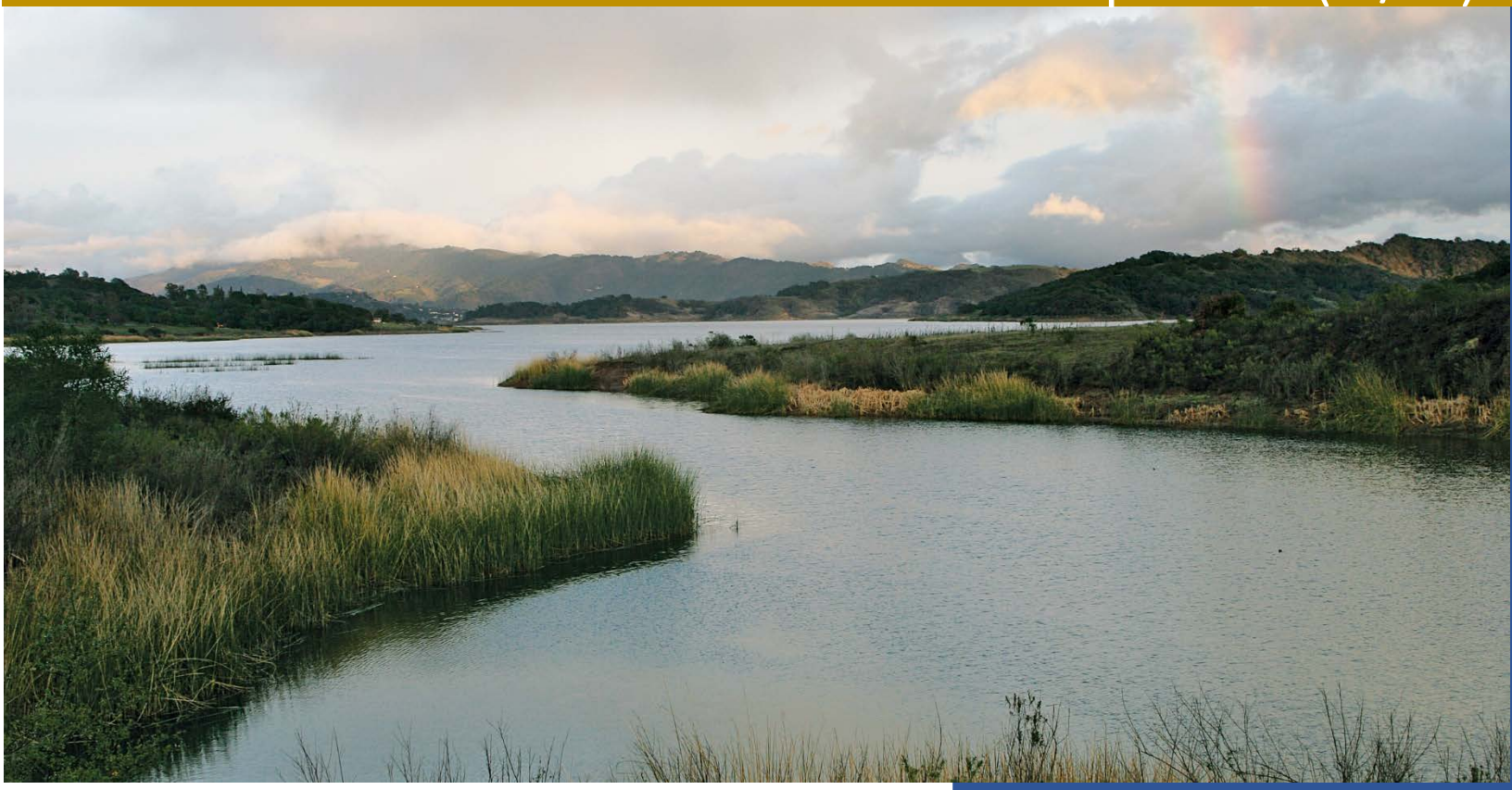
Ventura Countywide Stormwater Quality Management Program

2017-2018
Permit Year

Ventura Countywide Stormwater Quality Management Program Annual Report

Attachment E – TMDL Reports (1/3)



December 14, 2018

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

December 12, 2017

Jenny Newman, TMDL Section Chief
Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Subject: 2017 ANNUAL REPORT FOR SANTA CLARA RIVER ESTUARY AND REACH 3 BACTERIA TOTAL MAXIMUM DAILY LOAD

Dear Ms. Newman,

The attached tables summarize results of weekly monitoring required by the Santa Clara River Estuary and Reach 3 Bacteria Total Maximum Daily Load (TMDL) Final In-stream Compliance Monitoring Plan (CMP). This Annual Report presents weekly monitoring results for sampling events completed between October 4, 2016 and October 31, 2017. As described in the CMP, sampling took take place weekly on Tuesdays at Santa Clara River Estuary Reach 005 (SCRE-R005) and Santa Clara River Reach 3 Receiving Water 1 (SCRR3-RW1). Annual weekly sampling results, including daily geometric means are presented in Tables 1 and 2, with actual sample collection dates marked with a diamond symbol (♦). Wet weather (collected 72 hours after a day with >0.1" rainfall) and dry weather daily geometric means were calculated from most recent 30 days of either wet weather or dry weather sampling data. Daily bacteria results were assigned from weekly samples collected at sites.

While sampling was conducted weekly on Tuesdays, four sampling events required alternate dates at SCRE-R005 (October 11, 2016, November 9, 2016, December 14, 2016, and February 22, 2017). Analytical methodology was consistent over the sampling period except for January 24, 2017, February 7, 2017, February 14, 2017, February 21, 2017, and February 28, 2017 at SCRR3-RW1; SM 9221 B,C,E method was used in place of SM 9223 - Colilert Quanti-Tray Method due to high turbidity of surface water matrix.

Samples were collected by the Ventura City's Wastewater Treatment Plant (WWTP) staff at SCRE-R005 and by Rincon Consultants at SCRR3-RW1 for bacteria analysis by the Ventura City's WWTP Laboratory. The report was prepared by Rincon Consultants, Inc.

If you have any questions regarding this CMP, please contact Ewelina Mutkowska at (805) 645-1382.

Sincerely,

Arne Anselm
Deputy Director,
Ventura County Watershed Protection District

CC: Jeff Pratt, Ventura County Public Works Agency
Glenn Shephard, Ventura County Watershed Protection District
Ewelina Mutkowska, Ventura County Public Works Agency
Joe Yahner, City of Ventura
Roxanne Hughes, City of Fillmore
Caesar Hernandez, City of Santa Paula
Badaoui Mouderres, City of Oxnard

Table 1
Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Time	Date		Rain		Single Sample E.coli (MPN/100mL) Site: SCRR3-RW1 (235 MPN)		Single Sample Total Coliform (MPN/100mL) Site: SCRE-R005 (10,000 MPN)		Single Sample Fecal Coliform (MPN/100mL) Site: SCRE-R005 (400 MPN)		Single Sample Enterococcus (MPN/100mL) Site: SCRE-R005 (104 MPN)
Santa Clara River Reach 3												
SCRR3-RW1	1100	10/11/2016	♦	Dry	=	488.4		n/a		n/a		n/a
SCRR3-RW1	1015	10/18/2016	♦	Wet	=	866.4		n/a		n/a		n/a
SCRR3-RW1	1430	10/25/2016	♦	Dry	>	2,419.2		n/a		n/a		n/a
SCRR3-RW1	1400	11/1/2016	♦	Dry	>	2,419.2		n/a		n/a		n/a
SCRR3-RW1	1250	11/8/2016	♦	Dry	>	2,419.2		n/a		n/a		n/a
SCRR3-RW1	1250	11/15/2016	♦	Dry	>	2,419.2		n/a		n/a		n/a
SCRR3-RW1	1300	11/22/2016	♦	Wet	>	2,419.2		n/a		n/a		n/a
SCRR3-RW1	1200	11/29/2016	♦	Wet	>	2,419.2		n/a		n/a		n/a
SCRR3-RW1	1015	12/6/2016	♦	Dry	>	2,419.2		n/a		n/a		n/a
SCRR3-RW1	0805	12/13/2016	♦	Dry	>	273.0		n/a		n/a		n/a
SCRR3-RW1	0950	12/20/2016	♦	Dry	=	613.0		n/a		n/a		n/a
SCRR3-RW1	1215	12/27/2016	♦	Wet	=	194.0		n/a		n/a		n/a
SCRR3-RW1	1205	1/3/2017	♦	Dry	=	68.3		n/a		n/a		n/a
SCRR3-RW1	1310	1/10/2017	♦	Wet	=	126.3		n/a		n/a		n/a
SCRR3-RW1	1300	1/17/2017	♦	Dry	=	60.9		n/a		n/a		n/a
SCRR3-RW1	1225	1/24/2017	♦	Wet	=	800.0		n/a		n/a		n/a
SCRR3-RW1	1330	1/31/2017	♦	Dry	=	18.5		n/a		n/a		n/a
SCRR3-RW1	1400	2/7/2017	♦	Wet	=	800.0		n/a		n/a		n/a
SCRR3-RW1	1200	2/14/2017	♦	Wet	=	130.0		n/a		n/a		n/a
SCRR3-RW1	1215	2/21/2017	♦	Wet	=	300.0		n/a		n/a		n/a
SCRR3-RW1	1015	2/28/2017	♦	Wet	=	23.0		n/a		n/a		n/a
SCRR3-RW1	1215	3/7/2017	♦	Dry	=	13.0		n/a		n/a		n/a
SCRR3-RW1	0835	3/14/2017	♦	Dry	=	33.0		n/a		n/a		n/a
SCRR3-RW1	1230	3/21/2017	♦	Dry	=	770.1		n/a		n/a		n/a
SCRR3-RW1	1350	3/28/2017	♦	Dry	=	30.5		n/a		n/a		n/a
SCRR3-RW1	0900	4/4/2017	♦	Dry	=	36.4		n/a		n/a		n/a
SCRR3-RW1	0810	4/11/2017	♦	Wet	=	66.9		n/a		n/a		n/a
SCRR3-RW1	1000	4/18/2017	♦	Dry	=	185.0		n/a		n/a		n/a
SCRR3-RW1	1400	4/25/2017	♦	Dry	=	41.0		n/a		n/a		n/a
SCRR3-RW1	1045	5/2/2017	♦	Dry	=	32.0		n/a		n/a		n/a
SCRR3-RW1	1240	5/9/2017	♦	Dry	=	30.1		n/a		n/a		n/a
SCRR3-RW1	1200	5/16/2017	♦	Dry	=	32.3		n/a		n/a		n/a
SCRR3-RW1	1000	5/23/2017	♦	Dry	=	62.0		n/a		n/a		n/a
SCRR3-RW1	1005	5/31/2017	♦	Dry	=	76.6		n/a		n/a		n/a
SCRR3-RW1	0910	6/6/2017	♦	Dry	=	172.2		n/a		n/a		n/a
SCRR3-RW1	0945	6/13/2017	♦	Dry	=	275.5		n/a		n/a		n/a
SCRR3-RW1	1000	6/20/2017	♦	Dry	=	126.7		n/a		n/a		n/a

Table 1
Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Time	Date		Rain		Single Sample E.coli (MPN/100mL) Site: SCRR3-RW1 (235 MPN)		Single Sample Total Coliform (MPN/100mL) Site: SCRE-R005 (10,000 MPN)		Single Sample Fecal Coliform (MPN/100mL) Site: SCRE-R005 (400 MPN)		Single Sample Enterococcus (MPN/100mL) Site: SCRE-R005 (104 MPN)
SCRR3-RW1	1305	6/27/2017	♦	Dry	=	62.0		n/a		n/a		n/a
SCRR3-RW1	0930	7/4/2017	♦	Dry	=	143.0		n/a		n/a		n/a
SCRR3-RW1	1110	7/11/2017	♦	Dry	=	43.5		n/a		n/a		n/a
SCRR3-RW1	1115	7/18/2017	♦	Dry	=	49.0		n/a		n/a		n/a
SCRR3-RW1	1320	7/25/2017	♦	Dry	=	30.2		n/a		n/a		n/a
SCRR3-RW1	1120	8/1/2017	♦	Dry	=	35.8		n/a		n/a		n/a
SCRR3-RW1	1100	8/8/2017	♦	Dry	=	63.3		n/a		n/a		n/a
SCRR3-RW1	1215	8/15/2017	♦	Dry	=	74.9		n/a		n/a		n/a
SCRR3-RW1	1215	8/22/2017	♦	Dry	=	143.9		n/a		n/a		n/a
SCRR3-RW1	0940	8/29/2017	♦	Dry	=	74.3		n/a		n/a		n/a
SCRR3-RW1	1315	9/5/2017	♦	Dry	=	55.6		n/a		n/a		n/a
SCRR3-RW1	1145	9/12/2017	♦	Dry	=	34.5		n/a		n/a		n/a
SCRR3-RW1	1155	9/19/2017	♦	Dry	=	43.5		n/a		n/a		n/a
SCRR3-RW1	1045	9/26/2017	♦	Dry	=	20.9		n/a		n/a		n/a
SCRR3-RW1	1120	10/3/2017	♦	Dry	=	31.8		n/a		n/a		n/a
SCRR3-RW1	1310	10/10/2017	♦	Dry	=	39.7		n/a		n/a		n/a
SCRR3-RW1	0852	10/17/2017	♦	Dry	=	145.5		n/a		n/a		n/a
SCRR3-RW1	1045	10/24/2017	♦	Dry	=	1,986.3		n/a		n/a		n/a
SCRR3-RW1	1115	10/31/2017	♦	Dry	=	547.5		n/a		n/a		n/a
Santa Clara River Estuary												
SCRE-R005	0812	10/4/2016	♦	Dry		n/a	=	3000	=	800	=	127
SCRE-R005	0903	10/12/2016	♦	Dry		n/a	=	3,000	=	130	=	127
SCRE-R005	1105	10/18/2016	♦	Wet		n/a	=	3,000	=	1,300	=	49
SCRE-R005	0825	10/25/2016	♦	Dry		n/a	=	2,200	=	23	=	105
SCRE-R005	0957	11/1/2016	♦	Dry		n/a	=	9,000	=	500	=	37
SCRE-R005	0903	11/9/2016	♦	Dry		n/a	=	2,800	=	300	=	37
SCRE-R005	0731	11/15/2016	♦	Dry		n/a	=	5,000	=	500	=	579
SCRE-R005	0822	11/22/2016	♦	Wet		n/a	=	2,400	=	350	=	82
SCRE-R005	0911	11/29/2016	♦	Wet		n/a	>	1,600	=	110	=	80
SCRE-R005	0746	12/6/2016	♦	Dry		n/a	=	3,000	=	800	=	112
SCRE-R005	0940	12/14/2016	♦	Dry		n/a	=	1,300	=	300	=	121
SCRE-R005	0853	12/20/2016	♦	Dry		n/a	=	700	=	23	=	6
SCRE-R005	0757	12/27/2016	♦	Wet		n/a	=	16,000	=	230	=	35
SCRE-R005	0936	1/3/2017	♦	Dry		n/a	=	3,000	=	130	=	49
SCRE-R005	0942	1/10/2017	♦	Wet		n/a	>	1,600	>	1,600	>	2,419
SCRE-R005	0901	1/17/2017	♦	Dry		n/a	=	5,000	=	130	=	5
SCRE-R005	0853	1/24/2017	♦	Wet		n/a	>	1,600	=	9,000	=	3,448
SCRE-R005	0847	1/31/2017	♦	Dry		n/a	=	2,200	=	30	=	10

Table 1
Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Time	Date		Rain		Single Sample E.coli (MPN/100mL) Site: SCRR3-RW1 (235 MPN)		Single Sample Total Coliform (MPN/100mL) Site: SCRE-R005 (10,000 MPN)		Single Sample Fecal Coliform (MPN/100mL) Site: SCRE-R005 (400 MPN)		Single Sample Enterococcus (MPN/100mL) Site: SCRE-R005 (104 MPN)
SCRE-R005	0809	2/7/2017	♦	Wet		n/a	>	16,000	=	9,000	>	2,419
SCRE-R005	0959	2/14/2017	♦	Wet		n/a	=	5,000	=	300	=	132
SCRE-R005	1107	2/22/2017	♦	Wet		n/a	>	16,000	=	800	=	573
SCRE-R005	1022	2/28/2017	♦	Wet		n/a	=	5,000	=	80	=	573
SCRE-R005	0819	3/7/2017	♦	Dry		n/a	=	1,300	=	80	=	35
SCRE-R005	0945	3/14/2017	♦	Dry		n/a	=	1,100	=	30	=	24
SCRE-R005	0945	3/21/2017	♦	Dry		n/a	=	700	=	30	=	12
SCRE-R005	0917	3/28/2017	♦	Dry		n/a	=	1,700	=	80	=	6
SCRE-R005	0923	4/4/2017	♦	Dry		n/a	=	900	=	300	=	25
SCRE-R005	0825	4/11/2017	♦	Wet		n/a	=	1,100	=	130	=	57
SCRE-R005	0910	4/18/2017	♦	Dry		n/a	=	800	=	500	>	2,419
SCRE-R005	0857	4/25/2017	♦	Dry		n/a	=	5,000	=	300	=	214
SCRE-R005	0825	5/2/2017	♦	Dry		n/a	=	1,600	=	13	=	276
SCRE-R005	0829	5/9/2017	♦	Dry		n/a	=	1,100	=	30	=	96
SCRE-R005	0915	5/16/2017	♦	Dry		n/a	=	280	=	2	=	27
SCRE-R005	0817	5/23/2017	♦	Dry		n/a	=	700	=	2	=	32
SCRE-R005	0924	5/31/2017	♦	Dry		n/a	=	500	=	7	>	2,419
SCRE-R005	0848	6/6/2017	♦	Dry		n/a	=	500	=	50	=	7
SCRE-R005	0950	6/13/2017	♦	Dry		n/a	=	1,600	=	2	=	2
SCRE-R005	0923	6/20/2017	♦	Dry		n/a	=	800	=	23	=	40
SCRE-R005	0935	6/27/2017	♦	Dry		n/a	=	800	=	23	=	12
SCRE-R005	1016	7/4/2017	♦	Dry		n/a	=	9,000	<	2	=	1
SCRE-R005	0927	7/11/2017	♦	Dry		n/a	=	3,500	=	70	=	37
SCRE-R005	0929	7/18/2017	♦	Dry		n/a	=	16,000	=	14	=	44
SCRE-R005	0843	7/25/2017	♦	Dry		n/a	=	800	=	8	=	19
SCRE-R005	1009	8/1/2017	♦	Dry		n/a	=	1,600	=	1,600	=	72
SCRE-R005	1005	8/8/2017	♦	Dry		n/a	=	300	=	4	=	17
SCRE-R005	0918	8/15/2017	♦	Dry		n/a	=	500	=	8	=	21
SCRE-R005	1006	8/22/2017	♦	Dry		n/a	=	300	=	8	=	49
SCRE-R005	0940	8/29/2017	♦	Dry		n/a	=	130	=	130	=	38
SCRE-R005	0912	9/5/2017	♦	Dry		n/a	=	2,800	=	17	=	52
SCRE-R005	0928	9/12/2017	♦	Dry		n/a	=	9,000	=	170	=	46
SCRE-R005	0837	9/19/2017	♦	Dry		n/a	=	220	=	8	=	68
SCRE-R005	0959	9/26/2017	♦	Dry		n/a	=	130	=	4	=	26
SCRE-R005	0943	10/3/2017	♦	Dry		n/a	=	700	=	4	=	3
SCRE-R005	0917	10/10/2017	♦	Dry		n/a	>	16,000	=	30	=	8
SCRE-R005	0933	10/17/2017	♦	Dry		n/a	>	16,000	=	23	=	27
SCRE-R005	0759	10/24/2017	♦	Dry		n/a	=	9,000	=	50	=	48

Table 1

Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Time	Date		Rain		Single Sample E.coli (MPN/100mL) Site: SCRR3-RW1		Single Sample Total Coliform (MPN/100mL) Site: SCRE-R005		Single Sample Fecal Coliform (MPN/100mL) Site: SCRE-R005		Single Sample Enterococcus (MPN/100mL) Site: SCRE-R005
						(235 MPN)		(10,000 MPN)		(400 MPN)		(104 MPN)
SCRE-R005	1001	10/31/2017	♦	Dry		n/a	=	1,300	=	13	=	11

Notes:

♦ Date of Sampling

MPN - most probably number

TMDL - Total Maximum Daily Load

E.coli - Escherichia coli

> - greater than

< - less than

= - equal to

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Coliform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
Santa Clara River Reach 3																
SCRR3-RW1	10/11/2016	♦	-	Dry	=	488.4	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/12/2016		-	Dry	=	488.4	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/13/2016		-	Dry	=	488.4	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/14/2016		-	Dry	=	488.4	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/15/2016		-	Dry	=	488.4	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/16/2016		-	Dry	=	488.4	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/17/2016		-	Dry	=	488.4	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/18/2016	♦	-	Wet	=	866.4	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/19/2016		-	Wet	=	866.4	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/20/2016		-	Wet	=	866.4	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/21/2016		-	Wet	=	866.4	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/22/2016		-	Wet	=	866.4	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/23/2016		-	Wet	=	866.4	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/24/2016		-	Wet	=	866.4	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/25/2016	♦	-	Dry	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/26/2016		-	Dry	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/27/2016		-	Dry	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/28/2016		-	Dry	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/29/2016		-	Dry	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/30/2016		-	Dry	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/31/2016		-	Dry	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/1/2016	♦	-	Dry	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/2/2016		-	Dry	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/3/2016		-	Dry	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/4/2016		-	Dry	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/5/2016		-	Dry	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/6/2016		-	Dry	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/7/2016		-	Dry	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/8/2016	♦	-	Dry	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/9/2016		-	Dry	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/10/2016		-	Dry	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/11/2016		-	Dry	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/12/2016		-	Dry	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/13/2016		-	Dry	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/14/2016		-	Dry	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/15/2016	♦	-	Dry	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Coliform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
SCRR3-RW1	11/16/2016		-	Dry	>	2,419.2	1665.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/17/2016		-	Dry	>	2,419.2	1756.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/18/2016		-	Dry	>	2,419.2	1852.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/19/2016		-	Dry	>	2,419.2	1954.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/20/2016		-	Dry	>	2,419.2	2061.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/21/2016		-	Dry	>	2,419.2	2174.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/22/2016	♦	-	Wet	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/23/2016		-	Wet	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/24/2016		-	Wet	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/25/2016		-	Wet	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/26/2016		-	Wet	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/27/2016		-	Wet	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/28/2016		-	Wet	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/29/2016	♦	-	Wet	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/30/2016		-	Wet	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/1/2016		-	Wet	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/2/2016		-	Wet	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/3/2016		-	Wet	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/4/2016		-	Wet	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/5/2016		-	Wet	>	2,419.2	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/6/2016	♦	-	Dry	>	2,419.2	2293.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/7/2016		-	Dry	>	2,419.2	2419.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/8/2016		-	Dry	>	2,419.2	2419.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/9/2016		-	Dry	>	2,419.2	2419.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/10/2016		-	Dry	>	2,419.2	2419.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/11/2016		-	Dry	>	2,419.2	2419.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/12/2016		-	Dry	>	2,419.2	2419.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/13/2016	♦	-	Dry	>	273.0	2249.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/14/2016		-	Dry	=	273.0	2091.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/15/2016		-	Dry	=	273.0	1945.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/16/2016		-	Dry	=	273.0	1808.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/17/2016		-	Dry	=	273.0	1681.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/18/2016		-	Dry	=	273.0	1563.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/19/2016		-	Dry	=	273.0	1454.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/20/2016	♦	-	Dry	=	613.0	1389.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/21/2016		-	Dry	=	613.0	1326.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/22/2016		-	Dry	=	613.0	1267.6		n/a	n/a		n/a	n/a		n/a	n/a

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Coliform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
SCRR3-RW1	12/23/2016		-	Dry	=	613.0	1210.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/24/2016		-	Dry	=	613.0	1156.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/25/2016		-	Dry	=	613.0	1105.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/26/2016		-	Dry	=	613.0	1055.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/27/2016	♦	-	Wet	=	194.0	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/28/2016		-	Wet	=	194.0	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/29/2016		-	Wet	=	194.0	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/30/2016		-	Wet	=	194.0	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	12/31/2016		-	Wet	=	194.0	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/1/2017		-	Wet	=	194.0	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/2/2017		-	Wet	=	194.0	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/3/2017	♦	-	Dry	=	68.3	937.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/4/2017		-	Dry	=	68.3	832.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/5/2017		-	Dry	=	68.3	738.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/6/2017		-	Dry	=	68.3	656.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/7/2017		-	Dry	=	68.3	582.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/8/2017		-	Dry	=	68.3	517.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/9/2017		-	Dry	=	68.3	459.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/10/2017	♦	-	Wet	=	126.3	-		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/11/2017		-	Wet	=	126.3	867.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/12/2017		-	Wet	=	126.3	813.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/13/2017		-	Wet	=	126.3	763.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/14/2017		-	Wet	=	126.3	715.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/15/2017		-	Wet	=	126.3	671.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/16/2017		-	Wet	=	126.3	629.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/17/2017	♦	-	Dry	=	60.9	406.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/18/2017		-	Dry	=	60.9	359.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/19/2017		-	Dry	=	60.9	317.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/20/2017		-	Dry	=	60.9	281.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/21/2017		-	Dry	=	60.9	248.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/22/2017		-	Dry	=	60.9	219.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/23/2017		-	Dry	=	60.9	194.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/24/2017	♦	-	Wet	=	800.0	627.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/25/2017		-	Wet	=	800.0	626.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/26/2017		-	Wet	=	800.0	603.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/27/2017		-	Wet	=	800.0	581.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/28/2017		-	Wet	=	800.0	560.6		n/a	n/a		n/a	n/a		n/a	n/a

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Coliform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
SCRR3-RW1	1/29/2017		-	Wet	=	800.0	540.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/30/2017		-	Wet	=	800.0	520.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	1/31/2017	♦	-	Dry	=	18.5	165.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/1/2017		-	Dry	=	18.5	140.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/2/2017		-	Dry	=	18.5	128.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/3/2017		-	Dry	=	18.5	117.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/4/2017		-	Dry	=	18.5	107.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/5/2017		-	Dry	=	18.5	98.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/6/2017		-	Dry	=	18.5	89.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/7/2017	♦	-	Wet	=	800.0	501.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/8/2017		-	Wet	=	800.0	483.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/9/2017		-	Wet	=	800.0	466.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/10/2017		-	Wet	=	800.0	449.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/11/2017		-	Wet	=	800.0	433.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/12/2017		-	Wet	=	800.0	417.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/13/2017		-	Wet	=	800.0	402.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/14/2017	♦	-	Wet	=	130.0	364.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/15/2017		-	Wet	=	130.0	331.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/16/2017		-	Wet	=	130.0	326.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/17/2017		-	Wet	=	130.0	322.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/18/2017		-	Wet	=	130.0	318.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/19/2017		-	Wet	=	130.0	313.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/20/2017		-	Wet	=	130.0	309.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/21/2017	♦	-	Wet	=	300.0	314.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/22/2017		-	Wet	=	300.0	318.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/23/2017		-	Wet	=	300.0	328.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/24/2017		-	Wet	=	300.0	337.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/25/2017		-	Wet	=	300.0	347.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/26/2017		-	Wet	=	300.0	357.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/27/2017		-	Wet	=	300.0	368.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	2/28/2017	♦	-	Wet	=	23.0	347.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/1/2017		-	Wet	=	23.0	328.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/2/2017		-	Wet	=	23.0	292.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/3/2017		-	Wet	=	23.0	259.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/4/2017		-	Wet	=	23.0	230.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/5/2017		-	Wet	=	23.0	204.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/6/2017		-	Wet	=	23.0	181.9		n/a	n/a		n/a	n/a		n/a	n/a

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Coliform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
SCRR3-RW1	3/7/2017	♦	-	Dry	=	13.0	81.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/8/2017		-	Dry	=	13.0	73.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/9/2017		-	Dry	=	13.0	64.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/10/2017		-	Dry	=	13.0	56.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/11/2017		-	Dry	=	13.0	49.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/12/2017		-	Dry	=	13.0	43.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/13/2017		-	Dry	=	13.0	38.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/14/2017	♦	-	Dry	=	33.0	35.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/15/2017		-	Dry	=	33.0	31.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/16/2017		-	Dry	=	33.0	31.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/17/2017		-	Dry	=	33.0	30.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/18/2017		-	Dry	=	33.0	29.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/19/2017		-	Dry	=	33.0	28.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/20/2017		-	Dry	=	33.0	28.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/21/2017	♦	-	Dry	=	770.1	30.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/22/2017		-	Dry	=	770.1	33.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/23/2017		-	Dry	=	770.1	35.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/24/2017		-	Dry	=	770.1	39.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/25/2017		-	Dry	=	770.1	42.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/26/2017		-	Dry	=	770.1	46.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/27/2017		-	Dry	=	770.1	50.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/28/2017	♦	-	Dry	=	30.5	49.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/29/2017		-	Dry	=	30.5	48.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/30/2017		-	Dry	=	30.5	48.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	3/31/2017		-	Dry	=	30.5	49.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/1/2017		-	Dry	=	30.5	50.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/2/2017		-	Dry	=	30.5	51.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/3/2017		-	Dry	=	30.5	52.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/4/2017	♦	-	Dry	=	36.4	53.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/5/2017		-	Dry	=	36.4	54.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/6/2017		-	Dry	=	36.4	56.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/7/2017		-	Dry	=	36.4	58.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/8/2017		-	Dry	=	36.4	60.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/9/2017		-	Dry	=	36.4	62.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/10/2017		-	Dry	=	36.4	65.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/11/2017	♦	-	Wet	=	66.9	167.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/12/2017		-	Wet	=	66.9	154.2		n/a	n/a		n/a	n/a		n/a	n/a

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Coliform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
SCRR3-RW1	4/13/2017		-	Wet	=	66.9	142.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/14/2017		-	Wet	=	66.9	130.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/15/2017		-	Wet	=	66.9	120.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/16/2017		-	Wet	=	66.9	110.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/17/2017		-	Wet	=	66.9	102.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/18/2017	♦	-	Dry	=	185.0	71.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/19/2017		-	Dry	=	185.0	77.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/20/2017		-	Dry	=	185.0	82.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/21/2017		-	Dry	=	185.0	87.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/22/2017		-	Dry	=	185.0	92.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/23/2017		-	Dry	=	185.0	97.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/24/2017		-	Dry	=	185.0	103.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/25/2017	♦	-	Dry	=	41.0	104.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/26/2017		-	Dry	=	41.0	104.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/27/2017		-	Dry	=	41.0	95.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/28/2017		-	Dry	=	41.0	86.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/29/2017		-	Dry	=	41.0	78.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	4/30/2017		-	Dry	=	41.0	70.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/1/2017		-	Dry	=	41.0	64.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/2/2017	♦	-	Dry	=	32.0	57.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/3/2017		-	Dry	=	32.0	52.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/4/2017		-	Dry	=	32.0	52.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/5/2017		-	Dry	=	32.0	52.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/6/2017		-	Dry	=	32.0	52.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/7/2017		-	Dry	=	32.0	52.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/8/2017		-	Dry	=	32.0	52.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/9/2017	♦	-	Dry	=	30.1	52.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/10/2017		-	Dry	=	30.1	52.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/11/2017		-	Dry	=	30.1	52.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/12/2017		-	Dry	=	30.1	51.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/13/2017		-	Dry	=	30.1	51.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/14/2017		-	Dry	=	30.1	51.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/15/2017		-	Dry	=	30.1	50.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/16/2017	♦	-	Dry	=	32.3	50.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/17/2017		-	Dry	=	32.3	50.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/18/2017		-	Dry	=	32.3	47.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/19/2017		-	Dry	=	32.3	44.8		n/a	n/a		n/a	n/a		n/a	n/a

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Coliform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
SCRR3-RW1	5/20/2017		-	Dry	=	32.3	42.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/21/2017		-	Dry	=	32.3	39.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/22/2017		-	Dry	=	32.3	37.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/23/2017	♦	-	Dry	=	62.0	36.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/24/2017		-	Dry	=	62.0	35.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/25/2017		-	Dry	=	62.0	35.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/26/2017		-	Dry	=	62.0	36.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/27/2017		-	Dry	=	62.0	36.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/28/2017		-	Dry	=	62.0	37.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/29/2017		-	Dry	=	62.0	37.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/30/2017	♦	-	Dry	=	62.0	38.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	5/31/2017		-	Dry	=	76.6	38.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/1/2017		-	Dry	=	76.6	40.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/2/2017		-	Dry	=	76.6	41.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/3/2017		-	Dry	=	76.6	42.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/4/2017		-	Dry	=	76.6	43.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/5/2017		-	Dry	=	76.6	44.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/6/2017	♦	-	Dry	=	172.2	47.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/7/2017		-	Dry	=	172.2	50.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/8/2017		-	Dry	=	172.2	53.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/9/2017		-	Dry	=	172.2	56.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/10/2017		-	Dry	=	172.2	59.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/11/2017		-	Dry	=	172.2	63.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/12/2017		-	Dry	=	172.2	67.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/13/2017	♦	-	Dry	=	275.5	72.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/14/2017		-	Dry	=	275.5	77.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/15/2017		-	Dry	=	275.5	83.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/16/2017		-	Dry	=	275.5	89.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/17/2017		-	Dry	=	275.5	96.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/18/2017		-	Dry	=	275.5	103.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/19/2017		-	Dry	=	275.5	111.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/20/2017	♦	-	Dry	=	126.7	116.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/21/2017		-	Dry	=	126.7	121.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/22/2017		-	Dry	=	126.7	124.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/23/2017		-	Dry	=	126.7	127.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/24/2017		-	Dry	=	126.7	131.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/25/2017		-	Dry	=	126.7	134.1		n/a	n/a		n/a	n/a		n/a	n/a

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Coliform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
SCRR3-RW1	6/26/2017		-	Dry	=	126.7	137.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/27/2017	♦	-	Dry	=	62.0	137.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/28/2017		-	Dry	=	62.0	137.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/29/2017		-	Dry	=	62.0	137.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	6/30/2017		-	Dry	=	62.0	136.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/1/2017		-	Dry	=	62.0	135.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/2/2017		-	Dry	=	62.0	134.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/3/2017		-	Dry	=	62.0	133.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/4/2017	♦	-	Dry	=	143.0	136.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/5/2017		-	Dry	=	143.0	139.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/6/2017		-	Dry	=	143.0	138.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/7/2017		-	Dry	=	143.0	137.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/8/2017		-	Dry	=	143.0	136.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/9/2017		-	Dry	=	143.0	135.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/10/2017		-	Dry	=	143.0	135.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/11/2017	♦	-	Dry	=	43.5	128.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/12/2017		-	Dry	=	43.5	123.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/13/2017		-	Dry	=	43.5	115.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/14/2017		-	Dry	=	43.5	108.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/15/2017		-	Dry	=	43.5	102.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/16/2017		-	Dry	=	43.5	96.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/17/2017		-	Dry	=	43.5	90.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/18/2017	♦	-	Dry	=	49.0	85.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/19/2017		-	Dry	=	49.0	80.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/20/2017		-	Dry	=	49.0	78.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/21/2017		-	Dry	=	49.0	75.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/22/2017		-	Dry	=	49.0	73.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/23/2017		-	Dry	=	49.0	71.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/24/2017		-	Dry	=	49.0	68.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/25/2017	♦	-	Dry	=	30.2	65.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/26/2017		-	Dry	=	30.2	62.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/27/2017		-	Dry	=	30.2	61.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/28/2017		-	Dry	=	30.2	59.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/29/2017		-	Dry	=	30.2	58.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/30/2017		-	Dry	=	30.2	56.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	7/31/2017		-	Dry	=	30.2	55.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/1/2017	♦	-	Dry	=	35.8	54.5		n/a	n/a		n/a	n/a		n/a	n/a

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Coliform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
SCRR3-RW1	8/2/2017		-	Dry	=	35.8	53.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/3/2017		-	Dry	=	35.8	51.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/4/2017		-	Dry	=	35.8	48.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/5/2017		-	Dry	=	35.8	46.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/6/2017		-	Dry	=	35.8	44.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/7/2017		-	Dry	=	35.8	42.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/8/2017	♦	-	Dry	=	63.3	41.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/9/2017		-	Dry	=	63.3	40.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/10/2017		-	Dry	=	63.3	40.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/11/2017		-	Dry	=	63.3	41.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/12/2017		-	Dry	=	63.3	41.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/13/2017		-	Dry	=	63.3	42.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/14/2017		-	Dry	=	63.3	42.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/15/2017	♦	-	Dry	=	74.9	43.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/16/2017		-	Dry	=	74.9	44.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/17/2017		-	Dry	=	74.9	45.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/18/2017		-	Dry	=	74.9	45.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/19/2017		-	Dry	=	74.9	46.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/20/2017		-	Dry	=	74.9	47.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/21/2017		-	Dry	=	74.9	47.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/22/2017	♦	-	Dry	=	143.9	49.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/23/2017		-	Dry	=	143.9	51.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/24/2017		-	Dry	=	143.9	54.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/25/2017		-	Dry	=	143.9	56.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/26/2017		-	Dry	=	143.9	59.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/27/2017		-	Dry	=	143.9	63.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/28/2017		-	Dry	=	143.9	66.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/29/2017	♦	-	Dry	=	74.3	68.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/30/2017		-	Dry	=	74.3	70.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	8/31/2017		-	Dry	=	74.3	72.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/1/2017		-	Dry	=	74.3	74.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/2/2017		-	Dry	=	74.3	75.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/3/2017		-	Dry	=	74.3	77.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/4/2017		-	Dry	=	74.3	79.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/5/2017	♦	-	Dry	=	55.6	80.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/6/2017		-	Dry	=	55.6	82.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/7/2017		-	Dry	=	55.6	81.7		n/a	n/a		n/a	n/a		n/a	n/a

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Coliform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
SCRR3-RW1	9/8/2017		-	Dry	=	55.6	81.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/9/2017		-	Dry	=	55.6	81.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/10/2017		-	Dry	=	55.6	80.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/11/2017		-	Dry	=	55.6	80.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/12/2017	♦	-	Dry	=	34.5	78.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/13/2017		-	Dry	=	34.5	77.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/14/2017		-	Dry	=	34.5	75.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/15/2017		-	Dry	=	34.5	73.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/16/2017		-	Dry	=	34.5	71.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/17/2017		-	Dry	=	34.5	69.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/18/2017		-	Dry	=	34.5	67.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/19/2017	♦	-	Dry	=	43.5	66.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/20/2017		-	Dry	=	43.5	65.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/21/2017		-	Dry	=	43.5	62.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/22/2017		-	Dry	=	43.5	60.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/23/2017		-	Dry	=	43.5	58.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/24/2017		-	Dry	=	43.5	55.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/25/2017		-	Dry	=	43.5	53.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/26/2017	♦	-	Dry	=	20.9	50.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/27/2017		-	Dry	=	20.9	47.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/28/2017		-	Dry	=	20.9	45.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/29/2017		-	Dry	=	20.9	43.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	9/30/2017		-	Dry	=	20.9	41.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/1/2017		-	Dry	=	20.9	39.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/2/2017		-	Dry	=	20.9	38.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/3/2017	♦	-	Dry	=	31.8	37.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/4/2017		-	Dry	=	31.8	36.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/5/2017		-	Dry	=	31.8	35.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/6/2017		-	Dry	=	31.8	34.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/7/2017		-	Dry	=	31.8	34.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/8/2017		-	Dry	=	31.8	33.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/9/2017		-	Dry	=	31.8	32.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/10/2017	♦	-	Dry	=	39.7	32.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/11/2017		-	Dry	=	39.7	32.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/12/2017		-	Dry	=	39.7	32.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/13/2017		-	Dry	=	39.7	32.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/14/2017		-	Dry	=	39.7	32.5		n/a	n/a		n/a	n/a		n/a	n/a

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Coliform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
SCRR3-RW1	10/15/2017		-	Dry	=	39.7	32.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/16/2017		-	Dry	=	39.7	32.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/17/2017	♦	-	Dry	=	145.5	34.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/18/2017		-	Dry	=	145.5	36.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/19/2017		-	Dry	=	145.5	37.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/20/2017		-	Dry	=	145.5	39.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/21/2017		-	Dry	=	145.5	40.8		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/22/2017		-	Dry	=	145.5	42.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/23/2017		-	Dry	=	145.5	44.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/24/2017	♦	-	Dry	=	1,986.3	50.2		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/25/2017		-	Dry	=	1,986.3	57.0		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/26/2017		-	Dry	=	1,986.3	66.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/27/2017		-	Dry	=	1,986.3	77.3		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/28/2017		-	Dry	=	1,986.3	89.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/29/2017		-	Dry	=	1,986.3	104.7		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/30/2017		-	Dry	=	1,986.3	121.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	10/31/2017	♦	-	Dry	=	547.5	135.9		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/1/2017		-	Dry	=	547.5	151.5		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/2/2017		-	Dry	=	547.5	166.6		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/3/2017		-	Dry	=	547.5	183.1		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/4/2017		-	Dry	=	547.5	201.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/5/2017		-	Dry	=	547.5	221.4		n/a	n/a		n/a	n/a		n/a	n/a
SCRR3-RW1	11/6/2017		-	Dry	=	547.5	243.4		n/a	n/a		n/a	n/a		n/a	n/a
Santa Clara River Estuary																
SCRE-R005	10/4/2016	♦	-	Dry		n/a	n/a	=	3000	-	=	800	-	=	127	-
SCRE-R005	10/5/2016		-	Dry		n/a	n/a	=	3,000	-	=	800	-	=	127	-
SCRE-R005	10/6/2016		-	Dry		n/a	n/a	=	3,000	-	=	800	-	=	127	-
SCRE-R005	10/7/2016		-	Dry		n/a	n/a	=	3,000	-	=	800	-	=	127	-
SCRE-R005	10/8/2016		-	Dry		n/a	n/a	=	3,000	-	=	800	-	=	127	-
SCRE-R005	10/9/2016		-	Dry		n/a	n/a	=	3,000	-	=	800	-	=	127	-
SCRE-R005	10/10/2016		-	Dry		n/a	n/a	=	3,000	-	=	800	-	=	127	-
SCRE-R005	10/11/2016		-	Dry		n/a	n/a	=	3,000	-	=	800	-	=	127	-
SCRE-R005	10/12/2016	♦	-	Dry		n/a	n/a	=	3,000	-	=	130	-	=	127	-
SCRE-R005	10/13/2016		-	Dry		n/a	n/a	=	3,000	-	=	130	-	=	127	-
SCRE-R005	10/14/2016		-	Dry		n/a	n/a	=	3,000	-	=	130	-	=	127	-
SCRE-R005	10/15/2016		-	Dry		n/a	n/a	=	3,000	-	=	130	-	=	127	-
SCRE-R005	10/16/2016		-	Dry		n/a	n/a	=	3,000	-	=	130	-	=	127	-

