

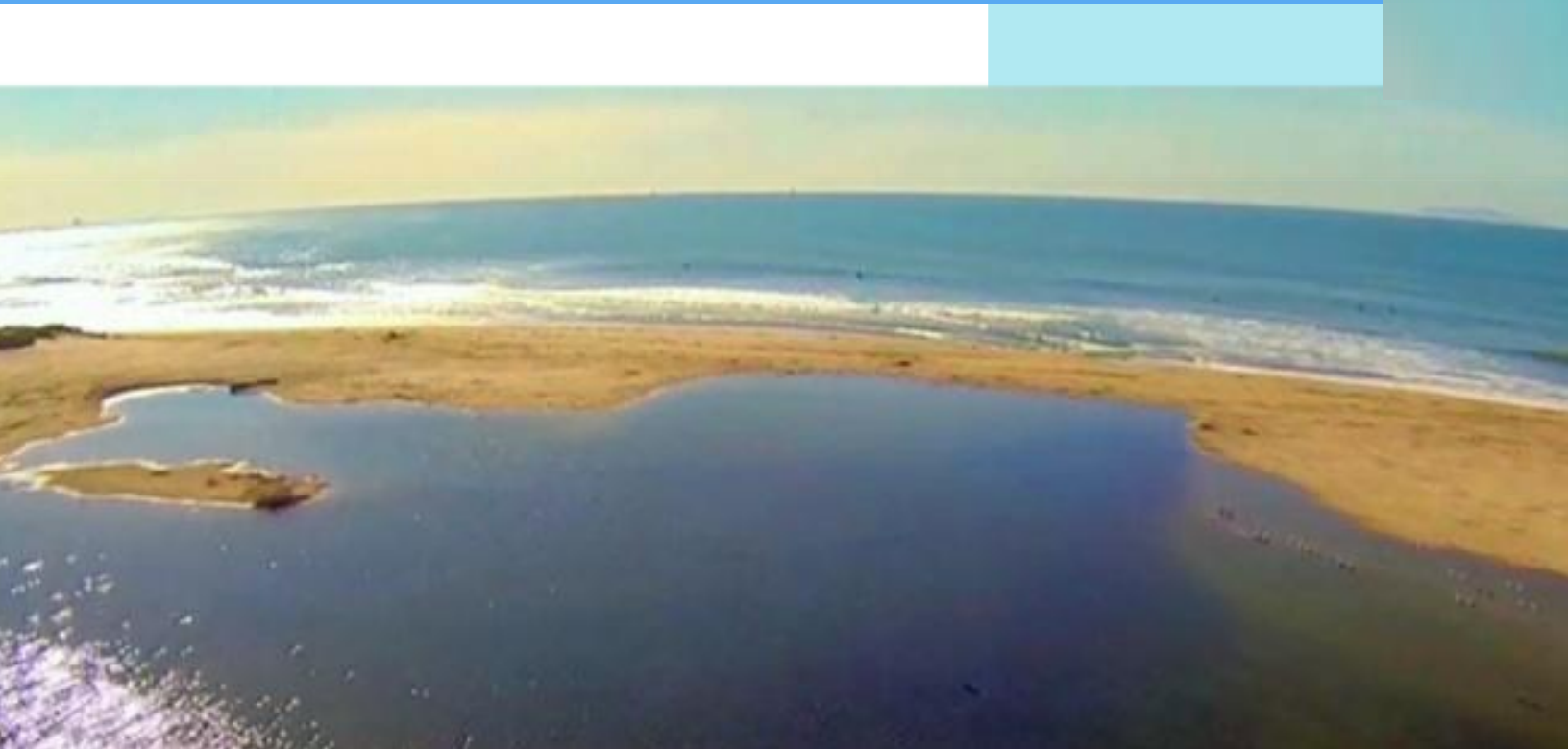


*Ventura Countywide  
Stormwater Quality  
Management Program*

**2012-2013  
Permit Year**

# Ventura Countywide Stormwater Quality Management Program Annual Report

## Attachment D: Water Quality Monitoring Appendices C through E



**December 13, 2013**

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

## **Attachment E: Total Maximum Daily Load Data and Reports**

1. Malibu Creek and Lagoon Bacteria TMDL Compliance Monitoring for Ventura County and City of Thousand Oaks. July 2012 - June 2013
2. Calleguas Creek Watershed TMDL Compliance Monitoring 4<sup>th</sup> Year Annual Monitoring Report

**Malibu Creek and Lagoon Bacteria TMDL Compliance Monitoring for  
Ventura County and City of Thousand Oaks. July 2012 - June 2013**

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



# Ventura County Watershed Protection District

## Planning & Regulatory Hydrology Section MEMORANDUM

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DATE: September 4, 2009 Updated August 12, 2010

TO: Tommy Liddell

VIA: Bruce Rindahl

FROM: Mark Bandurraga

**SUBJECT: NPDES Monitoring Site Yield Evaluation**

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

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

### **Curve Number Calculation Methodology**

#### Land Use Data

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

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

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

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

### Soils Information

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

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

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

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

The results are shown in Table 2.

**Table 2: Storm Yield Results- Weighted Average Curve Numbers**

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

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

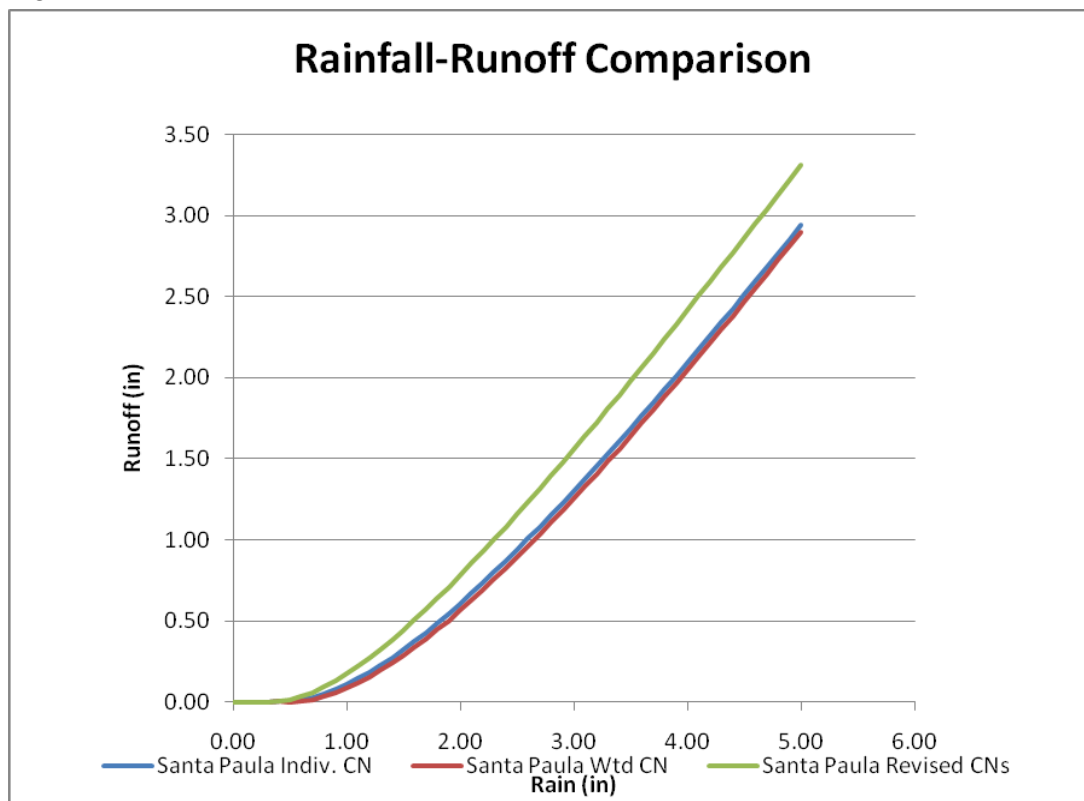
**Table 3: Storm Yield Results- Weighted Average Curve Numbers with Updated CNs**

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

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

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

Figure 1



### Conclusions and Limitations

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



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

Filename	Description
GIS	Contains GIS files used in evaluation
GIS2010	Contains 2010 GIS files used in updated evaluation
ClippedLandUse.mdb	Geodatabase with land uses clipped to watershed boundaries provided by WQ section
*_SelectedWatershed.shp	shapefiles showing boundaries of monitoring watersheds
*soils.shp	soils shapefiles clipped to watershed boundaries
*soilsunion.shp	Union of soils and land use data shapefile for watersheds
Allsoil.shp	VCWPD soils shapefile showing numbers for hydrology calcs
NPDES_MonitoringSitesRunoff9-09.xls	9-09 CN data
NPDES_MonitoringSitesRunoff8-10.xls	8-10 updated analysis for 11 sites total
NPDES_MonitoringSitesRunoff8-10RevCNs.xls	8-10 analysis using revised CNs
MonitoringSites9-09.mxd	ArcMap project file for analysis

## Ventura Watershed

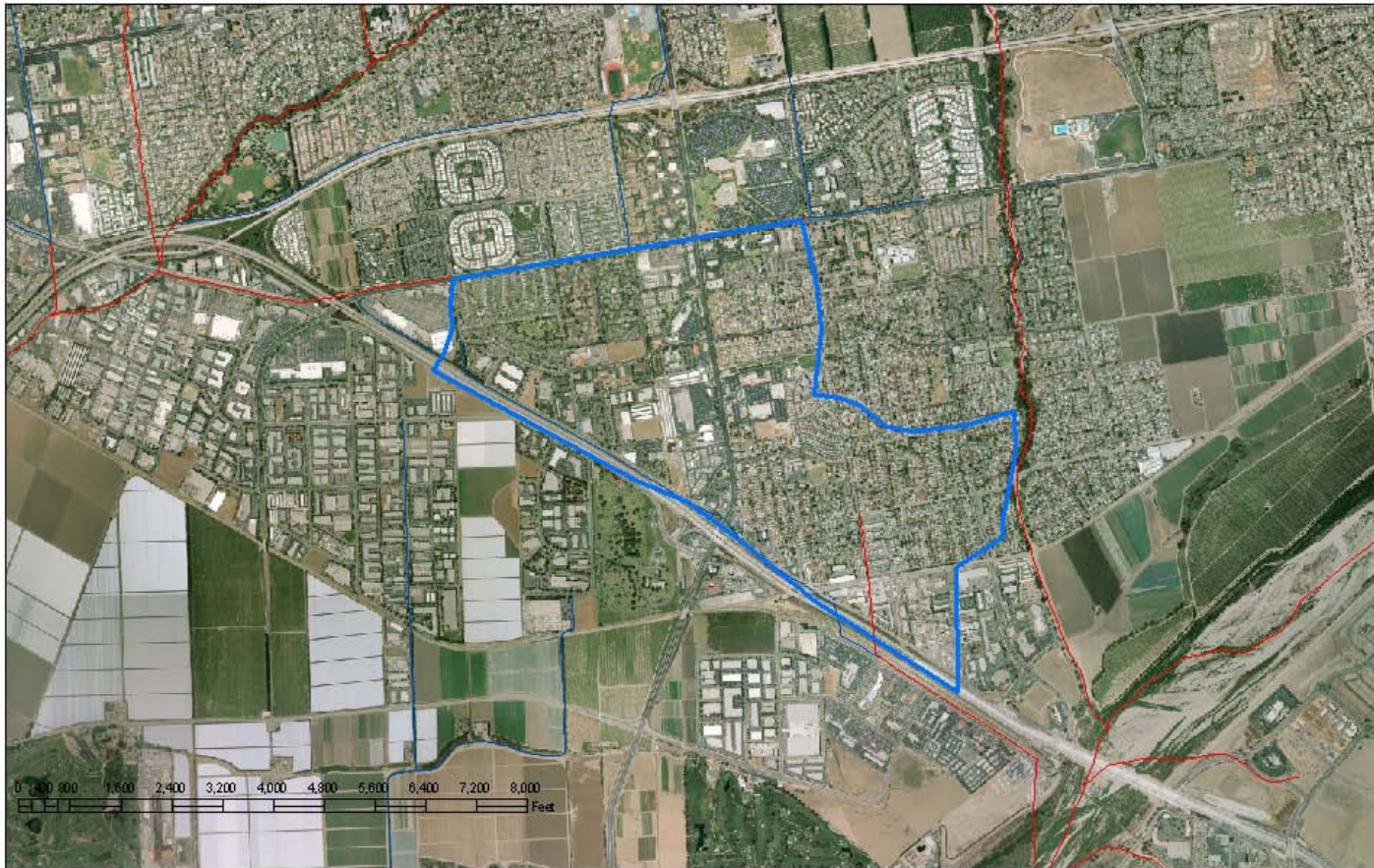


Figure 2



# Meiners Oaks Happy Valley Watershed



Figure 3



## Ojai Fox Watershed

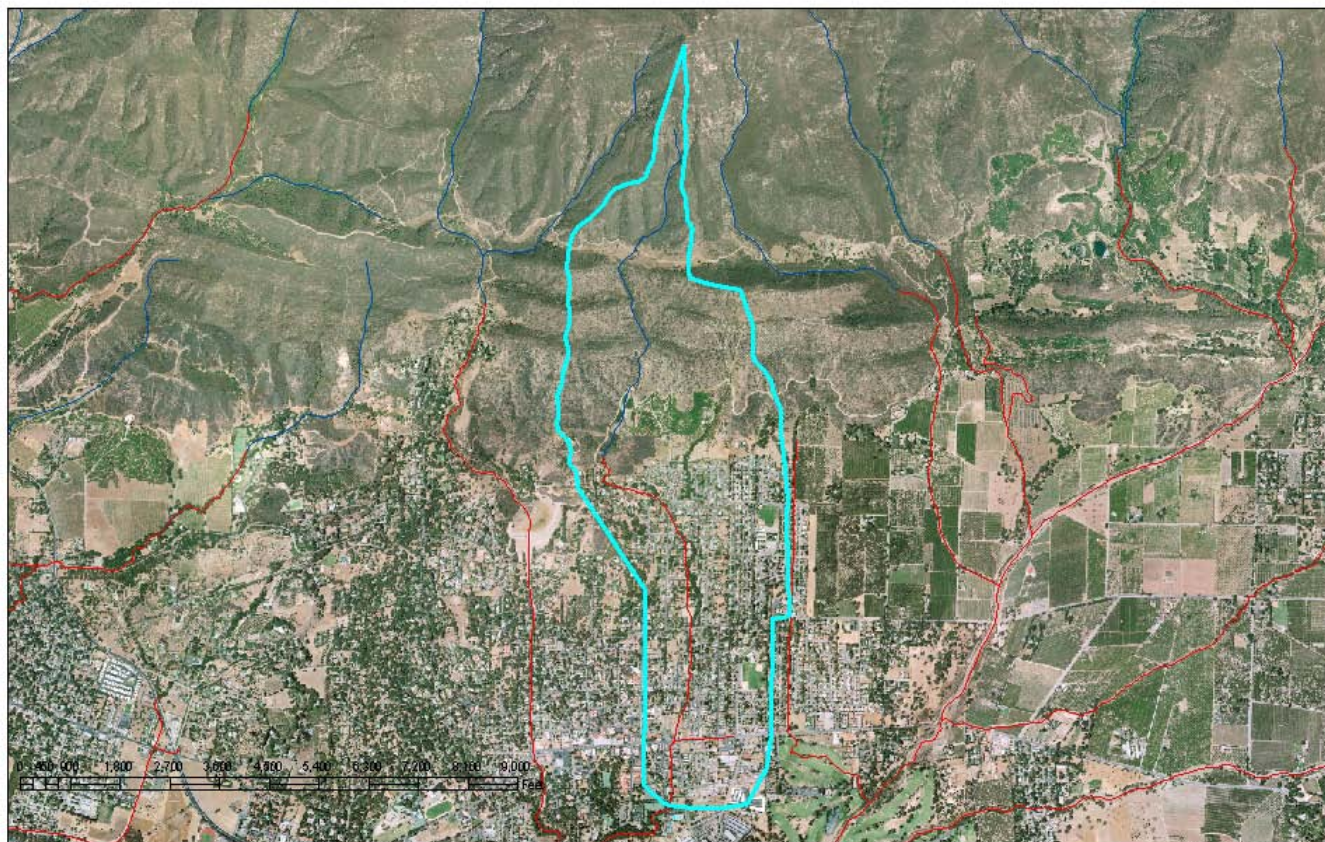


Figure 4



# Camarillo Hills Drain Watershed

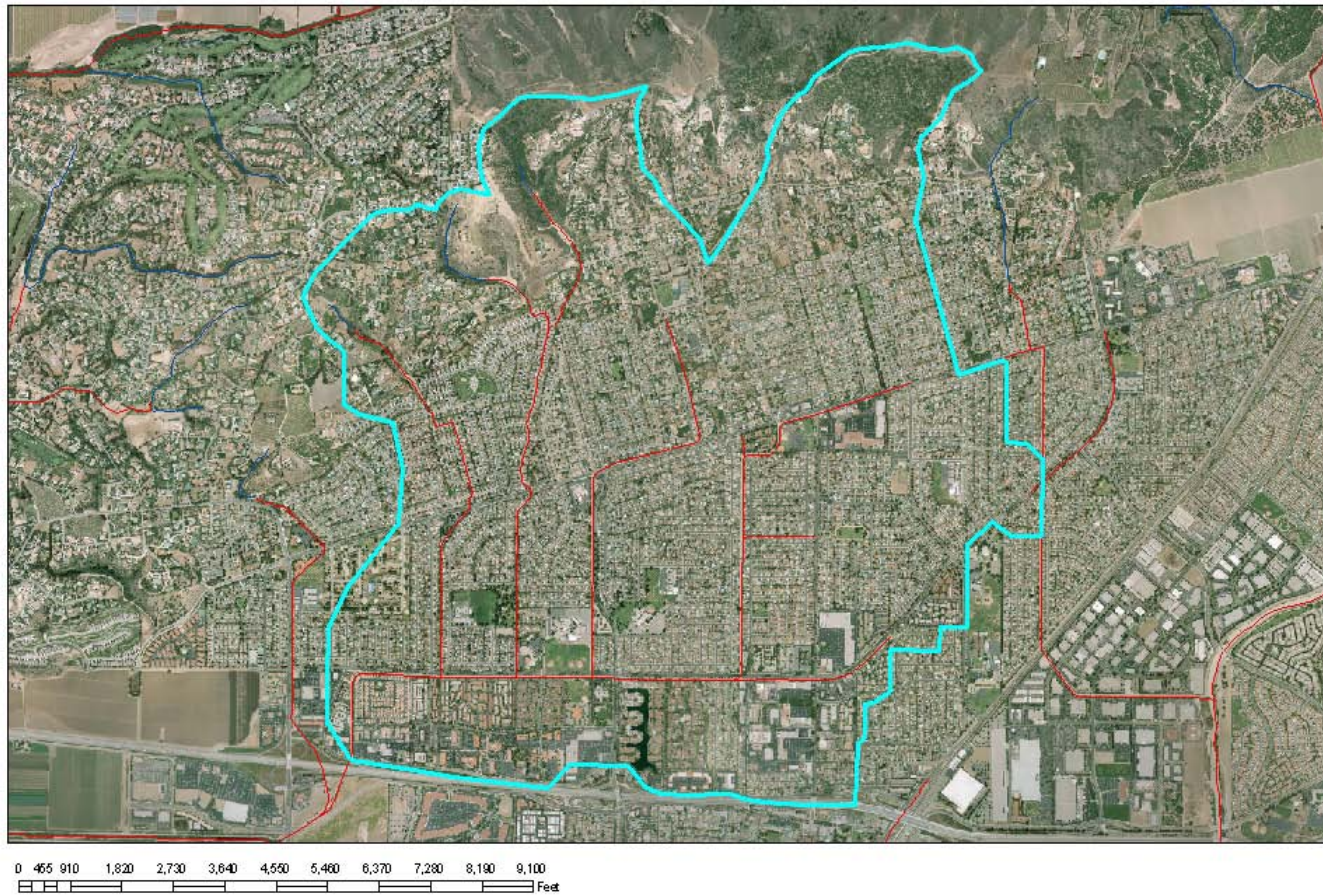


Figure 5



## Simi Valley Watershed

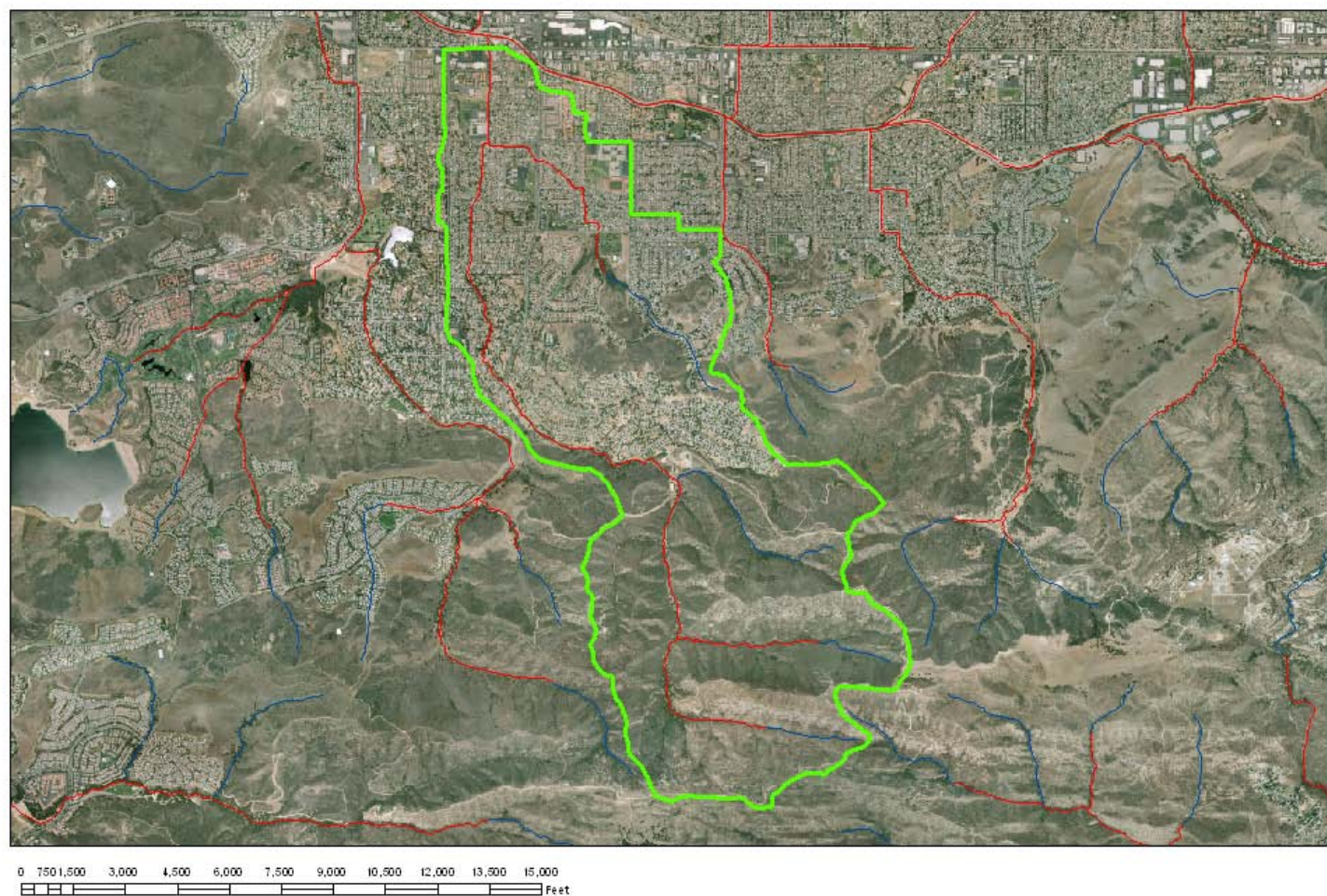


Figure 6

Oxnard Watershed



Figure 7



## Moorpark Watershed

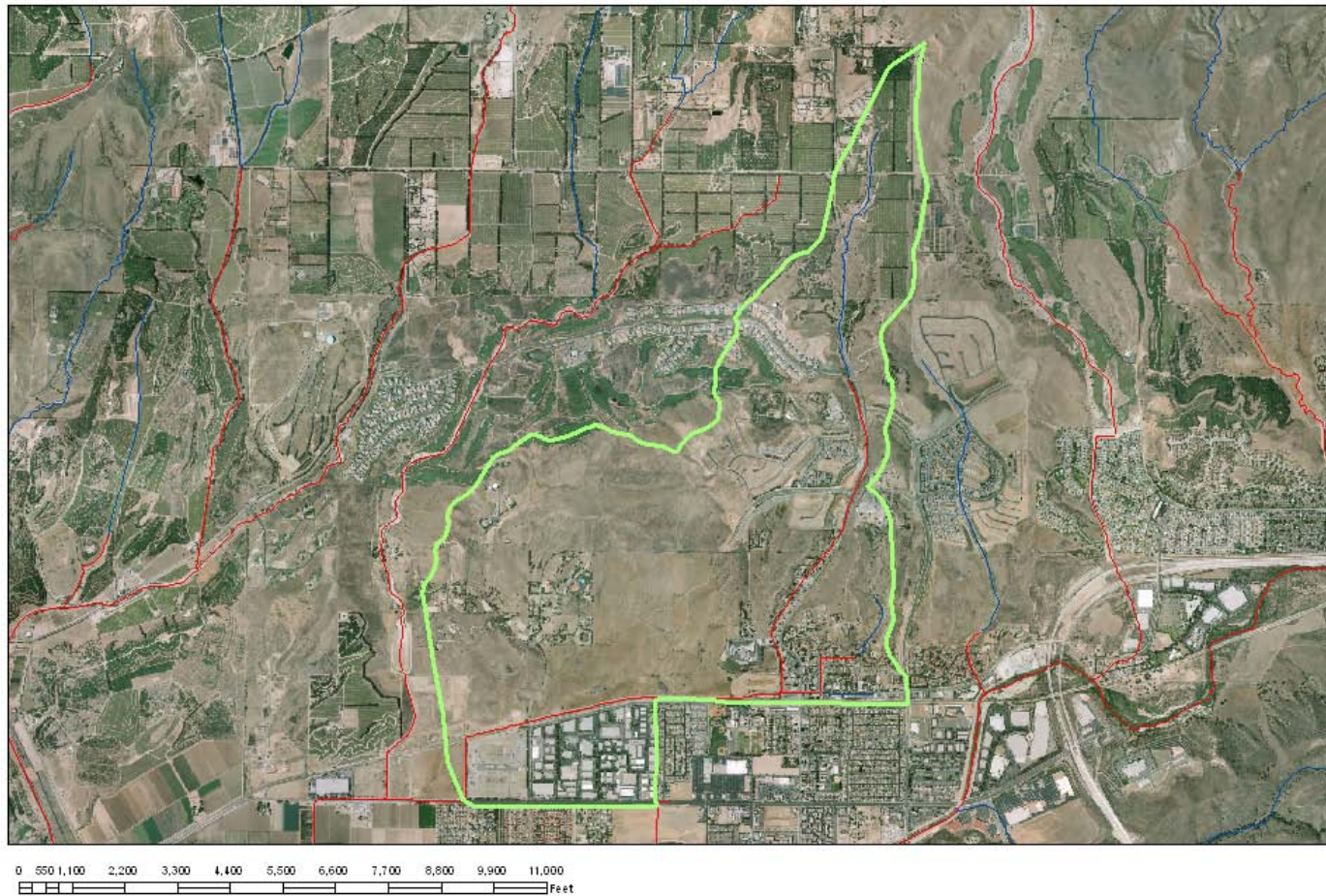


Figure 8



## Port Hueneme Watershed

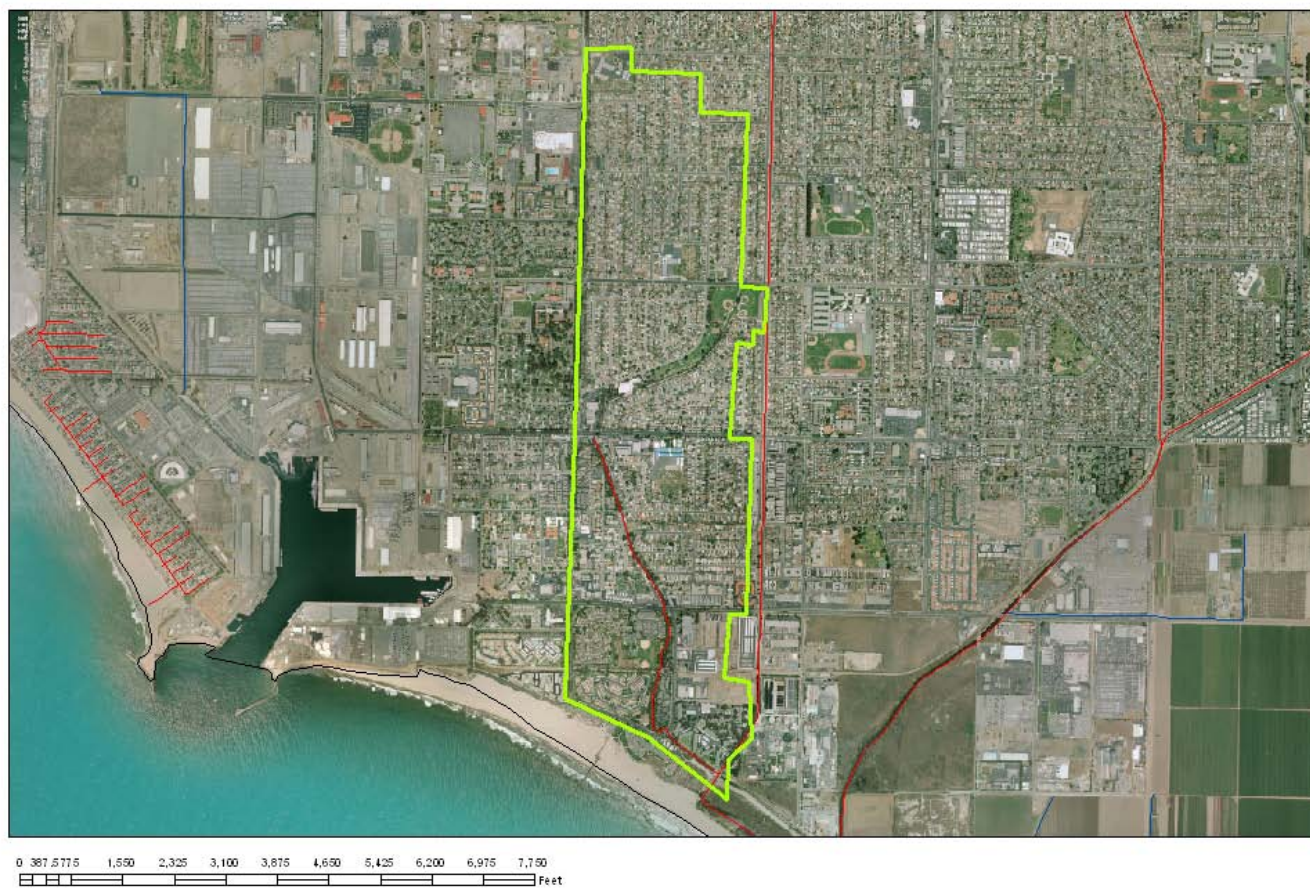


Figure 9



## Fillmore Watershed



Figure 10



## Thousand Oaks Watershed



Figure 11



## Santa Paula Watershed

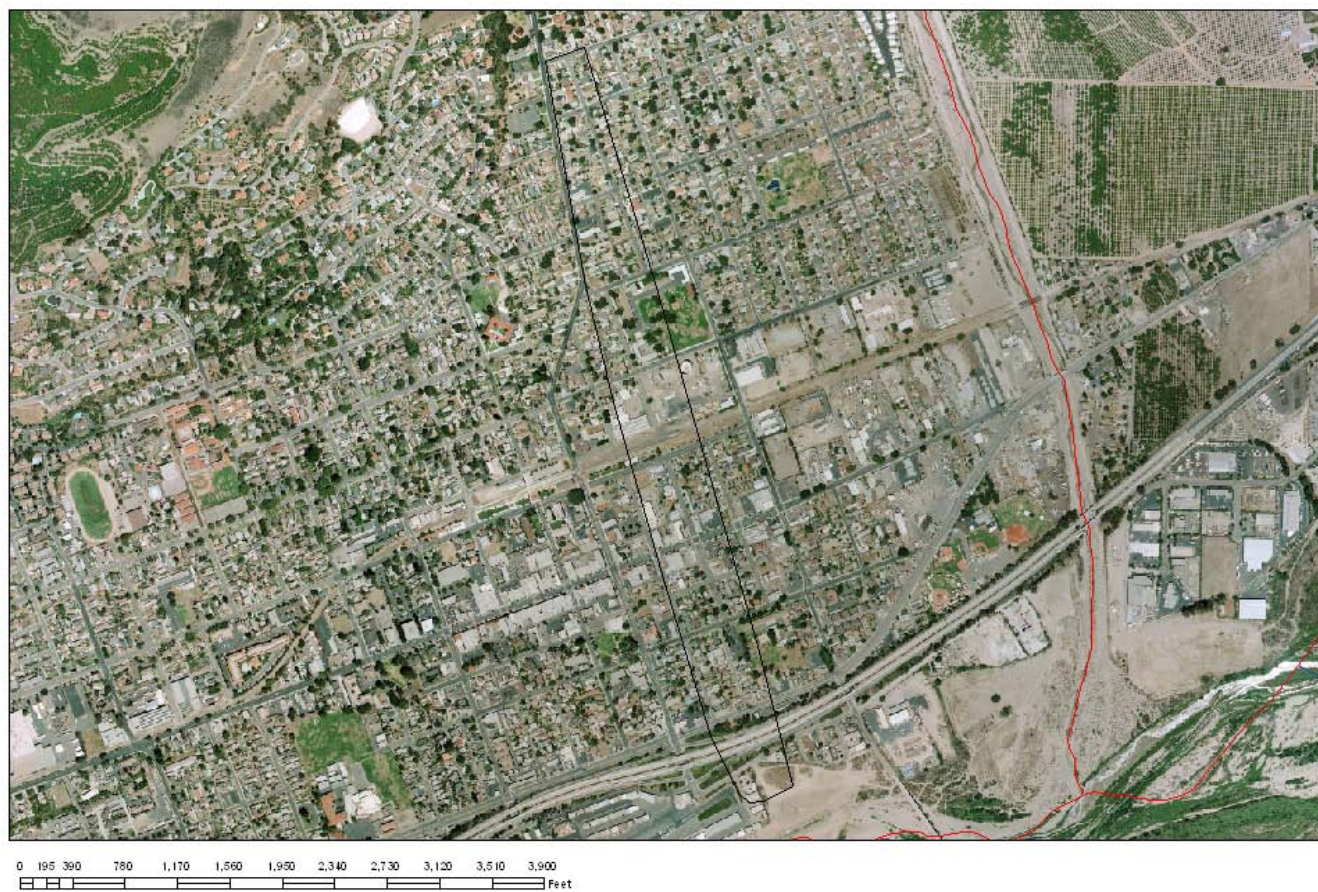


Figure 12

## **Appendix D. Event Summaries**

# NPDES 2012/13 Water Quality Monitoring Event #1 (Wet), October 11-12, 2012 Summary

**First Flush:** MO-OJA.

**Forecasted Rainfall Amounts:** 0.3" Ojai and Meiners Oaks, <0.10" across the county

**Actual Rainfall Amounts:** 0.74" at gauge 030 and 0.12" at gauge 165 in Ojai.

**Sampling Durations (to nearest 0.5 hours):**

MO-OJA = 0.5 hrs.

**Storm Control:** Bill Carey

**Sampling Crew:** Kelly Hahs & Bram Sercu

**Narrative:** This storm was a cutoff low and so difficult to forecast. The 24 hour forecast preceding the event predicted sufficient rain in the Ojai Valley to sample, so MO-OJA, MO-MEI, and ME-VR2 stations were set up. The rain was very patchy, with Ojai receiving 0.12" at Stewart Canyon Gauge 165 and 0.74" at Ojai Fire Station Gauge 030 in 1 hour and no rain falling in Meiners Oaks.

**Previous  $\geq 0.1$ " Storm:** 182 days, 1.85".

## NPDES ~ MAJOR OUTFALLS

### MO-OJA Ojai (Fox Canyon Barranca)

#### ❖ 10/11/12 @ 10:05 a.m. PDT. [KH,BS]

Forecast 0.3" rainfall → 1,000 cf pacing (2105 set remotely to 1,000 cf pacing).

4230: 09:03 PST, -0.002', 0 cfs

6712: Fridge at 4° C. Flushed line with 1L 1% HNO<sub>3</sub> (captured effluent) and 2L distilled water. Pump tubing count 3,339. Program flow paced; pacing every 1 pulse. Run program: "Program disabled". Installed one labeled 18.5 L bottle, lid off. Left grab bottles onsite.

Notes: Prepared mud line under bridge for high water mark.

#### ❖ 10/11/12 @ 14:55 p.m. PDT. [KH,BS]

4230: 13:51 PST, 0.081', 4 cfs

6712: "Program: Flow paced is done. Fridge at 2° C. Bottle full.

**Grab samples:** Taken at 15:00 p.m. PDT.

<b>Field Measurements:</b>	Temperature = 17.0° C	pH = 7.23
DO (%) = 100.4	Conductivity = 134.2 uS	Salinity = 0.1 ppt
DO(mg/L) = 9.54	Specific Conductance = 156.7 uS	

#### ❖ 10/12/12 @ 09:20 a.m. PDT. [KH,BS]

4230: 08:20 PST, -0.003', 0 cfs

6712: Fridge at 2° C. Flushed line with 2 L distilled water. Pump tubing count 108,704. Turned 6712 off.

**Composite samples:** Pulled at 09:23 a.m. PDT.

Notes: High water mark ~0.25' inside curve and 0.41' outside curve.

### Sample Tracking

## **NPDES 2012/13 Event #1 (Wet)**

- ❖ Bacteria samples to VCHCA (Susan Benavides):  
10/11/12 @ 16:10 PDT: Kelly Hahs & Bram Sercu
- ❖ Toxicity samples to Aquatic Bioassay & Consulting Laboratories, Inc.(Karin Patrick):  
10/11/12 @ 15:47 PDT: Kelly Hahs & Bram Sercu
- ❖ Grab and composite samples to Weck Laboratories, Inc. by Weck courier (Allan Goldberg) from VC Government Center:  
10/12/12 @ 10:43 PDT: Grab and composite samples by Kelly Hahs

# NPDES 2012/13 Water Quality Monitoring Event #2 (Wet), November 17-18, 2012 Summary

**First Flush:** all sites except MO-OJA.

**Forecasted Rainfall Amounts:** 0.25"

**Actual Rainfall Amounts:** ~ 0.25" – 1.5" across the county

**Sampling Durations (to nearest 0.5 hours):**

ME-CC = 20.0 hrs.	ME-SCR = 17.5 hrs.	ME-VR2 = 23.5 hrs.
MO-CAM = 6.0 hrs.	MO-FIL = 17.5 hrs.	MO-HUE = 23.0 hrs.
MO-MEI = 4.5 hrs.	MO-MPK = 7.0 hrs.	MO-OJA = 21.5 hrs.
MO-OXN = 9.0 hrs.	MO-SIM = 4.5 hrs.	MO-SPA = 10.0 hrs.
MO-THO = 6.0 hrs.	MO-VEN = 19.0 hrs.	

**Storm Control:** Bill Carey

**Sampling Crew (during storm):**

SCR/VR2/OJA/MEI/VEN: Bram Sercu & Tommy Liddell (JRE)

CC/CAM/HUE/OXN: Arne Anselm, Tom Sanford (WSP) & Sarah McGinnis (WSP)

FIL/SPA/MPK/SIM/THO: Jason Siegert (VRSD) & Daniel Calderon (VRSD)

**Sampling Crew (post-storm sample pickup):**

11/18/2012 (VR2/MEI/OJA/VEN/OXN): Kelly Hahs & Bram Sercu

11/18/2012 (CC/SCR/THO/CAM/HUE): Tommy Liddell (JRE) & Tom Sanford (WSP)

11/18/2012 (SPA/FIL/MPK/SIM): Arne Anselm & Bill Carey

## NPDES ~ MASS EMISSION

### ME-CC Calleguas Creek (CSUCI Bridge)

❖ 11/15/2012 @ 13:45 PST [KH,TS,SM]

Forecast 0.5" rainfall → 2105 set remotely to 1,000 cf pacing.

4230: 13:43 PST, 1.083', 7 cfs.

6712: Fridge at 16° C, turned on to ¾ coldest setting. Flushed line with 1L 1% HNO<sub>3</sub> (collected waste) and 2L distilled water. Program flow paced; pacing every 500 pulses, 96 hour max run time. Run program: "Program disabled 14:54:32 TH 15-NOV". Time was on PDT but all equipment should always be PST. Set clock to PST and restarted program, "Program disabled 13:56 TH 15-NOV". Composite lid off. Grab and toxicity bottles onsite.

❖ 11/16/2012 [WBC-remote]

2105: Changed to 500 cf pacing (250,000 cf)

❖ 11/17/2012 @ 11:05 a.m. PST [AA,TS,SM]

4230: 11:05 PST, 1.218', 18 cfs [loss 1.22]

6712: "Program Disabled." Bottle empty. Fridge at 0.5° C.

**Grab samples:** Taken at check structure @ 11:05 a.m. PST.

<b>Field Measurements:</b>	Temperature = 17.7° C	pH = 7.51
DO (%) = 77.9	Conductivity = 1095 uS	Salinity = 0.6 ppt
DO(mg/L) = 7.35	Specific Conductance = 1167 uS	

❖ 11/18/2012 @ 08:50 a.m. PST [TL,TS]

4230: 08:50 PST, 1.290', 45 cfs. Outside staff ~ 1.28'.



## NPDES 2012/2013 Event #2 (Wet)

6712: Stopped program. Bottle ½ full. Pump tubing count 246,069. Flushed line with 2 L distilled water. Fridge at 3° C.

**Composite samples:** Pulled at 08:50 a.m. PST.

### ME-SCR Santa Clara River (Freeman Diversion)

First event using new swing arm intake, which is designed to keep the intake strainer submerged regardless of whether the diversion is open or closed. First event with 4210 installed in diversion canal to be able to detect when gate is opened (water level will drop noticeably). However, the gate was not opened during this event.

#### ❖ 11/14/2012 @ 14:05 p.m. PST [WBC,BS]

4210: 0.055'

6712: Refrigerator at -2° C, turned slightly warmer. Flushed line with 1L 1% HNO<sub>3</sub> (collected waste) and 2L distilled water. Program time paced 18 hours, sample every 31 minutes. Run program: "Program disabled". Composite bottle lid off. Grab bottles and toxicity buckets left onsite.

#### ❖ 11/16/2012 [WBC]

Forecast 0.5" rainfall.

#### ❖ 11/17/2012 @ 10:40 a.m. PST [BS,TL]

4210: 1.71'

6712: "Sample 9 in 00:03". Bottle 1/5 full. Fridge at 2° C.

**Grab samples:** Taken from diversion canal @ 10:50 PST.

**Field Measurements:**

Temperature = 16.2° C	pH = 8.23
DO (%) = 122.7	Conductivity = 1317 uS
DO(mg/L) = 12.00	Salinity = 0.8 ppt
	Specific Conductance = 1583 uS

#### ❖ 11/18/2012 @ 10:27 PST [TL,TS]

4210: 10:29 PST 1.881'

6712: "Program: time paced is done." Bottle full. Pump tubing count 266,274. Flushed line with 2L distilled water. Fridge temp 4° C.

**Composite samples:** Pulled at 10:35 a.m. PST.

### ME-VR2 Ventura River (Ojai Valley Sanitary District)

#### ❖ 11/15/2012 @ 11:50 a.m. PST [BS]

Forecast 1" rainfall → 75,000 cf pacing (2105 set remotely to 1,000 cf pacing).

4230: 11:50 PST, 1.757', 1 cfs.

6712: Fridge at 4° C. Flushed line with 2L distilled water (cleaned with 1L 1% HNO<sub>3</sub> on 10/11/2012). Program flow paced; pacing every 75 pulses. Run program: "Program disabled". Composite bottle lid off. Grab bottles and toxicity buckets onsite.

#### ❖ 11/16/2012 [WBC-remote]

2105: Reduced pacing to 333 cf due to decrease in forecast (0.25").

#### ❖ 11/17/2012 @ 09:40 a.m. PST [BS,TL]

4230: 09:39 PST, 1.849', 2 cfs [oss 1.86]

6712: "Program disabled." Bottle empty. Fridge at 3° C.

**Grab samples:** Taken in river near composite intake at 09:50 a.m. PST.

## NPDES 2012/2013 Event #2 (Wet)

**Field Measurements:**      Temperature = 13.3° C      pH = 7.73  
DO (%) = 95.5      Conductivity = 931 uS      Salinity = 0.6 ppt  
DO(mg/L) = 9.90      Specific Conductance = 1198 uS

### ❖ 11/17/2012 @ 19:45 p.m. PST [WBC-remote]

2105: Reduced pacing to 30 cf due to lack of response from rain.

### ❖ 11/18/2012 @ 09:40 a.m. PST [KH,BS]

4230: 1.793', 1 cfs.

6712: Fridge at 4° C. "Sample 33 after 61 pulses". Stopped program. Bottle full.

Flushed line with 2 L distilled water. Pump tubing count 389,116.

**Composite samples:** Pulled at 09:40 a.m. PST.

**Note:** San Antonio Creek did not flow into Ventura River during this event and the Ventura River did not flow at Santa Ana Blvd, so there was no connectivity between the outfalls (MO-MEI and MO-OJA) and the mass emission station (ME-VR2) during this event.

## NPDES ~ MAJOR OUTFALLS

### MO-CAM Camarillo (Camarillo Hills Drain)

#### ❖ 11/15/2012 @ 10:15 a.m. PST [KH,SM,TS]

Forecast 0.50" rainfall → 2105 set remotely to 1,000 cf pacing.

4230: 10:16 PST, 0.030', 10 cfs (flow level too low to register at bubbler)

6712: Fridge at 4° C. Flushed line with 1L 1% HNO<sub>3</sub> (collected waste) and 2L distilled water. Program flow paced; pacing every 20 pulses. Run program: "Program disabled". Composite bottle lid off. Grab and field duplicate bottles and toxicity buckets on site.

#### ❖ 11/16/2012 [WBC-remote]

2105: Forecast decreased to 0.25". Decreased pacing to 500cf.

#### ❖ 11/17/2012 @ 09:24 a.m. PST [AA,SM,TS]

4230: 09:24 PST, 0.088', 15 cfs. Outside staff ~ 0.05'

6712: "Sample 20 after 5 pulses." Bottle half full. Fridge at 3° C.

**Grab samples:** Taken at 09:25 a.m. PST. Field duplicates at 09:25 a.m.

**Field Measurements:**      Temperature = 17.0° C      pH = 7.29  
DO (%) = 98.1      Conductivity = 136.2 uS      Salinity = 0.1 ppt  
DO(mg/L) = 9.50      Specific Conductance = 160.7 uS

#### ❖ 11/18/2012 @ 09:55 a.m. PST [TL,TS]

4230: 09:54 PST, 0.00.028', 10 cfs (flow level too low to register at bubbler)

6712: "Program disabled". Stopped program. Bottle ~17L. Fridge at 4° C. Pump tubing count 91,739. Flushed line with 2 L distilled water. Dessicant needs changed.

**Composite samples:** Pulled 10:00 a.m. PST.

### MO-FIL Fillmore (North Fillmore Drain)

#### ❖ 11/16/2012 @ 12:29 p.m. PST [WBC,AA]

Forecast 0.5" rainfall

4250: 2.655'

## NPDES 2012/2013 Event #2 (Wet)

6712: Fridge at 1° C. Flushed line with 2L distilled water. Pump count 33,195. Program 18 hour time-paced program, sample every 31 minutes, no delay to start. Run program "Program disabled". Composite bottle lid off. Grab bottles and toxicity buckets onsite.

### ❖ 11/17/2012 @ 09:30 a.m. PST [JS,DC]

4250: 3.240'

6712: "Sample 5". Bottle 1/10 full. Fridge at 3° C.

**Grab samples:** Taken at 09:45 a.m. PST.

**Field Measurements:** Temperature = 16.0° C pH = 7.62  
DO (%) = 79.4 Conductivity = 171.5 uS Salinity = 0.1 ppt  
DO(mg/L) = 7.52 Specific Conductance = 214.5 uS

### ❖ 11/18/2012 @ 08:17 a.m. PST [WBC,AA]

4250: 3.055', 0.10 ft/s

6712: "Program time paced is done". Pump counts 179,844. Bottle full. Flushed line with 2 L distilled water.