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Collform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
SCRE-R005	10/17/2016		-	Dry		n/a	n/a	=	3,000	-	=	130	-	=	127	-
SCRE-R005	10/18/2016	♦	-	Wet		n/a	n/a	=	3,000	-	=	1,300	-	=	49	-
SCRE-R005	10/19/2016		-	Wet		n/a	n/a	=	3,000	-	=	1,300	-	=	49	-
SCRE-R005	10/20/2016		-	Wet		n/a	n/a	=	3,000	-	=	1,300	-	=	49	-
SCRE-R005	10/21/2016		-	Wet		n/a	n/a	=	3,000	-	=	1,300	-	=	49	-
SCRE-R005	10/22/2016		-	Wet		n/a	n/a	=	3,000	-	=	1,300	-	=	49	-
SCRE-R005	10/23/2016		-	Wet		n/a	n/a	=	3,000	-	=	1,300	-	=	49	-
SCRE-R005	10/24/2016		-	Wet		n/a	n/a	=	3,000	-	=	1,300	-	=	49	-
SCRE-R005	10/25/2016	♦	-	Dry		n/a	n/a	=	2,200	-	=	23	-	=	105	-
SCRE-R005	10/26/2016		-	Dry		n/a	n/a	=	2,200	-	=	23	-	=	105	-
SCRE-R005	10/27/2016		-	Dry		n/a	n/a	=	2,200	-	=	23	-	=	105	-
SCRE-R005	10/28/2016		-	Dry		n/a	n/a	=	2,200	-	=	23	-	=	105	-
SCRE-R005	10/29/2016		-	Dry		n/a	n/a	=	2,200	-	=	23	-	=	105	-
SCRE-R005	10/30/2016		-	Dry		n/a	n/a	=	2,200	-	=	23	-	=	105	-
SCRE-R005	10/31/2016		-	Dry		n/a	n/a	=	2,200	-	=	23	-	=	105	-
SCRE-R005	11/1/2016	♦	-	Dry		n/a	n/a	=	9,000	-	=	500	-	=	37	-
SCRE-R005	11/2/2016		-	Dry		n/a	n/a	=	9,000	-	=	500	-	=	37	-
SCRE-R005	11/3/2016		-	Dry		n/a	n/a	=	9,000	-	=	500	-	=	37	-
SCRE-R005	11/4/2016		-	Dry		n/a	n/a	=	9,000	-	=	500	-	=	37	-
SCRE-R005	11/5/2016		-	Dry		n/a	n/a	=	9,000	-	=	500	-	=	37	-
SCRE-R005	11/6/2016		-	Dry		n/a	n/a	=	9,000	-	=	500	-	=	37	-
SCRE-R005	11/7/2016		-	Dry		n/a	n/a	=	9,000	-	=	500	-	=	37	-
SCRE-R005	11/8/2016		-	Dry		n/a	n/a	=	2,800	-	=	500	-	=	37	-
SCRE-R005	11/9/2016	♦	-	Dry		n/a	n/a	=	2,800	3,589	=	300	207.5	=	37	83.9
SCRE-R005	11/10/2016		-	Dry		n/a	n/a	=	2,800	3,581	=	300	200.8	=	37	80.5
SCRE-R005	11/11/2016		-	Dry		n/a	n/a	=	2,800	3,573	=	300	194.3	=	37	77.3
SCRE-R005	11/12/2016		-	Dry		n/a	n/a	=	2,800	3,565	=	300	188.1	=	37	74.2
SCRE-R005	11/13/2016		-	Dry		n/a	n/a	=	2,800	3,557	=	300	182.0	=	37	71.2
SCRE-R005	11/14/2016		-	Dry		n/a	n/a	=	2,800	3,548	=	300	176.2	=	37	68.3
SCRE-R005	11/15/2016	♦	-	Dry		n/a	n/a	=	5,000	3,609	=	500	173.5	=	579	71.9
SCRE-R005	11/16/2016		-	Dry		n/a	n/a	=	5,000	3,671	=	500	170.8	=	579	75.6
SCRE-R005	11/17/2016		-	Dry		n/a	n/a	=	5,000	3,734	=	500	168.1	=	579	79.5
SCRE-R005	11/18/2016		-	Dry		n/a	n/a	=	5,000	3,798	=	500	175.8	=	579	83.6
SCRE-R005	11/19/2016		-	Dry		n/a	n/a	=	5,000	3,864	=	500	183.9	=	579	88.0
SCRE-R005	11/20/2016		-	Dry		n/a	n/a	=	5,000	3,930	=	500	192.3	=	579	92.5
SCRE-R005	11/21/2016		-	Dry		n/a	n/a	=	5,000	3,998	=	500	201.2	=	579	97.3
SCRE-R005	11/22/2016	♦	-	Wet		n/a	n/a	=	2,400	-	=	350	-	=	82	-

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Coliform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
SCRE-R005	11/23/2016		-	Wet		n/a	n/a	=	2,400	-	=	350	-	=	82	-
SCRE-R005	11/24/2016		-	Wet		n/a	n/a	=	2,400	-	=	350	-	=	82	-
SCRE-R005	11/25/2016		-	Wet		n/a	n/a	=	2,400	-	=	350	-	=	82	-
SCRE-R005	11/26/2016		-	Wet		n/a	n/a	=	2,400	-	=	350	-	=	82	-
SCRE-R005	11/27/2016		-	Wet		n/a	n/a	=	2,400	-	=	350	-	=	82	-
SCRE-R005	11/28/2016		-	Wet		n/a	n/a	=	2,400	-	=	350	-	=	82	-
SCRE-R005	11/29/2016	♦	-	Wet		n/a	n/a	>	1,600	-	=	110	-	=	80	-
SCRE-R005	11/30/2016		-	Wet		n/a	n/a	>	1,600	-	=	110	-	=	80	-
SCRE-R005	12/1/2016		-	Wet		n/a	n/a	>	1,600	-	=	110	-	=	80	-
SCRE-R005	12/2/2016		-	Wet		n/a	n/a	>	1,600	-	=	110	-	=	80	-
SCRE-R005	12/3/2016		-	Wet		n/a	n/a	>	1,600	-	=	110	-	=	80	-
SCRE-R005	12/4/2016		-	Wet		n/a	n/a	>	1,600	-	=	110	-	=	80	-
SCRE-R005	12/5/2016		-	Wet		n/a	n/a	>	1,600	-	=	110	-	=	80	-
SCRE-R005	12/6/2016	♦	-	Dry		n/a	n/a	=	3,000	3,998	=	800	213.7	=	112	96.9
SCRE-R005	12/7/2016		-	Dry		n/a	n/a	=	3,000	3,998	=	800	227.1	=	112	96.5
SCRE-R005	12/8/2016		-	Dry		n/a	n/a	=	3,000	4,039	=	800	255.6	=	112	96.7
SCRE-R005	12/9/2016		-	Dry		n/a	n/a	=	3,000	4,081	=	800	287.7	=	112	96.9
SCRE-R005	12/10/2016		-	Dry		n/a	n/a	=	3,000	4,123	=	800	323.8	=	112	97.2
SCRE-R005	12/11/2016		-	Dry		n/a	n/a	=	3,000	4,166	=	800	364.5	=	112	97.4
SCRE-R005	12/12/2016		-	Dry		n/a	n/a	=	3,000	4,210	=	800	410.3	=	112	97.6
SCRE-R005	12/13/2016		-	Dry		n/a	n/a	=	3,000	4,253	=	800	461.8	=	112	97.8
SCRE-R005	12/14/2016	♦	-	Dry		n/a	n/a	=	1,300	4,179	=	300	503.1	=	121	98.3
SCRE-R005	12/15/2016		-	Dry		n/a	n/a	=	1,300	3,918	=	300	494.6	=	121	102.2
SCRE-R005	12/16/2016		-	Dry		n/a	n/a	=	1,300	3,674	=	300	486.2	=	121	106.3
SCRE-R005	12/17/2016		-	Dry		n/a	n/a	=	1,300	3,444	=	300	478.0	=	121	110.6
SCRE-R005	12/18/2016		-	Dry		n/a	n/a	=	1,300	3,229	=	300	470.0	=	121	115.1
SCRE-R005	12/19/2016		-	Dry		n/a	n/a	=	1,300	3,027	=	300	462.0	=	121	119.7
SCRE-R005	12/20/2016	♦	-	Dry		n/a	n/a	=	700	2,780	=	23	417.0	=	6	112.7
SCRE-R005	12/21/2016		-	Dry		n/a	n/a	=	700	2,553	=	23	376.3	=	6	106.0
SCRE-R005	12/22/2016		-	Dry		n/a	n/a	=	700	2,438	=	23	339.6	=	6	99.8
SCRE-R005	12/23/2016		-	Dry		n/a	n/a	=	700	2,328	=	23	311.7	=	6	93.9
SCRE-R005	12/24/2016		-	Dry		n/a	n/a	=	700	2,223	=	23	286.1	=	6	88.4
SCRE-R005	12/25/2016		-	Dry		n/a	n/a	=	700	2,123	=	23	262.7	=	6	83.2
SCRE-R005	12/26/2016		-	Dry		n/a	n/a	=	700	2,027	=	23	241.1	=	6	78.3
SCRE-R005	12/27/2016	♦	-	Wet		n/a	n/a	=	16,000	-	=	230	-	=	35	-
SCRE-R005	12/28/2016		-	Wet		n/a	n/a	=	16,000	-	=	230	-	=	35	-
SCRE-R005	12/29/2016		-	Wet		n/a	n/a	=	16,000	-	=	230	-	=	35	-

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Coliform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
SCRE-R005	12/30/2016		-	Wet		n/a	n/a	=	16,000	-	=	230	-	=	35	-
SCRE-R005	12/31/2016		-	Wet		n/a	n/a	=	16,000	-	=	230	-	=	35	-
SCRE-R005	1/1/2017		-	Wet		n/a	n/a	=	16,000	-	=	230	-	=	35	-
SCRE-R005	1/2/2017		-	Wet		n/a	n/a	=	16,000	-	=	230	-	=	35	-
SCRE-R005	1/3/2017	♦	-	Dry		n/a	n/a	=	3,000	2,031.3	=	130	234.5	=	49	79.0
SCRE-R005	1/4/2017		-	Dry		n/a	n/a	=	3,000	2,036.0	=	130	228.0	=	49	79.8
SCRE-R005	1/5/2017		-	Dry		n/a	n/a	=	3,000	2,001.6	=	130	218.0	=	49	73.5
SCRE-R005	1/6/2017		-	Dry		n/a	n/a	=	3,000	1,967.8	=	130	208.5	=	49	67.7
SCRE-R005	1/7/2017		-	Dry		n/a	n/a	=	3,000	1,934.6	=	130	199.3	=	49	62.3
SCRE-R005	1/8/2017		-	Dry		n/a	n/a	=	3,000	1,901.9	=	130	190.5	=	49	57.4
SCRE-R005	1/9/2017		-	Dry		n/a	n/a	=	3,000	1,869.8	=	130	182.2	=	49	52.9
SCRE-R005	1/10/2017	♦	-	Wet		n/a	n/a	>	1,600	-	>	1,600	-	>	2,419	-
SCRE-R005	1/11/2017		-	Wet		n/a	n/a	>	1,600	3,485.3	>	1,600	364.1	>	2,419	74.3
SCRE-R005	1/12/2017		-	Wet		n/a	n/a	>	1,600	3,413.0	>	1,600	366.6	>	2,419	84.6
SCRE-R005	1/13/2017		-	Wet		n/a	n/a	>	1,600	3,342.3	>	1,600	369.2	>	2,419	96.3
SCRE-R005	1/14/2017		-	Wet		n/a	n/a	>	1,600	3,273.0	>	1,600	371.7	>	2,419	109.7
SCRE-R005	1/15/2017		-	Wet		n/a	n/a	>	1,600	3,205.1	>	1,600	374.3	>	2,419	124.9
SCRE-R005	1/16/2017		-	Wet		n/a	n/a	>	1,600	3,138.6	>	1,600	376.9	>	2,419	142.3
SCRE-R005	1/17/2017	♦	-	Dry		n/a	n/a	=	5,000	1,869.8	=	130	174.2	=	5	45.1
SCRE-R005	1/18/2017		-	Dry		n/a	n/a	=	5,000	1,869.8	=	130	166.5	=	5	38.5
SCRE-R005	1/19/2017		-	Dry		n/a	n/a	=	5,000	1,901.9	=	130	156.7	=	5	34.7
SCRE-R005	1/20/2017		-	Dry		n/a	n/a	=	5,000	1,934.6	=	130	147.5	=	5	31.3
SCRE-R005	1/21/2017		-	Dry		n/a	n/a	=	5,000	1,967.8	=	130	138.9	=	5	28.2
SCRE-R005	1/22/2017		-	Dry		n/a	n/a	=	5,000	2,001.6	=	130	130.7	=	5	25.4
SCRE-R005	1/23/2017		-	Dry		n/a	n/a	=	5,000	2,036.0	=	130	123.0	=	5	22.9
SCRE-R005	1/24/2017	♦	-	Wet		n/a	n/a	>	1,600	3,073.6	=	9,000	402.0	=	3,448	163.9
SCRE-R005	1/25/2017		-	Wet		n/a	n/a	>	1,600	3,009.8	=	9,000	428.8	=	3,448	188.9
SCRE-R005	1/26/2017		-	Wet		n/a	n/a	>	1,600	2,969.4	=	9,000	477.8	=	3,448	214.0
SCRE-R005	1/27/2017		-	Wet		n/a	n/a	>	1,600	2,929.6	=	9,000	532.4	=	3,448	242.4
SCRE-R005	1/28/2017		-	Wet		n/a	n/a	>	1,600	2,890.2	=	9,000	593.3	=	3,448	274.6
SCRE-R005	1/29/2017		-	Wet		n/a	n/a	>	1,600	2,851.4	=	9,000	661.1	=	3,448	311.0
SCRE-R005	1/30/2017		-	Wet		n/a	n/a	>	1,600	2,813.1	=	9,000	736.7	=	3,448	352.3
SCRE-R005	1/31/2017	♦	-	Dry		n/a	n/a	=	2,200	2,015.1	=	30	110.3	=	10	21.2
SCRE-R005	2/1/2017		-	Dry		n/a	n/a	=	2,200	1,994.3	=	30	98.8	=	10	19.5
SCRE-R005	2/2/2017		-	Dry		n/a	n/a	=	2,200	1,973.8	=	30	88.6	=	10	18.0
SCRE-R005	2/3/2017		-	Dry		n/a	n/a	=	2,200	2,008.7	=	30	82.0	=	10	16.6
SCRE-R005	2/4/2017		-	Dry		n/a	n/a	=	2,200	2,044.3	=	30	76.0	=	10	15.3

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Coliform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
SCRE-R005	2/5/2017		-	Dry		n/a	n/a	=	2,200	2,080.4	=	30	70.4	=	10	14.0
SCRE-R005	2/6/2017		-	Dry		n/a	n/a	=	2,200	2,117.3	=	30	65.2	=	10	12.9
SCRE-R005	2/7/2017	♦	-	Wet		n/a	n/a	>	16,000	2,996.8	=	9,000	820.9	>	2,419	394.3
SCRE-R005	2/8/2017		-	Wet		n/a	n/a	>	16,000	3,192.4	=	9,000	914.7	>	2,419	441.4
SCRE-R005	2/9/2017		-	Wet		n/a	n/a	>	16,000	3,447.1	=	9,000	1,059.4	>	2,419	494.6
SCRE-R005	2/10/2017		-	Wet		n/a	n/a	>	16,000	3,722.1	=	9,000	1,226.9	>	2,419	554.1
SCRE-R005	2/11/2017		-	Wet		n/a	n/a	>	16,000	4,019.0	=	9,000	1,421.0	>	2,419	620.7
SCRE-R005	2/12/2017		-	Wet		n/a	n/a	>	16,000	4,339.6	=	9,000	1,645.7	>	2,419	695.5
SCRE-R005	2/13/2017		-	Wet		n/a	n/a	>	16,000	4,685.8	=	9,000	1,905.9	>	2,419	779.1
SCRE-R005	2/14/2017	♦	-	Wet		n/a	n/a	=	5,000	4,867.2	=	300	1,970.7	=	132	792.3
SCRE-R005	2/15/2017		-	Wet		n/a	n/a	=	5,000	5,055.6	=	300	2,037.8	=	132	805.6
SCRE-R005	2/16/2017		-	Wet		n/a	n/a	=	5,000	4,863.4	=	300	2,055.9	=	132	842.0
SCRE-R005	2/17/2017		-	Wet		n/a	n/a	=	5,000	4,678.4	=	300	2,074.2	=	132	880.1
SCRE-R005	2/18/2017		-	Wet		n/a	n/a	=	5,000	4,500.5	=	300	2,092.6	=	132	920.0
SCRE-R005	2/19/2017		-	Wet		n/a	n/a	=	5,000	4,329.4	=	300	2,111.2	=	132	961.6
SCRE-R005	2/20/2017		-	Wet		n/a	n/a	=	5,000	4,164.7	=	300	2,130.0	=	132	1,005.1
SCRE-R005	2/21/2017		-	Wet		n/a	n/a	=	5,000	4,006.3	=	300	2,149.0	=	132	1,050.6
SCRE-R005	2/22/2017	♦	-	Wet		n/a	n/a	>	16,000	4,006.3	=	800	2,240.1	=	573	1,153.2
SCRE-R005	2/23/2017		-	Wet		n/a	n/a	>	16,000	4,325.9	=	800	2,189.0	=	573	1,099.1
SCRE-R005	2/24/2017		-	Wet		n/a	n/a	>	16,000	4,671.0	=	800	2,139.0	=	573	1,047.6
SCRE-R005	2/25/2017		-	Wet		n/a	n/a	>	16,000	5,043.7	=	800	2,090.1	=	573	998.5
SCRE-R005	2/26/2017		-	Wet		n/a	n/a	>	16,000	5,446.0	=	800	2,042.4	=	573	951.7
SCRE-R005	2/27/2017		-	Wet		n/a	n/a	>	16,000	5,880.5	=	800	1,995.7	=	573	907.1
SCRE-R005	2/28/2017	♦	-	Wet		n/a	n/a	=	5,000	6,108.1	=	80	1,806.1	=	573	864.6
SCRE-R005	3/1/2017		-	Wet		n/a	n/a	=	5,000	6,344.6	=	80	1,634.4	=	573	824.0
SCRE-R005	3/2/2017		-	Wet		n/a	n/a	=	5,000	6,590.2	=	80	1,396.4	=	573	776.2
SCRE-R005	3/3/2017		-	Wet		n/a	n/a	=	5,000	6,845.3	=	80	1,193.0	=	573	731.1
SCRE-R005	3/4/2017		-	Wet		n/a	n/a	=	5,000	7,110.3	=	80	1,019.2	=	573	688.7
SCRE-R005	3/5/2017		-	Wet		n/a	n/a	=	5,000	7,385.6	=	80	870.7	=	573	648.7
SCRE-R005	3/6/2017		-	Wet		n/a	n/a	=	5,000	7,671.5	=	80	743.9	=	573	611.0
SCRE-R005	3/7/2017	♦	-	Dry		n/a	n/a	=	1,300	2,117.3	=	80	62.4	=	35	12.4
SCRE-R005	3/8/2017		-	Dry		n/a	n/a	=	1,300	2,117.3	=	80	59.7	=	35	11.9
SCRE-R005	3/9/2017		-	Dry		n/a	n/a	=	1,300	2,161.4	=	80	62.2	=	35	12.6
SCRE-R005	3/10/2017		-	Dry		n/a	n/a	=	1,300	2,206.5	=	80	64.8	=	35	13.4
SCRE-R005	3/11/2017		-	Dry		n/a	n/a	=	1,300	2,252.5	=	80	67.6	=	35	14.2
SCRE-R005	3/12/2017		-	Dry		n/a	n/a	=	1,300	2,299.4	=	80	70.5	=	35	15.0
SCRE-R005	3/13/2017		-	Dry		n/a	n/a	=	1,300	2,347.4	=	80	73.5	=	35	16.0