**Composite samples:** Pulled at 08:17 a.m. PST.

## MO-MEI Meiners Oaks (Happy Valley Drain)

### ❖ 11/15/2012 @ 12:19 p.m. PST [BS]

Forecast 1.25" rainfall → 10,000 cf pacing (2105 set remotely to 1,000 cf pacing).

4230: 12:20 PST, 0.082', 1 cfs (out of contact with low flow water)

6712: Fridge at 5° C, turned colder. Flushed line with 2L distilled water (cleaned with 1L 1% HNO3 on 10/11/2012). Program flow paced; pacing every 10 pulses. Run program: "Program disabled". Composite bottle lid off. Grab bottles and toxicity buckets onsite.

### ❖ 11/16/2012 @ 02:59 a.m. PST [WBC-remote]

2105: Changed pacing to 200 cf due to lowered forecast of 0.25".

### ❖ 11/17/2012 @ 09:15 a.m. PST [BS,TL]

4230: 09:04 PST, 0.150', 5 cfs. [Outside staff ~ 0.10']

6712: "Program Flow Paced is done. Errors have occurred during program." Fridge at 6° C, turned colder. Composite volume ~3/4 full.

**Grab samples:** Taken at 09:45 a.m. PST.

**Field Measurements:** Temperature = 14.4° C pH = 7.64  
DO (%) = 102.3 Conductivity = 81.7 uS Salinity = 0.1 ppt  
DO(mg/L) = 10.42 Specific Conductance = 102.4 uS

### ❖ 11/18/2012 @ 08:30 a.m. PST [BS,KH]

4230: 08:24 PST, 0.081', 1cfs

6712: "Program: Flow paced is done." Bottle ~ 12L. Fridge at 4° C Flushed line with 2 L distilled water. Pump tubing count 114,614. Turned 6712 off. High water mark in stilling well, ~0.5".

**Composite samples:** Pulled at 08:30 a.m. PST.

### ❖ 11/19/2012 @ 12:00 p.m. PST [WBC]

Turned fridge off. High water mark under bridge ~0.3'.

## NPDES 2012/2013 Event #2 (Wet)

### **MO-MPK Moorpark (Gabbert Canyon Drain)**

#### **❖ 11/15/2012 @ 11:15 a.m. PST [KH,SM,TS]**

Forecast 0.5" rainfall → 2,000 cf pacing (2105 set remotely to 1,000 cf pacing).

4230: 11:16, 0.076', 0.2 cfs

6712: Fridge at 4° C. Flushed line with 1L 1% HNO<sub>3</sub> (collected waste) and 2L distilled water. Program flow paced; pacing every 2 pulses. Run program: "Program disabled". Composite bottle lid off. Grab bottles and toxicity buckets onsite.

#### **❖ 11/16/2012 [WBC-remote]**

2105: Reduced pacing to 500 cf due to decrease in forecast (0.25").

#### **❖ 11/17/2012 @ 10:30 a.m. PST [JS,DC]**

4230: 0.127'

6712: "Program disabled". Bottle ~ ¼ full.

**Grab samples:** Taken at 10:45 a.m. PST.

<b>Field Measurements:</b>	Temperature = 17.1° C	pH = 8.12
DO (%) = 101.2	Conductivity = 322.8 uS	Salinity = 0.2 ppt
DO(mg/L) = 9.48	Specific Conductance = 379.5 uS	

Notes: No flow from upper or lower RCP from Edison property to have analyzed for pentachlorophenol (EPA 515.3).

#### **❖ 11/18/2012 @ 08:43 a.m. PST [WBC,AA]**

4230: 0.073', 0.2 cfs

6712: "Program disabled. Errors have occurred." No liquid detected multiple samples. Fridge at 3° C. Bottle 4" full. Flushed line with 2L distilled water. Pump tubing count 62,248.

**Composite samples:** Pulled at 08:43 a.m. PST.

Notes: Less rain fell than forecast.

### **MO-OJA Ojai (Fox Canyon Barranca)**

#### **❖ 11/15/2012 @ 12:45 p.m. PST [BS]**

Forecast 1.0" rainfall → 10,000 cf pacing (2105 set remotely to 1,000 cf pacing).

4230: 12:44 PST, -0.003', 0 cfs

6712: Fridge at 3° C. Flushed line with 2L distilled water (cleaned with 1L 1% HNO<sub>3</sub> on 10/11/2012). Program flow paced; pacing every 10 pulses. Run program: "Program disabled". Composite bottle lid off. Grab bottles onsite.

Notes: Prepared mud line under bridge for high water mark.

#### **❖ 11/16/2012 [WBC-remote]**

2105: Reduced pacing to 500 cf due to decrease in forecast (0.25").

#### **❖ 11/17/2012 @ 08:35 a.m. PST [BS,TL]**

4230: -0.003', 0 cfs

6712: "Program disabled". Bottle ¼ full. Fridge at 4° C.

**Grab samples:** Taken 08:45 a.m. PST.

<b>Field Measurements:</b>	Temperature = 14.5° C	pH = 7.15
DO (%) = 102.4	Conductivity = 73.4 uS	Salinity = 0.0 ppt
DO(mg/L) = 10.14	Specific Conductance = 92.5 uS	

## NPDES 2012/2013 Event #2 (Wet)

### ❖ 11/18/2012 @ 09:00 a.m. PST [BS,KH]

4230: 08:54 PST, -0.003', 0 cfs

6712: "Sample 17 after 9 pulses". Bottle ~ 9L. Fridge at 3° C. Flushed line with 2 L distilled water. Pump tubing count 157,966. Turned 6712 off.

**Composite samples:** Pulled at 09:00 a.m. PST.

Notes: High water mark ~0.25' inside curve, ~0.27' outside curve.

### MO-OXN Oxnard (El Rio Drain)

#### ❖ 11/15/2012 @ 14:30 p.m. PST [KH,SM,TS]

Forecast 1" rainfall → 25,000 cf pacing (2105 set remotely to 1,000 cf pacing).

4230: 14:28 PST, 0.128', 0.4 cfs

6712: Fridge at 4° C. Flushed line with 1L 1% HNO<sub>3</sub> (collected waste) and 2L distilled water. Program flow paced; pacing every 25 pulses. Run program: "Program disabled". Composite bottle lid off. Grab bottles and toxicity buckets onsite.

#### ❖ 11/16/2012 [WBC-remote]

2105: Reduced pacing to 280 cf due to decrease in forecast (0.25").

#### ❖ 11/17/2012 @ 08:34 a.m. PST [AA,SM,TS]

4230: 0.607' [o/s 0.55'], 9.4 cfs

6712: Fridge at 1° C. "Sample 17 after 15 pulses." Bottle 6" full.

**Grab samples:** Taken at 08:34 a.m. PST.

<b>Field Measurements:</b>	Temperature = 15.9° C	pH = 7.03
DO (%) = 89.9	Conductivity = 181.4 uS	Salinity = 0.1 ppt
DO(mg/L) = 8.88	Specific Conductance = 216.7 uS	

#### ❖ 11/18/2012 @ 10:30 a.m. PST [KH,BS]

4230: 10:26 PST, 0.108', 0.2 cfs

6712: "Program: Flow paced is done." Bottle full. Flushed line with 2 L distilled water. Pump tubing count 103,115.

**Composite samples:** Pulled at 10:30 a.m. PST.

### MO-HUE Port Hueneme (Hueneme Drain)

#### ❖ 11/15/2012 @ 10:00 a.m. PST [BS]

6712: Fridge at 4° C. Flushed line with 2L distilled water. Trouble shoot communication difficulties. Tested inside and rooftop antennae, did not restore communication. Disconnected and reconnected fuses for 2105 and 6712, communication restored. Programmed time paced start 00:05 on 11/17, 31 min interval, 18 hour program. Run program "Start Time – proceed at 00:05 SA 17-NOV". Composite bottle lid off. Grab bottles and toxicity buckets onsite.

#### ❖ 11/16/2012 [WBC]

Forecast 0.25".

#### ❖ 11/17/2012 @ 00:10 a.m. PST [WBC-remote]

2105: 2105c set to enable (latched) with 0.06" rain.

#### ❖ 11/17/2012 @ 10:29 a.m. PST [AA,SM,TS]

6712: Fridge at 4° C. "Sample 11 in 00:02:10". Bottle 4" full.

## NPDES 2012/2013 Event #2 (Wet)

**Grab samples:** Taken at 10:30 a.m. PST. Water level behind gates very low, below last step. 10-15 ducks at sample site.

**Field Measurements:** Temperature = 16.7° C                      pH = 7.42  
DO (%) = 40.6                      Conductivity = 7430 uS                      Salinity = 5.0 ppt  
DO(mg/L) = 3.67                      Specific Conductance = 8820 uS

### ❖ 11/18/2012 @ 08:21 a.m. PST [TL,TS]

6712: Fridge at 4° C. "Program time paced is done." Bottle full. Flushed line with 2 L distilled water. Pump tubing count 187,517.

**Composite samples:** Pulled at 08:30 a.m. PST.

## MO-SIM Simi Valley (Bus Canyon Drain)

### ❖ 11/15/2012 @ 12:10 p.m. PST [KH,TS,SM]

Forecast 0.5" rainfall → 20,000 cf pacing (2105 set remotely to 1,000 cf pacing).

4230: 12:08 PST, 0.141', 2 cfs

6712: Fridge at 5° C, turned colder. Flushed line with 1L 1% HNO<sub>3</sub> (collected waste) and 2L distilled water. Program flow paced; pacing every 20 pulses. Run program: "Program disabled". Installed one labeled 18.5 L bottle, lid off. Grab bottles and toxicity buckets onsite.

**Notes:** Re-chalked for high water mark.

### ❖ 11/16/2012 [WBC-remote]

2105: Reduced pacing to 500 cf due to decrease in forecast (0.25").

### ❖ 11/17/2012 @ 11:30 a.m. PST [JS,DC]

4230: 11:30 PST, 0.342'

6712: "Sample 17". Bottle ~ ½ full. Fridge at 0° C.

**Grab samples:** Taken at 11:45 a.m. PST.

**Field Measurements:** Temperature = 17.4° C                      pH = 7.75  
DO (%) = 96.6                      Conductivity = 548 uS                      Salinity = 0.3 ppt  
DO(mg/L) = 9.19                      Specific Conductance = 562 uS

### ❖ 11/18/2012 @ 09:17 a.m. PST [AA,WBC]

4230: 0.139', 2 cfs

6712: "Program disabled." Fridge at 3° C. Bottle 1/3 full. Pump tubing count 52,602. Flushed line with 2 L distilled water.

**Composite samples:** Pulled at 09:17 a.m. PST.

## MO-SPA Santa Paula (11<sup>th</sup> Street Drain)

### ❖ 11/15/2012 @ 15:04 p.m. PST [WBC,BS]

Forecast 1.0" rainfall → 7,000 cf pacing (2105 set remotely to 1,000 cf pacing).

4250: 15:04 PST, 0.007', 0 cfs

6712: Fridge at 2° C. Flushed line with 1L 1% HNO<sub>3</sub> (collected waste) and 2L distilled water. Program flow paced; pacing every 7 pulses. Run program: "Program disabled". Composite bottle lid off. Grab bottles and toxicity buckets left onsite.

### ❖ 11/16/2012 [WBC-remote]

2105: Reduced pacing to 286 cf due to decrease in forecast (0.25").

## NPDES 2012/2013 Event #2 (Wet)

### ❖ 11/17/2012 @ 08:25 a.m. PST [JS,DC]

4250: Not recorded

6712: "Sample 32". Bottle 7/8 full. Fridge at 4° C.

**Grab samples:** Taken at 08:35 a.m. PST.

**Field Measurements:** Temperature = 15.2° C                      pH = 7.42  
DO (%) = 99.5                      Conductivity = 151.8 uS                      Salinity = 0.1 ppt  
DO(mg/L) = 9.98                      Specific Conductance = 186.7 uS

### ❖ 11/18/2012 @ 07:54 a.m. PST [WBC,AA]

4250: 0.26 cfs, 2.56 ft/s

6712: "Program flow paced is done." Bottle full. Fridge at 3° C. Flushed line with 2 L distilled water. Pump tubing count 184,569.

**Composite samples:** Pulled at 07:54 a.m. PST.

## MO-THO Thousand Oaks (Hill Canyon WWTP)

### ❖ 11/15/2012 @ 12:55 p.m. PST [KH,SM,TS]

Forecast 0.25" rainfall → 10,000 cf pacing through the 4230.

4230: 12:58 PST, 2.157', 1 cfs.

6712: Fridge at 4° C. Flushed line with 1L 1% HNO<sub>3</sub> (collected waste) and 2L distilled water. Program flow paced; pacing every 1 pulse. Run program: "Program disabled". Composite bottle lid off. Grab bottles and toxicity buckets onsite.

### ❖ 11/17/2012 @ 12:30 p.m. PST [JS,DC]

4230: 2.466'

6712: "Sample 23." Bottle ~ 2/3 full. Fridge at 4° C.

**Grab samples:** Taken at 12:45 p.m. PST.

**Field Measurements:** Temperature = 15.5° C                      pH = 8.16  
DO (%) = 94.4                      Conductivity = 834 uS                      Salinity = 0.5 ppt  
DO(mg/L) = 8.82                      Specific Conductance = 1021 uS

### ❖ 11/18/2012 @ 09:21 a.m. PST [TL,TS]

4230: 09:21 PST, 2.226', 2 cfs

6712: "Program: Flow paced is done". Fridge at 4° C. Bottle full. Pump tubing count 198,625. Flushed line with 2 L distilled water.

**Composite samples:** Pulled at 09:30 a.m. PST.

## MO-VEN Ventura (Moon Ditch)

### ❖ 11/15/2012 @ 11:19 a.m. PST [BS]

Forecast 1.25" rainfall → 50,000 cf pacing (2105 set remotely to 1,000 cf pacing).

4230: 11:20 PST, 0.041', 1 cfs

6712: Fridge at -4° C, turned warmer. Flushed line with 2L distilled water (cleaned with 1L 1% HNO<sub>3</sub> on 8/28/2012). Program flow paced; pacing every 50 pulses. Run program: "Program disabled." Removed composite bottle lid. Grab bottles and toxicity bottles left onsite.

### ❖ 11/16/2012 [WBC-remote]

2105: Reduced pacing to 200 cf due to decrease in forecast (0.25").

## NPDES 2012/2013 Event #2 (Wet)

### ❖ 11/17/2012 @ 07:35 a.m. PST [BS,TL]

4230: 07:37 PST, 0.313, 14 cfs [loss 0.25']

6712: "Sample 7 after 15 pulses." Fridge at 2° C. Composite bottle ~ 6L. Bottle volume good.

**Grab samples:** Taken at 07:45 a.m. PST.

<b>Field Measurements:</b>	Temperature = 15.7° C	pH = 7.67
DO (%) = 101.6	Conductivity = 216.4 uS	Salinity = 0.1 ppt
DO(mg/L) = 9.98	Specific Conductance = 263.0 uS	

### ❖ 11/18/2012 @ 10:05 a.m. PST [KH,BS]

4230: 10:01 PST, 0.039', 1 cfs

6712: "Program disabled. Errors have occurred." No liquid detected for sample 10+11, last sample @ 1:44 PST was #18. Bottle ~ 8L. Flushed line with 2 L distilled water. Pump tubing count 72,450. Turned 6712 off.

**Composite samples:** Pulled at 10:05 a.m. PST.

### Sample Tracking

❖ Bacteria samples to VCHCA (Susan Benavides):

11/17/12 @ 11:41 PST (SCR/VR2/OJA/MEI/VEN): Bram Sercu & Tommy Liddell

11/17/12 @ 12:14 PST (CC/CAM(&MD-1)/HUE/OXN): Arne Anselm, Sarah McGinnis, Tom Sanford

11/17/12 @ 14:20 PST (FIL/SPA/MPK/SIM/THO): Jason Siegert & Daniel Calderon

❖ Toxicity samples to ABC (Lorena Marquez):

11/17/12 @ 12:16 PST (SCR/VR2/MEI/VEN): Bram Sercu & Tommy Liddell

11/17/12 @ 12:42 PST (CC/CAM/HUE/OXN): Arne Anselm, Sarah McGinnis, Tom Sanford

11/17/12 @ 14:20 PST (FIL/SPA/MPK/SIM/THO): Jason Siegert & Daniel Calderon

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

11/18/12 @ 13:22 PST: Saticoy Operations Yard. All grab samples and composites relinquished by Bill Carey and received by Luis Lopez from RMS courier service.

### Staff

❖ Ventura County Watershed Protection District (VCWPD)

[AA] Arne Anselm

[WBC] Bill Carey

[KH] Kelly Hahs

[BS] Bram Sercu

❖ Americorps – Watershed Stewards Project (WSP)

[SM] Sarah McGinnis

[TS] Tom Sandford

❖ Ventura Regional Sanitation District (VRSD)

[JS] Jason Siegert



## **NPDES 2012/2013 Event #2 (Wet)**

[DC] Daniel Calderon

❖ JR's Environmental Services (JRE)

[TL] Tommy Liddell

# NPDES 2012/13 Water Quality Monitoring Event #3 (Wet), February 19-20, 2013 Summary

**Notes:** The 2012/13 wet season has been unusually dry. The forecast for this storm differed depending on forecaster with the national weather service (NWS) predicting 0.33 – 0.66” and Alan Fox predicting 0.10 – 0.20”, with possibly 0.30” for south county. Since it is approaching the end of the wet season and we have only sampled one rain event for most sites, we sampled this storm. Rainfall was below the required threshold for analysis (0.15”) at several sites; however samples were analyzed due to concerns that there would be insufficient qualifying rain events before April 15<sup>th</sup>.

**Forecasted Rainfall Amounts:** All sites 0.1” – 0.6” rainfall

**Actual Rainfall Amounts:** ~ 0” – 0.24” across the county

**Sampling Durations (to nearest 0.5 hours):**

ME-CC = 11.5 hrs.	ME-SCR = 11.0 hrs.	
MO-CAM = 0.5 hrs.	MO-FIL = 11 hrs.	MO-HUE = 21.0 hrs.
MO-OXN = 2.5 hrs.	MO-SIM = 1.0 hrs.	MO-SPA = 1.5 hrs.
MO-THO = 2.0 hrs.	MO-VEN = 1.0 hrs.	

**Storm Control:** Bill Carey

**Sampling Crew (during storm):**

VR2/OJA/MEI/VEN/MB-1(VEN): Kelly Hahs & Abraham Miguel (VRSD)  
MPK/SIM/THO: Arne Anselm, Tom Sanford (WSP) & Sarah McGinnis (WSP)  
SCR/FIL/SPA/OXN: Tommy Liddell (JRE) & Giovanni Malagon (VRSD)  
CC/CAM/HUE: Bram Sercu & Daniel Calderon (VRSD)

**Sampling Crew (post-storm sample pickup):**

2/20/2013 (VR2/OJA/MEI): Kelly Hahs (no samples)  
2/20/2013 (VEN/OXN/HUE/CC/CAM/SCR/SPA): Kelly Hahs & Bram Sercu  
2/20/2013 (FIL/MPK/SIM/THO): Arne Anselm & Bill Carey (no samples MPK)

## NPDES ~ MASS EMISSION

### ME-CC Calleguas Creek (CSUCI Bridge)

2105: Pacing = 1,000 cf

❖ 2/18/2013 @ 12:34 PST [AA]

4230: 1.145', 7 cfs.

6712: Fridge at 59°C, turned on to middle setting. Flushed line with 2L distilled water. Pump counts 259,098. Program flow paced; pacing every 75 pulses, 96 hour max run time. Run program: “Program disabled 12:40 MO 18-FEB”. Composite lid off. Grab bottles still onsite.

❖ 02/19/2013 @ 20:12 PST [BS,DC]

4230: 1.169', 15 cfs

6712: “Program Disabled.” Bottle empty. Fridge at 6°C, turned colder.

**Grab samples:** Taken at check structure @ 20:20 PST.

<b>Field Measurements:</b>	Temperature = 14.1° C	pH = 8.08
DO (%) = 79.8	Conductivity = 1267 uS	Salinity = 0.8 ppt
DO(mg/L) = 7.37	Specific Conductance = 1601 uS	

## NPDES 2012/2013 Event #3 (Wet)

### ❖ 02/19/2013 @ 20:45 PST [WBC-remote]

2105: Sampler remotely enabled.

### ❖ 02/20/2013 @ 10:50 PST [KH,BS]

4230: 10:49 PST, 1.354', 34 cfs. Outside staff obscured by weeds.

6712: "Program flow paced is done. Errors have occurred during program." Sample 16 "No more liquid". Bottle full to top. Fridge at 4°C. Flushed line with 2 L distilled water. Pump tubing count 580,088. Turned 6712 off.

**Composite samples:** Pulled at 10:50 PST.

**Event rainfall:** Unofficial as of 3/26/2013 = 0.24".

## ME-SCR Santa Clara River (Freeman Diversion)

Swing arm intake (designed to keep the intake strainer submerged regardless of whether the diversion is open or closed). The gate was not opened during this event.

### ❖ 02/18/2013 @ 10:50 PST [KH]

4210: 0.055'

6712: Refrigerator at 2° C. Flushed line with 2L distilled water. Pump count = 287,797. Program time paced 12 hours, sample every 21 minutes. Run program: "Program disabled 10:56 MO-18-FEB." Composite bottle lid off. Grab bottles still onsite.

### ❖ 02/19/2013 @ 20:06 PST [WBC-remote]

2105: Sampler remotely enabled.

### ❖ 02/19/2013 @ 21:23 PST [TL,GM]

4210: 3.276'

6712: "Sample 6 in 18:34". Bottle ~ 2L. Fridge at 4° C.

**Grab samples:** Taken from diversion canal @ 21:45 PST.

<b>Field Measurements:</b>	Temperature = 13.6° C	pH = 8.06
DO (%) = 91	Conductivity = 1372 uS	Salinity = 0.89 ppt
DO(mg/L) = 9.4	Specific Conductance = 1752 uS	

### ❖ 02/20/2013 @ 07:00 PST [WBC-remote]

2105: Sampler remotely disabled.

### ❖ 02/20/2013 @ 11:50 PST [KH,BS]

4210: 3.285'

6712: "Program disabled." Disabled after sample 32 at 06:59. Bottle full. Fridge temp 2°C. Flushed line with 2L distilled water. Pump tubing count 485,403. Turned 6712 off.

**Composite samples:** Pulled at 11:50 PST.

**Event rainfall:** Unofficial as of 3/26/2013 = 0.12".

## ME-VR2 Ventura River (Ojai Valley Sanitary District)

2105: Pacing = 1,000 cf

### ❖ 02/18/2013 @ 14:55 PST [KH]

4230: 14:55 PST, 1.897', 2 cfs

6712: Fridge at 2°C. Flushed line with 2L distilled water. Pump count 402,198. Lid off. Program flow paced; pacing every 9 pulses. Run program: "Program disabled 15:01 MO

## NPDES 2012/2013 Event #3 (Wet)

18-FEB". Composite bottle lid off. Grab bottles still onsite. Oss = 1.910', 4230 = 1.900'. Bubbler in contact with water, communication channel has water, intake strainer submerged in main channel of river.

### ❖ 11/20/2013 @ 08:40 PST [KH]

6712: Stopped program, turned 6712 off. Insufficient flow to trigger sampler. Bottle clean, recapped lid.

**Note:** Flow was insufficient in this watershed to sample this event.

## NPDES ~ MAJOR OUTFALLS

### MO-CAM Camarillo (Camarillo Hills Drain)

#### ❖ 02/18/2013 @13:04 PST [AA]

2105: Pacing = 1,000 cf

4230: 0.030', 10 cfs (flow level too low to register at bubbler)

6712: Fridge at 2°C. Flushed line with 2L distilled water. Pump count = 101,712. Chalk line set for high water mark. Program flow paced; pacing every 2 pulses. Run program: "Program disabled 13:19 MO 18-FEB". Composite bottle lid off. Grab bottles still on site.

#### ❖ 02/19/2013 @ 18:39 PST [BS,DC]

4230: 0.029', 10 cfs

6712: "Program disabled." Bottle empty. Stopped program, changed pulses to 5 and restarted program. "Program disabled 18:38". Wait for rain.

#### ❖ 02/19/2013 @ 19:27 PST [BS,DC]

4230: 0.028', 10 cfs

6712: "Program disabled." Bottle empty. Fridge at 4° C.

**Grab samples:** Taken at 19:40 PST.

<b>Field Measurements:</b>	Temperature = 12.0°C	pH = 7.40
DO (%) = 88.2	Conductivity = 162.5 uS	Salinity = 0.1 ppt
DO(mg/L) = 9.32	Specific Conductance = 213.1 uS	

#### ❖ 02/19/2013 @ 19:34 PST [WBC-remote]

2105: Changed 2105c pacing to 400 cf for overall pacing rate of 2,000 cf.

#### ❖ 02/20/2013 @ 11:15 PST [KH,BS]

4230: 11:14 PST, 0.030', 10 cfs (flow level too low to register at bubbler)

6712: "Program disabled" after sample 27. Stopped program. Bottle ~15L. Fridge at 4°C. Flushed line with 2 L distilled water. Pump tubing count 173,969. Turned 6712 off.

**Composite samples:** Pulled 11:15 PST.

**Event rainfall:** Unofficial as of 3/26/2013 = 0.06".

### MO-FIL Fillmore (North Fillmore Drain)

#### ❖ 02/18/2013 @ 10:10 PST [AA]

4250: 2.714'

6712: Fridge at 6° C, turned 1 notch colder. Flushed line with 2L distilled water. Pump count 193,589. Program 12 hour time-paced program, sample every 20 minutes. Run program "Program disabled 10:23 MO 18-FEB". Composite bottle lid off. Grab bottles still onsite.

## **NPDES 2012/2013 Event #3 (Wet)**

### **❖ 02/19/2013 @ 20:31 PST [WBC-remote]**

2105: Sampler remotely enabled.

### **❖ 02/19/2013 @ 20:40 PST [TL,GM]**

4250: 2.847'

6712: "Sample 2 in 11:38". Bottle ~ 0.5L (strong smell of sulfur). Fridge at 3°C.

**Grab samples:** Taken at 20:55 PST.

**Field Measurements:**

Temperature = 16.0°C	pH = 7.74
DO (%) = 59	Conductivity = 1377 uS
DO(mg/L) = 5.7	Salinity = 0.84 ppt
	Specific Conductance = 1662 uS

### **❖ 02/20/2013 @ 07:41 PST [WBC-remote]**

2105: Sampler remotely disabled.

### **❖ 02/20/2013 @ 10:13 PST [WBC,AA]**

4250: 2.849'

6712: "Program disabled." Program stopped. Pump counts 336,239. Bottle full to shoulder. Flushed line with 2 L distilled water.

**Composite samples:** Pulled at 10:15 PST.

**Event rainfall:** Unofficial as of 3/26/2013 = 0.09" .

## **MO-MEI Meiners Oaks (Happy Valley Drain)**

2105: Pacing = 500 cf

### **❖ 02/18/2013 @ 14:25 PST [KH]**

4230: 14:20 PST, 0.083', 1 cfs (channel dry)

6712: Fridge at 13°C, turned fridge on. Flushed line with 2L distilled water. Pump count = 121,728. Program flow paced; pacing every 1 pulse. Run program: "Program disabled 14:25 MO 18-FEB". Composite bottle lid off. Grab bottles still onsite. Chalked line under bridge for high water mark.

### **❖ 02/20/2013 @ 08:20 PST [KH]**

6712: Stopped program, turned 6712 off. Insufficient flow to trigger sampler. Bottle clean, recapped lid.

**Note:** Flow was insufficient in this watershed to sample this event.

## **MO-MPK Moorpark (Gabbert Canyon Drain)**

2105: Pacing = 500 cf

### **❖ 02/18/2013 @ 10:51 PST [AA]**

4230: 0.081', 0.2 cfs

6712: Fridge at 4° C. Flushed line with 2L distilled water. Pump count = 71,310. Program flow paced; pacing every 1 pulse. Run program: "Program disabled 10:57 MO 18-FEB". Composite bottle lid off. Grab bottles still onsite.

### **❖ 02/19/2013 @ 19:40 PST [AA,TS,SM]**

4230: 0.078', 0.2 cfs

6712: Fridge at 2° C. "Program disabled." Bottle empty.

## NPDES 2012/2013 Event #3 (Wet)

Notes: Collected grab samples but flow was insufficient to trigger sampler so grab samples were discarded. No flow from upper or lower RCP from Edison property to have analyzed for pentachlorophenol (EPA 515.3).

### ❖ 02/20/2013 [AA,WBC]

6712: "Program disabled." Bottle empty. Recapped bottle.

**Note:** Flow was insufficient to sample this event at this site.

### MO-OJA Ojai (Fox Canyon Barranca)

2105: Pacing = 500 cf

### ❖ 02/18/2013 @ 13:45 PST [KH]

4230: 13:41 PST, -0.002', 0 cfs

6712: Fridge at 0°C. Flushed line with 2L distilled water. Pump count = 165,428.

Program flow paced; pacing every 1 pulse. Run program: "Program disabled 13:45 MO 18-FEB". Composite bottle lid off. Grab bottles onsite.

Notes: Prepared chalk line under bridge for high water mark and moved palm fronds in channel to below sampler intake.

### ❖ 02/19/2013 @ 21:10 PST [KH]

Notes: Attempted to collect grab samples but flow was too low to fill bottles.

### ❖ 02/20/2013 @ 08:05 PST [KH]

6712: Stopped program, turned 6712 off. Insufficient flow to trigger sampler. Bottle clean, recapped lid.

**Note:** Flow was insufficient in this watershed to sample this event.

### MO-OXN Oxnard (El Rio Drain)

2105: Pacing = 1,000 cf

### ❖ 02/18/2013 @ 12:10 PST [KH]

4230: 12:03 PST, 0.108', 0.2 cfs

6712: Fridge at 2°C. Flushed line with 2L distilled water. Program flow paced; pacing every 2 pulses. Run program: "Program disabled 12:08 MO 18-FEB". Composite bottle lid off. Grab bottles still onsite. Chalked line under bridge for high water mark.

### ❖ 02/19/2013 @ 19:11 PST [TL,GM]

4230: 19:09, 0.110' [oss <0.1'], 0.3 cfs

6712: Fridge at 4°C. "Program disabled." Bottle empty.

**Grab samples:** Taken at 19:30 PST.

<b>Field Measurements:</b>	Temperature = 12.5°C	pH = 9.06
DO (%) = 112	Conductivity = 813 uS	Salinity = 0.53 ppt
DO(mg/L) = 11.8	Specific Conductance = 1073 uS	

### ❖ 02/20/2013 @ 09:40 PST [KH,BS]

4230: 09:40 PST, 0.108', 0.2 cfs

6712: Fridge @ 4°C. "Program: Flow paced is done." Bottle full. Flushed line with 2 L distilled water. Pump tubing count 198,714. High water mark ~ 0.6'.

**Composite samples:** Pulled at 09:40 PST.

**Event rainfall:** Unofficial as of 3/26/2013 = 0.07".

## NPDES 2012/2013 Event #3 (Wet)

### MO-HUE Port Hueneme (Hueneme Drain)

#### ❖ 02/18/2013 @ 12:45 PST [KH]

6712: Fridge at 2°C. Flushed line with 2L distilled water. Pump count = 197,818. Programmed time paced 12 hour program, 21 min/sample. Run program "Program disabled 12:48 MO-18-FEB". Composite bottle lid off. Grab bottles still onsite.

#### ❖ 02/18/2013 [WBC-remote]

2105: 2105c set to enable (latched) with 0.06" rain.

#### ❖ 02/19/2013 @ 10:07 PST [WBC-remote]

2105: 2105c set to enable (latched) with 0.1" rain. Several samples (11 of 35) were taken due to shower event that triggered sampler at 0630 hrs.

#### ❖ 02/19/2013 @ 19:13 PST [WBC-remote]

2105: Sampler remotely enabled.

#### ❖ 02/19/2013 @ 20:55 PST [BS,DC]

6712: Fridge at 4°C. "Sample 18 in 00:19:20". Bottle ½ full.

**Grab samples:** Taken at 21:10 PST

<b>Field Measurements:</b>	Temperature = 14.1° C	pH = 7.62
DO (%) = 40.1	Conductivity = 4100 uS	Salinity = 3.2 ppt
DO(mg/L) = 3.93	Specific Conductance = 5930 uS	

#### ❖ 02/20/2013 @ 10:25 PST [KH,BS]

6712: Fridge at 4° C. "Program time paced is done." Bottle full. Flushed line with 2 L distilled water. Pump tubing count 351,269.

**Composite samples:** Pulled at 10:25 PST.

**Event rainfall:** Unofficial as of 3/26/2013 = 0.18".

### MO-SIM Simi Valley (Bus Canyon Drain)

2105: Pacing = 1,000 cf

#### ❖ 02/18/2013 @ 11:20 PST [AA]

4230: 0.137', 2 cfs

6712: Fridge at 4° C. Flushed line with 2L distilled water. Pump count = 63,945. Program flow paced; pacing every 2 pulses. Run program: "Program disabled 11:28 MO 18-FEB". Removed bottle lid. Grab bottles still onsite.

Notes: Re-chalked for high water mark.

#### ❖ 02/19/2013 @ 20:41 PST [AA,SM,TS]

4230: 0.472', 29 cfs, [oss 0.45]

6712: "Sample 23 after 2 pulses". Bottle ~ ½ full. Fridge at 2°C.

**Grab samples:** Taken at 20:41 PST.

<b>Field Measurements:</b>	Temperature = 11.5°C	pH = 7.41
DO (%) = 89.3	Conductivity = 412.7 uS	Salinity = 0.3 ppt
DO(mg/L) = 9.74	Specific Conductance = 557 uS	

#### ❖ 02/20/2013 @ 11:08 PST [AA,WBC]

4230: 0.139', 2 cfs

## NPDES 2012/2013 Event #3 (Wet)

6712: "Program flow paced is done." Fridge at 4° C. Bottle full. Pump tubing count 135,115. Flushed line with 2 L distilled water.

**Composite samples:** Pulled at 11:10 PST.

**Event rainfall:** Unofficial as of 3/26/2013 = 0.15".

### MO-SPA Santa Paula (11<sup>th</sup> Street Drain)

2105: Pacing = 1,000 cf

#### ❖ 12/18/2013 @ 12:30 PST [WBC]

4250: 0.007', 0.00 cfs, 0.06 ft/s

6712: Fridge at 3°C. Pump count = 188,535. Flushed line with 2L distilled water.

Program flow paced; pacing every 1 pulse. Run program: "Program disabled".

Composite bottle lid off. Grab bottles still onsite. Strainer and AV sensor look good.

#### ❖ 02/19/2013 @ 20:05 PST [TL,GM]

4250: 0.293', 2.15 cfs, 5.20 ft/s

6712: "Sample 5 after 1 pulse". Bottle ~ 2L. Fridge at 3°C.

**Grab samples:** Taken at 20:15 PST.

<b>Field Measurements:</b>	Temperature = 12.3°C	pH = 7.68
DO (%) = 103	Conductivity = 149.8 uS	Salinity = 0.1 ppt
DO(mg/L) = 10.9	Specific Conductance = 223.1 uS	

#### ❖ 02/20/2013 @ 12:25 PST [KH,BS]

4250: 12:18, 0.019', 0 cfs

6712: "Program disabled." Last sample #10 at 21:17. Bottle ~ 5L (priority list will be initiated). Fridge at 0° C. Flushed line with 2 L distilled water. Pump tubing count 240,686. Turned 6712 off.

**Composite samples:** Pulled at 12:25 PST.

**Event rainfall:** Unofficial as of 3/26/2013 = 0.08".

### MO-THO Thousand Oaks (Hill Canyon WWTP)

Pacing = 7,500 cf through the 4230

#### ❖ 02/18/2013 @ 11:55 PST [AA]

4230: 2.246', 2 cfs [oss 2.125']

6712: Fridge at 2°C. Flushed line with 2L distilled water. Pump count = 208,953.

Program flow paced; pacing every 1 pulse. Run program: "Program disabled 12:10 MO 18-FEB". Composite bottle lid off. Grab bottles still onsite.

#### ❖ 02/19/2013 @ 21:43 PST [AA,SM,TS]

4230: 3.192', 49 cfs [oss 3.03']

6712: "Sample 22 after 1 pulse." Bottle half full. Fridge at 4°C.

**Grab samples:** Taken at 21:40 PST.

<b>Field Measurements:</b>	Temperature = 11.3°C	pH = 8.42
DO (%) = 90.1	Conductivity = 1079 uS	Salinity = 0.7 ppt
DO(mg/L) = 9.83	Specific Conductance = 1457 uS	

#### ❖ 02/20/2013 @ 11:40 PST [AA,WBC]

4230: 2.245', 2 cfs



## NPDES 2012/2013 Event #3 (Wet)

6712: "Program: Flow paced is done". Pump count = 368,350. Fridge at 2°C. Bottle full. Flushed line with 2 L distilled water. OSS HWM ~ 3.7'. Telemetered peak = 3.55'

**Composite samples:** Pulled at 11:40 PST.

**Event rainfall:** Unofficial as of 3/26/2013 = 0.21".

### MO-VEN Ventura (Moon Ditch)

#### ❖ 02/18/2013 @ 11:40 PST [KH]

2105: Pacing = 1,000 cf

4230: 11:43, 0.040', 1 cfs

6712: Fridge at 4°C. Flushed line with 2L distilled water. Pump count = 79,922.

Program flow paced; pacing every 2 pulses. Run program: "Program disabled 11:45 MO-18-FEB." Removed composite bottle lid. Grab bottles still onsite.

#### ❖ 02/19/2013 @ 18:31 PST [KH,AM]

4230: 18:28 PST, 0.042', 1 cfs

6712: "Program disabled." Stopped program, changed pacing to 4 pulses. "Program disabled 18:29 TU 19-FEB."

#### ❖ 02/19/2013 @ 19:18 PST [WBC-remote]

2105: Reduced pacing to 500 cf (500 cf x 4 pulses = 2,000 cf pacing overall)

#### ❖ 02/19/2013 @ 19:40 PST [KH,AM]

**Grab samples:** Taken at 19:40 PST. Field blank samples taken at 19:40 PST.

<b>Field Measurements:</b>	Temperature = 12.2°C	pH = 7.10
DO (%) = 84.4	Conductivity = 128.5 uS	Salinity = 0.1 ppt
DO(mg/L) = 8.85	Specific Conductance = 170.4 uS	

#### ❖ 02/20/2013 @ 09:20 PST [KH,BS]

4230: 09:22 PST, 0.042', 1 cfs

6712: Fridge @ 2°C. Bottle full to shoulder. "Program disabled. Errors have occurred." Stopped program. "Sample 31 No more liquid." Flushed line with 2 L distilled water. Pump tubing count 165,469. Turned 6712 off.

**Composite samples:** Pulled at 09:25 PST.

**Event rainfall:** Unofficial as of 3/26/2013 = 0.07".

### Sample Tracking

❖ Bacteria samples to VCHCA (Susan Benavides):

02/19/13 @ 21:40 PST (CC/CAM/HUE): Bram Sercu & Daniel Calderon

02/19/13 @ 21:40 PST (SCR/SPA/FIL/OXN): Tommy Liddell & Giovanni Malagon

02/19/13 @ 22:25 PST (VEN?MB-1): Kelly Hahs & Abraham Miguel

02/19/13 @ 22:28 PST (SIM/MPK/THO): Arne Anselm, Sarah McGinnis, Tom Sanford

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

02/20/13 @ 15:25 PST: Government Center. All grab samples and composites relinquished by Kelly Hahs and received by Abraham from Reliable Messenger Service (RMS).

### Staff

## **NPDES 2012/2013 Event #3 (Wet)**

### ❖ Ventura County Watershed Protection District (VCWPD)

[AA] Arne Anselm

[WBC] Bill Carey

[KH] Kelly Hahs

[BS] Bram Sercu

### ❖ Americorps – Watershed Stewards Project (WSP)

[SM] Sarah McGinnis

[TS] Tom Sandford

### ❖ Ventura Regional Sanitation District (VRSD)

[AM] Abraham Miguel

[DC] Daniel Calderon

[GM] Giovanni Malagon

### ❖ JR's Environmental Services (JRE)

[TL] Tommy Liddell

# NPDES 2012/13 Water Quality Monitoring Event #4 (Wet), March 7-8, 2013 Summary

**Notes:** The forecast for this storm differed depending on forecaster with the national weather service (NWS) predicting 0.25 – 0.75” and Alan Fox predicting 0.10 – 0.75”. Rainfall was higher than forecasted. All sites were successfully sampled.

**Forecasted Rainfall Amounts:** 0.1” – 0.75” rainfall

**Actual Rainfall Amounts:** ~ 0.5” – 1” across the county

**Sampling Durations (to nearest 0.5 hours):**

ME-CC = 13.5 hrs.	ME-SCR = 13.5 hrs.	ME-VR2 = 10.5 hrs.
MO-CAM = 1.5 hrs.	MO-FIL = 9.5 hrs.	MO-HUE = 12.0 hrs.
MO-MEI = 0.5 hrs.	MO-MPK = 2.0 hrs.	MO-OJA = 1.0 hrs.
MO-OXN = 3.0 hrs.	MO-SIM = 2.5 hrs.	MO-SPA = 2.5 hrs.
MO-THO = 4.0 hrs.	MO-VEN = 2.0 hrs.	

**Storm Control:** Bill Carey

**Sampling Crew (during storm):**

VR2/OJA/MEI/VEN/HUE: Kelly Hahs & Bill Wooster (GCE)

CC/SCR/CAM/THO/OXN: Arne Anselm, Tom Sanford (WSP) & Sarah McGinnis (WSP)

FIL/SPA/IM/MPK: Tommy Liddell (JRE) & Manny Roldan (VRSD)

**Sampling Crew (post-storm sample pickup):**

3/8/2013 (SCR/CAM/OXN): Kelly Hahs & Dave Panaro

3/8/2013 (FIL/SIM/MPK): Bill Carey & Bill Wooster (GCE)

3/8/2013 (VR2/OJA/MEI/VEN): Arne Anselm & Tommy Liddell (JRE)

3/8/2013 (SPA/HUE/THO): Tom Sanford (WSP) & Sarah McGinnis (WSP)

3/9/2013 (CC): Bill Carey

## NPDES ~ MASS EMISSION

### ME-CC Calleguas Creek (CSUCI Bridge)

2105: Pacing = 1,000 cf

❖ 3/7/2013 @ 12:25 PST [KH]

4230: 12:20, 1.148', 9 cfs.

6712: Fridge at 6°C, turned 2 notches colder. Program flow paced; pacing every 500 pulses, 96 hour max run time. Run program: “Program disabled 12:25 TH 7-MAR”. Installed labeled composite lid off. Left grab bottles onsite.

❖ 3/7/2013 @ 23:27 PST [AA,SM,TS]

4230: 1.166', 14 cfs

6712: “Program Disabled.” Bottle empty. Fridge at 3.5°C.

**Grab samples:** Taken at check structure @ 23:27 PST.

<b>Field Measurements:</b>	Temperature = 15.7°C	pH = 7.92
DO (%) = 70.7	Conductivity = 1250 uS	Salinity = 0.7 ppt
DO(mg/L) = 6.69	Specific Conductance = 1461 uS	

❖ 3/8/2013 @ 16:00 PST [WBC-remote]

2105: Hydrograph approaching base levels, remotely disabled sampler.

## NPDES 2012/2013 Event #4 (Wet)

### ❖ 3/9/2013 @ 08:05 PST [WBC]

4230: 1.224', 17 cfs.

6712: "Program disabled. Errors have occurred during program." Samples 1 through 4 "No More liquid." Composite is full after 21 samples. Fridge at 4°C. Flushed line with 2 L distilled water. Pump tubing count 780,876. Turned fridge off, pulled fuse and left lid open.

**Composite samples:** Pulled at 08:05 PST.

### ME-SCR Santa Clara River (Freeman Diversion)

Swing arm intake (designed to keep the intake strainer submerged regardless of whether the diversion is open or closed). The gate was not opened during this event.

### ❖ 3/7/2013 @ 14:00 PST [KH]

4210: 13:51, 3.245'

6712: Refrigerator at 1°C. Flushed line with 2L distilled water. Program time paced 18 hours, sample every 31 minutes. Run program: "Program disabled 14:05 TH 7-MAR." Installed labeled composite bottle lid off. Left grab bottles onsite.

### ❖ 3/8/2013 @ 00:48 PST [AA,SM,TS]

4210: 3.297'

6712: "Sample 9 in 00:24". Bottle volume good (~2.5"). Fridge at 3°C.

**Grab samples:** Taken from diversion canal @ 00:47 PST.

<b>Field Measurements:</b>	Temperature = 14.5°C	pH = 8.06
DO (%) = 59.2	Conductivity = 1276 uS	Salinity = 0.8 ppt
DO(mg/L) = 6.04	Specific Conductance = 1592 uS	

### ❖ 3/8/2013 @ 10:45 PST [KH,DP]

4210: 3.247'

6712: "Sample 27 in 02:00." Waited for sample. Very sediment laden sample. Stopped program. Bottle ~ 13 L. Fridge temp 2°C. Flushed line with 2L distilled water. Pump tubing count 655,940. Turned 6712 off.

**Composite samples:** Pulled at 10:45 PST.

### ME-VR2 Ventura River (Ojai Valley Sanitary District)

2105: Pacing = 1,000 cf

### ❖ 3/7/2013 @ 11:00 PST [KH]

4230: 10:53 PST, 2.013', 4 cfs

6712: Fridge at 3°C. Flushed line with 2L distilled water. Lid off bottle. Program flow paced; pacing every 15 pulses. Run program: "Program disabled 10:58 TH 7-MAR". Grab bottles still onsite. Oss = 2.032. Bubbler in contact with water, communication channel has water, intake strainer submerged in main channel of river.

### ❖ 3/8/2013 @ 02:11 PST [KH,BW]

4230: 02:11 PST, 2.233', 10 cfs

6712: Bottle ~3.5 L full. "Sample 7 after 14 pulses." Fridge at 4°C.

## NPDES 2012/2013 Event #4 (Wet)

**Grab samples:** Grab samples except oil and grease and meter measurements were taken from main channel @ 02:20 PST. Meters and oil and grease bottles were dropped. Bottles broken and meter not working so were not sampled during this visit.

### ❖ 3/8/2013 @ 09:45 PST [AA,TL]

4230: 09:45 PST, 2.101', 6 cfs

6712: "Sample 20 after 7 pulses." Bottle half full. "Warning: replace pump tubing." Fridge at 3°C. Flushed line with 2 L distilled water. Pump counts 563,393.

**Grab samples:** Oil & Grease and field meter measurements taken from main channel @ 09:45 PST.

<b>Field Measurements:</b>	Temperature = 13.2°C	pH = 7.93
DO (%) = 69.9	Conductivity = 891 uS	Salinity = 0.6 ppt
DO(mg/L) = 7.2	Specific Conductance = 1152 uS	

**Composite samples:** Pulled at 09:45 PST.

## NPDES ~ MAJOR OUTFALLS

### MO-CAM Camarillo (Camarillo Hills Drain)

#### ❖ 3/7/2013 @13:00 PST [KH]

2105: Pacing = 400 cf

4230: 12:58, 0.031', 10 cfs (flow level too low to register at bubbler)

6712: Fridge at 4°C. Flushed line with 2L distilled water. Program flow paced; pacing every 15 pulses. Run program: "Program disabled 13:04 TH 7-MAR". Installed labeled composite bottle, lid off. Grab bottles left on site.

#### ❖ 3/7/2013 @ 21:45 PST [AA,SM,TS]

4230: 0.053', 12 cfs [oss 0.05']

6712: "Program disabled." Bottle empty. Fridge at 4°C.

**Grab samples:** Taken at 21:45 PST.

<b>Field Measurements:</b>	Temperature = 14.3°C	pH = 7.52
DO (%) = 86.5	Conductivity = 86.0 uS	Salinity = 0.1 ppt
DO(mg/L) = 8.81	Specific Conductance = 100.0 uS	

#### ❖ 3/8/2013 @ 10:10 PST [KH,DP]

4230: 10:06 PST, 0.029', 10 cfs (flow level too low to register at bubbler)

6712: "Program is done". Bottle full. Fridge at 1°C. Flushed line with 2 L distilled water. Pump tubing count 265,558. Turned 6712 off.