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Coliform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
SCRE-R005	3/14/2017	♦	-	Dry		n/a	n/a	=	1,100	2,383.0	=	30	74.1	=	24	16.7
SCRE-R005	3/15/2017		-	Dry		n/a	n/a	=	1,100	2,419.2	=	30	74.8	=	24	17.5
SCRE-R005	3/16/2017		-	Dry		n/a	n/a	=	1,100	2,339.6	=	30	71.2	=	24	17.1
SCRE-R005	3/17/2017		-	Dry		n/a	n/a	=	1,100	2,262.7	=	30	67.8	=	24	16.7
SCRE-R005	3/18/2017		-	Dry		n/a	n/a	=	1,100	2,188.2	=	30	64.6	=	24	16.3
SCRE-R005	3/19/2017		-	Dry		n/a	n/a	=	1,100	2,116.3	=	30	61.5	=	24	15.9
SCRE-R005	3/20/2017		-	Dry		n/a	n/a	=	1,100	2,046.7	=	30	58.6	=	24	15.5
SCRE-R005	3/21/2017	♦	-	Dry		n/a	n/a	=	700	1,949.7	=	30	55.8	=	12	14.8
SCRE-R005	3/22/2017		-	Dry		n/a	n/a	=	700	1,857.4	=	30	53.1	=	12	14.1
SCRE-R005	3/23/2017		-	Dry		n/a	n/a	=	700	1,739.6	=	30	50.6	=	12	14.6
SCRE-R005	3/24/2017		-	Dry		n/a	n/a	=	700	1,629.2	=	30	48.2	=	12	15.0
SCRE-R005	3/25/2017		-	Dry		n/a	n/a	=	700	1,525.9	=	30	45.9	=	12	15.4
SCRE-R005	3/26/2017		-	Dry		n/a	n/a	=	700	1,429.1	=	30	43.7	=	12	15.9
SCRE-R005	3/27/2017		-	Dry		n/a	n/a	=	700	1,338.4	=	30	41.6	=	12	16.4
SCRE-R005	3/28/2017	♦	-	Dry		n/a	n/a	=	1,700	1,291.2	=	80	40.9	=	6	16.5
SCRE-R005	3/29/2017		-	Dry		n/a	n/a	=	1,700	1,245.6	=	80	40.3	=	6	16.6
SCRE-R005	3/30/2017		-	Dry		n/a	n/a	=	1,700	1,234.9	=	80	41.6	=	6	16.3
SCRE-R005	3/31/2017		-	Dry		n/a	n/a	=	1,700	1,224.3	=	80	43.0	=	6	16.0
SCRE-R005	4/1/2017		-	Dry		n/a	n/a	=	1,700	1,213.9	=	80	44.4	=	6	15.7
SCRE-R005	4/2/2017		-	Dry		n/a	n/a	=	1,700	1,203.5	=	80	45.9	=	6	15.5
SCRE-R005	4/3/2017		-	Dry		n/a	n/a	=	1,700	1,193.2	=	80	47.4	=	6	15.2
SCRE-R005	4/4/2017	♦	-	Dry		n/a	n/a	=	900	1,158.1	=	300	51.2	=	25	15.7
SCRE-R005	4/5/2017		-	Dry		n/a	n/a	=	900	1,124.1	=	300	55.3	=	25	16.2
SCRE-R005	4/6/2017		-	Dry		n/a	n/a	=	900	1,110.4	=	300	57.8	=	25	16.0
SCRE-R005	4/7/2017		-	Dry		n/a	n/a	=	900	1,096.9	=	300	60.4	=	25	15.8
SCRE-R005	4/8/2017		-	Dry		n/a	n/a	=	900	1,083.6	=	300	63.1	=	25	15.6
SCRE-R005	4/9/2017		-	Dry		n/a	n/a	=	900	1,070.4	=	300	65.9	=	25	15.5
SCRE-R005	4/10/2017		-	Dry		n/a	n/a	=	900	1,057.3	=	300	68.9	=	25	15.3
SCRE-R005	4/11/2017	♦	-	Wet		n/a	n/a	=	1,100	7,576.2	=	130	645.9	=	57	532.9
SCRE-R005	4/12/2017		-	Wet		n/a	n/a	=	1,100	7,482.2	=	130	560.8	=	57	464.8
SCRE-R005	4/13/2017		-	Wet		n/a	n/a	=	1,100	6,843.4	=	130	486.9	=	57	410.2
SCRE-R005	4/14/2017		-	Wet		n/a	n/a	=	1,100	6,259.1	=	130	422.8	=	57	362.0
SCRE-R005	4/15/2017		-	Wet		n/a	n/a	=	1,100	5,724.8	=	130	367.1	=	57	319.5
SCRE-R005	4/16/2017		-	Wet		n/a	n/a	=	1,100	5,236.0	=	130	318.8	=	57	282.0
SCRE-R005	4/17/2017		-	Wet		n/a	n/a	=	1,100	4,789.0	=	130	276.8	=	57	248.9
SCRE-R005	4/18/2017	♦	-	Dry		n/a	n/a	=	800	1,040.3	=	500	73.2	>	2,419	17.6
SCRE-R005	4/19/2017		-	Dry		n/a	n/a	=	800	1,023.6	=	500	77.9	>	2,419	20.3

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Coliform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
SCRE-R005	4/20/2017		-	Dry		n/a	n/a	=	800	1,012.8	=	500	85.5	>	2,419	23.7
SCRE-R005	4/21/2017		-	Dry		n/a	n/a	=	800	1,002.1	=	500	93.9	>	2,419	27.6
SCRE-R005	4/22/2017		-	Dry		n/a	n/a	=	800	991.6	=	500	103.2	>	2,419	32.2
SCRE-R005	4/23/2017		-	Dry		n/a	n/a	=	800	981.1	=	500	113.3	>	2,419	37.5
SCRE-R005	4/24/2017		-	Dry		n/a	n/a	=	800	970.7	=	500	124.4	>	2,419	43.8
SCRE-R005	4/25/2017	♦	-	Dry		n/a	n/a	=	5,000	1,021.0	=	300	134.4	=	214	47.1
SCRE-R005	4/26/2017		-	Dry		n/a	n/a	=	5,000	1,073.8	=	300	145.1	=	214	50.6
SCRE-R005	4/27/2017		-	Dry		n/a	n/a	=	5,000	1,146.6	=	300	156.7	=	214	55.7
SCRE-R005	4/28/2017		-	Dry		n/a	n/a	=	5,000	1,224.2	=	300	169.2	=	214	61.4
SCRE-R005	4/29/2017		-	Dry		n/a	n/a	=	5,000	1,307.1	=	300	182.6	=	214	67.5
SCRE-R005	4/30/2017		-	Dry		n/a	n/a	=	5,000	1,395.7	=	300	197.2	=	214	74.3
SCRE-R005	5/1/2017		-	Dry		n/a	n/a	=	5,000	1,490.2	=	300	213.0	=	214	81.8
SCRE-R005	5/2/2017	♦	-	Dry		n/a	n/a	=	1,600	1,531.8	=	13	207.1	=	276	90.9
SCRE-R005	5/3/2017		-	Dry		n/a	n/a	=	1,600	1,574.6	=	13	201.4	=	276	100.9
SCRE-R005	5/4/2017		-	Dry		n/a	n/a	=	1,600	1,571.5	=	13	189.6	=	276	114.6
SCRE-R005	5/5/2017		-	Dry		n/a	n/a	=	1,600	1,568.3	=	13	178.4	=	276	130.2
SCRE-R005	5/6/2017		-	Dry		n/a	n/a	=	1,600	1,565.1	=	13	167.9	=	276	147.9
SCRE-R005	5/7/2017		-	Dry		n/a	n/a	=	1,600	1,562.0	=	13	158.1	=	276	168.1
SCRE-R005	5/8/2017		-	Dry		n/a	n/a	=	1,600	1,558.8	=	13	148.8	=	276	190.9
SCRE-R005	5/9/2017	♦	-	Dry		n/a	n/a	=	1,100	1,536.4	=	30	144.0	=	96	209.4
SCRE-R005	5/10/2017		-	Dry		n/a	n/a	=	1,100	1,514.2	=	30	139.4	=	96	229.7
SCRE-R005	5/11/2017		-	Dry		n/a	n/a	=	1,100	1,524.4	=	30	129.1	=	96	240.2
SCRE-R005	5/12/2017		-	Dry		n/a	n/a	=	1,100	1,534.6	=	30	119.5	=	96	251.3
SCRE-R005	5/13/2017		-	Dry		n/a	n/a	=	1,100	1,544.9	=	30	110.7	=	96	262.8
SCRE-R005	5/14/2017		-	Dry		n/a	n/a	=	1,100	1,555.3	=	30	102.5	=	96	274.8
SCRE-R005	5/15/2017		-	Dry		n/a	n/a	=	1,100	1,565.7	=	30	94.9	=	96	287.4
SCRE-R005	5/16/2017	♦	-	Dry		n/a	n/a	=	280	1,506.0	=	2	80.3	=	27	288.2
SCRE-R005	5/17/2017		-	Dry		n/a	n/a	=	280	1,448.5	=	2	68.0	=	27	288.9
SCRE-R005	5/18/2017		-	Dry		n/a	n/a	=	280	1,398.7	=	2	56.6	=	27	248.7
SCRE-R005	5/19/2017		-	Dry		n/a	n/a	=	280	1,350.6	=	2	47.0	=	27	214.1
SCRE-R005	5/20/2017		-	Dry		n/a	n/a	=	280	1,304.1	=	2	39.1	=	27	184.3
SCRE-R005	5/21/2017		-	Dry		n/a	n/a	=	280	1,259.3	=	2	32.6	=	27	158.7
SCRE-R005	5/22/2017		-	Dry		n/a	n/a	=	280	1,216.0	=	2	27.1	=	27	136.6
SCRE-R005	5/23/2017	♦	-	Dry		n/a	n/a	=	700	1,210.6	=	2	22.5	=	32	118.2
SCRE-R005	5/24/2017		-	Dry		n/a	n/a	=	700	1,205.2	=	2	18.7	=	32	102.4
SCRE-R005	5/25/2017		-	Dry		n/a	n/a	=	700	1,128.7	=	2	15.9	=	32	96.1
SCRE-R005	5/26/2017		-	Dry		n/a	n/a	=	700	1,057.1	=	2	13.4	=	32	90.2

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Coliform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
SCRE-R005	5/27/2017		-	Dry		n/a	n/a	=	700	990.1	=	2	11.4	=	32	84.7
SCRE-R005	5/28/2017		-	Dry		n/a	n/a	=	700	927.3	=	2	9.6	=	32	79.5
SCRE-R005	5/29/2017		-	Dry		n/a	n/a	=	700	868.4	=	2	8.1	=	32	74.6
SCRE-R005	5/30/2017		-	Dry		n/a	n/a	=	700	813.4	=	2	6.9	=	32	70.0
SCRE-R005	5/31/2017	♦	-	Dry		n/a	n/a	=	500	753.3	=	7	6.1	>	2,419	75.9
SCRE-R005	6/1/2017		-	Dry		n/a	n/a	=	500	724.6	=	7	5.9	>	2,419	81.6
SCRE-R005	6/2/2017		-	Dry		n/a	n/a	=	500	697.1	=	7	5.8	>	2,419	87.7
SCRE-R005	6/3/2017		-	Dry		n/a	n/a	=	500	670.6	=	7	5.7	>	2,419	94.3
SCRE-R005	6/4/2017		-	Dry		n/a	n/a	=	500	645.1	=	7	5.6	>	2,419	101.4
SCRE-R005	6/5/2017		-	Dry		n/a	n/a	=	500	620.5	=	7	5.5	>	2,419	109.0
SCRE-R005	6/6/2017	♦	-	Dry		n/a	n/a	=	500	596.9	=	50	5.7	=	7	96.4
SCRE-R005	6/7/2017		-	Dry		n/a	n/a	=	500	574.2	=	50	6.0	=	7	85.3
SCRE-R005	6/8/2017		-	Dry		n/a	n/a	=	500	559.3	=	50	6.1	=	7	78.2
SCRE-R005	6/9/2017		-	Dry		n/a	n/a	=	500	544.8	=	50	6.2	=	7	71.6
SCRE-R005	6/10/2017		-	Dry		n/a	n/a	=	500	530.7	=	50	6.3	=	7	65.7
SCRE-R005	6/11/2017		-	Dry		n/a	n/a	=	500	516.9	=	50	6.4	=	7	60.2
SCRE-R005	6/12/2017		-	Dry		n/a	n/a	=	500	503.5	=	50	6.5	=	7	55.1
SCRE-R005	6/13/2017	♦	-	Dry		n/a	n/a	=	1,600	509.8	=	2	6.0	=	2	48.5
SCRE-R005	6/14/2017		-	Dry		n/a	n/a	=	1,600	516.2	=	2	5.4	=	2	42.6
SCRE-R005	6/15/2017		-	Dry		n/a	n/a	=	1,600	547.1	=	2	5.4	=	2	39.1
SCRE-R005	6/16/2017		-	Dry		n/a	n/a	=	1,600	579.9	=	2	5.4	=	2	35.8
SCRE-R005	6/17/2017		-	Dry		n/a	n/a	=	1,600	614.5	=	2	5.4	=	2	32.8
SCRE-R005	6/18/2017		-	Dry		n/a	n/a	=	1,600	651.3	=	2	5.4	=	2	30.1
SCRE-R005	6/19/2017		-	Dry		n/a	n/a	=	1,600	690.3	=	2	5.4	=	2	27.6
SCRE-R005	6/20/2017	♦	-	Dry		n/a	n/a	=	800	714.9	=	23	5.9	=	40	28.0
SCRE-R005	6/21/2017		-	Dry		n/a	n/a	=	800	740.3	=	23	6.4	=	40	28.3
SCRE-R005	6/22/2017		-	Dry		n/a	n/a	=	800	743.6	=	23	7.0	=	40	28.5
SCRE-R005	6/23/2017		-	Dry		n/a	n/a	=	800	746.9	=	23	7.5	=	40	28.8
SCRE-R005	6/24/2017		-	Dry		n/a	n/a	=	800	750.3	=	23	8.2	=	40	29.0
SCRE-R005	6/25/2017		-	Dry		n/a	n/a	=	800	753.6	=	23	8.9	=	40	29.2
SCRE-R005	6/26/2017		-	Dry		n/a	n/a	=	800	757.0	=	23	9.6	=	40	29.4
SCRE-R005	6/27/2017	♦	-	Dry		n/a	n/a	=	800	760.3	=	23	10.4	=	12	28.5
SCRE-R005	6/28/2017		-	Dry		n/a	n/a	=	800	763.7	=	23	11.3	=	12	27.5
SCRE-R005	6/29/2017		-	Dry		n/a	n/a	=	800	767.1	=	23	12.3	=	12	26.7
SCRE-R005	6/30/2017		-	Dry		n/a	n/a	=	800	779.3	=	23	12.8	=	12	22.3
SCRE-R005	7/1/2017		-	Dry		n/a	n/a	=	800	791.6	=	23	13.3	=	12	18.7
SCRE-R005	7/2/2017		-	Dry		n/a	n/a	=	800	804.1	=	23	13.8	=	12	15.7

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Coliform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
SCRE-R005	7/3/2017		-	Dry		n/a	n/a	=	800	816.8	=	23	14.4	=	12	13.1
SCRE-R005	7/4/2017	♦	-	Dry		n/a	n/a	=	9,000	899.4	<	2	13.8	=	1	10.1
SCRE-R005	7/5/2017		-	Dry		n/a	n/a	=	9,000	990.3	<	2	13.2	=	1	7.8
SCRE-R005	7/6/2017		-	Dry		n/a	n/a	=	9,000	1,090.5	<	2	11.9	=	1	7.3
SCRE-R005	7/7/2017		-	Dry		n/a	n/a	=	9,000	1,200.8	<	2	10.7	=	1	6.9
SCRE-R005	7/8/2017		-	Dry		n/a	n/a	=	9,000	1,322.2	<	2	9.6	=	1	6.4
SCRE-R005	7/9/2017		-	Dry		n/a	n/a	=	9,000	1,456.0	<	2	8.6	=	1	6.0
SCRE-R005	7/10/2017		-	Dry		n/a	n/a	=	9,000	1,603.2	<	2	7.7	=	1	5.7
SCRE-R005	7/11/2017	♦	-	Dry		n/a	n/a	=	3,500	1,710.7	=	70	7.8	=	37	6.0
SCRE-R005	7/12/2017		-	Dry		n/a	n/a	=	3,500	1,825.3	=	70	7.9	=	37	6.3
SCRE-R005	7/13/2017		-	Dry		n/a	n/a	=	3,500	1,873.5	=	70	8.9	=	37	7.0
SCRE-R005	7/14/2017		-	Dry		n/a	n/a	=	3,500	1,923.1	=	70	10.0	=	37	7.7
SCRE-R005	7/15/2017		-	Dry		n/a	n/a	=	3,500	1,973.9	=	70	11.3	=	37	8.5
SCRE-R005	7/16/2017		-	Dry		n/a	n/a	=	3,500	2,026.1	=	70	12.7	=	37	9.3
SCRE-R005	7/17/2017		-	Dry		n/a	n/a	=	3,500	2,079.6	=	70	14.3	=	37	10.3
SCRE-R005	7/18/2017	♦	-	Dry		n/a	n/a	=	16,000	2,245.5	=	14	15.3	=	44	11.4
SCRE-R005	7/19/2017		-	Dry		n/a	n/a	=	16,000	2,424.7	=	14	16.3	=	44	12.6
SCRE-R005	7/20/2017		-	Dry		n/a	n/a	=	16,000	2,679.3	=	14	16.0	=	44	12.7
SCRE-R005	7/21/2017		-	Dry		n/a	n/a	=	16,000	2,960.7	=	14	15.8	=	44	12.7
SCRE-R005	7/22/2017		-	Dry		n/a	n/a	=	16,000	3,271.6	=	14	15.5	=	44	12.7
SCRE-R005	7/23/2017		-	Dry		n/a	n/a	=	16,000	3,615.2	=	14	15.3	=	44	12.8
SCRE-R005	7/24/2017		-	Dry		n/a	n/a	=	16,000	3,994.8	=	14	15.0	=	44	12.8
SCRE-R005	7/25/2017	♦	-	Dry		n/a	n/a	=	800	3,994.8	=	8	14.5	=	19	12.5
SCRE-R005	7/26/2017		-	Dry		n/a	n/a	=	800	3,994.8	=	8	14.0	=	19	12.2
SCRE-R005	7/27/2017		-	Dry		n/a	n/a	=	800	3,994.8	=	8	13.5	=	19	12.4
SCRE-R005	7/28/2017		-	Dry		n/a	n/a	=	800	3,994.8	=	8	13.0	=	19	12.6
SCRE-R005	7/29/2017		-	Dry		n/a	n/a	=	800	3,994.8	=	8	12.6	=	19	12.8
SCRE-R005	7/30/2017		-	Dry		n/a	n/a	=	800	3,994.8	=	8	12.2	=	19	13.0
SCRE-R005	7/31/2017		-	Dry		n/a	n/a	=	800	3,994.8	=	8	11.7	=	19	13.2
SCRE-R005	8/1/2017	♦	-	Dry		n/a	n/a	=	1,600	4,088.2	=	1,600	13.5	=	72	14.0
SCRE-R005	8/2/2017		-	Dry		n/a	n/a	=	1,600	4,183.7	=	1,600	15.6	=	72	14.8
SCRE-R005	8/3/2017		-	Dry		n/a	n/a	=	1,600	3,949.7	=	1,600	19.5	=	72	17.1
SCRE-R005	8/4/2017		-	Dry		n/a	n/a	=	1,600	3,728.7	=	1,600	24.3	=	72	19.7
SCRE-R005	8/5/2017		-	Dry		n/a	n/a	=	1,600	3,520.1	=	1,600	30.4	=	72	22.8
SCRE-R005	8/6/2017		-	Dry		n/a	n/a	=	1,600	3,323.1	=	1,600	38.0	=	72	26.3
SCRE-R005	8/7/2017		-	Dry		n/a	n/a	=	1,600	3,137.2	=	1,600	47.5	=	72	30.3
SCRE-R005	8/8/2017	♦	-	Dry		n/a	n/a	=	300	2,800.9	=	4	48.6	=	17	33.3

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Coliform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
SCRE-R005	8/9/2017		-	Dry		n/a	n/a	=	300	2,500.7	=	4	49.7	=	17	36.6
SCRE-R005	8/10/2017		-	Dry		n/a	n/a	=	300	2,304.1	=	4	45.2	=	17	35.6
SCRE-R005	8/11/2017		-	Dry		n/a	n/a	=	300	2,122.9	=	4	41.1	=	17	34.7
SCRE-R005	8/12/2017		-	Dry		n/a	n/a	=	300	1,956.0	=	4	37.3	=	17	33.8
SCRE-R005	8/13/2017		-	Dry		n/a	n/a	=	300	1,802.2	=	4	33.9	=	17	33.0
SCRE-R005	8/14/2017		-	Dry		n/a	n/a	=	300	1,660.5	=	4	30.9	=	17	32.1
SCRE-R005	8/15/2017	♦	-	Dry		n/a	n/a	=	500	1,556.2	=	8	28.7	=	21	31.5
SCRE-R005	8/16/2017		-	Dry		n/a	n/a	=	500	1,458.5	=	8	26.7	=	21	30.9
SCRE-R005	8/17/2017		-	Dry		n/a	n/a	=	500	1,299.4	=	8	26.2	=	21	30.2
SCRE-R005	8/18/2017		-	Dry		n/a	n/a	=	500	1,157.6	=	8	25.7	=	21	29.4
SCRE-R005	8/19/2017		-	Dry		n/a	n/a	=	500	1,031.3	=	8	25.2	=	21	28.7
SCRE-R005	8/20/2017		-	Dry		n/a	n/a	=	500	918.8	=	8	24.8	=	21	28.0
SCRE-R005	8/21/2017		-	Dry		n/a	n/a	=	500	818.5	=	8	24.3	=	21	27.3
SCRE-R005	8/22/2017	♦	-	Dry		n/a	n/a	=	300	716.9	=	8	23.9	=	49	27.4
SCRE-R005	8/23/2017		-	Dry		n/a	n/a	=	300	627.9	=	8	23.4	=	49	27.5
SCRE-R005	8/24/2017		-	Dry		n/a	n/a	=	300	607.7	=	8	23.4	=	49	28.4
SCRE-R005	8/25/2017		-	Dry		n/a	n/a	=	300	588.2	=	8	23.4	=	49	29.3
SCRE-R005	8/26/2017		-	Dry		n/a	n/a	=	300	569.3	=	8	23.4	=	49	30.3
SCRE-R005	8/27/2017		-	Dry		n/a	n/a	=	300	551.0	=	8	23.4	=	49	31.3
SCRE-R005	8/28/2017		-	Dry		n/a	n/a	=	300	533.2	=	8	23.4	=	49	32.3
SCRE-R005	8/29/2017	♦	-	Dry		n/a	n/a	=	130	501.9	=	130	25.7	=	38	33.0
SCRE-R005	8/30/2017		-	Dry		n/a	n/a	=	130	472.4	=	130	28.2	=	38	33.8
SCRE-R005	8/31/2017		-	Dry		n/a	n/a	=	130	434.5	=	130	26.0	=	38	33.1
SCRE-R005	9/1/2017		-	Dry		n/a	n/a	=	130	399.6	=	130	23.9	=	38	32.4
SCRE-R005	9/2/2017		-	Dry		n/a	n/a	=	130	367.5	=	130	22.0	=	38	31.7
SCRE-R005	9/3/2017		-	Dry		n/a	n/a	=	130	338.0	=	130	20.2	=	38	31.0
SCRE-R005	9/4/2017		-	Dry		n/a	n/a	=	130	310.9	=	130	18.6	=	38	30.4
SCRE-R005	9/5/2017	♦	-	Dry		n/a	n/a	=	2,800	316.7	=	17	16.0	=	52	30.0
SCRE-R005	9/6/2017		-	Dry		n/a	n/a	=	2,800	322.7	=	17	13.7	=	52	29.7
SCRE-R005	9/7/2017		-	Dry		n/a	n/a	=	2,800	347.7	=	17	14.4	=	52	30.8
SCRE-R005	9/8/2017		-	Dry		n/a	n/a	=	2,800	374.5	=	17	15.1	=	52	32.0
SCRE-R005	9/9/2017		-	Dry		n/a	n/a	=	2,800	403.5	=	17	15.9	=	52	33.2
SCRE-R005	9/10/2017		-	Dry		n/a	n/a	=	2,800	434.7	=	17	16.6	=	52	34.5
SCRE-R005	9/11/2017		-	Dry		n/a	n/a	=	2,800	468.3	=	17	17.5	=	52	35.8
SCRE-R005	9/12/2017	♦	-	Dry		n/a	n/a	=	9,000	524.5	=	170	19.8	=	46	37.0
SCRE-R005	9/13/2017		-	Dry		n/a	n/a	=	9,000	587.4	=	170	22.4	=	46	38.3
SCRE-R005	9/14/2017		-	Dry		n/a	n/a	=	9,000	646.8	=	170	24.8	=	46	39.3