**Composite samples:** Pulled 10:10 PST.

### MO-FIL Fillmore (North Fillmore Drain)

#### ❖ 3/7/2013 @ 14:25 PST [AA]

4250: 2.624'

6712: Fridge at 4°C. Flushed line with 2L distilled water. Pump count 345,739. Program 18 hour time-paced program, sample every 30 minutes. Run program "Program disabled". Installed labeled composite bottle, lid off. Grab bottles left onsite.

#### ❖ 3/7/2013 @ 23:27 PST [WBC-remote]

## **NPDES 2012/2013 Event #4 (Wet)**

2105: Sampler did not enable at the programmed threshold of 3.10'. Forced enable through remote connection.

### **❖ 3/7/2013 @ 23:45 PST [TL,MR]**

4250: 3.464'

6712: "Sample 2 in 12:21". Bottle ~ 0.5L. Fridge at 4°C.

**Grab samples:** Taken at 23:55 PST.

<b>Field Measurements:</b>	Temperature = 15.0°C	pH = 7.9
DO (%) = 68.4	Conductivity = 486 uS	Salinity = 0.3 ppt
DO(mg/L) = 6.47	Specific Conductance = 602 uS	

### **❖ 3/8/2013 @ 9:41 PST [WBC,BW]**

4250: 2.955'

6712: "Sample 22 in 10:00." Bottle ~ 10L. Fridge at 4°C. Pump counts 434,434.

Flushed line with 2 L distilled water. Turned 6712 off.

**Composite samples:** Pulled at 09:41 PST.

## **MO-MEI Meiners Oaks (Happy Valley Drain)**

2105: Pacing = 500 cf

### **❖ 3/7/2013 @ 10:15 PST [KH]**

4230: 10:10 PST, 0.085', 1 cfs (channel dry)

6712: Fridge at 10°C, turned fridge on to just over half way mark. Flushed line with 2L distilled water. Program flow paced; pacing every 1 pulse. Run program: "Program disabled 10:16 TH 7-MAR". Composite bottle lid off. Grab bottles still onsite.

### **❖ 3/8/2013 @ 00:15 PST [KH,BW]**

4230: 00:11, 0.261', 13 cfs

6712: Continuously pumping successive samples while on site so sample number not displayed. Fridge at 4°C.

**Grab samples:** Taken at 00:25 PST.

<b>Field Measurements:</b>	Temperature = 10.4°C	pH = 7.64
DO (%) = 97.4	Conductivity = 53.3 uS	Salinity = 0.0 ppt
DO(mg/L) = 10.1	Specific Conductance = 73.3 uS	

### **❖ 3/8/2013 @ 10:44 PST [AA,TL]**

4230: 0.028', 1 cfs

6712: "Program is done". Bottle full. Fridge at 3°C. Flushed line with 2 L distilled water. Pump tubing count 205,028. Turned 6712 off. Check dessicant.

**Composite samples:** Pulled 10:44 PST.

## **MO-MPK Moorpark (Gabbert Canyon Drain)**

2105: Pacing = 500 cf

### **❖ 3/7/2013 @ 15:05 PST [AA]**

4230: 0.078', 0.2 cfs

6712: Fridge at 2°C. Flushed line with 2L distilled water. Pump count = 74,849.

Program flow paced; pacing every 2 pulses. Run program: "Program disabled".

Composite bottle lid off. Grab bottles still onsite.

## NPDES 2012/2013 Event #4 (Wet)

### ❖ 3/8/2013 @ 01:25 PST [TL, MR]

4230: 0.321', 8 cfs

6712: Fridge at 4°C. "Sample 7 after 1 pulse." Bottle ~3L.

**Grab samples:** Taken at 01:35 PST.

**Field Measurements:** Temperature = 11.0°C pH = 7.90  
DO (%) = 84.1 Conductivity = 86.2 uS Salinity = 0.1 ppt  
DO(mg/L) = 9.21 Specific Conductance = 112.0 uS

### ❖ 3/8/2013 @ 10:52 PST [WBC,BW]

4230: 0.080', 0.2 cfs

6712: "Program is done". Bottle full. Fridge at 2°C. Flushed line with 2 L distilled water. Pump tubing count 160,122.

**Composite samples:** Pulled 10:52 PST.

### MO-OJA Ojai (Fox Canyon Barranca)

2105: Pacing = 500 cf

### ❖ 3/7/2013 @ 09:50 PST [KH]

4230: 09:48 PST, -0.002', 0 cfs

6712: Fridge at 1°C. Flushed line with 2L distilled water. Program flow paced; pacing every 1 pulse. Run program: "Program disabled 09:52 TH 7-MAR". Composite bottle lid off. Grab bottles onsite. Chalk line still intact for high water mark from setup for last event.

### ❖ 3/8/2013 @ 23:40 PST [KH,BW]

4230: 23:35 PST, 0.060', 3 cfs

**Note:** oss read by BW ~0.4' at 23:55. Flowlink shows meter level reading 0.14' at 23:55 so there may be operator error/backwater effects/hydrological issues of flow measurement on a curved channel involved in the discrepancy. Follow up will be conducted during daylight rain events.]

6712: Fridge at 2°C. Sample 3 taken while on site. Bottle ~1.5L."Sample 4 after 1 pulse."

**Grab samples:** Taken at 23:45 PST.

**Field Measurements:** Temperature = 11.1°C pH = 8.00  
DO (%) = 94.3 Conductivity = 61.6 uS Salinity = 0 ppt  
DO(mg/L) = 10.30 Specific Conductance = 78.1 uS

### ❖ 3/8/2013 @ 10:26 PST [AA,TL]

4230: -0.004', 0 cfs

6712: "Program is done". Bottle full. Pump tubing count 160,122. Fridge at 4°C. Flushed line with 2 L distilled water.

**Composite samples:** Pulled 10:26 PST.

### MO-OXN Oxnard (El Rio Drain)

2105: Pacing = 1,000 cf

### ❖ 3/7/2013 @ 08:30 PST [KH]

4230: 08:27 PST, 0.110', 0.2 cfs

## **NPDES 2012/2013 Event #4 (Wet)**

6712: Fridge at 4°C. Flushed line with 2L distilled water. Program flow paced; pacing every 2 pulses. Run program: "Program disabled 08:33 TH 7-MAR". Installed labeled composite bottle, lid off. Grab bottles left onsite. Chalked line under bridge for high water mark.

### **❖ 3/7/2013 @ 21:03 PST [AA,SM,TS]**

4230: 0.470' [oss 0.45'], 5.6 cfs

6712: Fridge at 4°C. "Sample 8 after 1 pulse." Bottle half full.

**Grab samples:** Taken at 21:03 PST.

**Field Measurements:**

Temperature = 14.8°C	pH = 7.55
DO (%) = 67.4	Conductivity = 330.0 uS
DO(mg/L) = 6.77	Salinity = 0.2 ppt
	Specific Conductance = 420.5 uS

### **❖ 3/8/2013 @ 09:40 PST [KH,DP]**

4230: 09:34 PST, 0.182', 0.9 cfs

6712: Fridge @ 2°C. "Program: Flow paced is done." Bottle full. Flushed line with 2 L distilled water. Pump tubing count 291,571. Turned 6712 off. High water mark ~ 0.9' (2.26' in Flowlink).

**Composite samples:** Pulled at 09:40 PST.

## **MO-HUE Port Hueneme (Hueneme Drain)**

### **❖ 3/7/2013 @ 11:55 PST [KH]**

6712: Fridge at 3°C. Flushed line with 2L distilled water. Programmed time paced 12 hour program, 21 min/sample. Run program "Program disabled 11:55 TH 7-MAR". Installed labeled composite bottle, lid off. Grab bottles left onsite.

### **❖ 3/7/2013 [WBC-remote]**

2105: 2105c set to enable (latched) with 0.06" rain.

### **❖ 3/7/2013 @ 10:15 PST [KH,BW]**

6712: Fridge at 4°C. "Sample 8 in 00:06". Bottle ~ 3.5 L.

**Grab samples:** Taken at 22:20 PST

**Field Measurements:**

Temperature = 16.7°C	pH = 7.76
DO (%) = 106.9	Conductivity = 6570 uS
DO(mg/L) = 10.10	Salinity = 4.4 ppt
	Specific Conductance = 7870 uS

### **❖ 3/8/2013 @ 11:18 PST [SM,TS]**

6712: Fridge at 3°C. "Program time paced is done." Bottle 90% full. Pump tubing count 504,827. Flushed line with 2 L distilled water.

**Composite samples:** Pulled at 11:18 PST.

## **MO-SIM Simi Valley (Bus Canyon Drain)**

2105: Pacing = 1,000 cf

### **❖ 3/7/2013 @ 15:40 PST [AA]**

4230: 0.141', 2 cfs

6712: Fridge at -2°C, turned warmer. Flushed line with 2L distilled water. Pump count = 142,048. Program flow paced; pacing every 8 pulses. Run program: "Program disabled". Installed labeled composite bottle, lid off. Grab bottles left onsite.



## NPDES 2012/2013 Event #4 (Wet)

### ❖ 3/8/2013 @ 00:40 PST [TL,MR]

4230: 0.347', 16 cfs,

6712: "Sample 7 after 5 pulses". Bottle ~ 3 L. Fridge at 7°C.

**Grab samples:** Taken at 00:50 PST.

**Field Measurements:** Temperature = 12.7°C pH = 7.6  
DO (%) = 90.1 Conductivity = 306.3 uS Salinity = 0.2 ppt  
DO(mg/L) = 9.60 Specific Conductance = 400.8 uS

### ❖ 3/8/2013 @ 10:26 PST [WBC,BW]

4230: 0.174', 3 cfs

6712: "Program flow paced is done." Fridge at 2°C. Bottle full. Pump tubing count 213,080. Flushed line with 2 L distilled water.

**Composite samples:** Pulled at 10:26 PST.

### MO-SPA Santa Paula (11<sup>th</sup> Street Drain)

2105: Pacing = 1,000 cf

### ❖ 3/7/2013 @ 13:15 PST [AA]

4250: 0.005', 0.00 cfs

6712: Fridge at 0°C. Flushed line with 2L distilled water. Pump count = 244,054. Program flow paced; pacing every 1 pulse. Run program: "Program disabled". Installed composite bottle, lid off. Grab bottles left onsite.

### ❖ 3/7/2013 @ 22:58 PST [TL,MR]

4250: 0.543', 7.18 ft/s, 7.62 cfs

6712: "Sample 31 after 1 pulses". Bottle ~ 18 L. Fridge at -1°C.

**Grab samples:** Taken at 23:15 PST.

**Field Measurements:** Temperature = 14.8°C pH = 7.24  
DO (%) = 89.3 Conductivity = 51.7 uS Salinity = 0.0 ppt  
DO(mg/L) = 9.41 Specific Conductance = 72.7 uS

### ❖ 3/8/2013 @ 09:17 PST [SM,TS]

4250: 12:18, 0.019', 0 cfs

6712: "Program flow paced is done." Bottle ~ 90% full. Fridge at 4°C. Flushed line with 2 L distilled water. Pump tubing count 396,873. Turned 6712 off.

**Composite samples:** Pulled at 09:17 PST.

### MO-THO Thousand Oaks (Hill Canyon WWTP)

Pacing = 20,000 cf through the 4230

### ❖ 3/7/2013 @ 16:15 PST [AA]

4230: 2.064', 1 cfs

6712: Fridge at 2°C. Flushed line with 2L distilled water. Pump count = 375,617. Program flow paced; pacing every 1 pulse. Run program: "Program disabled". Installed labeled composite bottle, lid off. Grab bottles left onsite.

### ❖ 3/7/2013 @ 22:27 PST [AA,SM,TS]

4230: 2.124', 1 cfs

6712: "Program disabled." Bottle empty. Fridge at 4.5°C.

## NPDES 2012/2013 Event #4 (Wet)

**Grab samples:** Taken at 22:27 PST.

**Field Measurements:**      Temperature = 12.2°C      pH = 8.45  
DO (%) = 64.5      Conductivity = 1343 uS      Salinity = 0.9 ppt  
DO(mg/L) = 6.89      Specific Conductance = 1775 uS

### ❖ 3/8/2013 @ 10:18 PST [TS,SM]

4230: 2.191', 2 cfs

6712: "Program: Flow paced is done". Pump count = 534,414. Fridge at 4°C. Bottle full. Flushed line with 2 L distilled water.

**Composite samples:** Pulled at 10:18 PST.

## MO-VEN Ventura (Moon Ditch)

### ❖ 3/7/2013 @ 09:00 PST [KH]

2105: Pacing = 500 cf

4230: 09:08, 0.040', 1 cfs

6712: Fridge at 1°C. Flushed line with 2L distilled water. Program flow paced; pacing every 4 pulses. Run program: "Program disabled 09:09 TH 7-MAR." Installed labeled composite bottle, lid off. Grab bottles left onsite.

### ❖ 3/7/2013 @ 21:35 PST [KH,BW]

4230: 21:23 PST, 0.205', 7 cfs

6712: Sample 31 taken while on site. Bottle full. Stopped program so bottle would not overflow. Fridge at 1°C.

**Grab samples:** Taken at 21:35 PST.

**Field Measurements:**      Temperature = 13.9°C      pH = 7.77  
DO (%) = 82.0      Conductivity = 239.0 uS      Salinity = 0.1 ppt  
DO(mg/L) = 8.35      Specific Conductance = 302.8 uS

### ❖ 3/8/2013 @ 11:33 PST [AA,TL]

4230: 11:33 PST, 0.045', 1 cfs

6712: Fridge @ 0°C. Bottle full. "Program stopped: Errors have occurred." Pump tubing count 254,939. Flushed line with 2 L distilled water.

**Composite samples:** Pulled at 11:33 PST.

## Sample Tracking

❖ Bacteria samples to VCHCA (Susan Benavides):

3/8/13 @ 03:25 PST (CC/SCR/VR2/CAM/OJA/MEI/VEN/THO/OXN/HUE): Kelly Hahs

3/8/13 @ 02:20 PST (SPA/FIL/SIM/MPK): Tommy Liddell & Manny Roldan

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

3/8/13 @ 10:35 PST: All grabs except VR2 Oil & Grease. Relinquished at Saticoy Operations Yard (SOY) by Jason Burke and received by Hector Sanchez.

3/8/13 @ 14:00 PST: VR2 Oil & Grease grab and all composites except CC. Relinquished at SOY by Bill Carey and received by Abraham Levy (Reliable Messenger Service).

3/9/13 @ 09:41 PST: CC composite. Relinquished at SOY by Bill Carey and received by Daniel Sandoval (Reliable Messenger Service).

## **NPDES 2012/2013 Event #4 (Wet)**

### **Staff**

❖ Ventura County Watershed Protection District (VCWPD)

[AA] Arne Anselm

[WBC] Bill Carey

[KH] Kelly Hahs

[DP] Dave Panaro

❖ Americorps – Watershed Stewards Project (WSP)

[SM] Sarah McGinnis

[TS] Tom Sandford

❖ Ventura Regional Sanitation District (VRSD)

[MR] Manny Roldan

❖ JR's Environmental Services (JRE)

[TL] Tommy Liddell

❖ Gold Coast Environmental Services (GCE)

[BW] Bill Wooster

# **NPDES 2012/13 Water Quality Monitoring Event #5 (Dry) Summary: April 22-23 & 29-30, May 22-23, 2013**

## **Sampling Durations (to nearest 0.5 hours):**

ME-CC = 23.0 hrs.	ME-SCR = 23.0 hrs.	ME-VR2 = 23.0 hrs.
MO-CAM = 23.0 hrs.	MO-FIL = 23.0 hrs.	MO-HUE = 23.0 hrs.
MO-MEI = DRY.	MO-MPK = DRY.	MO-OJA = 23.0 hrs.
MO-OXN = 17.0 hrs.	MO-SIM = 23.0 hrs.	MO-SPA = DRY.
MO-THO = 23.0 hrs.	MO-VEN = 24.0 hrs.	

**Sampling Crew (April 22-23 and 29-30):** Kelly Hahs, Bill Carey

**Sampling Crew (May 22-23):** Bill Carey, Bram Sercu.

## **EVENT 5.1 Santa Clara River Watershed, April 22-23, 2013**

Last rainfall > 0.1" occurred on March 8<sup>th</sup>, 2013.

### **NPDES ~ MASS EMISSION**

#### **ME-SCR Santa Clara River (Freeman Diversion)**

##### **❖ 04/22/2013 @ 10:38 am PDT**

4210: 09:26 PST, 3.416'

6712: Fridge at 2°C. Flushed line with 2L distilled water. Installed one 18.5 L labeled bottle, lid off. Program time-paced for 35 x 500ml samples, taken every 41 minutes, once enabled stay enabled, sample at enable, no delay to start. Run program. Sample 1 volume good. "Sample 2 in 00:38". Grab bottles left onsite.

##### **❖ 04/23/2013 @ 11:25 am PDT**

4210: 10:10 PST, 3.038'

6712: "Program time-paced is done". Fridge at 2°C. Bottle full. Flushed line with 2L distilled water. Pump counts 248,061. Turned 6712 off.

**Grab samples:** Taken in diversion canal at @ 11:25 am PDT.

<b>Field Measurements:</b>	Temperature = 18.0° C	pH = 8.17
DO (%) = 124.4	Conductivity = 1487 uS	Salinity = 0.9 ppt
DO(mg/L) = 11.72	Specific Conductance = 1716 uS	

**Composite samples:** Pulled at 11:25 am PDT.

### **NPDES ~ MAJOR OUTFALLS**

#### **MO-FIL Fillmore (North Fillmore Drain)**

##### **❖ 04/22/2013 @ 08:00 am PDT**

4250: 06:54 PST, 2.835'

6712: Fridge at 1°C. Flushed line with 2L distilled water. Installed one 18.5 L labeled bottle, lid off. Program time-paced for 35 x 500ml samples, taken every 41 minutes. Run program. Sample 1 volume good. "Sample 2 in 00:39." Left grab bottles onsite.

##### **❖ 04/23/2013 @ 08:10 am PDT**

4250: 07:05 PST, 2.777'

6712: "Program: time paced is done". Fridge at 1°C. Bottle full. Flushed line with 2 L distilled water. Pump counts 590,441. Turned 6712 off.

**Grab samples:** Taken at 08:10 am PDT.

## NPDES 2012/13 Event # 5 (Dry)

**Field Measurements:** Temperature = 17.7°C pH = 7.37  
DO (%) = 28.7 Conductivity = 1296 uS Salinity = 0.8 ppt  
DO(mg/L) = 2.70 Specific Conductance = 1508 uS  
**Composite samples:** Pulled at 08:10 am PDT.

### MO-OXN Oxnard (El Rio Drain)

#### ❖ 04/22/2013 @ 09:50 am PDT

Notes: Channel dry

4230: 08:46 PST, 0.111', 0.3 cfs (channel dry)

6712: Refrigerator at 4°C. Flushed line with 2L distilled water. Installed one labeled 18.5 L bottle, lid off. Lay weighted silicone tubing dam in channel. Program time paced for 18 hour event starting in 360 minutes (~ 16:00) due to dry channel. Sample pacing every 30 minutes, 35 samples at 500 ml/sample. Run program. "Start Time Paced at 15:02 MO 22-APR" (times PST). Left grab bottles onsite.

#### ❖ 04/23/2013 @ 10:20 am PDT

4230: 09:14, 0.110', 0.3 cfs

6712: Refrigerator at 4°C. "Program is done: Errors have occurred." Viewed program report: no liquid detected samples 1 and 2. Bottle full. Flushed line 2L distilled water. Pump count = 394,094. Turned 6712 off. Removed sand bags and dam from channel.

**Grab samples:** Taken at 10:20 am PDT.

**Field Measurements:** Temperature = 24.6° C pH = 8.3  
DO (%) = 128.7 Conductivity = 1127 uS Salinity = 0.6 ppt  
DO(mg/L) = 10.71 Specific Conductance = 1136 uS

**Composite samples:** Pulled at 10:20 am PDT.

### MO-SPA Santa Paula (11<sup>th</sup> Street Drain)

#### ❖ 04/22/2013 @ 08:22 am PDT

4250: 07:17 PST, 0.001', 0 cfs

6712: Refrigerator at 1°C. Flushed line with 2L distilled water. Installed one labeled 18.5 L bottle, lid off. Positioned clean silicone dam and sandbags in pipe. Flow data was reviewed prior to programming to see if there was a pattern in flow. Unfortunately, this site had been mostly dry for several weeks, including the previous five days, so it was programmed to enable at 0.1" depth and sample every 6 minutes (for 3 hour event) in case flow started. Run program. "Program disabled 07:37". Grab bottles left onsite.

#### ❖ 04/23/2013 @ 08:45 am PDT

4250: 07:41 PST, 0.003', 0 cfs

6712: No flow during sampling period, sampler did not enable. Program disabled, turned 6712 off. Removed sand bags and dam from channel.

**Grab samples:** Not taken – no flow.

**Field Measurements:** Not taken – no flow.

**Composite samples:** Bottle empty and dry.

### MO-VEN Ventura (Moon Ditch)

#### ❖ 04/22/2013 @ 09:00 am PDT

## NPDES 2012/13 Event # 5 (Dry)

4230: 08:02 PST, 0.039', 1 cfs

6712: Refrigerator at 4°C. Flushed line with 2L distilled water. Placed silicone dam in channel. Installed one labeled 18.5 L bottle, lid off. Very low flow in channel so program time-paced for 70 x 250ml samples, taken every 21 minutes with 27' line length (using silicone extender to get intake below water level). Calibrate 1) 220 ml delivered 250 ml, Run program. Sample 1 volume good. "Sample 2 in 19:56". Left grab bottles onsite.

### ❖ 04/23/2013 @ 09:15 am PDT

4230: 08:09, 0.107', 2 cfs

6712: Refrigerator at 1°C. "Sample 69 in 00:05". Bottle overflowed, ~1" water in fridge well (~5L). Stopped program. Drained fridge. Flushed line 2L distilled water. Removed sand bags and dam from channel. Pump count 444,062. Turned 6712 off.

**Grab samples:** Taken at 09:15 am PDT.

<b>Field Measurements:</b>	Temperature = 18.5° C	pH = 8.29
DO (%) = 91.0	Conductivity = 7510 uS	Salinity = 4.8 ppt
DO(mg/L) = 8.18	Specific Conductance = 8560 uS	

**Composite samples:** Pulled at 09:15 am PDT.

## EVENT 5.2 Ventura River and Coastal Watersheds, April 29-30, 2013

Last rainfall > 0.1" occurred on March 8<sup>th</sup> and March 31<sup>st</sup> (depending on site), 2013.

### NPDES ~ MASS EMISSION

#### ME-VR2 Ventura River (Ojai Valley Sanitary District)

### ❖ 04/29/13 @ 08:54 am PDT

4230: 07:50 PST, 2.179, 8 cfs

6712: Fridge at 4°C. Flushed line with 2 L distilled water. Installed labeled composite bottle, lid off. Program time-paced for 35 x 500ml samples, taken every 41 minutes (24 hour program). Run program. Sample 1 volume good. "Sample 2 in 00:37". Left grab bottles onsite.

### ❖ 04/30/13 @ 09:35 am PDT

4230: 08:33 PST, 2.200', 9 cfs

6712: "Program: Flow paced is done" (note: program was time paced but name of program was not changed). Bottle overfull. Fridge at 4°C. Wiped out fridge. Flushed line with 2L distilled water. Pump count 316,953. Turned 6712 off.

**Grab samples:** Taken in river at composite inlet at 09:40 am PDT.

<b>Field Measurements:</b>	Temperature = 18.1°C	pH = 7.71
DO (%) = 55.4	Conductivity = 1058 uS	Salinity = 0.6 ppt
DO(mg/L) = 5.25	Specific Conductance = 1213 uS	

**Composite samples:** Pulled at 09:40 am PDT.

### NPDES ~ MAJOR OUTFALLS

#### MO-MEI Meiners Oaks (Happy Valley Drain)

### ❖ 04/29/13 @ 08:30 am PDT

## **NPDES 2012/13 Event # 5 (Dry)**

Notes: Site has been completely dry with no evidence of flow for weeks and during most of the winter wet season.

### **❖ 04/30/13 @ 09:10 am PDT**

Notes: Site remained completely dry with no evidence of flow overnight. Samples could not be collected for the dry event.

## **MO-OJA Ojai (Fox Canyon Barranca)**

### **❖ 04/29/13 @ 08:04 am PDT**

Notes: Fox Canyon Drain was scraped by WPD operations and maintenance crews last week as part of routine, scheduled maintenance.

4230: 07:00 PST, -0.000', 0 cfs

6712: Fridge at 1°C. Attached braided silicone line and intake strainer to tubing near toe of channel. Placed sand filled silicone line dam across channel and secured in place with sand bags. Flushed line with 2L distilled water. Water level pooled in channel but insufficient to be in contact with bubbler flow meter. Installed one labeled 18.5 L bottle, lid off. Program time-paced for 35 x 500ml samples, taken every 41 minutes (24 hour program). Run program. Sample 1 volume good. "Sample 2 in 00:39." Left grab bottles onsite.

### **❖ 04/30/13 @ 08:30 am PDT**

4230: 07:28 PST, -0.003', 0 cfs

6712: "Program: Time Paced is done." Bottle overflowed. Fridge @ 1°C. Flushed line with 2L distilled water. . Pump count 351,628. Wiped out fridge. Turned 6712 off. Removed sand bags and dam from channel.

**Grab samples:** Taken at 08:30 am PDT.

<b>Field Measurements:</b>	Temperature = 16.1°C	pH = 8.42
DO (%) = 142.1	Conductivity = 1465 uS	Salinity = 0.9 ppt
DO(mg/L) = 13.55	Specific Conductance = 1765 uS	

**Composite samples:** Pulled at 08:30 am PDT.

## **MO-HUE Port Hueneme (Hueneme Drain)**

### **❖ 04/29/13 @ 09:40 am PDT**

6712: Fridge at 2°C. Flushed line with 2L distilled water. Installed one labeled 18.5 L bottle, lid off. Program time-paced for 35 x 500ml samples, taken every 41 minutes. Run program. Sample 1 volume good. "Sample 2 in 00:39". Left grab bottles onsite.

### **❖ 04/30/13 @ 10:40 am PDT**

6712: Fridge at 2° C. "Program: Time paced is done". Bottle full. Flushed line 2L distilled water. Pump count 666,431. Turned 6712 off.

**Grab samples:** Taken at 10:40 am PDT.

<b>Field Measurements:</b>	Temperature = 17.7° C	pH = 7.48
DO (%) = 57.0	Conductivity = 9280 uS	Salinity = 6.2 ppt
DO(mg/L) = 5.13	Specific Conductance = 10820 uS	

**Composite samples:** Pulled at 10:40 am PDT.

## **EVENT 5.3 Calleguas Creek Watersheds, May 22-23, 2013**

## NPDES 2012/13 Event # 5 (Dry)

Last rainfall > 0.1" occurred on May 6, 2013.

### NPDES ~ MASS EMISSION

#### ME-CC Calleguas Creek (CSUCI Bridge)

##### ❖ 05/22/2013 @ 10:38 am PDT

4230: 1.081', 6 cfs

6712: Turned fridge on. Calibrated volume 500ml → 500 ml. Flushed line with 2L distilled water. Pump count 70,968. Installed one 18.5 L labeled bottle, lid off. Program time-paced for 35 x 500ml samples, taken every 41 minutes. Run program. "Sample 2 in 00:37:00." Left grab bottles onsite.

##### ❖ 05/23/2013 @ 10:25 am PDT

4230: 1.061', 3 cfs

6712: Refrigerator at 3°C. "Program is done, errors have occurred." Bottle overfull. Flushed line with 2L distilled water. Pump count 404,067.

**Grab samples:** Taken at check structure @ 10:30 am PDT.

<b>Field Measurements:</b>	Temperature = 20.7°C	pH = 8.01
DO (%) = 93.8	Conductivity = 1680 uS	Salinity = 0.9 ppt
DO(mg/L) = 8.36	Specific Conductance = 1823 uS	

**Composite samples:** Pulled at 10:30 am PDT.

### NPDES ~ MAJOR OUTFALLS

#### MO-CAM Camarillo (Camarillo Hills Drain)

##### ❖ 05/22/2013 @ 11:16 am PDT

4230: 0.029', 10 cfs

6712: Refrigerator at 3°C. Connected calibration line and flushed line with 1L 1% nitric acid and 2L distilled water. Lay weighted silicone line in channel to dam flow. Installed one 18.5 L labeled bottle, lid off. Program time-paced for 35 x 500ml samples, taken every 41 minutes. Run program. "Sample 2 in 00:40:00."

##### ❖ 05/23/2013 @ 11:00 am PDT

4230: 0.030', 10 cfs

6712: "Program is done." Bottle full. Refrigerator at 4°C. Flushed line with 2 L distilled water. Pump count 361,873.

**Grab samples:** Taken at 11:00 am PDT.

<b>Field Measurements:</b>	Temperature = 27.6° C	pH = 9.64 (avg 9.63, 9.65)
DO (%) = 274.2	Conductivity = 1620 uS	Salinity = 0.8 ppt
DO(mg/L) = over range	Specific Conductance = 1545 uS	

**Composite samples:** Pulled at 11:00 am PDT.

#### MO-MPK Moorpark (Gabbert Canyon Drain)

##### ❖ 05/22/2013 @ 08:50 am PDT

**Notes:** Channel upstream of site dry, no sign of flow. Diversion in channel for nearby construction backed up flow from downstream drain. No sampling.

##### ❖ 05/23/2013 @ 08:30 am PDT



## NPDES 2012/13 Event # 5 (Dry)

Notes: Channel dry, same conditions as 05/22/2013.

### **MO-SIM Simi Valley (Bus Canyon Drain)**

#### **❖ 05/22/2013 @ 09:12 am PDT**

4230: 0.141', 2 cfs

6712: Refrigerator at 5°C, turned colder. Flushed line with 2 L distilled water. Pump count 219,927. Installed one labeled 18.5 L bottle, lid off. Program time-paced, 41 mins, 35 samples, 500ml samples. Run program. "Sample 2 in 00:39:00." Left grab bottles onsite.

#### **❖ 05/23/2013 @ 08:40 am PDT**

4230: 0.143', 2 cfs

6712: "Program is done." Refrigerator at 2°C Composite bottle completely full, overflowed a little. Flushed line 2 L distilled water.

**Grab samples:** Taken at 09:00 am PDT.

<b>Field Measurements:</b>	Temperature = 18.6°C	pH = 8.01
DO (%) = 106.7	Conductivity = 2414 uS	Salinity = 1.4 ppt
DO(mg/L) = 9.86	Specific Conductance = 2747 uS	

**Composite samples:** Pulled at 09:00 am PDT.

### **MO-THO Thousand Oaks (Hill Canyon WWTP)**

#### **❖ 05/22/2013 @ 09:50 am PDT**

4230: 2.071', 1 cfs.

6712: Refrigerator at 3°C. Flushed line 2 L distilled water. Installed one labeled 18.5 L bottle, lid off. Program time-paced, 35 samples, 41 min/sample, 500 ml. Run program. "Sample 2 in 00:39:00." Left grab bottles onsite.

#### **❖ 05/23/2013 @ 09:33 am PDT**

4230: 2.087', 1 cfs

6712: Refrigerator at 3°C. "Program is done. Errors have occurred." Bottle overflowed. Flushed line 2 L distilled water. Pump count 794,400.

**Grab samples:** Taken at 09:40 am PDT.

<b>Field Measurements:</b>	Temperature = 16.8°C	pH = 8.23
DO (%) = 91.9	Conductivity = 1638 uS	Salinity = 1.0 ppt
DO(mg/L) = 8.79	Specific Conductance = 1941 uS	

**Composite samples:** Pulled at 09:40 am PDT.

### **Sample Tracking**

#### **Dry Sites (unsamplable)**

❖ MO-SPA (4/23/13), MO-MEI (4/30/13), MO-MPK (5/23/13)

#### **Event 5.1 (ME-SCR, MO-FIL, MO-OXN, MO-VEN)**

❖ Bacteria samples to VCHCA (Susan Benavides):

4/23/13 @ 12:10 PDT by Kelly Hahs & Bill Carey

❖ Grab and composite samples to Weck Laboratories, Inc. courier (Allan Goldberg):

## **NPDES 2012/13 Event # 5 (Dry)**

4/23/13 @ 15:00 PDT by Kelly Hahs.

### **Event 5.2 (ME-VR2, MO-OJA, MO-HUE)**

❖ Bacteria samples to VCHCA (Salvador Barragan):

4/30/13 @ 11:15 PDT by Kelly Hahs and Bill Carey

❖ Grab and composite samples to Weck Laboratories provided courier (Reliable Messenger Services):

4/30/13 @ 17:02 PDT by Arne Anselm

### **Event 5.3 (ME-CC, MO-CAM, MO-SIM, MO-THO)**

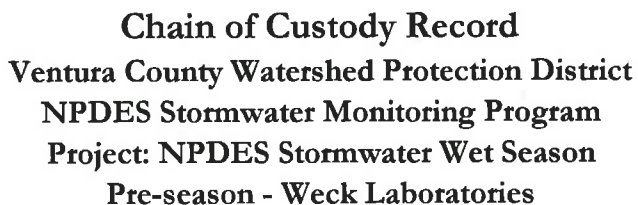
❖ Bacteria samples to VCHCA (Susan Benavides):

5/23/13 @ 11:40 PDT by WB Carey & Bram Sercu

❖ Grab and composite samples to Weck Laboratories, Inc. courier (Allan Goldberg):

5/23/13 @ 14:35 PDT by Kelly Hahs

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



Project Number: Pre-season 2012

[illegible]

BRAM SORCL



VC - WPD

8/2/12 3:40 pm

ALLAN GOLDBERG



WEEK

8/2/12 1540

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



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

Sampling Date: 8-2-12

Project Number: Preseason 2012/13

Sampling Team: BS / WOC

EQUIPMENT	Clean with detergent and HNO3	No action required			NOTES
18.5 L carboy and lid	1				Please place tape or plastic bag over top
Blue cube cooler		1			
Black bags		1			

Relinquished Printed Name BRAM SORCU

Signature [Signature]

Affiliation VC-WPD Date/Time 8/2/12 3:40 PM

Received Printed Name ALLAN GOLDBERG

Signature [Signature]

Affiliation WEEK Date/Time 8/2/12 1540

Other Notes: \* Please clean with detergent, nitric acid, and deionized water per SOP.





**Chain of Custody Record**  
**Ventura County Watershed Protection District**  
**NPDES Stormwater Monitoring Program**  
**Project: NPDES Stormwater Wet Season**  
**Pre-season2 - Week Laboratories**

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

8/28/12

Project Number: Pre-season2 2012

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

WBC & BS

SAMPLE ID	DATE/TIME COLLECTED	Total Copper (EPA 200.8)										Number of Bottles	NOTES
EB lines (MO-VEN)	8/28/12 <del>10:25</del> 11:25	X										1	
EB lines (MO-MEI)	8/28/12 10:20	X										1	
EB lines (MO-MEI) HMO	8/28/12 10:25	X										1	
EB lines (MO-VEN) HMO	8/28/12 11:30	X										1	

Relinquished

Printed Name

~~BRAM SORCE~~

W.B. CAREY

Signature

~~[Signature]~~

W.B. Carey

Affiliation

UC WPD

Date/Time

~~8/28/12~~ 8/29/12 1430

Received

Printed Name

ALYN CARROLL

Signature

[Signature]

Affiliation

WEEK LAB

Date/Time

8/29/12 1430

Other Notes:

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



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

Sampling Date: 10/11/12 Project Number: 2012/13-1 (Wet)  
 Sampling Team: K. HAHS, B. SERCU

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)			Number of Bottles	NOTES
	<del>ME-CC</del>		X	X	X	X	X			1	
	<del>ME-SCR</del>		X	X	X	X	X			1	
	<del>ME-VRZ</del>		X	X	X	X	X			1	
	<del>MO-CAM</del>		X	X		X	X			1	
	MO-OJA	10/11/12 15:00	X	X		X	X			1	
	<del>MO-MBI</del>		X	X		X	X			1	
	<del>MO-VEN</del>		X	X		X	X			1	
	<del>MD-1</del>		X	X		X	X			1	

Relinquished Printed Name KELLY HAHS  
 Signature [Signature]  
 Affiliation VCHCA Date/Time 10/11/12

Received Printed Name Susan Benavides  
 Signature [Signature]  
 Affiliation PH Lab Date/Time 10/11/12 16:10

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



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

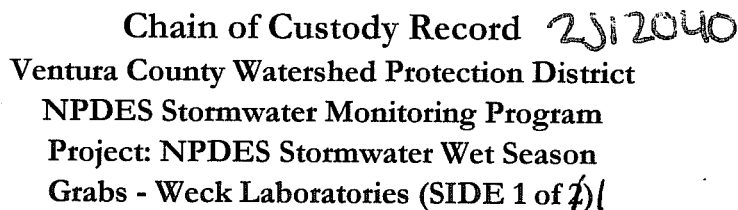
Sampling Date: 10/11/12 Project Number: 2012/13-1 (Wet)  
 Sampling Team: K. HAHS, B. SERCU

SAMPLE ID	DATE/TIME COLLECTED	Chronic toxicity - topsmelt ( <i>Atherinops affinis</i> )	Chronic toxicity - inland silverside ( <i>Menidia beryllina</i> )	Chronic toxicity - giant kelp ( <i>Macrocystis pyrifera</i> )	Chronic toxicity - purple sea urchin ( <i>Strongylocentrotus purpuratus</i> )	Chronic toxicity - fathead minnow ( <i>Pimephales promelas</i> )	Chronic toxicity - daphnid ( <i>Ceriodaphnia dubia</i> )	Chronic toxicity - green alga ( <i>Raphidocelis subcapitata</i> )	Number of 5-Gallon Buckets	NOTES
<del>ME-CC</del>		X							2	Note 1, Note 2, Note 3
<del>ME-SCR</del>					X				1	Note 1, Note 2, Note 3
<del>ME-VR2</del>		X							2	Note 1, Note 2, Note 3
<del>MO-CAM</del>						X			2	Note 1, Note 2, Note 3
MO-OJA	10/11/12 15:00					X			2	Note 1, Note 2, Note 3
<del>MO-MEL</del>						X			2	Note 1, Note 2, Note 3
<del>MO-VEN</del>							X		2	Note 1, Note 2, Note 3

Relinquished Printed Name KELLY HAHS  
 Signature Kelly HaHS  
 Affiliation VCWSPD Date/Time 10/11/12 15:47

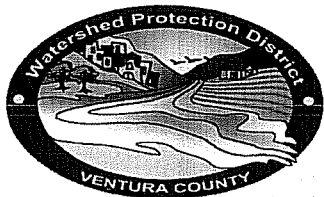
Received Printed Name Karin Patrick  
 Signature Karin Patrick  
 Affiliation ABC Date/Time 10/11/12 1547

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.



Project Number: 2012/13-1 (Wet) Grabs

SANDI LE  
SANDI LE  
PICK-UP



2J12037

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

Sampling Date: 10/12/12

Project Number: 2012/13-1 (Wet) Composites

Sampling Team: K. HAHS, B. SERCU

SAMPLE ID	DATE/TIME COLLECTED	Barium, total	Chlorine Residual	NO3-N	Metals, total & dissolved (+ Hardness)	Cr+6	BOD, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F (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	ALK, CL04, Turb, TDS, TSS, VSS, Cond	Number of Bottles	NOTES
<del>ME-CC</del>		X	X	X	X	X	X	X	X	X	X	X	X	1	<p>Metals by 200.8, Total &amp; Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg</p> <p>Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.)</p> <p>608 include alpha- &amp; gamma-chlordane</p> <p>* Same extraction with low-level spike for 3 methods: 625CTR, 8270SIM-PAH, &amp; 8270SIM-PHENOLS</p> <p>Lab to select samples for MS/MSD where extra volume permits (all test methods)</p>
<del>ME-SCR</del>		X	X	X	X	X	X	X	X	X	X	X	X	1	
<del>ME-VR2</del>					X	X	X	X	X	X	X	X	X	1	
<del>MO-CAM</del>					X	X	X	X	X	X	X	X	X	1	
MO-OJA	10/12/12 0923				X	X	X	X	X	X	X	X	X	1	
<del>MO-MEI</del>					X	X	X	X	X	X	X	X	X	1	
<del>MO-VEN</del>					X	X	X	X	X	X	X	X	X	1	
															SAMPLE PICK-UP

Relinquished

Printed Name KELLY HAHS

Signature Kelly Hahs

Affiliation VCCPD

Date/Time 10/12/12 / 10:43

Received

Printed Name ALLAN GOLDBERG

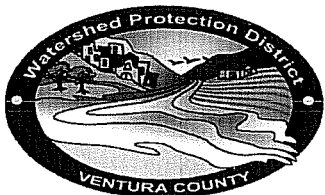
Signature Allan Goldberg

Affiliation WECK LABS

Date/Time 10/12/12 / 10:43

Other Notes: RELINQ X

Filter for dissolved metals and perform conductivity analyses immediately. 10/12/12 / 1230



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

Sampling Date: 10/12/12

Project Number: 2012/13-1 (Wet)

Sampling Team: K. HAHS, B. SERCU

EQUIPMENT	Clean with detergent and HNO <sub>3</sub>	Clean with detergent, HNO <sub>3</sub> , and methanol*	No action required		NOTES
18.5 L carboy and lid		<input checked="" type="checkbox"/>	<input type="checkbox"/>		Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Blue cube cooler		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Black bags		<input type="checkbox"/>	<input type="checkbox"/>		
		<input type="checkbox"/>	<input type="checkbox"/>		
		<input type="checkbox"/>	<input type="checkbox"/>		
		<input type="checkbox"/>	<input type="checkbox"/>		
		<input type="checkbox"/>	<input type="checkbox"/>		
		<input type="checkbox"/>	<input type="checkbox"/>		
		<input type="checkbox"/>	<input type="checkbox"/>		

Relinquished Printed Name KELLY HAHS

Signature [Signature]

Affiliation VCWPD Date/Time 10/12/12 / 10:43

Received Printed Name ALLAN GOLDBERG

Signature [Signature]

Affiliation WECK LABS Date/Time 10/12/12 / 10:43

RELINQ X  
 Other Notes: ALLAN 10/12/12 1230

\* 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 which bottles were 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: 11-17-12 Project Number: 2012/13-2 (Wet)  
 Sampling Team: BS, TL

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		X	X	X	X	X			1	
	ME-SCR	11-17-12 1050	X	X	X	X	X			1	
	ME-VR2	11-17-12 950	X	X	X	X	X			1	
	MO-CAM		X	X		X	X			1	
	MO-OJA	11-17-12 845	X	X		X	X			1	
	MO-MEI	11-17-12 915	X	X		X	X			1	
	MO-VEN	11-17-12 745	X	X		X	X			1	
	MD-1		X	X		X	X			1	

Relinquished Printed Name BRAM SORCU  
 Signature [Signature]  
 Affiliation VC - WPD Date/Time 11/17/12 11:41

Received Printed Name Susan Benavides  
 Signature [Signature]  
 Affiliation PHLab Date/Time 11/17/12 11:41

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



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

Sampling Date: 11/17/12 Project Number: 2012/13-2 (Wet)  
 Sampling Team: Jason Siegert & Daniel Calderon

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)			Number of Bottles	NOTES
	MO-SPA	11/17/12 08:35	X	X		X	X			1	
	MO-FIL	09:30	X	X		X	X			1	
	MO-SIM	11:45	X	X		X	X			1	
	MO-MPK	10:45	X	X		X	X			1	
	MO-THO	12:45	X	X		X	X			1	
	MO-OXN		X	X		X	X			1	
	MO-HUE	↓	X	X		X	X			1	

Relinquished Printed Name Jason Siegert  
 Signature [Signature]  
 Affiliation VRSD Date/Time 11/17/12 1328

Received Printed Name Susan Benard  
 Signature [Signature]  
 Affiliation PH Lab Date/Time 11/17/12 1328

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



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

Sampling Date: 11/17/12

Project Number: 2012/13-2 (Wet)

Sampling Team: AA, TS, SM

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	11-17-12 11:05	X	X	X	X	X			1	
	ME-SCR		X	X	X	X	X			1	
	ME-VR2		X	X	X	X	X			1	
	MO-CAM	11-17-12 09:25	X	X		X	X			1	
	MO-OJA		X	X		X	X			1	
	MO-MEI		X	X		X	X			1	
	MO-VEN		X	X		X	X			1	
	MD-1	11-17-12 09:25	X	X		X	X			1	

Relinquished

Printed Name

ARNE ANSELM

Signature

[Signature]

Affiliation

VCWPD

Date/Time

11-17-12

12:14

Received

Printed Name

Susan Benard

Signature

[Signature]

Affiliation

PH Lab

Date/Time

11/17/12

12:14

Other Notes:

Perform bacteriological analyses within 6 hours of sample collection time



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

Sampling Date: 11/17/12 Project Number: 2012/13-2 (Wet)  
 Sampling Team: AA, TS, SM

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)			Number of Bottles	NOTES
	MO-SPA		X	X		X	X			1	
	MO-FIL		X	X		X	X			1	
	MO-SIM		X	X		X	X			1	
	MO-MPK		X	X		X	X			1	
	MO-THO		X	X		X	X			1	
	MO-OXN	11-17-12 08:34	X	X		X	X			1	
	MO-HUE	11-17-12 08:34	X	X		X	X			1	
		10:30									

Relinquished Printed Name ARNE ANSELM  
 Signature [Signature]  
 Affiliation VCHCA Date/Time 11-17-12 12:14

Received Printed Name SUDAN BENARDE  
 Signature [Signature]  
 Affiliation PH Lab Date/Time 11/17/12 12:14

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



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

Sampling Date: 11-17-12 Project Number: 2012/13-2 (Wet)

Sampling Team: BS, TL

SAMPLE ID	DATE/TIME COLLECTED	Chronic toxicity - topsmelt ( <i>Atherinops affinis</i> )	Chronic toxicity - inland silverside ( <i>Menidia beryllina</i> )	Chronic toxicity - giant kelp ( <i>Macrocystis pyrifera</i> )	Chronic toxicity - purple sea urchin ( <i>Strongylocentrotus purpuratus</i> )	Chronic toxicity - fathead minnow ( <i>Pimephales promelas</i> )	Chronic toxicity - daphnid ( <i>Ceriodaphnia dubia</i> )	Chronic toxicity - green alga ( <i>Raphidocelis subcapitata</i> )	Number of 5-Gallon Buckets	NOTES
ME-CC		X							2	Note 1, Note 2, Note 3
ME-SCR	11-17-12 1050				X				1	Note 1, Note 2, Note 3
ME-VR2	11-17-12 950	X							2	Note 1, Note 2, Note 3
MO-CAM						X			2	Note 1, Note 2, Note 3
MO-OJA	<del>11-17-12 915</del>					X			2	Note 1, Note 2, Note 3
MO-MEI	11-17-12 915					X			2	Note 1, Note 2, Note 3
MO-VEN	11-17-12 745						X		2	Note 1, Note 2, Note 3

Relinquished Printed Name BRAM SERCU  
 Signature [Signature]  
 Affiliation VC-WPD Date/Time 11-17-12 12:16

Received Printed Name Lorena Marquez  
 Signature [Signature]  
 Affiliation ABC Date/Time 11-17-12 1216

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



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

Sampling Date:

11/17/12

Project Number: 2012/13-1 (Wet)

Sampling Team:

Jason Siegent & Daniel Calderon

SAMPLE ID	DATE/TIME COLLECTED	Chronic toxicity - topsmelt ( <i>Atherinops affinis</i> )	Chronic toxicity - inland silverside ( <i>Menidia beryllina</i> )	Chronic toxicity - giant kelp ( <i>Macrocystis pyrifera</i> )	Chronic toxicity - purple sea urchin ( <i>Strongylocentrotus purpuratus</i> )	Chronic toxicity - fathead minnow ( <i>Pimephales promelas</i> )	Chronic toxicity - daphnid ( <i>Ceriodaphnia dubia</i> )	Chronic toxicity - green alga ( <i>Raphidocelis subcapitata</i> )	Number of 5-Gallon Buckets	NOTES
MO-OXN	<u>11/17/12</u>					X			2	Note 1, Note 2, Note 3
MO-HUE							X		2	Note 1, Note 2, Note 3
MO-THO	<u>12:45</u>						X		2	Note 1, Note 2, Note 3
MO-MPK	<u>10:45</u>							X	2	Note 1, Note 2, Note 3
MO-SIM	<u>11:45</u>						X		2	Note 1, Note 2, Note 3
MO-FIL	<u>09:30</u>						X		2	Note 1, Note 2, Note 3
MO-SPA	<u>08:35</u>					X			2	Note 1, Note 2, Note 3