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Coliform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
SCRE-R005	9/15/2017		-	Dry		n/a	n/a	=	9,000	712.3	=	170	27.5	=	46	40.3
SCRE-R005	9/16/2017		-	Dry		n/a	n/a	=	9,000	784.3	=	170	30.4	=	46	41.4
SCRE-R005	9/17/2017		-	Dry		n/a	n/a	=	9,000	863.6	=	170	33.7	=	46	42.5
SCRE-R005	9/18/2017		-	Dry		n/a	n/a	=	9,000	951.0	=	170	37.3	=	46	43.6
SCRE-R005	9/19/2017	♦	-	Dry		n/a	n/a	=	220	925.3	=	8	37.3	=	68	45.3
SCRE-R005	9/20/2017		-	Dry		n/a	n/a	=	220	900.3	=	8	37.3	=	68	47.2

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Coliform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
SCRE-R005	9/21/2017		-	Dry		n/a	n/a	=	220	891.1	=	8	37.3	=	68	47.7
SCRE-R005	9/22/2017		-	Dry		n/a	n/a	=	220	881.9	=	8	37.3	=	68	48.2
SCRE-R005	9/23/2017		-	Dry		n/a	n/a	=	220	872.8	=	8	37.3	=	68	48.7
SCRE-R005	9/24/2017		-	Dry		n/a	n/a	=	220	863.9	=	8	37.3	=	68	49.3
SCRE-R005	9/25/2017		-	Dry		n/a	n/a	=	220	855.0	=	8	37.3	=	68	49.8
SCRE-R005	9/26/2017	♦	-	Dry		n/a	n/a	=	130	831.5	=	4	36.4	=	26	48.8
SCRE-R005	9/27/2017		-	Dry		n/a	n/a	=	130	808.6	=	4	35.6	=	26	47.7
SCRE-R005	9/28/2017		-	Dry		n/a	n/a	=	130	808.6	=	4	31.7	=	26	47.1
SCRE-R005	9/29/2017		-	Dry		n/a	n/a	=	130	808.6	=	4	28.2	=	26	46.6
SCRE-R005	9/30/2017		-	Dry		n/a	n/a	=	130	808.6	=	4	25.1	=	26	46.0
SCRE-R005	10/1/2017		-	Dry		n/a	n/a	=	130	808.6	=	4	22.4	=	26	45.4
SCRE-R005	10/2/2017		-	Dry		n/a	n/a	=	130	808.6	=	4	19.9	=	26	44.8
SCRE-R005	10/3/2017	♦	-	Dry		n/a	n/a	=	700	855.3	=	4	17.8	=	3	41.2
SCRE-R005	10/4/2017		-	Dry		n/a	n/a	=	700	904.7	=	4	15.8	=	3	37.8
SCRE-R005	10/5/2017		-	Dry		n/a	n/a	=	700	863.8	=	4	15.1	=	3	34.4
SCRE-R005	10/6/2017		-	Dry		n/a	n/a	=	700	824.8	=	4	14.4	=	3	31.3
SCRE-R005	10/7/2017		-	Dry		n/a	n/a	=	700	787.6	=	4	13.7	=	3	28.4
SCRE-R005	10/8/2017		-	Dry		n/a	n/a	=	700	752.0	=	4	13.0	=	3	25.9
SCRE-R005	10/9/2017		-	Dry		n/a	n/a	=	700	718.0	=	5	12.5	=	4	23.7
SCRE-R005	10/10/2017	♦	-	Dry		n/a	n/a	>	16,000	761.0	=	30	12.8	=	8	22.3
SCRE-R005	10/11/2017		-	Dry		n/a	n/a	>	16,000	806.5	=	30	13.0	=	8	21.0
SCRE-R005	10/12/2017		-	Dry		n/a	n/a	>	16,000	822.1	=	30	12.3	=	8	19.8
SCRE-R005	10/13/2017		-	Dry		n/a	n/a	>	16,000	838.0	=	30	11.6	=	8	18.7
SCRE-R005	10/14/2017		-	Dry		n/a	n/a	>	16,000	854.3	=	30	10.9	=	8	17.6
SCRE-R005	10/15/2017		-	Dry		n/a	n/a	>	16,000	870.8	=	30	10.3	=	8	16.6
SCRE-R005	10/16/2017		-	Dry		n/a	n/a	>	16,000	887.7	=	30	9.7	=	8	15.7
SCRE-R005	10/17/2017	♦	-	Dry		n/a	n/a	>	16,000	904.9	=	23	9.1	=	27	15.4
SCRE-R005	10/18/2017		-	Dry		n/a	n/a	>	16,000	922.4	=	23	8.5	=	27	15.1
SCRE-R005	10/19/2017		-	Dry		n/a	n/a	>	16,000	1,064.1	=	23	8.8	=	27	14.7
SCRE-R005	10/20/2017		-	Dry		n/a	n/a	>	16,000	1,227.5	=	23	9.1	=	27	14.2
SCRE-R005	10/21/2017		-	Dry		n/a	n/a	>	16,000	1,416.1	=	23	9.5	=	27	13.8
SCRE-R005	10/22/2017		-	Dry		n/a	n/a	>	16,000	1,633.6	=	23	9.8	=	27	13.4
SCRE-R005	10/23/2017		-	Dry		n/a	n/a	>	16,000	1,884.5	=	23	10.2	=	27	13.0
SCRE-R005	10/24/2017	♦	-	Dry		n/a	n/a	=	9,000	2,132.7	=	50	10.8	=	48	12.8
SCRE-R005	10/25/2017		-	Dry		n/a	n/a	=	9,000	2,413.5	=	50	11.5	=	48	12.7
SCRE-R005	10/26/2017		-	Dry		n/a	n/a	=	9,000	2,779.7	=	50	12.5	=	48	12.9
SCRE-R005	10/27/2017		-	Dry		n/a	n/a	=	9,000	3,201.4	=	50	13.6	=	48	13.2

Table 2

Geomean Data for Weekly Sampling Results for Santa Clara River Reach 3 (SCRR3-RW1) and Estuary (SCRRE-R005)

Location	Date		Time	Rain		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean		Single Sample	30-Day Geomean
						E.coli (MPN/100mL)			Total Coliform (MPN/100mL)			Fecal Coliform (MPN/100mL)			Enterococcus (MPN/100mL)	
						Site: SCRR3-RW1			Site: SCRE-R005			Site: SCRE-R005			Site: SCRE-R005	
						(235 MPN)	(126 MPN)		(10,000 MPN	(1,000 MPN)		(400 MPN)	(200 MPN)		(104 MPN)	(35 MPN)
SCRE-R005	10/28/2017		-	Dry		n/a	n/a	=	9,000	3,687.0	=	50	14.8	=	48	13.5
SCRE-R005	10/29/2017		-	Dry		n/a	n/a	=	9,000	4,246.4	=	50	16.1	=	48	13.7
SCRE-R005	10/30/2017		-	Dry		n/a	n/a	=	9,000	4,890.6	=	50	17.5	=	48	14.0
SCRE-R005	10/31/2017	♦	-	Dry		n/a	n/a	=	1,300	5,280.8	=	13	18.2	=	11	13.6
SCRE-R005	11/1/2017		-	Dry		n/a	n/a	=	1,300	5,702.1	=	13	18.9	=	11	13.2
SCRE-R005	11/2/2017		-	Dry		n/a	n/a	=	1,300	5,820.9	=	13	19.7	=	11	13.8
SCRE-R005	11/3/2017		-	Dry		n/a	n/a	=	1,300	5,942.3	=	13	20.5	=	11	14.4
SCRE-R005	11/4/2017		-	Dry		n/a	n/a	=	1,300	6,066.2	=	13	21.3	=	11	15.1
SCRE-R005	11/5/2017		-	Dry		n/a	n/a	=	1,300	6,192.7	=	13	22.1	=	11	15.7
SCRE-R005	11/6/2017		-	Dry		n/a	n/a	=	1,300	6,321.8	=	13	23.0	=	11	16.4

Notes:

♦ Date of Sampling

Weeks with alternating wet weather samples (collected 72 hours after a day with >0.1" rainfall) and dry weather samples, previous 30 days of either wet weather samples or dry weather samples were used to calculate daily geomean.

Daily geomeans unable to be caluclated due to lack of previous 30 day data noted by "-"

MPN - most probably number
TMDL - Total Maximum Daily Load
E.coli - Escherichia coli

> - greater than
< - less than
= - equal to

CALLEGUAS CREEK

A COOPERATIVE STRATEGY FOR
RESOURCE MANAGEMENT & PROTECTION

January 28, 2018

Renee Purdy
Los Angeles Regional Water Quality Control Board
320 W. 4th St., Suite 200
Los Angeles, CA 90013

Subject: Revolon Slough and Beardsley Wash Trash TMDL 2016-2017 Annual Monitoring Report

Dear Ms. Purdy,

Enclosed for your review and consideration is the Revolon Slough and Beardsley Wash (RSBW) Trash total maximum daily load (TMDL) Annual Monitoring Report (AMR) for 2016-2017. The AMR is being submitted per the requirements of the Revolon Slough and Beardsley Wash Trash TMDL, Los Angeles Regional Water Quality Control Board (Regional Board) Resolution No. R4-2007-007 on behalf of the following responsible parties: City of Camarillo, City of Oxnard, County of Ventura, Ventura County Watershed Protection District, California Department of Transportation (Caltrans), and participants in the Ventura County Agricultural Irrigated Lands Group (VCAILG), which is a subdivision of the Farm Bureau of Ventura County.

The AMR provides a summary of the monitoring conducted, a summary of the monitoring results, and proposed revisions to the minimum frequency of collection and assessment/best management practice program (MFAC/BMP Program).

The TMDL Responsible Parties would also like to further support the reconsideration of Trash TMDLs to incorporate an approach that would focus point-source trash-control efforts in high-trash generation areas within our jurisdictions in accordance with the Statewide Trash Amendments (Resolution No. 2015-0019). We feel a more targeted point source control approach is supported by information gathered by the responsible parties during TMDL implementation and would

provide beneficial use protection at levels consistent with the existing TMDL. We look forward to working with Regional Board staff to incorporate these changes into the TMDL.

If you have any comments or questions regarding the attached document, please contact Anita Kuhlman via email (akuhlman@cityofcamarillo.org) or by phone at (805) 312-2239.

Sincerely,

Lucia McGovern, Chair
Stakeholders Implementing TMDLs in the Calleguas Creek Watershed

cc: Stefanie Hada, Regional Board
Jeff Pratt, Ventura County PWA Director
Peter Sheydayi, Interim Director of VCWPD
Arne Anselm, Deputy Director of VCWPD
Ewelina Mutkowska, Ventura County PWA
Anita Kuhlman City of Camarillo
Jeff Hershman, City of Oxnard
Baylie Hanrahan, City of Oxnard
John Krist, Farm Bureau of Ventura County
Nancy Broschart, Farm Bureau of Ventura County
Maria Agustin, California Department of Transportation
Chen Pei Yu, California Department of Transportation
Ashli Desai, Larry Walker Associates

Revolon Slough/Beardsley Wash Trash TMDL TMRP/MFAC 2016-2017 Annual Report

submitted to

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION

on behalf of the

COUNTY OF VENTURA,
VENTURA COUNTY WATERSHED PROTECTION DISTRICT,
CITY OF CAMARILLO,
CITY OF OXNARD,
PARTICIPANTS IN THE VENTURA COUNTY AGRICULTURAL IRRIGATED LANDS GROUP,
AND CALIFORNIA DEPARTMENT OF TRANSPORTATION

LARRY WALKER ASSOCIATES

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Executive Summary

The purpose of this report is to present the results of the eighth-year (2016-2017) monitoring efforts conducted in accordance with the Revolon Slough and Beardsley Wash Trash TMDL (Trash TMDL), which is effective as of March 6, 2008, and the Trash Monitoring and Reporting Plan (TMRP) Minimum Frequency of Assessment and Collection/Best Management Practice (MFAC/BMP) Program. The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) approved Addendum No. 1 to the TMRP in June 2015, which revised the monitoring program from a quantitative program to a visual program. The eighth-year monitoring effort was the second year of monitoring under Addendum No.1 to the TMRP.

The responsible parties are complying with the non-point source requirements of the Trash TMDL through the implementation of a MFAC/BMP Program and complying with the point source requirements through the installation of certified trash full capture devices on all responsible parties' conveyances discharging to Revolon Slough and Beardsley Wash and/or implementing a point source-specific MFAC/BMP Program within the Revolon Slough and Beardsley Wash subwatershed.

During the 2016-2017 monitoring year, higher trash levels were found at Site 1 throughout the reporting period and moderate trash levels were found at Site 5 and Site 10. Overall, the MFAC/BMP Program is effective for addressing trash as none of the five monitoring sites met the criteria for increased BMP implementation (four consecutive months of Category 3 trash conditions). The non-point source-responsible parties are in compliance with the requirements of the Trash TMDL as the MFAC Program resulted in zero trash in-stream immediately following all of the monitoring events. Non-point source-responsible parties will continue to conduct all required MFAC events and implement BMPs at high trash generating areas as well as watershed-wide to reduce the discharge of trash from their jurisdictions to minimize the impact of trash in the watershed per the Regional Board-approved June 2015 Addendum No. 1 to the TMRP.

To address point sources, the responsible parties, where feasible, have, and will continue to install full capture devices on conveyances discharging to Revolon Slough and Beardsley Wash and/or install full capture devices in high trash generating areas and employ a point source-specific MFAC/BMP Program in other areas of their jurisdictions.

Per previous communications with Regional Board staff, the City of Camarillo is currently meeting compliance with the point source requirements of the Trash TMDL through a point source MFAC/BMP Program (see **Section 3.1.1.1.** for information on the City's point source MFAC/BMP Program). Further, the City continues to maintain the 38 trash full capture devices that were installed in City of Camarillo storm drain catch basins in the high trash generating areas within the Revolon Slough and Beardsley Wash subwatershed.

The City of Oxnard employs various BMPs to address trash including catch basin inspection and cleaning, open channel maintenance, street sweeping, education and outreach, stormwater ordinances, and commercial/industrial facilities and construction site inspections. The City of Oxnard has not yet been able to install full capture devices for conveyances discharging to Revolon Slough and Beardsley Wash. The City of Oxnard identified 106 catch basins that require retrofitting. A staff report has been prepared and the project has been assigned to the Capital Improvement Project (CIP) Division. The CIP Division is currently working with the

City of Oxnard's finance department to secure funding to install the full capture devices. While full capture device planning is ongoing, the City is continuing to implement BMPs within their jurisdiction to address point sources of trash and participate in the non-point source MFAC/BMP program. The non-point source MFAC/BMP program results in cleanups of a site within the City of Oxnard to support point source compliance as well.

For point sources, the County completed installing full capture devices in conveyances it is responsible for and is meeting the March 2016 requirement of 100 percent of the conveyances discharging to Revolon Slough and Beardsley Wash addressed by full capture devices.

The California Department of Transportation (Caltrans) has installed two biofiltration swales (BSWs) on Highway 34 and three biofiltration strips (BSTs) on Highway 101 in the Revolon Slough/Beardsley Wash subwatershed. Currently, Caltrans is constructing 14 BSWs, 7 BSTs, and 1 Austin Vault Sand Filter along Highway 101 (these BMPs are scheduled to be completed by July 2018). The BSWs, BSTs, and Austin Vault Sand Filter are being installed to address a suite of constituents including metals and selenium; organochlorine pesticides, PCBs, and siltation; and trash. Caltrans will continue to implement its current suite of BMPs as outlined in the TMRP. In addition, Caltrans has plans to install 6 BSWs on Highway 34, with construction beginning in 2022 as well as 4 BSWs, 1 BST, and 1 Austin Vault Sand Filter on Highway 118, with construction beginning in 2021 - these BMPs are subject to funding availability and the TMDL Reach Prioritization completed under the most recent Caltrans MS4 Permit. The continued implementation of current BMPs and the implementation of future potential BMPs will be directed by results obtained from future monitoring events as part of the adaptive management compliance approach.

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1 Overview

This Annual Report is being submitted to fulfill the compliance requirements of the Amendments to the Water Quality Control Plan – Los Angeles Region for the Revolon Slough and Beardsley Wash Trash TMDL (Trash TMDL), Resolution No. R4-2007-007 (effective March 6, 2008). The purpose of this Annual Report is to present the results of eighth-year (2016-2017) monitoring efforts associated with the Revolon Slough/Beardsley Wash Trash Monitoring and Reporting Plan (TMRP) - Addendum No. 1 and associated Minimum Frequency of Assessment and Collection/Best Management Practice (MFAC/BMP) Program.

The Annual Report includes:

- MFAC/BMP Program Summary and Assessment;
- Compliance strategy; and
- Proposed revisions to MFAC/BMP Program.

This effort is being completed on behalf of the responsible parties to the Trash TMDL as listed in **Table 1**.

Table 1. Responsible Parties Participating in this TMRP and MFAC/BMP Program

Responsible Party	Non-point Source	Point Source
City of Camarillo	X	X[1]
City of Oxnard	X	X[2]
Ventura County	X	X[2]
Ventura County Watershed Protection District (VCWPD)	X	X
Participants in the VCAILG[3, 4]	X	
California Department of Transportation (Caltrans)[5]		X[2]

1. The City of Camarillo is complying with the point source requirements through a point source-specific MFAC/BMP Program.
2. These Responsible Parties are complying with the point source requirements through installation of certified trash full capture devices on all conveyances discharging to Revolon Slough and Beardsley Wash.
3. Ventura County Agricultural Irrigated Lands Group.
4. Not listed as point sources in the Trash TMDL.
5. Caltrans was not given a non-point source Load Allocation (LA) in the TMDL yet is voluntarily participating in the MFAC to meet the TMDL goals.

To complete this effort, the responsible parties hired the California Conservation Corps (CCC) to conduct field monitoring efforts and Larry Walker Associates (LWA) to oversee and conduct monitoring efforts as well as complete reporting requirements. The monitoring efforts during 2016-2017 were conducted according to the TMRP Addendum No. 1, which was submitted to the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) in June 2015. TMRP Addendum No. 1 revised the non-point source MFAC Program from a quantitative assessment-based program to a visual assessment-based program. A TMRP update was necessary to improve the effectiveness of the MFAC Program to more efficiently assess trash levels in Revolon Slough and Beardsley Wash, target actions towards reducing trash quantities, and better utilize available resources. The revised MFAC Program was initiated in July 2015 and this Annual Report provides the results from October 2016 to September 2017.