Relinquished

Printed Name

Jason Siegent

Signature

[Signature]

Affiliation

VRSD

Date/Time

11/17/12 1420

Received

Printed Name

Lorena Marquez

Signature

[Signature]

Affiliation

ABC Lab

Date/Time

11/17/12 1420

Other Notes:

Note 1: Dilutions - 6.25%, 12.5%, 25%, 50%, 100%

Note 2: Please execute TIE if mortality > 50%

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





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

Sampling Date: 11-17-12 Project Number: 2012/13-2 (Wet)

Sampling Team: AA, TS, SM

SAMPLE ID	DATE/TIME COLLECTED	Chronic toxicity - topsmelt ( <i>Atherinops affinis</i> )	Chronic toxicity - inland silverside ( <i>Menidia beryllina</i> )	Chronic toxicity - giant kelp ( <i>Macrocystis pyrifera</i> )	Chronic toxicity - purple sea urchin ( <i>Strongylocentrotus purpuratus</i> )	Chronic toxicity - fathead minnow ( <i>Pimephales promelas</i> )	Chronic toxicity - daphnid ( <i>Ceriodaphnia dubia</i> )	Chronic toxicity - green alga ( <i>Raphidocelis subcapitata</i> )	Number of 5-Gallon Buckets	NOTES
ME-CC	11-17-12 11:05	X							2	Note 1, Note 2, Note 3
ME-SCR					X				1	Note 1, Note 2, Note 3
ME-VR2		X							2	Note 1, Note 2, Note 3
MO-CAM	11-17-12 09:25					X			2	Note 1, Note 2, Note 3
MO-OJA						X			2	Note 1, Note 2, Note 3
MO-MEI						X			2	Note 1, Note 2, Note 3
MO-YEN							X		2	Note 1, Note 2, Note 3

Relinquished Printed Name ARNE ANSLEM  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 11-17-12 12:41

Received Printed Name Lorena Marquez  
 Signature [Signature]  
 Affiliation ABC Labs Date/Time 11-17-12 1242

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



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

Sampling Date: 11-17-12 Project Number: 2012/13-2 (Wet)  
 Sampling Team: AA, TS, SM

SAMPLE ID	DATE/TIME COLLECTED	Chronic toxicity - topsmelt ( <i>Atherinops affinis</i> )	Chronic toxicity - inland silverside ( <i>Menidia beryllina</i> )	Chronic toxicity - giant kelp ( <i>Macrocystis pyrifera</i> )	Chronic toxicity - purple sea urchin ( <i>Strongylocentrotus purpuratus</i> )	Chronic toxicity - fathead minnow ( <i>Pimephales promelas</i> )	Chronic toxicity - daphnid ( <i>Ceriodaphnia dubia</i> )	Chronic toxicity - green alga ( <i>Raphidocelis subcapitata</i> )	Number of 5-Gallon Buckets	NOTES
MO-OXN	11-17-12 08:34					X			2	Note 1, Note 2, Note 3
MO-HUE	11-17-12 10:30						X		2	Note 1, Note 2, Note 3
MO-THO							X		2	Note 1, Note 2, Note 3
MO-MPK								X	2	Note 1, Note 2, Note 3
MO-SIM							X		2	Note 1, Note 2, Note 3
MO-FIL							X		2	Note 1, Note 2, Note 3
MO-SPA						X			2	Note 1, Note 2, Note 3

Relinquished Printed Name ARNE ANSELM  
 Signature [Signature]  
 Affiliation VWPD Date/Tim 11-17-12 12:41

Received Printed Name Lorena Martinez  
 Signature [Signature]  
 Affiliation ABC Lab Date/Tim 11-17-12 12:42

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 1 of 2)

Sampling Date: 11-17-12 Project Number: 2012/13-2 (Wet) Grabs

Sampling Team: AEA, TS, SM, BS, TL, JS, DC

SAMPLE ID	DATE/TIME COLLECTED	Oil & Grease; O&G-NP (EPA 1664A)				Cyanide (EPA 335.4)				MTBE & 2CLEVE (EPA 524.2)				Travel Blanks (EPA 524.2)-only analyze if hits				Number of Bottles	NOTES (sampled by)
ME-CC	11-17-12 11:05	3	1	3	1													8	AEA, TS, SM
ME-SCR	11-17-12 1050	2	1	3	1													7	BS, TL
ME-VR2	11-17-12 0950	2	1	3	1													7	BS, TL
MO-CAM	11-17-12 09:25	2	1	3	1													7	AEA, TS, SM
MO-OJA	11-17-12 0845	2	1	3	1													7	BS, TL
MO-MEI	11-17-12 0915	2	1	3	1													7	BS, TL
MO-VEN	11-17-12 0745	2	1	3	1													7	BS, TL
MO-OXN	11-17-12 08:34	2	1	3	1													7	AEA, TS, SM
MD-1	11-17-12 09:25	2	1	3	1													7	AEA, TS, SM

Relinquished Printed Name W.B. CAREY

Signature W.B. Carey

Affiliation VCWPD Date/Time 11-18-12/1321

Received Printed Name Luis Lopez

Signature [Signature]

Affiliation RMS Date/Time 11-18-12/1322

Other Notes: Please run 524.2 on travel blanks only if constituents detected in original analysis



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

Sampling Date: 11-17-12 Project Number: 2012/13-2 (Wet) Grabs  
 Sampling Team: AEA, SM, TS, JS, DC, BS, TL

SAMPLE ID	DATE/TIME COLLECTED	Oil & Grease; O&G-NP (EPA 1664A)						Cyanide (EPA 335.4)	MTBE & 2CLEVE (EPA 524.2)	Travel Blanks (EPA 524.2)-only analyze if hits	EPA 515.3			Number of Bottles	NOTES (sampled by)
MO-SPA	11-17-12 0835	2	1	3	1									7	JS, DC
MO-FIL	11-17-12 0930	2	1	3	1									7	JS, DC
MO-SIM	11-17-12 1145	2	1	3	1									7	JS, DC
MO-HUE	11-17-12 1030	2	1	3	1									7	AEA, SM, TS
MO-THO	11-17-12 1245	2	1	3	1									7	JS, DC
MO-MPK	11-17-12 1045	2	1	3	1									7	JS, DC
MO-MPK Upstream at RR											2			2	
Edison RC Pipe at MPK - Lower											2			2	
Edison RC Pipe at MPK - Upper											2			2	

Relinquished Printed Name W.B. CAREY  
 Signature W.B. Carey  
 Affiliation VCWPD Date/Time 11-18-12 / 1321

Received Printed Name Luis Lopez  
 Signature [Signature]  
 Affiliation RMS Date/Time 11-18-12 / 1322

Other Notes: Please run 524.2 on travel blanks only if constituents detected in original analysis



# 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:

11/18/12

Project Number: 2012/13-2 (Wet) Composites

Sampling Team:

K. HAHS, B. SERLO, AEA, WBC, T. LIDDELL, T. SANFORD

SAMPLE ID	DATE/TIME COLLECTED	Barium, total	Chlorine Residual	NO3-N	Metals, total & dissolved (+ Hardness)	Cr+6	BOD, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F (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	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	NOTES (sampled by)
ME-CC	11/18/12 0850	X	X	X	X	X	X	X	X	X	X	X	X	1	TL, TS
ME-SCR	11/18/12 1035	X			X	X	X	X	X	X	X	X	X	1	TL, TS
ME-VR2	11/18/12 0940				X	X	X	X	X	X	X	X	X	1	KH, BS
MO-CAM	11/18/12 10:00				X	X	X	X	X	X	X	X	X	1	TL, TS
MO-OJA	11/18/12 0900				X	X	X	X	X	X	X	X	X	1	KH, BS
MO-MEI	11/18/12 0830				X	X	X	X	X	X	X	X	X	1	KH, BS
MO-VEN	11/18/12 1005				X	X	X	X	X	X	X	X	X	1	KH, BS

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

W.B. CAREY

Signature

W.B. Carey

Affiliation

VCWPD

Date/Time

11-18-12/1321

Received

Printed Name

Luis Lopez

Signature

Luis Lopez

Affiliation

RMS

Date/Time

11-18-12/1322

Other Notes:

Filter for dissolved metals and perform conductivity analyses immediately.



**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: 11/18/12 Project Number: 2012/13-2 (Wet) Composites

Sampling Team: K. HAHS, B. SERCU, AEA, WBC, T. LIDDELL, T. SANFORD

SAMPLE ID	DATE/TIME COLLECTED					Metals, total & dissolved (+ Hardness)	Cr+6	BOD, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F (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	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	NOTES (sampled by)
MO-SPA	11/18/12 0754					X	X	X	X	X	X	X	X	X	1	AEA, WBC
MO-FIL	11/18/12 0817					X	X	X	X	X	X	X	X	X	1	AEA, WBC
MO-SIM	11/18/12 0917					X	X	X	X	X	X	X	X	X	1	AEA, WBC
MO-MPK	11/18/12 0843					X	X	X	X	X	X	X	X	X	1	AEA, WBC
MO-THO	11/18/12 0930					X	X	X	X	X	X	X	X	X	1	TL, TS
MO-oxN	11/18/12 10:30					X	X	X	X	X	X	X	X	X	1	KH, BS
MO-HUE	11/18/12 0830					X	X	X	X	X	X	X	X	X	1	TL, TS

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 W.B. CAREY

Signature W.B. Carey

Affiliation VCWPD Date/Time 11-18-12 / 1321

Received Printed Name Luis Lopez

Signature [Signature]

Affiliation RMS Date/Time 11-18-12 / 1322

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





# Chain of Custody Record

Ventura County Watershed Protection District  
NPDES Stormwater Monitoring Program  
Project: NPDES Stormwater Wet Season  
Equipment - Weck Laboratories

Sampling Date: 11/18/12

Project Number: 2012/13-2 (Wet)

Sampling Team: K. HAHN

EQUIPMENT	Clean with detergent and HNO3	Clean with detergent, HNO3, and methanol*	No action required	NOTES
18.5 L carboy and lid		14		Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Blue cube cooler			14	
Black bags			14	

Relinquished Printed Name W.B. CAREY

Signature W.B. Carey

Affiliation VCWPA Date/Time 11-18-12/1321

Received Printed Name Luis Lopez

Signature [Signature]

Affiliation RMS Date/Time 11-18-12/1322

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 which bottles were 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: 2/19/13 Project Number: 2012/13-3 (Wet)  
 Sampling Team: BS, OC

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	2/19/13 2020	X	X	X	X	X			1	
	ME-SCR		X	X	X	X	X			1	
	ME-VR2		X	X	X	X	X			1	
	MO-CAM	2/19/13 1940	X	X		X	X			1	
	MO-OJA		X	X		X	X			1	
	MO-MEI		X	X		X	X			1	
	MO-VEN		X	X		X	X			1	
	MD-1		X	X		X	X			1	

Relinquished Printed Name BRAM SORCU  
 Signature [Signature]  
 Affiliation VC-WPD Date/Time 2/19/13 2139

Received Printed Name Susan Benandes  
 Signature [Signature]  
 Affiliation PA Lab Date/Time 2/19/13 2140

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



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

Sampling Date: \_\_\_\_\_ Project Number: 2012/13-3 (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 )			Number of Bottles	NOTES
	MO-SPA		X	X		X	X			1	
	MO-FIL		X	X		X	X			1	
	MO-SIM		X	X		X	X			1	
	MO-MPK		X	X		X	X			1	
	MO-THO		X	X		X	X			1	
	MO-OXN		X	X		X	X			1	
	MO-HUE	2/19/13 2110	X	X		X	X			1	

Relinquished Printed Name BRAM SBRU  
 Signature [Signature]  
 Affiliation VC-WPD Date/Time 2/19/13 2139

Received Printed Name Susan Benavides  
 Signature [Signature]  
 Affiliation PH Lab Date/Time 2/19/13 2140

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



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

Sampling Date: 2/19/13 Project Number: 2012/13-3 (Wet)  
 Sampling Team: T. LIDDELL

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		X	X	X	X	X			1	
	ME-SCR	2/19/13 2145	X	X	X	X	X			1	
	ME-VR2		X	X	X	X	X			1	
	MO-CAM		X	X		X	X			1	
	MO-OJA		X	X		X	X			1	
	MO-MEI		X	X		X	X			1	
	MO-VEN		X	X		X	X			1	
	MD-1		X	X		X	X			1	

Relinquished Printed Name TOMMY LIDDELL  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 2/19/13 (2115) 2215

Received Printed Name Susan Benard  
 Signature [Signature]  
 Affiliation PH Lab Date/Time 02/19/13 2115 2215

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



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

Sampling Date: \_\_\_\_\_ Project Number: 2012/13-3 (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)			Number of Bottles	NOTES
	MO-SPA	2/19/13 2015	X	X		X	X			1	
	MO-FIL	2/19/13 2055	X	X		X	X			1	
	MO-SIM		X	X		X	X			1	
	MO-MPK		X	X		X	X			1	
	MO-THO		X	X		X	X			1	
	MO-OXN	2/19/13 1930	X	X		X	X			1	
	MO-HUE		X	X		X	X			1	

Relinquished Printed Name TOMMY LIDDELL  
 Signature [Signature]  
 Affiliation VLWPD Date/Time 2/19/13 (2015) 2215

Received Printed Name Susan Benner  
 Signature [Signature]  
 Affiliation PH Lab Date/Time 2/19/13 2015 22:15

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



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

Sampling Date: 2/19/13 Project Number: 2012/13-3 (Wet)

Sampling Team: K. HAHS, A. MIGUEL

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)			Number of Bottles	NOTES
	<del>ME-CC</del>		X	X	X	X	X			1	
	<del>ME-SCR</del>		X	X	X	X	X			1	
	<del>ME-VRZ</del>		X	X	X	X	X			1	
	<del>MO-GAM</del>		X	X		X	X			1	
	<del>MO-OJA</del>		X	X		X	X			1	
	<del>MO-MEI</del>		X	X		X	X			1	
	MO-VEN	2/19/13 1940	X	X		X	X			1	
	<del>MO-MB-1</del>	2/19/13 1940	X	X		X	X			1	

Relinquished Printed Name KELLY HAHS  
 Signature [Signature]  
 Affiliation VCHCA Date/Time 2/19/13 1025 PM

Received Printed Name Susay Benar  
 Signature [Signature]  
 Affiliation PHLAS Date/Time 02/19/13 2225

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





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

Sampling Date: 2-19-13 Project Number: 2012/13-3 (Wet)

Sampling Team: AA - SM - TS

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)			Number of Bottles	NOTES
	MO-SPA		X	X		X	X			1	
	MO-FIL		X	X		X	X			1	
	MO-SIM	2-19-13 20:41	X	X		X	X			1	
	MO-MPK	<del>2</del> 2-19-13 19:38	X	X		X	X			1	
	MO-THO	2-19-13 21:40	X	X		X	X			1	
	MO-OXN		X	X		X	X			1	
	MO-HUE		X	X		X	X			1	

Relinquished Printed Name ARNE ANSELM  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 2-19-13 20:28 22:28

Received Printed Name Susan Bene  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 2-19-13 20:31

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time 22:28



332017

## Chain of Custody Record

### Ventura County Watershed Protection District

#### NPDES Stormwater Monitoring Program

#### Project: NPDES Stormwater Wet Season

#### Grabs - Weck Laboratories (SIDE 1 of 2)

Sampling Date: 2/19/13 Project Number: 2012/13-3 (Wet) Grabs

Sampling Team: K. HAHS, A. MIGUEL, T. LIDDELL, G.M., B. SERCU, D. CALDERON, A. ANSELM, S. McGinnis, T. Sanford

SAMPLE ID	DATE/TIME COLLECTED	Oil & Grease; O&G-NP (EPA 1664A)				Cyanide (EPA 335.4)	MTBE & 2CLEVE (EPA 524.2)	Travel Blanks (EPA 524.2)-only analyze if hits											Number of Bottles	NOTES
ME-CC	2/19/13 2020	3	1	3	1														8	B. SERCU, D. CALDERON
ME-SCR	2/19/13 21:45	2	1	3	1														7	T. LIDDELL, G.M.
<del>ME-VR2</del>		<del>2</del>	<del>1</del>	<del>3</del>	<del>1</del>														<del>7</del>	
MO-CAM	2/19/13 1940	2	1	3	1														7	B. SERCU, D. CALDERON
<del>MO-OJA</del>		<del>2</del>	<del>1</del>	<del>3</del>	<del>1</del>														<del>7</del>	
<del>MO-MET</del>		<del>2</del>	<del>1</del>	<del>3</del>	<del>1</del>														<del>7</del>	
MO-VEN	2/19/13 1940	2	1	3	1														7	K. HAHS, A. MIGUEL
MO-OXN	2/19/13 1930	2	1	3	1														7	T. LIDDELL, G.M.
ME MB-1	2/19/13 1940	2	1	3	1														7	K. HAHS, A. MIGUEL

Relinquished Printed Name Kelly Hahs Signature [Signature] Affiliation VCWFO Date/Time 2/20/13 1525

Received Printed Name Alvian Vaz Signature [Signature] Affiliation Rms Date/Time 2/20/13 1525

Other Notes: Please run 524.2 on travel blanks only if constituents detected in original analysis

James Grier 2/20/13 1710 170



3B20117

# Chain of Custody Record

## Ventura County Watershed Protection District

### NPDES Stormwater Monitoring Program

#### Project: NPDES Stormwater Wet Season

#### Grabs - Weck Laboratories (SIDE 2 of 2)

Sampling Date: 2/19/13 Project Number: 2012/13-3 (Wet) Grabs

Sampling Team: see other side

SAMPLE ID	DATE/TIME COLLECTED							Number of Bottles	NOTES
		Oil & Grease; O&G-NP (EPA 1664A)	Cyanide (EPA 335.4)	MTBE & 2CLEVE (EPA 524.2)	Travel Blanks (EPA 524.2)-only analyze if hits	EPA 515.3			
MO-SPA	2/19/13 20:15	2	1	3	1			7	T. LIDDELL, G.M.
MO-FIL	2/19/13 20:55	2	1	3	1			7	T. LIDDELL, G.M.
MO-SIM	2/19/13 20:41	2	1	3	1			7	A. ANSELM, S. MCGINNIS, T. SANFORD
MO-HUE	2/19/13 21:10	2	1	3	1			7	B. SERCU, D. CALDERON
MO-THO	2/19/13 21:40	2	1	3	1			7	A. ANSELM, S. MCGINNIS T. SANFORD
<del>MO-MPK</del>	<del>2/19/13 19:38</del>	<del>2</del>	<del>1</del>	<del>3</del>	<del>1</del>			<del>7</del>	<del>A. ANSELM, S. MCGINNIS T. SANFORD</del>
<del>MO-MPK Upstream at RR</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>2</del>		<del>2</del>	
<del>Edison RC Pipe at MPK - Lower</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>2</del>		<del>2</del>	
<del>Edison RC Pipe at MPK - Upper</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>2</del>		<del>2</del>	

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

Signature \_\_\_\_\_

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

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

Signature \_\_\_\_\_

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

Other Notes: Please run 524.2 on travel blanks only if constituents detected in original analysis

Note mo-mpk bottles should be discarded for this event



31320093



**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:

2/20/13

Project Number: 2012/13-3 (Wet) Composites

Sampling Team:

K. HAHS, B. SERCU, W.B. CAREY, A. ANSELM

SAMPLE ID	DATE/TIME COLLECTED	Barium, total	Chlorine Residual	NO3-N	Metals, total & dissolved (+ Hardness)	Cr+6	BOD, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F (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	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	NOTES
ME-CC	2/20/13 1050	X	X	X	X	X	X	X	X	X	X	X	X	1	K. HAHS, B. SERCU
ME-SCR	2/20/13 1150	X			X	X	X	X	X	X	X	X	X	1	K. HAHS, B. SERCU
<del>ME-VR2</del>	<del>—</del>				<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
MO-CAM	2/20/13 11:15				X	X	X	X	X	X	X	X	X	1	K. HAHS, B. SERCU
<del>MO-OJA</del>	<del>—</del>				<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>MO-MEL</del>	<del>—</del>				<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
MO-VEN	2/20/13 0925				X	X	X	X	X	X	X	X	X	1	K. HAHS, B. SERCU

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

Metals by 200.7, Total (only):  
 Ca, Mg (for Hardness calc.)

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 HaHS

Signature

Kelly HaHS

Affiliation

VSWPD

Date/Time

2/20/13 15:25

Received

Printed Name

Plummer Carey

Signature

Plummer Carey

Affiliation

RMS

Date/Time

2/20/13 15:25

Other Notes:

Filter for dissolved metals and perform conductivity analyses immediately.

Jamalmer 2/20/13 17101.7c

3820093



**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: 2/20/13 Project Number: 2012/13-3 (Wet) Composites

Sampling Team: K. HAHS, B. SERCU, WB. CAREY, A. ANSELM

SAMPLE ID	DATE/TIME COLLECTED					Metals, total & dissolved (+ Hardness)	Cr+6	BOD, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F (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	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	NOTES
MO-SPA	2/20/13 12:25					X	X	X	X	X	X	X	X	X	1	K. HAHS, B. SERCU
MO-FIL	2/20/13 10:15					X	X	X	X	X	X	X	X	X	1	WB CAREY, A. ANSELM
MO-SIM	2/20/13 11:10					X	X	X	X	X	X	X	X	X	1	WB CAREY, A. ANSELM
MO-MPK	2/20/13					X	X	X	X	X	X	X	X	X	1	WB CAREY, A. ANSELM
MO-THO	2/20/13 11:40					X	X	X	X	X	X	X	X	X	1	WB CAREY, A. ANSELM
MO-OXN	2/20/13 0940					X	X	X	X	X	X	X	X	X	1	K. HAHS, B. SERCU
MO-HUE	2/20/13 10:25					X	X	X	X	X	X	X	X	X	1	K. HAHS, B. SERCU

Metals by 200.8, Total & Dissolved:

Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg

Metals by 200.7, Total (only):  
Ca, Mg (for Hardness calc.)