1.1 ASSESSMENT SITE LOCATIONS

Five visual assessment sites were included in TMRP Addendum No. 1, with four of the sites comprised of assessment sites from the previous MFAC Program (Sites 1, 3a, 5 and 8) and one site comprised of an assessment location in the City of Oxnard (Site 10) that was not included in the original TMRP. The assessment sites listed below are also depicted in **Figure 1** and detailed in **Appendix 1.**

Assessment Sites:

- Site 1: Revolon Slough and its adjacent land areas at Wood Road (the end of the concrete-lined channel). (MFAC-required)
- Site 3a: Drain outlet on the north side of Camarillo Hills Drain between Las Posas Road and Springville Drive. (MFAC-required)
- Site 5: Agriculture Drain – East of Wood Road on Etting Road.
- Site 8: Caltrans Site at the 101 Freeway Bridge over Revolon Slough.
- Site 10: 5th Street Drain in the City of Oxnard. (MFAC-required)

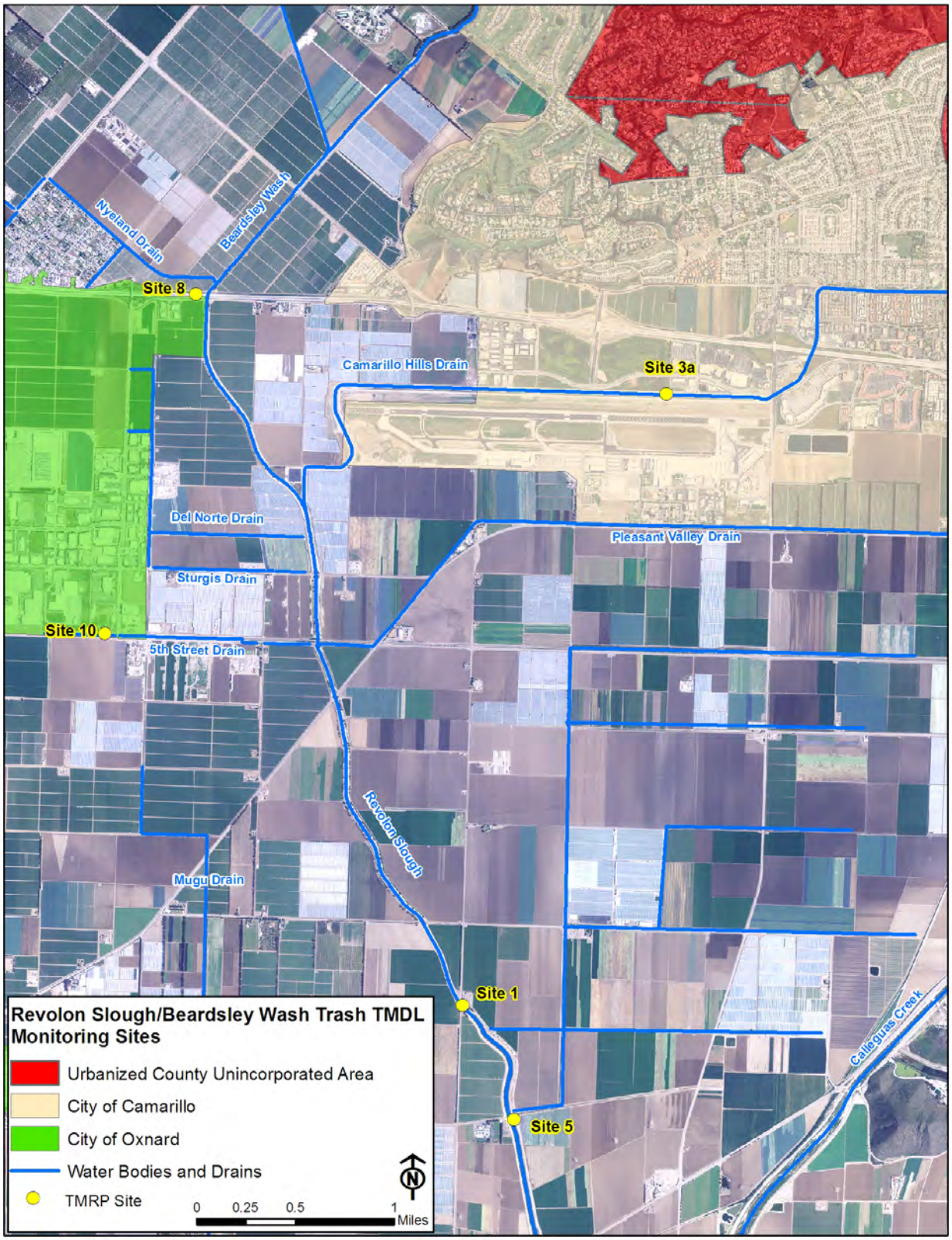

Figure 1. TMRP/MFAC Program Sites

2 Visual MFAC Program

This section provides a summary of the visual monitoring program implemented October 2016 through September 2017.

2.1 MFAC/BMP PROGRAM APPROACH

The goal of the MFAC/BMP program is to address non-point sources of trash in the Revolon Slough and Beardsley Wash watershed. The MFAC/BMP program includes implementing BMPs as outlined in the TMRP and conducting monitoring to assess the effectiveness of BMP implementation.

The revised MFAC/BMP Program includes the following elements:

1. **Conduct monthly assessments and trash collection events**

   MFAC events are conducted monthly at the monitoring sites. The collection aspect of the MFAC utilizes information from the assessments (visual surveys) to determine the locations where trash collection efforts should be focused for the event.

2. **Conduct regular cleanups**

   Although the TMRP outlined quarterly cleanups, the responsible parties have been conducting monthly cleanups to reduce the amount of trash entering the Revolon Slough and Beardsley Wash.

3. **Employ additional BMPs**

   Information gathered during the MFAC events are used to inform the responsible parties as to the level and frequency of BMP implementation, including special trash cleanups, needed to achieve a Category 1 level of trash, as detailed below.

2.2 MONITORING APPROACH

The monitoring approach is a streamlined visual survey of trash levels at select sites within Revolon Slough and Beardsley Wash and sites within conveyances that discharge to Revolon Slough and Beardsley Wash. The visual survey uses a component of the Surface Water Ambient Monitoring Program Rapid Trash Assessment Protocol (SWAMP Protocol) and visual assessment approaches being utilized by the City of Ventura, the Santa Clara Valley Urban Runoff Pollution Prevention Program in the San Francisco Bay Area, and a number of cities and municipalities throughout the country.

The visual surveys utilize a three-point system based on the “Level of Trash” scoring category discussed in the SWAMP Protocol to estimate the presence of litter in a specific area. Individuals performing the visual surveys are trained on how to properly conduct these assessments to ensure consistency when performing such surveys and are trained to score each assessed area by rating the amount of litter observed, using the following categories:

- Category 1 – Represents the SWAMP Category “Optimal”
- Category 2 – Represents the SWAMP Category “Suboptimal”
- Category 3 – Represents the SWAMP Category “Poor”

The definition of Category 1 is:

> "On first glance, no trash visible. Little or no trash (<10 pieces) evident when streambed and stream banks are closely examined for litter and debris, for instance by looking under leaves."

The definition of Category 2 is:

> "On first glance, low to medium levels of trash are evident (10 – 100 pieces). Stream, bank surfaces, and riparian zone contain some litter and debris. Possible evidence of site being used by people: scattered cans, bottles, food wrappers, blankets, clothing."

The definition of Category 3 is:

> "Trash distracts the eye on first glance. Stream, bank surfaces, and immediate riparian zone contain substantial levels of litter and debris (>100 pieces). Evidence of site being used frequently by people: many cans, bottles, and food wrappers, blankets, clothing."

Visual monitoring is conducted monthly for each designated site (**Table 2**).

2.3 MFAC/BMP PROGRAM ASSESSMENT APPROACH

As stated above, the goal of the MFAC/BMP Program is to address non-point sources of trash in Revolon Slough and Beardsley Wash. Results of the monitoring are used to evaluate the effectiveness of the MFAC/BMP Program and to support any necessary modifications. The MFAC/BMP Program is continuously evaluated and modified using an adaptive management approach consistent with the procedures outlined in the TMRP - Addendum No. 1 and as summarized below:

1. Monitoring sites classified in Category 1 during the visual monitoring event are noted and any trash observed is collected during the visual monitoring event.
2. Monitoring sites classified in Category 2 are evaluated to determine if and what type of additional BMPs are needed to reduce the accumulation of trash between visual monitoring events with intent to move these sites to Category 1.
3. Monitoring sites classified in Category 3 for four (4) consecutive monthly visual monitoring events initiate more frequent additional cleanups in the areas surrounding the sites to address trash. It is anticipated that the additional cleanups will address trash thereby moving the site to Category 2 and then to Category 1.

2.4 COMPLETED MONITORING EVENTS

Eighth-year visual monitoring for the Trash TMDL was conducted from October 2016 to September 2017 at the frequencies detailed in **Table 2.** The completed monitoring events are shown in **Table 3** and **Appendix 2** contains example photos from a typical MFAC Event.

Table 2. TMRP Seventh-Year Visual Assessment Monitoring Event Frequency

Site	Frequency
Site 1 – Revolon Slough At Wood Road	Once Monthly[1]
Site 3a – Storm drain outlet on the north side of Camarillo Hills Drain just downstream of Las Posas Road	Once Monthly[1]
Site 5 – Agricultural Drain East of Etting Road	Once Monthly[2]
Site 8 – Caltrans Site on side of US101 just west of Revolon Slough	Once Monthly[2]
Site 10 – 5th Street Drain at Del Norte Boulevard	Once Monthly[1]

1. The Trash TMDL specifically required these sites to be included in the MFAC Program.
2. The Trash TMDL did not require these sites; they were included to better characterize trash in the watershed.

Table 3. Completed Visual Assessment Monitoring Events (October 2016 – September 2017)

Site	Month											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	X	X	X	X	X	X	X	X	NA[1]	X	X	X
3a	X	X	X	X	X	X	X	X	X	X	X	X
5	X	X	X	X	X	X	X	X	X	X	X	X
8	X	X	X	X	X	X	X	X	X	X	X	X
10	X	X	X	X	X	X	X	X	X	X	X	X

X = Visual assessment monitoring event completed per the TMRP - Addendum No. 1.
1. Site 1 was inaccessible during the June 2016 event due to VCWPD channel maintenance activities.

2.5 MFAC/BMP PROGRAM ASSESSMENT

Eighth-year visual monitoring was the second year to exclusively include Visual Assessment Monitoring methods. The visual assessment categories for each site during the monthly MFAC events from October 2016 to September 2017 are presented in **Table 4**. An example of a completed visual assessment form is presented in **Appendix 3**.

During the monitoring events, the main sources and types of trash were identified as originating from agricultural and urban sources. Agricultural trash includes irrigation hose, plastic containers for shipping produce, row crop plastic covering, plant containers, etc. Urban trash includes food wrappers, Styrofoam, cardboard, paper, metal, etc.

Table 4. Visual Assessment Trash Categories by Monitoring Site

Site	Visual Assessment Trash Category[1]											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1	2	2	2	2	3	3	2	1	2	2	2
3a	1	1	1	1	1	1	1	1	1	1	1	1
5	2	2	2	3	2	2	1	1	1	1	1	1
8	1	1	2	1	1	1	1	1	1	1	1	3
10	2	2	2	2	1	1	1	1	2	1	1	2

1. Number indicates visual assessment trash category.

Site 1 was found to be consistently in the Category 2 and Category 3 range throughout the reporting period, with the exception of the October 2016 and June 2017 Events. Site 1 was not found to be in Category 3 for four consecutive months, and did not warrant additional BMPs such as more frequent cleanups, as outlined in the TMRP - Addendum No. 1. During the 2015-2016 reporting year, the responsible parties decided to expand the areas subject to additional cleanups as a preventative measure to reduce trash discharging to Revolon Slough, and this new protocol was continued into the 2016-2017 reporting year. In addition, Site 1 experienced dumping of dead chickens on a semi-regular basis. During six of the twelve months, field personnel found dead chickens that has been placed inside of plastic bags and dumped into the stream. Due to field personnel safety concerns, the VCWPD Operations and Maintenance staff were contacted after each event, to remove the bags from the channel. Ventura County Animal Services was then contacted to pick up and dispose of the chickens afterwards.

Site 1 was also impacted by high rainfall and subsequent elevated stream levels during January and February 2017. Field personnel were unable to enter certain portions of the stream due to water depth and crew safety concerns. All safely accessible areas were thoroughly cleaned, and inaccessible areas of the site were documented.

Site 3a was consistently found to be in Category 1 for the entire monitoring year indicating that the BMPs implemented to address trash upstream of and along the Camarillo Hills Drain are effective at addressing trash. On January 28, 2017, a construction site upstream of the Camarillo Hills Drain began to discharge approximately 700,000 gallons/day of accumulated precipitation after proper filtration into a storm drain that is connected to the Camarillo Hills Drain upstream of site 3a. The discharge continued for 12 more days and heavily impacted stream depth at all sites downstream of the discharge point. Stream levels returned to normal after the dewatering was completed, and crews were able to resume monitoring activities as normal.

Site 5 was found to be primarily in Categories 1 and 2 during the monitoring year, with the exception of January 2017 where the site was in Category 3. It is likely that the proximity to several agricultural fields contributes to the high trash levels found at Site 5. An agricultural ditch is upstream of the site, which runs between several agricultural fields, where trash may accumulate before the ditch discharges into Revolon Slough. Site 5 also has significant vegetation within the stream and on the banks, which acts as a natural trash capture device. Based on the visual assessment data collected, the responsible parties began conducting targeted outreach to the agricultural areas surrounding Site 5 including contacting the owners/operators of the agricultural areas and installing anti-litter signage at key locations in the agricultural areas.

Site 8 was in Category 1 for ten of the twelve months during the monitoring year. Site 8 was in Category 2 in December 2016 and Category 3 in September 2017; however, there had been a recent vehicle accident near Site 8 that created the majority of the Debris found in September. The BMPs implemented to address trash along the 101 freeway were effective at addressing trash. Site 8 will continue to be monitored in the future to bring it back to a Category 1 level of trash.

Site 10 was in Category 1 six of the twelve months during the monitoring year, and in Category 2 the remaining six months. Site 10 had evidence of a homeless encampment within the storm drain, during the October 2016 event, but has since been removed.

Overall, the MFAC/BMP Program is effective for addressing trash as none of the five monitoring sites met the criteria for increased BMP implementation (four consecutive months of

Category 3 trash conditions). However, as high trash levels were found at Site 1 and Site 5, the responsible parties decided to increase BMP implementation in the areas surrounding these sites to further address trash. The responsible parties are confident these increased BMPs will lead to further trash reduction in these areas.

3 Compliance Strategy

The Trash TMDL requires all annual reports to include proposals to enhance BMPs, revise the MFAC (if needed), and prioritize the installation of full capture devices or other compliance measures, including structural BMPs or trash collection events for high trash generating areas. Additionally, the Trash TMDL requires point source-responsible parties to achieve a 100 percent reduction from the baseline wasteload allocation (WLA) by March 2016. This section describes the proposed compliance strategies to be utilized to meet the non-point source and point source Trash TMDL requirements and to further reduce trash discharges into Revolon Slough and Beardsley Wash.

Non-point source-responsible parties will continue complying with the Trash TMDL through a MFAC/BMP Program that includes a combination of MFAC events and BMPs including structural and non-structural BMPs. The information gathered from the MFAC/BMP Program will guide BMP implementation and selection to ensure efficient and effective compliance with the Trash TMDL. The responsible parties will also utilize adaptive management to allow for flexibility in determining the correct BMPs to implement and the correct locations to implement the BMPs. The proposed adaptive management compliance strategy is as follows:

1. Continue implementation of the approved MFAC Program using the visual assessment method.
2. Continue to implement the current suite of BMPs identified in the TMRP with the additions described in the **Current Best Management Practices Section**;
3. Implement BMPs in the future based on information generated from the MFAC/BMP Program focusing on the high trash generating areas as discussed in the **Future Potential Best Management Practices Section**; and
4. Evaluate the effectiveness and needs for additional BMPs and/or MFAC revisions semi-annually based on the results of the MFAC/BMP Program. The evaluation will consider the results of the visual assessments, on a site-by-site and watershed basis, to prioritize the areas where additional BMP implementation may be most effective in reducing trash levels. Proposed revisions to the MFAC/BMP Program and full capture device or other measure installation/implementation prioritization will be included in each annual report.

To address point sources, the responsible parties, where feasible, have or are installing full capture devices on conveyances discharging to Revolon Slough and Beardsley Wash and/or installing full capture devices in high trash generating areas and/or employing a point source-specific MFAC/BMP Program in other areas of their jurisdictions.

The following sections outline the jurisdictional BMPs currently being implemented, the additional BMPs to be implemented in prioritized areas, other BMPs being considered for implementation throughout the watershed, and a BMP implementation schedule.

3.1 CURRENT BEST MANAGEMENT PRACTICES

TMRP - Addendum No. 1 lists a suite of BMPs that each responsible party is implementing in their respective jurisdictions. One of the primary modifications to the MFAC/BMP Program in response to the monitoring results, is to add additional trash cleanups at the high trash generating sites identified during the monitoring. The responsible parties contracted with the CCC to conduct monthly trash cleanups at all sites during the entire reporting year. LWA supervised the monthly monitoring event activities during the entire reporting year, and beginning in September 2016, LWA also supervised CCC field personnel during additional monthly cleanup events. From October 2016 through September 2017, the total annual amount of trash removed was approximately 5,753 pounds, in 525 33-gallon bags. Beginning in September 2016, the trash cleanup area for Site 1 was expanded, so the entire 2016-2017 reporting year was covered under this new protocol. Example photos taken during these special cleanups are presented in **Appendix 4**.

In addition to the trash cleanups, the responsible parties implemented the following BMPs to address trash:

3.1.1 City of Camarillo Litter Management Program

TMRP Addendum No. 1 BMP list for the City:

1. Catch basin cleaning - all City catch basins outside of the Revolon Slough/Beardsley Wash subwatershed are inspected at least once per year and those in high-trash generating areas are inspected four times per year and all are cleaned when filled with trash to 25 percent or more of the catch basin's capacity. As identified in the City's March 2016 letter to the Regional Board staff, starting with July 2016, the city changed the inspection frequency of all catch basins in the Revolon Slough/Beardsley Wash subwatershed to quarterly and the metric for determining when a catch basin needs to be cleaned to the same metric used for the nonpoint source program. The total pounds of trash removed from all the cleanouts from October 2016 through September 2017 was 2,359 pounds. Example photos from a City full capture device inspection and cleaning event are presented in **Appendix 5**.
2. Open channel maintenance - all City-maintained channels are inspected and cleaned at least once before the wet season and at least once after the wet season.
3. Trash Management at Public Events - All special use permits for events in the public right of way require proper management of trash and litter.

The following are enhancements/revisions made to the non-point source BMPs listed in the TMRP for the City:

1. Trash removal was also performed along City fence lines near city stormwater system structures in the Revolon Slough/Beardsley Wash subwatershed. Approximately 900 pounds of trash was removed during the fence line trash removals this year.
2. The City performs annual debris and trash removal from city-maintained ditches/channels and detention basins. Approximately 68,440 pounds of materials were removed from the structures within the Revolon Slough and Beardsley Wash subwatershed.

3. City arterial streets are swept weekly and residential streets are swept monthly in an attempt to reduce trash accumulating in deleterious amounts on streets within the City. An estimated 816,000 pounds of debris were removed by the street sweepers from streets in the Revolon Slough/Beardsley Wash subwatershed this year.
4. The City requires conditions pertaining to trash to be met for all new development and redevelopment projects within the watershed, including:
    A. Trash full capture devices and post-construction treatment devices for other pollutants of concern must be installed in drain inlets;
    B. Trash enclosures and/or recycling areas must be properly installed (e.g., covered and including structures to direct stormwater away from entering the enclosures/areas);
    C. All property areas must be maintained free of litter/debris;
    D. Onsite storm drains must be cleaned at least twice per year, including once before the beginning of the wet season; and
    E. Private roads and parking lots must be swept at a minimum of once per month, with two sweepings occurring in October before the beginning of the wet season.
5. The City requires private owners to provide proof of maintenance of their post construction treatment devices annually.
6. The City hosts household hazardous waste collection events two days per month to provide residents a place to properly dispose of their materials. This reduces the amount of illegal dumping and diverts household hazardous waste from landfills. The City successfully diverted 225,324 pounds of household hazardous waste in 2016-2017 which equals a 99.9 percent diversion rate of items collected during the events.
7. The City adopted Stormwater Ordinance No. 1032 in December 2012 which includes trash specific prohibitions and fines and penalties for violations of the prohibitions.
8. The City continued additional measures to its Water Conservation Ordinance limiting lawn watering to four days per week, no washing of hard surfaces (i.e., driveways, sidewalks), and imposing penalties for runoff. Further, the City of reduced its water usage by 26.6 percent for the six-month period ending July 2017 compared to usage in 2013. These measures will reduce dry weather flows to the storm drain system thereby reducing trash transport.
9. The City engages in several outreach and education campaigns including:
    A. The City includes a litter prevention message, at least annually, in its quarterly Cityscene Newsletter, which is distributed to all residents.
    B. The City includes an insert with all utility bills soliciting volunteers to remove trash in the City on Coastal Cleanup Day and which also educates residents on pollution prevention.

C. The City conducts commercial and industrial facility inspections to ensure proper pollutant prevention BMPs are being applied and to educate the employees on the importance of pollution prevention. The City inspected 307 facilities during 2016-2017.

D. The City sends out letters to all commercial, industrial, and high-density residential property managers requesting assistance in controlling trash on their property.

E. The City inspects all construction sites to ensure application of proper pollution prevention BMPs. The City inspected 200 sites in 2016-2017. In addition the city inspected 13 construction sites prior to certificate of occupancy to verify the site design and that source control and treatment control BMPs were installed and maintained properly.

F. The City mails construction site BMP brochures to contractors and developers annually, during fall, to ensure proper pollutant prevention BMPs are being applied especially before the wet season.

G. The City participates in the Countywide Stormwater Public Outreach Program that includes litter outreach, which can be reviewed at www.cleanwatershed.org.

The following are enhancements/revisions made to the point source BMPs listed in the TMRP for the City:

1. The City installed and is maintaining 82 trash full capture devices in City storm drain catch basins in high trash generating areas throughout the City including 38 devices within the Revolon Slough and Beardsley Wash subwatershed. In addition, the city will be installing approximately 100 additional full capture trash devices by July 2018. The majority of these devices will be within the Revolon Slough and Beardsley Wash subwatershed. As discussed in last year's annual report, the City is currently employing a point source MFAC/BMP Program to meet the point source compliance requirements of the Trash TMDL. The section below provides information on the City's point source MFAC/BMP Program.

3.1.1.1 Point Source MFAC/BMP Program

In May 2015, the City submitted a letter to the Regional Board staff detailing a proposed point source compliance option and requesting Regional Board approval. Subsequently, in July 2015 the City met with Regional Board staff to discuss the City's May 2015 letter. In October 2015, per a Regional Board staff request, the City submitted additional data related to the point source compliance option. On December 14, 2015, the City received a response letter from the Regional Board stating it was unable to approve the City's requested point source strategy. On March 3, 2016, the City submitted another letter to the Regional Board in response to the December 14, 2015 letter detailing a revised, proposed point source compliance strategy (listed below). As of the submittal date of this annual report, the City has not received approval of the proposed point source compliance option.

Until the Regional Board re-considers the Trash TMDL related to the Statewide Trash Policy's priority land use areas, the City will continue to address all land uses (non-priority and priority)

within the Revolon Slough and Beardsley Wash watershed by conducting a point source MFAC/BMP Program, which will consist of implementing the suite of BMPs currently employed by the City, as detailed in TMRP - Addendum No. 1 and Annual Monitoring Reports, as well as inspecting and monitoring catch basins for trash and/or anthropogenic landscaping litter. The City is implementing the following inspection and collection schedule for non-priority land use area catch basins to serve as the assessment collection aspect of the MFAC/BMP Program:

- The City is conducting quarterly visual inspections for all non-priority land use catch basins.
- Inspection frequencies may be modified for particular catch basins based on the amount of trash and/or anthropogenic landscape litter (dumped grass clippings) present during initial quarterly inspections. A minimum inspection frequency interval will be selected that prevents trash and/or leaf litter from accumulating in deleterious amounts between collections.
- Collection events are occurring concurrently with the assessments and the City ensures zero trash and/or leaf litter will remain after the collection event.

Based on this inspection and cleaning schedule, catch basins cleaned one or fewer times (i.e., no trash/anthropogenic landscaping litter found during inspections) over a rolling three-year period are considered equivalent to catch basins with full capture devices installed. This determination is based on trash and/or anthropogenic landscaping litter not accumulating in the catch basins and therefore not being discharged to Revolon Slough and Beardsley Wash. This also indicates the BMPs implemented by the City are addressing trash equivalent to full capture devices. If any catch basin does not maintain its one or fewer cleaning status, the catch basin and/or area surrounding the catch basin will be addressed via trash-control BMPs to return the catch basin to the one or fewer cleaning category and, depending on the results of the full capture systems analyses, may be addressed by a full capture system. If the Regional Board revises the Trash TMDL to only focus on priority land uses, the MFAC/BMP Program will be ceased for the non-priority areas and the inspection and cleaning protocols will revert to the requirements of the Ventura County MS4 Permit.

During the 2016-2017 monitoring year quarterly inspections, 60 catch basins had to be cleaned more than once, which equates to approximately 10 percent of the total 573 catch basins within the Revolon Slough and Beardsley Wash watershed not addressed by full capture systems. The remaining 513 catch basins were cleaned one or fewer times. Of the 60 catch basins cleaned more than once, 8 were found to be Category 2 (10+ pieces of trash) and 52 were found to be in Category 1 (<10 pieces of trash). As this was the first full year of quarterly inspections and cleanings, the City is still assessing what BMPs will most effectively and efficiently address these catch basins.

In order to assess compliance with the 100 percent reduction from the baseline WLA requirement, the City calculated a point source baseline WLA for: (1) all land uses and (2) only the priority land uses, using land use acreage determined through geographic information system (GIS) analyses and trash generation rate (TGR) data obtained through a review of reports that contain trash generation rate data. A baseline WLA of 2,738 gallons per year was calculated for all land uses and a baseline WLA of 1,653 gallons per year was calculated for only the priority land use areas. In essence, if the City's BMPs address at least 2,738 gallons per year of trash,

then they will be in compliance with the 100 percent reduction from the baseline WLA. During the 2016-2017 monitoring year, the City removed 67,953 gallons of trash through the implemented trash control measures, which is much greater than the 2,738 gallons of trash baseline WLA (**Table 5**).

Based on the catch basin inspections and clean outs as well as the amount of trash removed by the City's trash control measures, trash and debris are not accumulating in deleterious amounts between the inspection and collection events. The City is confident the current trash control measures implemented as well as the point source MFAC/BMP Program are effectively meeting the point source requirements of the Trash TMDL.

Table 5. Materials Removed via Various City Trash-Control Measures Implemented in 2016-2017

BMP	Estimated Amount Removed	Amount of Trash	Amount of Leaf Litter[2]	Amount of Sediment
Amount of trash collected in pounds				
Catch Basin Cleaning	47,185	2,359	35,389	9,437
Street Sweeping	816,000	163,200	326,400	163,200
Ditch, Channel, and Detention Basin Cleaning	68,440	3,422	51,330	13,688
Fence Line Trash Removal	900	900	0	0
Total	**932,525**	**169,881**	**413,119**	**186,325**
Amount of trash collected in gallons[1]				
Catch Basin Cleaning	18,874	944	14,156	3,775
Street Sweeping	326,400	65,280	130,560	65,280
Ditch, Channel, and Detention Basin Cleaning	27,376	1,369	20,532	5,475
Fence Line Trash Removal	360	360	0	0
Total	**373,010**	**67,953**	**165,248**	**74,530**
Baseline Trash WLA (gallons)		**2,738**		

1. Pounds converted to gallons using 2.5 pounds=1 gallon from: Michael Baker International. Literature Review for Trash Amendment Compliance Strategy. Contract No. 534079, Task Order 52. Prepared for: County of San Diego Department of Public Works. July 2015.
2. Leaf litter is not anthropogenic landscaping litter but literally leaves from adjacent trees. Dumped landscaping litter is considered trash and is accounted for under "trash" category.

3.1.2 City of Oxnard Litter Management Program

1. Catch basin cleaning - all City of Oxnard catch basins are inspected at least once per year and those in high-trash generating areas are inspected four times per year and all are cleaned when filled with trash to 25 percent or more of the catch basin's capacity.
2. Open channel maintenance - all City of Oxnard-maintained channels are inspected and cleaned at least once per year before the wet season and at least once per year after the wet season.
3. City of Oxnard arterial streets are swept weekly and residential streets are swept monthly in an attempt to reduce trash accumulating in deleterious amounts on streets within the City of Oxnard.

4. Trash Management at Public Events - All special use permits for events in the public right of way require proper management of trash and litter.
5. The City of Oxnard requires conditions pertaining to trash to be met for all new development and redevelopment projects within the watershed, including:
    A. Trash full capture devices and post-construction treatment devices for other pollutants of concern must be installed in drain inlets;
    B. Trash enclosures and/or recycling areas must be properly installed (e.g., covered and including structures to direct stormwater away from entering the enclosures/areas);
    C. All property areas must be maintained free of litter/debris;
    D. Onsite storm drains must be cleaned at least twice per year, including once before the beginning of the wet season; and
    E. Private roads and parking lots must be swept at a minimum of once per month, with two sweepings occurring in October before the beginning of the wet season.
6. The City of Oxnard requires private owners to provide proof of maintenance of their post construction treatment devices annually.
7. The City of Oxnard accepts household hazardous wastes at the Del Norte Regional Recycling Station Monday - Saturday to provide residents a place to properly dispose of their materials. This reduces the amount of illegal dumping.
8. The City of Oxnard adopted Stormwater Ordinance No. 2876 in November 2013, which includes trash specific prohibitions and fines and penalties for violations of the prohibitions.
9. The City of Oxnard imposed additional measures to its Water Conservation Ordinance in 2014 by prohibiting lawn watering except between 4 PM and 9 AM or 6 PM and 9AM during daylight savings, no washing of hard surfaces (i.e., driveways, sidewalks), and imposing penalties for runoff. These measures will reduce dry weather flows to the storm drain system thereby reducing trash transport.
10. The City catch basins are labeled, “Don’t pollute, Flows to Waterways”.
11. The City of Oxnard engages in several outreach and education campaigns including:
    A. The City of Oxnard has established the www.oxnardnews.org website which disseminates information regarding pollution prevention, household hazardous waste roundups, Coastal Clean-up day and water conservation.
    B. The City of Oxnard includes an insert with all utility bills soliciting volunteers to remove trash in the City of Oxnard on Coastal Cleanup Day which also educates residents on pollution prevention.
    C. The City of Oxnard conducts commercial, industrial, and construction facility/site inspections to ensure proper pollutant prevention BMPs are being applied and to educate the employees on the importance of pollution prevention.

D. The City of Oxnard sends out letters to all commercial, industrial, and high-density residential property managers requesting assistance in controlling trash on their property.

E. The City of Oxnard inspects all construction sites to ensure application of proper pollution prevention BMPs.

F. The City of Oxnard participates in the Countywide Stormwater Public Outreach Program that includes litter outreach, which can be reviewed at www.cleanwatershed.org.

3.1.3 County of Ventura and VCWPD Litter Management Program

The County has a very limited storm drain system within the Trash TMDL responsibility area. In 2014, eight StormTek® connector pipe screen full capture devices were installed. The final inspection of the eight full capture devices was completed in October 2014 towards 100 percent Trash TMDL compliance. However, additional storm drain system analysis indicated the installed devices were insufficient to meet point source compliance requirements. In May 2015, the County issued a contract for a site suitability analysis for installation of additional full capture devices within the Revolon Slough/Beardsley Wash watershed. The results of this study showed that 48 additional full capture devices were required to meet the 100 percent full capture requirement. The County installed the remaining 48 full capture devices and is meeting the 100 percent point source compliance requirement. During the 2016-2017 monitoring year, the County properly maintained all installed full capture devices. For full capture device installation details, refer to "County of Ventura Full Capture Connector Pipe Screen Trash Excluder Certification Report" provided in the 2015-2016 Annual Report.

1. Catch basin cleaning - Catch basins are inspected at least once a year and cleaned when filled to 25 percent or more of the catch basin's capacity. During storm season, all drainage facilities are inspected and cleaned as necessary.
2. Open channel storm drain maintenance - All VCWPD-owned and -maintained channels are cleared, inspected, and cleaned as required at least once per year. During the annual 2016-2017 channel sediment cleaning of Revolon Slough and Beardsley Wash, approximately 119 tons of trash were removed from Revolon Slough and 73 tons of trash were removed from Beardsley Wash.
3. Trash Management at Public Events - A proper Management of Trash and Litter Plan is required when obtaining a permit for staging public events. This Plan requires adequate facilities for trash collection and disposal.
4. Public areas - Trash receptacles have been placed within high trash generation areas. These devices are cleaned and maintained regularly to prevent trash overflow.
5. The Stormwater Quality Management Ordinance for Unincorporated Areas (Ventura County Ordinance No. 4450) includes litter and trash specific prohibitions for the discharge or deposition of trash that may enter the County storm drain system or receiving waters (Section 6942). The ordinance also includes civil penalties for violations and provisions for issuing administrative fines, recovery of costs and misdemeanor violations.
6. County catch basins are labeled, "Don't pollute, Flows to Waterways".

7. Watershed awareness signs have been installed at key locations at major roadway crossings of Revolon Slough and Beardsley Wash, stating "Calleguas Creek Watershed, Keep It Clean!" In addition, in June 2016, the County/VCWPD installed 11 bilingual "No Dumping Allowed" signs at six locations at access points along Revolon Slough and Beardsley Wash, where illegal dumping had occurred, as reported in the 2015-2016 Annual Report.
8. In October 2013, an anti-littering billboard space was leased from ClearChannel with a message posted for a month along Highway 101 (near the Del Norte overcrossing) stating "Our Oceans are Drowning in Plastic", encouraging proper disposal of waste and recyclable materials. This location was seen by 97,000 people per day (estimated at 64,000 Ventura County residents and 33,000 others travelling through the area) for the entire month of October.
9. On July 31, 2012 the County of Ventura Board of Supervisors received and filed a draft model Single-Use Bag Ordinance referred to the County by the Beach Erosion Authority for Clean Oceans and Nourishment (BEACON). The County endorsed the use of up to $8,000 as the County's pro-rata share of a regional Environmental Impact Report (EIR) to be prepared by BEACON, which is required to be completed under the California Environmental Quality Act (CEQA) before the model single-use bag ban can be adopted. This was the first step for the County to move forward with the consideration of adoption of a single-use plastic bag ban.
10. On June 24, 2014 the County of Ventura Board of Supervisors approved a motion directing the County of Ventura Executive Officer to have staff prepare a Single-Use Bag Ordinance modeled on the BEACON Ordinance.
11. The County and VCWPD continue to participate in the Countywide Stormwater Program to provide outreach and education retaining the services of "The Agency", a professional advertisement group that designs and conducts Countywide, bilingual outreach programs advocating proper trash disposal. The most recent addition to the outreach program is trash prevention and protection of stormwater quality education using Facebook®.
12. The County conducts commercial, industrial, and construction facility/site inspections to ensure proper pollutant prevention BMPs are being applied and to educate the employees on the importance of pollution prevention. The County inspects over 360 businesses at least twice during the Ventura County MS4 Permit Term.
13. The County requires private owners to provide proof of maintenance of their post construction treatment devices annually.
14. On September 16, 2017, County staff captained a Coastal Cleanup Day site in Beardsley Wash. The site was first added to Coastal Cleanup Day in 2016. In 2017, 9 volunteers cleaned two sections of Beardsley Wash and removed 244 pounds of trash that included food and tobacco product wrappers, cigarette butts, as well as glass and plastic bottles. Example photos from this year's Coastal Cleanup Day are provided in **Appendix 6**.

3.1.4 VCAILG Litter Management Program

During the 2016-2017 monitoring year, the VCAILG provided education and outreach to a diverse group of owners and growers throughout Ventura County. Certain aspects of the education and outreach discuss trash BMPs for agricultural areas and information regarding the Trash TMDL. The VCAILG conducted two education and outreach classes during the 2016-2017 reporting year - July 18, 2017 and September 26, 2017. In addition, the VCAILG has been conducting direct outreach to agricultural areas surrounding Site 1 and Site 5 to address agricultural trash that was found near those sites and VCAILG installed anti-littering signs near the agricultural areas surrounding Site 1 and Site 5.

3.1.5 Caltrans Litter Management Program

Caltrans implements a variety of BMPs in the watershed along the freeways and highways. These BMPs are a suite of programs done to reduce trash as follows.

1. Street Sweeping
2. Trash Collection
3. Adopt-a-Highway Program

Caltrans (District 7, serving Los Angeles and Ventura Counties) uses a variety of methods to educate the public about the importance of managing stormwater. This consists of a variety of written materials, bulletins, and websites. A few venues the District uses to accomplish this are public schools and community sponsored clean up events, Bring Your Child to Work Day, and Earth Day. The written material is designed to appeal to the public while providing technical information on selected Caltrans projects and activities. Caltrans continues to install stenciled warnings prohibiting discharges to drain inlets at park and ride lots, rest areas, vista points and other areas with pedestrian traffic. Caltrans has installed two biofiltration swales (BSWs) on Highway 34 and three biofiltration strips (BSTs) on Highway 101 in the Revolon Slough/Beardsley Wash subwatershed. Currently, Caltrans is constructing 14 BSWs, 7 BSTs, and 1 Austin Vault Sand Filter along Highway 101 (these BMPs are scheduled to be completed by July 2018). The BSWs, BSTs, and Austin Vault Sand Filter are being installed to address a suite of constituents including metals and selenium; organochlorine pesticides, PCBs, and siltation; and trash.

3.2 FUTURE POTENTIAL BEST MANAGEMENT PRACTICES

Future potential BMPs specific to each responsible party are detailed below.

3.2.1 City of Camarillo Litter Management Program

To address non-point sources, the City will focus BMP efforts at the high trash generating areas identified through the MFAC Program and continue watershed-wide BMP activities as a means to further reduce the discharge of trash to Revolon Slough and Beardsley Wash. The City will install approximately 100 more full capture trash devices by July 2018, of which, the majority of the devices will be in the Revolon Slough/ Beardsley Wash subwatershed.

Until the Regional Board re-considers the Trash TMDL related to the Statewide Trash Policy's priority land use areas, the City will continue to address all land uses (non-priority and priority) within the Revolon Slough and Beardsley Wash watershed by conducting a point source

MFAC/BMP Program, which will consist of implementing the suite of BMPs currently employed by the City, as detailed in TMRP - Addendum No. 1 and Annual Monitoring Reports, as well as inspecting and monitoring catch basins for trash and/or anthropogenic landscaping litter.

3.2.2 City of Oxnard Litter Management Program

The City owns and operates the Del Norte Regional Recycling and Transfer Station, which is responsible for accepting, transferring and disposing of approximately 200,000 solid waste tons each year from the City, permitted haulers, and self-haulers throughout the region, as well as materials recovery, which is responsible for diverting material from the waste stream to prevent marketable recyclable material and divertible material from entering the landfill. The City has entered into agreements with organizations such as the Carpet America Recovery Effort (carpetrecovery.org) and Recycle with Paint Care (paintcare.org) for recycling of post consumer products. Green waste is recycled to provide compost soil amendments and other beneficial environmental products. The Del Norte Regional Recycling and Transfer Station includes a buyback center, which is responsible for accepting and dispensing payments to customers that redeem California Redemption Value material such as aluminum cans, plastic beverage containers, and glass. In addition, the Del Norte Regional Recycling and Transfer Station contains the Recyclable Household Hazardous Waste Center, which is responsible for accepting and recycling material from City residents that drop-off antifreeze, batteries, used motor oil, water-based paint and electronic devices. For hazardous wastes that are not accepted at Del Norte Regional Recycling and Transfer Station, the City offers Household Hazardous Waste Collection Events which are held at a separate location and allow residents to transport up to 15 gallons or 125 lbs household hazardous waste to the event. There is also a special program available once per month for Oxnard Conditionally Exempt Small Quantity Generator Businesses (CESQG's). A CESQG generates or stores less than 27 gallons or 200 pounds of Hazardous Waste per month. A CESQG may qualify for a limited amount of free disposal.

The City of Oxnard will continue to promote the City's Green Sustainability Programs with robust outreach focused on pollution prevention and environmental sustainability. The City of Oxnard has started a new "On the Road to Zero Waste" campaign which encourages community participation through a series of workshops designed to educate the public and garner community input. The program has vision of zero waste with a guiding principle to protect the environment and public health.

The City of Oxnard will focus BMP efforts at the high trash generating areas identified through the MFAC Program and continue watershed-wide BMP activities as a means to further reduce the discharge of trash to Revolon Slough and Beardsley Wash.

For point sources, the City of Oxnard has not yet been able to install full capture devices for conveyances discharging to Revolon Slough and Beardsley Wash. The City of Oxnard identified 106 catch basins that require retrofitting. A staff report has been prepared and the project has been assigned to the Capital Improvement Project (CIP) Division. The CIP Division is currently working with the City of Oxnard's finance department to secure funding to install the full capture devices. While full capture device planning in ongoing, the City is continuing to implement BMPs within their jurisdiction to address point sources of trash and participate in the non-point source MFAC/BMP program. The non-point source MFAC/BMP program results in cleanups of a site within the City of Oxnard to support point source compliance as well.

3.2.3 County of Ventura and VCWPD Litter Management Program

The County/VCWPD will continue to participate in the MFAC/BMP Program and regularly maintain the County's full capture devices. BMPs will include monthly trash cleanups at high trash generating areas. Additionally, the County will conduct targeted outreach to schools within the area covered by the Trash TMDL to educate the students, staff, and faculty on the importance of pollution prevention specifically regarding trash. The scale of BMP implementation will depend on the trash data collected during the 2017-2018 monitoring year. For point sources, the County completed installing full capture devices in conveyances they are responsible for and is meeting the March 2016 requirement of 100 percent of the conveyances discharging to Revolon Slough and Beardsley Wash are addressed by full capture devices. The County maintained the installed full capture devices during the 2016-2017 monitoring year to ensure their proper functioning.

3.2.4 VCAILG Litter Management Program

As part of the new Conditional Waiver, VCAILG will provide educational classes focused on improving water quality, including identifying trash as an impairment of water quality. VCAILG will make a concerted effort to make trash management a bigger focus during educational classes. Furthermore, based on 2016-2017 monitoring results, VCAILG will assist its members with the implementation of additional BMPs as necessary by following the adaptive process identified in the WQMP. In addition, VCAILG members will continue to be billed separately for Trash TMDLs to further reinforce the idea, through a fiscal measure, that there are trash problems in the watershed.

3.2.5 Caltrans Litter Management Program

Caltrans will continue to implement its current suite of BMPs as outlined in the TMRP. In addition, Caltrans has plans to install six BSWs on Highway 34, with construction beginning in 2022 as well as four BSWs, one BST, and one Austin Vault Sand Filter on Highway 118, with construction beginning in 2021 - these BMPs are subject to funding availability and the TMDL Reach Prioritization completed under the most recent Caltrans MS4 Permit. The continued implementation of current BMPs and the implementation of future potential BMPs will be directed by results obtained from future monitoring events as part of the adaptive management compliance approach.

3.3 BEST MANAGEMENT PRACTICES IMPLEMENTATION SCHEDULE

Non-point source-responsible parties intend to continue complying with the Trash TMDL through a visual MFAC/BMP Program, which may include the installation or implementation of structural or non-structural BMPs. The MFAC/BMP Program that was included in TMRP - Addendum No. 1 will continue to be implemented. Additional BMP implementation will be scheduled as appropriate to address the identified high trash generating areas.