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 \_\_\_\_\_

Signature \_\_\_\_\_

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

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

Signature \_\_\_\_\_

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

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



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

Sampling Date: 3/8/13 3/7-8/13

Project Number: 2012/13-4 (Wet)

Sampling Team: KH, BW, AA, TS, SM

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	3/7/13 22:21 <i>rev yellow book</i>	X	X	X	X	X			1	AA, TS, SM
	ME-SCR	3/8/13 00:47	X	X	X	X	X			1	AA, TS, SM
	ME-VR2	3/8/13 02:20	X	X	X	X	X			1	KH, BW
	MO-CAM	3/7/13 21:45	X	X		X	X			1	AA, TS, SM
	MO-OJA	3/7/13 23:45	X	X		X	X			1	KH, BW
	MO-MEI	3/8/13 00:25	X	X		X	X			1	KH, BW
	MO-VEN	3/7/13 21:35	X	X		X	X			1	KH, BW
	MD-1		X	X		X	X			1	

Relinquished Printed Name KELLY HAYS  
 Signature *Kelly Hays*  
 Affiliation VCSPO Date/Time 3/8/13 / <sup>(kn)</sup> 03:25

Received Printed Name Susan Bernick  
 Signature *Susan Bernick*  
 Affiliation PH Lab Date/Time 030813 0325

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





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

Sampling Date: 3/7-8/13 Project Number: 2012/13-4 (Wet)  
 Sampling Team: KH, BW, AA, TS, SM

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)			Number of Bottles	NOTES
	MO-SPA		X	X	X	X				1	
	MO-FIL		X	X	X	X				1	
	MO-SIM		X	X	X	X				1	
	MO-MPK		X	X	X	X				1	
	MO-THO	3/7/13 22:27	X	X		X	X			1	AA, TS, SM
	MO-oxn	3/7/13 21:03	X	X		X	X			1	AA, TS, SM
	MO-HUE	3/7/13 22:20	X	X		X	X			1	KH, BW

Relinquished Printed Name rdk/lls  
 Signature rdk/lls  
 Affiliation VCHCA Date/Time 3/8/13 10:25 (KH)

Received Printed Name Susan Benavides  
 Signature Susan Benavides  
 Affiliation PH Lab Date/Time 030813 0325

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



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

Sampling Date: \_\_\_\_\_ Project Number: 2012/13-4 (Wet)

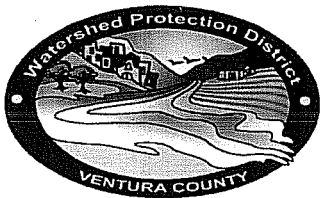
Sampling Team: \_\_\_\_\_

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)				Number of Bottles	NOTES
	MO-SPA	3/8/13 2315	X	X		X	X				1	
	MO-FIL	3/8/13 2355	X	X		X	X				1	
	MO-SIM	3/8/13 0050	X	X		X	X				1	
	MO-MPK	3/8/13 0135	X	X		X	X				1	
	MO-THO		X	X		X	X				1	
	MO-OXN		X	X		X	X				1	
	MO-HUE		X	X		X	X				1	

Relinquished Printed Name Tommy Liddle  
 Signature T. LIDDLE  
 Affiliation VCHCA Date/Time 3/8/13 0220

Received Printed Name Susan Benavides  
 Signature Susan Benavides  
 Affiliation VCHCA Date/Time 3/8/13 0220

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



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

3008035

Sampling Date:

Project Number: 2012/13-4 (Wet) Grabs

Sampling Team:

SAMPLE ID	DATE/TIME COLLECTED											Number of Bottles	NOTES
		Oil & Grease; O&G-NP (EPA 1664A)	Cyanide (EPA 335.4)	MTBE & 2CLEVE (EPA 524.2)	Travel Blanks (EPA 524.2)-only analyze if hits								
ME-CC	3/7/13 23:22	3	1	3	1							8	AA, TS, SM
ME-SCR	3/8/13 00:47	2	1	3	1							7	AA, TS, SM
ME-VR2	3/8/13 02:20	1	1	3	1							4	Kit, BW
MO-CAM	3/7/13 21:45	2	1	3	1							7	AA, TS, SM
MO-OJA	3/7/13 23:45	2	1	3	1							7	Kit, BW
MO-MEI	3/8/13 00:25	2	1	3	1							7	Kit, BW
MO-VEN	3/7/13 21:35	2	1	3	1							7	Kit, BW
MO-OXN	3/7/13 21:03	2	1	3	1							7	AA, TS, SM
MD-1		2	1	3	1							7	

Relinquished

Printed Name

Jason Burke

Signature

Jason Burke

Affiliation

WPP

Date/Time

3/8/13 10:35 am

Received

Printed Name

Hector Sanchez

Signature

Hector Sanchez

Affiliation

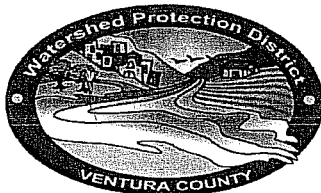
WECKLABS

Date/Time

3/8/13 10:35 am

Other Notes:

Please run 524.2 on travel blanks only if constituents detected in original analysis



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

3008035

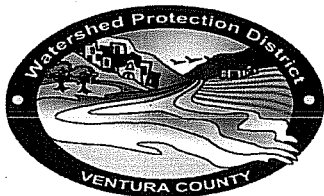
Sampling Date: \_\_\_\_\_ Project Number: 2012/13-4 (Wet) Grabs  
 Sampling Team: \_\_\_\_\_

SAMPLE ID	DATE/TIME COLLECTED	Oil & Grease; O&G-NP (EPA 1664A)						Cyanide (EPA 335.4)	MTBE & 2CLEVE (EPA 524.2)	Travel Blanks (EPA 524.2)-only analyze if hits	EPA 515.3	Number of Bottles	NOTES
MO-SPA	3/7/13 231S	2	1	3	1							7	TL
MO-FIL	3/7/13 235S	2	1	3	1							7	TL
MO-SIM	3/8/13 0050	2	1	3	1							7	TL
MO-HUE	22:20 3/7/13 22:20	2	1	3	1							7	KH, Bw
MO-THO	3/7/13 22:27	2	1	3	1							7	AA, TB, SM
MO-MPK	3/8/13 0135	2	1	3	1							7	TL
MO-MPK Upstream at RR						2						2	
Edison RC Pipe at MPK - Lower						2						2	
Edison RC Pipe at MPK - Upper						2						2	

Relinquished Printed Name: Jason Burke  
 Signature: [Signature]  
 Affiliation: WPD Date/Time: 3/8/13 10:35 am

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

Other Notes: Please run 524.2 on travel blanks only if constituents detected in original analysis



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)

3C00078

Sampling Date: AA, SA, FS, TL

Project Number: 2012/13-4 (Wet) Grabs

Sampling Team: 3-7-13

SAMPLE ID	DATE/TIME COLLECTED											Number of Bottles	NOTES
		Oil & Grease; O&G-NP (EPA 1664A)	Cyanide (EPA 335.4)	MTBE & 2CLEVE (EPA 524.2)	Travel Blanks (EPA 524.2)-only analyze if hits								
<del>ME-CC</del>	<del>3-7-13 23:21</del>	3	1	3	1							8	
<del>ME-SCR</del>	<del>3-8-13 00:47</del>	2	1	3	1							7	
ME-VR2	3-8-13 9:45	2	4	3	1							7	2 O&G ONLY @ 9:45
<del>MO-CAM</del>	<del>3-7-13 21:45</del>	2	1	3	1							7	
MO-OJA		2	1	3	1							7	
MO-MEI		2	1	3	1							7	
MO-VEN		2	1	3	1							7	
<del>MO-OXN</del>	<del>3-7-13 21:05</del>	2	1	3	1							7	
MD-1		2	1	3	1							7	

Relinquished

Printed Name

W.B. CAREY

Signature

W.B. Carey

Affiliation

VCWPD

Date/Time

3/8/13 1400

Received

Printed Name

Abraham Levy

Signature

Abraham Levy

Affiliation

Pedrolave

Date/Time

3/8/13 1400

Other Notes:

Please run 524.2 on travel blanks only if constituents detected in original analysis



3C08077

# 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: 3/8/13

Project Number: 2012/13-4 (Wet) Composites

Sampling Team: KH, OP, AA, TL, WBC, BW, TS, SM

SAMPLE ID	DATE/TIME COLLECTED	Barium, total	Chlorine Residual	NO3-N	Metals, total & dissolved (+ Hardness)	Cr+6	BOD, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F (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	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	NOTES
<del>ME-CC</del>	<del>3</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
ME-SCR	3/8/13 10:45	X			X	X	X	X	X	X	X	X	X	1	KH, <del>OP</del> DP
ME-VR2	09:45				X	X	X	X	X	X	X	X	X	1	AA, TL
MO-CAM	10:10				X	X	X	X	X	X	X	X	X	1	KH, OP
MO-OJA	10:26				X	X	X	X	X	X	X	X	X	1	AA, TL
MO-MEI	10:44				X	X	X	X	X	X	X	X	X	1	AA, TL
MO-VEN	11:33				X	X	X	X	X	X	X	X	X	1	AA, TL

Metals by 200.8, Total & Dissolved:

Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg

Metals by 200.7, Total (only):  
Ca, Mg (for Hardness calc.)

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

3/8/13 1400

Received

Printed Name

Abraham Levy

Signature

Abraham Levy

Affiliation

Reliable

Date/Time

3/8/13 1400

Other Notes:

Filter for dissolved metals and perform conductivity analyses immediately.

Jamae Giner 3/8/13 1815







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

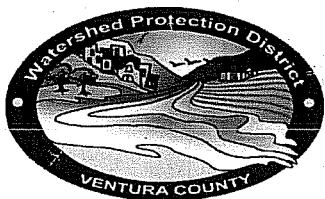
Sampling Date: 3/8/13 Project Number: 2012/13-4 (Wet)  
 Sampling Team: WBC

EQUIPMENT	Clean with detergent and HNO3	Clean with detergent, HNO3, and methanol*	No action required		NOTES
18.5 L carboy and lid		13			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Blue cube cooler			13		
Black bags			13		

Relinquished Printed Name W.B. CAREY Signature [Signature]  
 Signature W.B. Carey  
 Affiliation VCWPD Date/Time 3/8/13 1400

Received Printed Name Abba Lamy Signature [Signature]  
 Signature [Signature]  
 Affiliation Reitabie Date/Time 3/8/13 1400

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 which bottles were cleaned with methanol.



30091001

**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: 3/9/13

Project Number: 2012/134 (Wet) Composites

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

SAMPLE ID	DATE/TIME COLLECTED												Number of Bottles	NOTES
		Barium, total	Chlorine Residual	NO3-N	Metals, total & dissolved (+ Hardness)	Cr+6	BOD, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F (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	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	
ME-CC	3/9/13 08:05	X	X	X	X	X	X	X	X	X	X	X	1	WBC
<del>ME-SCR</del>		<del>X</del>			<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>ME-VR2</del>					<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>MO-CAM</del>					<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>MO-OJA</del>					<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>MO-MEI</del>					<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>MO-VEN</del>					<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	

Relinquished Printed Name W.B. CAREY

Signature W.B. Carey

Affiliation VCWPD Date/Time 3/9/13 0941

Received Printed Name Daniel Sandoval

Signature [Signature] Realty

Affiliation \_\_\_\_\_ Date/Time 3/9/13 0941

Other Notes: Filter for dissolved metals and perform conductivity analyses immediately. Jamie Gmer 3/9/13



**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: 4/23/13 Project Number: 2012/13 (Dry) SCR  
 Sampling Team: K. HAHS, W.B. CAREY

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)			Number of Bottles	NOTES
	ME-SCR	4/23/13 11:25	X	X	X	X	X			1	
	<del>MO-SPA</del>	<del>4/23/13 0810</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>			<del>1</del>	
	MO-FIL	4/23/13 0810	X	X		X	X			1	
	MO-OXN	4/23/13 1020	X	X		X	X			1	
	MO-VEN	4/23/13 0915	X	X		X	X			1	

Relinquished Printed Name KELLY HAHS  
 Signature [Signature]  
 Affiliation VCHCA Date/Time 4/23/13 12:10

Received Printed Name Susan Benard  
 Signature [Signature]  
 Affiliation PH [Signature] Date/Time 04/23/13 1210

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



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

Sampling Date: 4/30/13 Project Number: 2012/13-5 (Dry) VRW+HUE  
 Sampling Team: K. HAHS W.B. CAREY

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)			Number of Bottles	NOTES
	ME-VR2	4/30/13 0940	X	X	X	X	X			1	
	MO-OJA	4/30/13 0830	X	X		X	X			1	
	<del>MO-MEI</del>		X	X		X	X			1	<del>DRY</del>
	MO-HUE	4/30/13 1040	X	X		X	X			1	

Relinquished Printed Name KELLY HAHS  
 Signature [Signature]  
 Affiliation VCWRD Date/Time 4/30/13 11:13

Received Printed Name SAL V. BARRAGAN  
 Signature [Signature]  
 Affiliation P.H.F. LAB Date/Time 4/30/13 11:15

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



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

Sampling Date: 5/23/13

Sampling Team: BS, WBC

Project Number: 2012/13-5 (Dry) CC

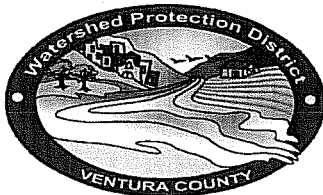
LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX )					Fecal Coliform (25 Tube Method - MPNX )					Enterococcus (Tray Method - WQ IDEXX )					E. coli (Tray Method - WQ IDEXX )					Total Coliform (Tray Method - WQ IDEXX )					Number of Bottles	NOTES
	ME-CC	5/23/13 1030	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1					
	MO-MPK		X	X				X	X			X	X											1					
	MO-SIM	5/23/13 900	X	X				X	X			X	X											1					
	MO-THO	5/23/13 940	X	X				X	X			X	X											1					
	MO-CAM	5/23/13 11:00	X	X				X	X			X	X											1					

Relinquished Printed Name BRAM SORCU  
 Signature [Signature]  
 Affiliation VC - WPD Date/Time 5/23/13 1137

Received Printed Name Susan Benavides Date/Time 05/23/13 1140  
 Signature [Signature]  
 Affiliation Pitt Lab Date/Time \_\_\_\_\_

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





Chain of Custody Record 3223089  
Ventura County Watershed Protection District  
NPDES Stormwater Monitoring Program  
Project: NPDES Stormwater Wet Season  
Grabs - Week Laboratories (SIDE 1 of 1)

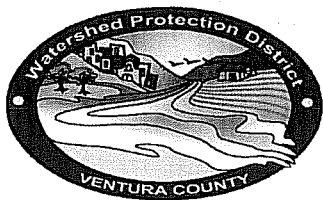
Sampling Date: 4/23/13 Project Number: 2012/13 (Dry) Grabs SCR  
Sampling Team: K. HAHS, W.B. CAREY

SAMPLE ID	DATE/TIME COLLECTED	Oil & Grease; O&G-NP (EPA 1664A)				Cyanide (EPA 335.4)	MTBE & 2CLEVE (EPA 524.2)	Travel Blanks (EPA 524.2)-only analyze if hits											Number of Bottles	NOTES
ME-SCR	4/23/13 11:25	2	1	3	1														7	* Travel Blank for all sites
MO-FIL	4/23/13 0810	2	1	3	1														7	were not received. JG
MO-SPA		2	1	3	1														7	4/23/13
MO-OXN	4/23/13 1020	2	1	3	1														7	
MO-VEN	4/23/13 0915	2	1	3	1														7	
																				SAMPLE PICKUP

Relinquished Printed Name KELLY HAHS  
Signature [Signature]  
Affiliation VCDPD Date/Time 4/23/13 / 15:00  
Received Printed Name MIMI GORDON  
Signature [Signature]  
Affiliation WEEK LABS Date/Time 4/23/13 1500

Other Notes: Please run 524.2 on travel blanks only if constituents detected in original analysis

RELINQUISHED [Signature] 4/23/13 1755 1.0°C  
Ventura Countywide Stormwater Quality Management Program Annual Report 2012-2013 Attachment E  
Monitoring Report Appendix E



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

3223077

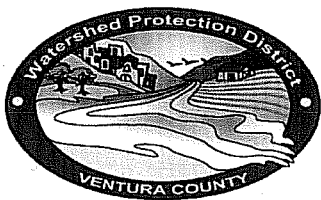
Sampling Date: 4/23/13 Project Number: 2012/13 (Dry) Composites SCR  
Sampling Team: K. HAYS, W.B. CAREY

SAMPLE ID	DATE/TIME COLLECTED	Barium, total	Chlorine Residual	NO3-N	Metals, total & dissolved (+ Hardness)	Cr+6	BOD, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F (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	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	Metals by 200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.)  608 include alpha- & gamma-chlordane  * Same extraction with low-level spike for 3 methods: 625CTR, 8270SIM-PAH, & 8270SIM-PHENOLS
ME-SCR	4/23/13 11:25	X			X	X	X	X	X	X	X	X	X	1	
<del>MO-SPA</del>	<del>                    </del>	<del>                    </del>	<del>                    </del>	<del>                    </del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	<del>                    </del>
MO-FIL	4/23/13 0810				X	X	X	X	X	X	X	X	X	1	
MO-OXN	4/23/13 1020				X	X	X	X	X	X	X	X	X	1	
MO-VEN	4/23/13 0915				X	X	X	X	X	X	X	X	X	1	

Relinquished Printed Name KELLY HAYS  
Signature [Signature]  
Affiliation VCWPD Date/Time 4/23/13 / 15:00

Received Printed Name ALLAN GOLDBERG  
Signature [Signature]  
Affiliation Week Lab Date/Time 4/23/13 1500

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



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

Sampling Date: 4/23/13 Project Number: 2012/13- (Dry) Equipment SCR

Sampling Team:

EQUIPMENT	Clean with detergent and HNO <sub>3</sub>	No action required			NOTES
18.5 L carboy and lid	✓				Please place tape or plastic bag over top
Blue cube cooler		✓			
Black bags		✓			
					SAMPLE PICK-UP

Relinquished Printed Name KELLY HAHN

Signature Rollin Hays


Affiliation Vuon Date/Time 4/23/13 15:00

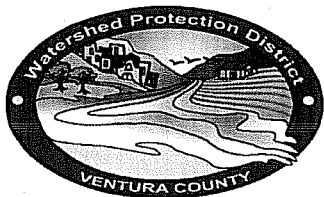
Received Printed Name FLAN GOLDSEN

Signature 

Affiliation WEEK LABS Date/Time 4/23/17 1300

Other Notes: \* Please clean with detergent, nitric acid, and deionized water per SOP.

REVIEWED  6/23/13 1755  
Ventura Countywide Stormwater Quality  
Management Program Annual Report 2012-2013  
Attachment E  
Monitoring Report Appendix E



Chain of Custody Record 3D30054  
 Ventura County Watershed Protection District  
 NPDES Stormwater Monitoring Program  
 Project: NPDES Stormwater Wet Season  
 Grabs - Week Laboratories (SIDE 1 of 1)

Sampling Date: 4/30/13  
 Sampling Team: K. HAHS, W.B. CAREY

Project Number: 2012/13-5 (Dry) Grabs VRW+HUE

SAMPLE ID	DATE/TIME COLLECTED																Number of Bottles	NOTES
		Oil & Grease; O&G-NP (EPA 1664A)	Cyanide (EPA 335.4)	MTBE & 2CLEVE (EPA 524.2)	Travel Blanks (EPA 524.2)-only analyze if hits													
ME-VR2	4/30/13 0830	2	1	3	1												7	
MO-OJA	4/30/13 0940	2	1	3	1												7	
<del>MO-MEI</del>		2	1	3	1												7	<del>DRY</del>
MO-HUE	4/30/13 1040	2	1	3	1												7	

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

Relinquished

Printed Name

KELLY HAHS

Signature

[Signature]

Affiliation

VCWPD

Date/Time

4/30/13

17:02

Received

Printed Name

Roger D. Lewis

Signature

[Signature]

Affiliation

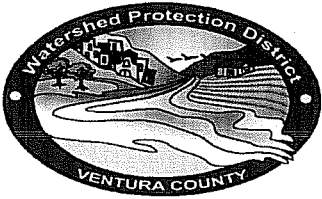
Peavaley mess

Date/Time

4-30-13

Other Notes:

Please run 524.2 on travel blanks only if constituents detected in original analysis



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

3030053

Sampling Date: 4/30/13  
Sampling Team: KHAHS, W.B. CAREY

Project Number: 2012/13-5 (Dry) Comp VRW+HUE

SAMPLE ID	DATE/TIME COLLECTED					Metals, total & dissolved (+ Hardness)	Cr+6	BOD, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F (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	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	NOTES
ME-VR2	4/30/13 0830					X	X	X	X	X	X	X	X	X	1	
MO-OJA	4/30/13 0940					X	X	X	X	X	X	X	X	X	1	
<del>MO-MEI</del>	<del>4/30/13 0940</del>					<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	<del>DRY</del>
MO-HUE	4/30/13 1040					X	X	X	X	X	X	X	X	X	1	

Relinquished: Printed Name KELLY HAHS / ARNE ANSELM  
Signature [Signatures]  
Affiliation VLWPD Date/Time 4/30/13 17:02

Received: Printed Name [Signature]  
Signature [Signature]  
Affiliation Peterson Date/Time 4-30-13

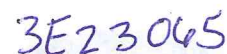
Other Notes: Filter for dissolved metals and perform conductivity analyses immediately.



Project Number: 2012/13-5 (Dry) Grabs CC

Attachment E  
Monitoring Report Appendix E





5/23/13

B<sub>5</sub>, WBC

**SAMPLE  
PICK-UP**

KELLY HATS

Kolsters

वृत्त

5/23/13 14:30

ALAN GOLDBER

all 

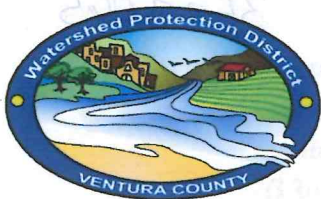
WEEK LABS

5/23/12 1435

Filter for dissolved metals and perform conductivity analyses immediately.

RELIANCE all  PLUM 5/23/13 1710





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

Sampling Date: 5/23/13 Project Number: 2012/13-5 (Dry) Equipment CC

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

EQUIPMENT	Clean with detergent and HNO <sub>3</sub>	No action required			NOTES
18.5 L carboy and lid	54				Please place tape or plastic bag over top
Blue cube cooler		54			
Black bags		54			
					<b>SAMPLE PICK-UP</b>

Relinquished Printed Name Kelly Hays  
 Signature [Signature]

Affiliation WVWD Date/Time 5/23/13 14:30

Received Printed Name Allen Goldsen  
 Signature [Signature]

Affiliation Week Labs Date/Time 5/23/13 1435

Other Notes: \* Please clean with detergent, nitric acid, and deionized water per SOP.

Relinquished x Allen Mumb 5/23/13 1740



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

Sampling Date: 8/12/13 + 8/13/13 Sample Event: DRY 2013  
 Sampling Team: K. HAHNS, W.B. CAREY

SAMPLE ID	DATE/TIME COLLECTED	Total Hardness	TOC	Dissolved Metals by 200.8 (Lead, Zinc, Copper)	Number of Bottles	Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks. Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.)
						NOTES
Camarillo-1	8/13/13 12:40	X	X	X	3	MO-GAM
Fillmore-1	8/12/13 13:25	X	X	X	3	MO-FIL
Moorpark-1	8/13/13 09:55	X	X	X	3	MO-MPK
Ojai-1	8/13/13 08:10	X	X	X	3	MO-OJA
Oxnard-1	8/12/13 09:45	X	X	X	3	MO-OXN
Port Hueneme-3	8/12/13 10:35	X	X	X	3	DRY-HUE3
Santa Paula-11	8/13/13 09:05	X	X	X	3	DRY-SPA2 MO-SPA
Simi Valley-1	8/13/13 10:30	X	X	X	3	MO-SIM
Thousand Oaks-1	8/13/13 11:25	X	X	X	3	MO-THO
Unincorporated-14	8/13/13 12:00	X	X	X	3	DRY-UNI14
Ventura-1	8/12/13 08:55	X	X	X	3	MO-VEN

Relinquished Printed Name Kelly Hahns  
 Signature [Signature]  
 Affiliation VWD Date/Time 8/13/13 / 1540

Received Printed Name ALLAN GOLDBERG  
 Signature [Signature]  
 Affiliation Week Labs Date/Time 8/13/13 / 1540

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: 8/12/13 Sample Event: DRY 2013

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
	<del>Camano-1</del>												<del>MO-CAM</del>
	Fillmore-1	8/12/13 13:25	X	X									MO-FIL
	<del>Moerpark-1</del>												<del>MO-MPR</del>
	<del>Ojai-1</del>												<del>MO-OJA</del>
	Oxnard-1	8/12/13 09:45	X	X									MO-OXN
	Port Hueneme-3	8/12/13 10:35	X	X									DRY-HUE3
	<del>Santa Paula-2</del>												<del>DRY-SPA2</del>
	<del>Simi Valley-1</del>												<del>MO-SIM</del>
	<del>Thousand Oaks-1</del>												<del>MO-THO</del>
	<del>Unincorporated-2</del>												<del>DRY-UNI2</del>
	Ventura-1	8/12/13 08:55	X	X									MO-VEN

Relinquished Printed Name KELLY HAHS  
Signature Kelly HaHS  
Affiliation VCEPD Date/Time 8/12/13 14:20

Received Printed Name Nadia West  
Signature Nadia West  
Affiliation PH Lab Date/Time 08/12/13 @ 1425

Other Notes: 1:10 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: 8/13/13

Sample Event: DRY 2013

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	8/13/13 12:40	X	X								3	MO-CAM
	<del>Fillmore-1</del>	—											<del>MO-FIL</del>
	Moorpark-1	8/13/13 09:55	X	X								3	MO-MPK
	Ojai-1	8/13/13 08:10	X	X								3	MO-OJA
	<del>Oxnard-1</del>	—											<del>MO-ONX</del>
	<del>Port Hueneume-3</del>	—											<del>DRY-HUES</del>
	Santa Paula-1	8/13/13 09:05	X	X								3	<del>DRY-SPA2</del> MO-SPA
	Simi Valley-1	8/13/13 10:30	X	X								3	MO-SIM
	Thousand Oaks-1	8/13/13 11:25	X	X								3	MO-THO
	Unincorporated-14	8/13/13 12:00	X	X								3	DRY-UN14
	<del>Ventura-1</del>	—											<del>MO-VEN</del>

Relinquished

Printed Name

Kelly Hahs

Signature

Kelly Hahs

Affiliation

VCWPD

Date/Time

8/13/13

Received

Printed Name

Nadia West

Signature

Nadia West

Affiliation

PHL

Date/Time

8/13/13

Other Notes:

1:10 and 1:1000 dilutions