Point source-responsible parties will continue installing full capture devices on conveyances discharging to Revolon Slough and Beardsley Wash and/or employ a point source-specific MFAC/BMP Program.

4 MFAC Revisions

Overall, the non-point source MFAC/BMP Program is effective for addressing trash as none of the five monitoring sites met the criteria for increased BMP implementation (four consecutive months of Category 3 trash conditions). In addition, the current monthly non-point source MFAC monitoring schedule is appropriate for assessing trash conditions within the Revolon Slough and Beardsley Wash subwatershed. Any necessary revisions identified during the implementation of the 2017-2018 monitoring year will be proposed in the ninth-year monitoring annual report in January 2019.

In addition, the City of Camarillo's point source-specific MFAC/BMP Program is effective at addressing trash and the quarterly inspection and collection frequency is appropriate for assessing trash conditions within the City's portion of the Revolon Slough and Beardsley Wash subwatershed. Any necessary revisions identified during the implementation of the 2017-2018 monitoring year will be proposed in the ninth-year monitoring annual report in January 2019.

Appendix 1. MFAC Program Site Descriptions

Site 1 – Revolon Slough at Wood Road	
This site consists of Revolon Slough and its adjacent land areas. It begins at the end of a concrete channel and includes the 100 foot downstream portion of Revolon Slough and the banks on both sides of the water body. GPS Coordinates: Lat: 34.169771 Lon: -119.095591	

Site 3a – Camarillo Hills Drain Outlet	
This site begins at the upstream end of a drain outlet and includes the in-stream portions of the Camarillo Hills Drain and the banks on either side of the drain. GPS Coordinates: Lat: 34.215486 Lon: -119.076388	

Site 5 – Revolon Slough at Etting Road	
This site begins at the downstream end of an agricultural drain that discharges into Revolon Slough and includes the in-stream portions of Revolon Slough as well as the land areas within the slough and the banks. GPS Coordinates: Lat: 34.161731 Lon: -119.091460	

Site 8 – Caltrans Site on U.S. 101 Freeway	
This site is located on the south side of U.S. 101 Freeway near Revolon Slough. The site begins at the end of the guard rail and ends at the fence surrounding Revolon Slough. GPS Coordinates: Lat: 34.221799 Lon: -119.120400	

Site 10 – 5th Street Drain at Del Norte Blvd.	
This site is located within the 5th Street Drain near the intersection of Del Norte Boulevard and 5th Street. This site was added to the MFAC Program in July 2015. GPS Coordinates: Lat: 34.191006 Lon: -119.107392	

Appendix 2. Example MFAC Event Photos

Site 1 – Revolon Slough at Wood Road

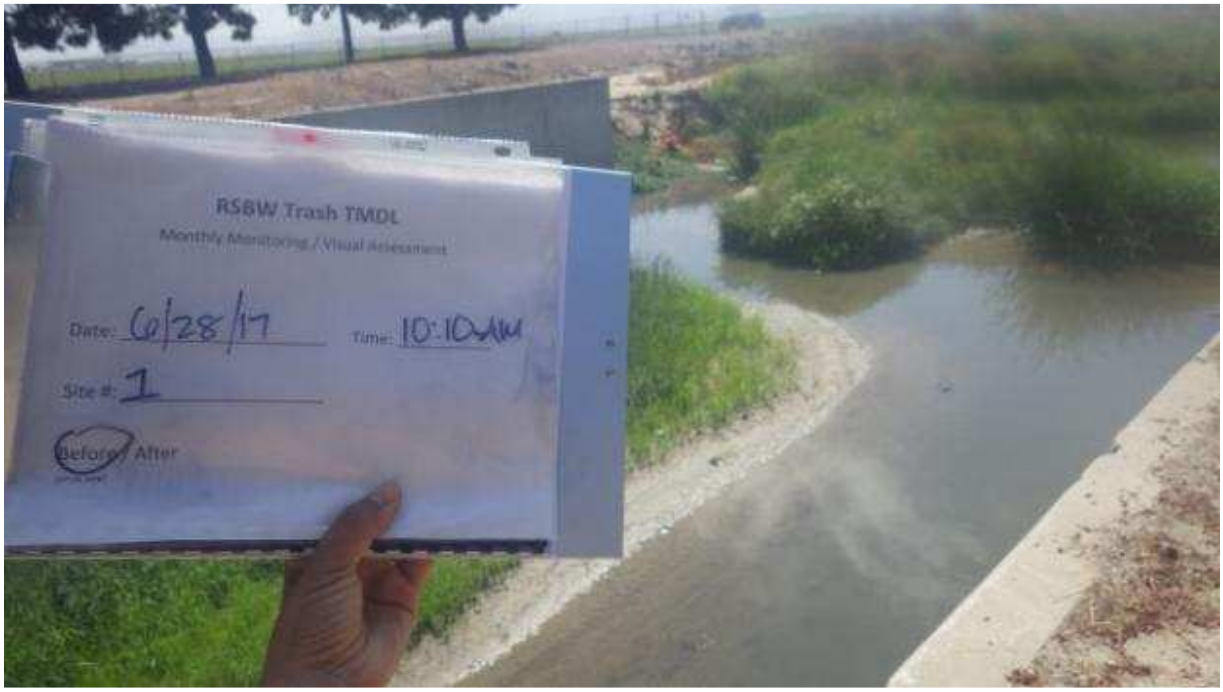

Figure 1: Site 1 before a MFAC Event in June, 2017

Figure 2: Site 1 after a MFAC Event in June, 2017

Site 3a – Camarillo Hills Drain Outlet

Figure 3: Site 3a before a MFAC Event in May 2017

Figure 4: Site 3a after a MFAC Event in May, 2017

Site 5 – Revolon Slough at Etting Road

Figure 5: Site 5 before a MFAC Event in February, 2017

Figure 6: Site 5 after a MFAC Event in February, 2017

Site 8 – Caltrans Site on U.S. 101 Freeway

Figure 7: Site 8 before a MFAC Event in March, 2017

Figure 8: Site 8 after a MFAC Event in March, 2017

Site 10 – Revolon Slough at Del Norte Blvd.

Figure 9. Site 10 before a MFAC Event in January, 2017

Figure 10. Site 10 before a MFAC Event in January, 2017

Appendix 3. Example Completed Visual Assessment Forms

Revolon Slough/Beardsley Wash Trash TMDL

Visual Assessment Worksheet

Event Date: 9/28/17 | Event Start Time: 8:49 AM
Field Technician Names: A. Stovall + CCC | Event End Time: 9:11 AM
Current Weather Conditions: Sunny, hot | # of Pictures Taken: 2
Antecedent Weather Conditions: ☐ Wind ☐ Rain: _____ inches N/A

Level of Trash Observed:

Refer to Program Monitoring Area Map as necessary. Note any categorical variation in levels of trash observed in different areas of the site. If necessary, categorize these areas individually.

Key: Category 1: (<10 pcs), Category 2 (10-100 pcs), Category 3 (>100 pcs)

Site ID	Category	Reason for Category Rating
3A	1	Minimal debris present

Types of Trash Observed (check all that apply)

- ☑ Plastic/Styrofoam
- ☐ Landscape Materials
- ☐ Toxic/Hazardous/Biohazardous Materials
- ☑ Paper Products/Biodegradable
- ☐ Aluminum/Metal
- ☑ Glass
- ☐ Household Items
- ☐ Automotive
- ☐ Agricultural Plastics/Trash
- ☐ Other: _____

Notes:

Estimated # of Follow-up Clean-up Events Needed:

N/A

Additional Notes:

Site in very good condition, minimal debris present. Discharge from outfall present, along with algae and sediment.

Revolon Slough/Beardsley Wash Trash TMDL

Visual Assessment Worksheet

Event Date: 9/28/17	Event Start Time: 9:22 AM
Field Technician Names: A. Stovall + CCC	Event End Time: 9:50 AM
Current Weather Conditions: Sunny, hot	# of Pictures Taken: 2
Antecedent Weather Conditions: ☐ Wind ☐ Rain: ____ inches	N/A

Level of Trash Observed:

Refer to Program Monitoring Area Map as necessary. Note any categorical variation in levels of trash observed in different areas of the site. If necessary, categorize these areas individually.

Key: Category 1: (<10 pcs), Category 2 (10-100 pcs), Category 3 (>100 pcs)

Site ID	Category	Reason for Category Rating
5	1	Minimal debris present

Types of Trash Observed (check all that apply)

- ☑ Plastic/Styrofoam
- ☐ Landscape Materials
- ☐ Toxic/Hazardous/Biohazardous Materials
- ☐ Paper Products/Biodegradable
- ☑ Aluminum/Metal
- ☑ Glass
- ☐ Household Items
- ☐ Automotive
- ☑ Agricultural Plastics/Trash
- ☐ Other: _____

Notes:

Estimated # of Follow-up Clean-up Events Needed:

N/A

Additional Notes:

Vegetation extremely overgrown, blocking significant portions of the banks, and also blocking the lower portion of the stream.

Revolon Slough/Beardsley Wash Trash TMDL

Visual Assessment Worksheet

Event Date: 9/28/17	Event Start Time: 9:53 AM
Field Technician Names: A. Stovall + CCC	Event End Time: 10:17 AM
Current Weather Conditions: Sunny, hot	# of Pictures Taken: 2
Antecedent Weather Conditions: ☐ Wind ☐ Rain: ____ inches	N/A

Level of Trash Observed:

Refer to Program Monitoring Area Map as necessary. Note any categorical variation in levels of trash observed in different areas of the site. If necessary, categorize these areas individually.

Key: Category 1: (<10 pcs), Category 2 (10-100 pcs), Category 3 (>100 pcs)

Site ID	Category	Reason for Category Rating
1	2	Moderate levels of debris in stream, minimal on banks

Types of Trash Observed (check all that apply)

- ☑ Plastic/Styrofoam
- ☐ Landscape Materials
- ☑ Toxic/Hazardous/Biohazardous Materials
- ☐ Paper Products/Biodegradable
- ☑ Aluminum/Metal
- ☑ Glass
- ☑ Household Items
- ☑ Automotive
- ☑ Agricultural Plastics/Trash
- ☐ Other: _____

Notes:

Biohazard – chickens (3x)

Estimated # of Follow-up Clean-up Events Needed:

County O+M needs to retrieve chickens.

Additional Notes:

Water was very clear, so visibility was high. Moderate levels of debris instream, and minimal debris on banks.

Revolon Slough/Beardsley Wash Trash TMDL

Visual Assessment Worksheet

Event Date: 9/28/17 | Event Start Time: 10:33 AM

Field Technician Names: A Stovall + CCC | Event End Time: 11:01 AM

Current Weather Conditions: Sunny, Hot | # of Pictures Taken: 2

Antecedent Weather Conditions: ☐ Wind ☐ Rain: ____ inches N/A

Level of Trash Observed:

Refer to Program Monitoring Area Map as necessary. Note any categorical variation in levels of trash observed in different areas of the site. If necessary, categorize these areas individually.

Key: Category 1: (<10 pcs), Category 2 (10-100 pcs), Category 3 (>100 pcs)

Site ID	Category	Reason for Category Rating
ID	2	Moderate levels of debris

Types of Trash Observed (check all that apply)

- ☒ Plastic/Styrofoam
- ☐ Landscape Materials
- ☐ Toxic/Hazardous/Biohazardous Materials
- ☒ Paper Products/Biodegradable
- ☒ Aluminum/Metal
- ☒ Glass
- ☒ Household Items
- ☐ Automotive
- ☒ Agricultural Plastics/Trash
- ☐ Other: _____

Notes:

Estimated # of Follow-up Clean-up Events Needed:

N/A

Additional Notes:

Moderate levels of debris in channel and on banks. Many small pieces of ag. plastic caught in vegetation on banks.

Revolon Slough/Beardsley Wash Trash TMDL

Visual Assessment Worksheet

Event Date: 9/28/17 | Event Start Time: 11:12 AM

Field Technician Names: A. Stovall + CCC | Event End Time: 11:45 AM

Current Weather Conditions: Sunny, hot | # of Pictures Taken: 2

Antecedent Weather Conditions: ☐ Wind ☐ Rain: ____ inches N/A

Level of Trash Observed:

Refer to Program Monitoring Area Map as necessary. Note any categorical variation in levels of trash observed in different areas of the site. If necessary, categorize these areas individually.

Key: Category 1: (<10 pcs), Category 2 (10-100 pcs), Category 3 (>100 pcs)

Site ID	Category	Reason for Category Rating
8	3	Recent car accident – lots of debris

Types of Trash Observed (check all that apply)

- ☑ Plastic/Styrofoam
- ☐ Landscape Materials
- ☐ Toxic/Hazardous/Biohazardous Materials
- ☐ Paper Products/Biodegradable
- ☑ Aluminum/Metal
- ☐ Glass
- ☑ Household Items
- ☐ Automotive
- ☑ Agricultural Plastics/Trash
- ☐ Other: _____

Notes:

Estimated # of Follow-up Clean-up Events Needed:

N/A

Additional Notes:

Large amount of debris from recent car accident, including mangled fencing + RSBW sign.

Appendix 4. Example Special Cleanup Event Photos

Site 1 – Revolon Slough at Wood Road

Figure 1: Site 1 before a Special Cleanup Event in February, 2017

Figure 2: Site 1 after a Special Cleanup Event in February, 2017

Site 3a-Camarillo Hills Drain Outlet

Figure 3: Site 3a before a Special Cleanup Event in June, 2017

Figure 4: Site 3a after a Special Cleanup Event in June, 2017

Site 5 – Revolon Slough at Etting Road

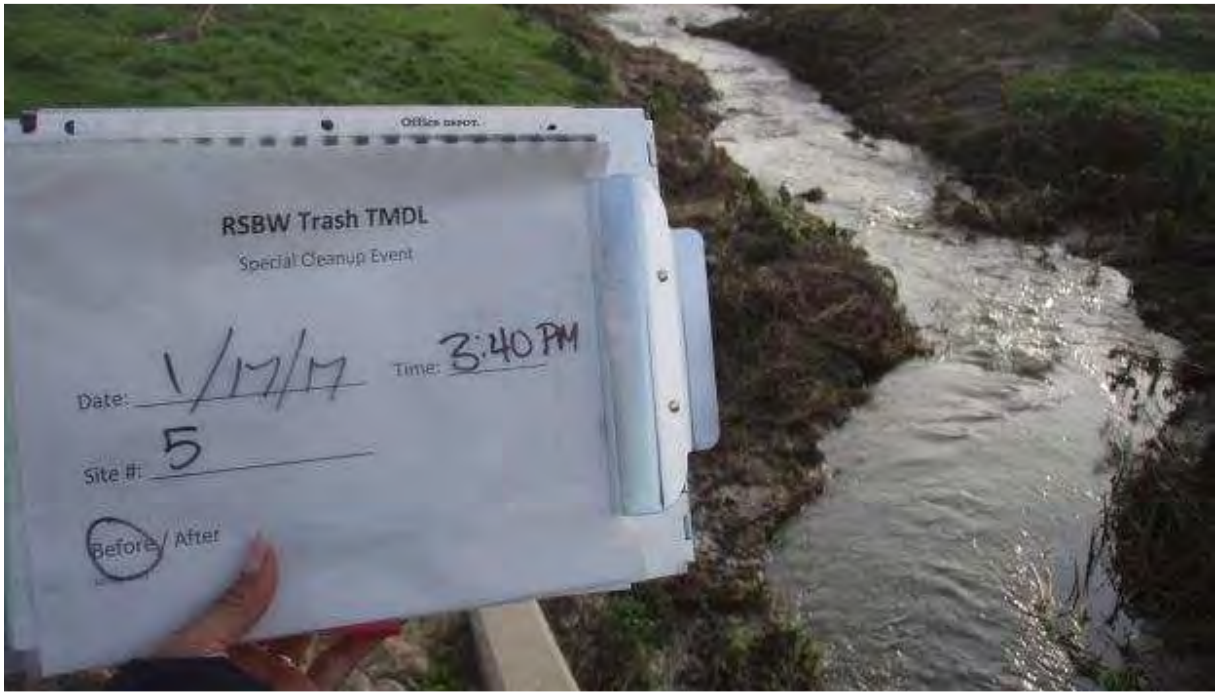

Figure 5: Site 5 before a Special Cleanup Event in January, 2017

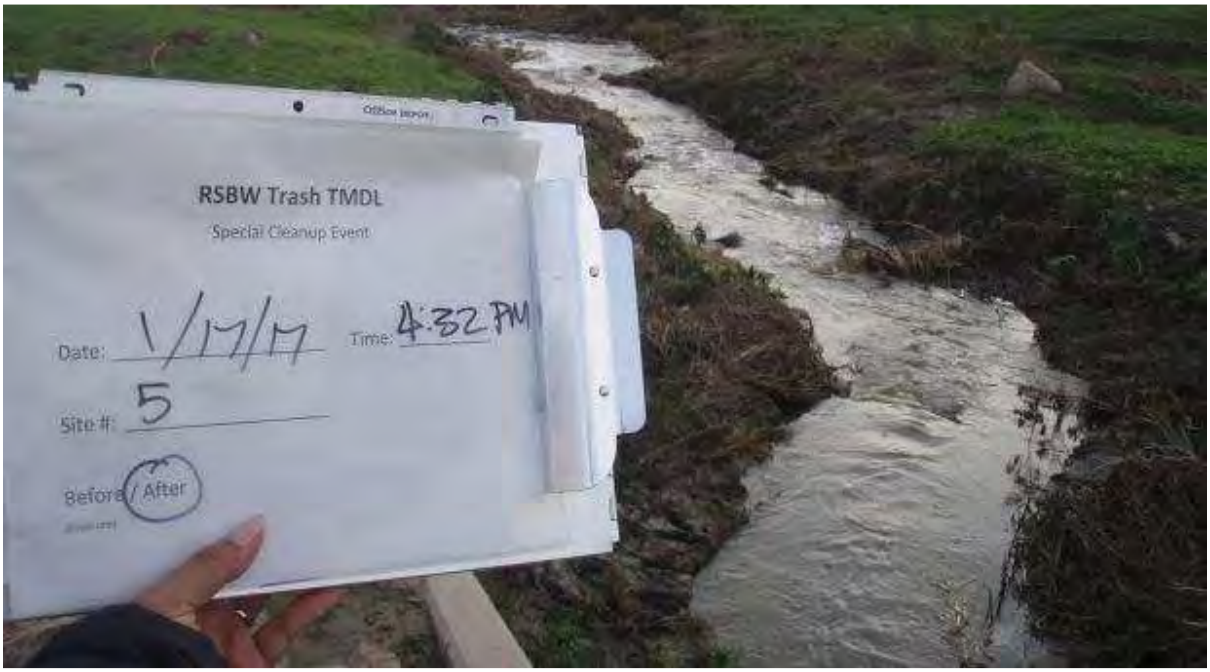

Figure 6: Site 5 after a Special Cleanup Event in January, 2017

Site 8 – Caltrans Site on U.S. 101 Freeway

Figure 7: Site 8 before a Special Cleanup Event in June, 2017

Figure 8: Site 8 after a Special Cleanup Event in June, 2017

Site 10 – Revolon Slough at Del Norte Blvd.

Figure 9. Site 10 before a Special Cleanup Event in March, 2017

Figure 10. Site 10 after a Special Cleanup Event in March, 2017

Appendix 5. City of Camarillo Example Full Capture Device Cleaning Photos

Appendix 6. Example Coastal Cleanup Day Photos

September 11, 2017

Ms. Jenny Newman
TMDL Section Chief
Los Angeles Regional Water Quality Control Board
320 W. 4th St., Suite 200
Los Angeles, California 90013

SUBJECT: MALIBU CREEK TRASH TMDL ANNUAL REPORT (UPPER MEDEA CREEK AND UPPER LINDERO CREEK) BASELINE AND ANNUAL REPORT DATED AUGUST 17, 2017

Dear Ms. Newman:

Enclosed for your review is the Fifth Malibu Creek Trash TMDL Annual Monitoring Report for monitoring activities conducted between July 1, 2016 and June 30, 2016. This Annual Monitoring Report is being submitted by the County of Ventura (the County), Ventura County Watershed Protection District (the District), and City of Thousand Oaks (the City) as required by the Malibu Creek Trash Total Maximum Daily Load (TMDL), Los Angeles Regional Water Quality Control Board Resolution No. 2008-007. It documents fifth year implementation of the Malibu Creek Watershed Trash Monitoring and Reporting Plan and Minimum Frequency of Assessment and Collection (TMRP/MFAC) program, submitted by the County, the District, and the City on April 30, 2010.

This annual summary report presents the data and analysis of trash loading patterns from the defined assessment areas, an evaluation of the effectiveness of existing Best Management Practices (BMPs), and comparison against the project defined baseline trash Waste Load Allocations.

If you have any comments or questions regarding the attached document, please contact Ewelina Mutkowska at (805) 645-1382 or Paul Jorgensen at (805) 449-2424.

Sincerely,

Glenn Shephard, P.E.
Ventura County Watershed Protection District
Director

Jay T. Spurgin
City of Thousand Oaks
Public Works Director

c: Renee Purdy, Regional Water Quality Control Board (RWQCB), Regional Programs Chief
Stefanie Hada, RWQCB, Environmental Scientist
Jeff Pratt, Ventura County Public Works Agency (VCPWA), Director
Arne Anselm, Ventura County Watershed Protection District, Deputy Director
Ewelina Mutkowska, VCPWA, Stormwater Program Manager
John Minkel, City of Thousand Oaks, Utilities Superintendent
Paul Jorgensen, City of Thousand Oaks, Environmental Programs Coordinator
Ron Manwill, City of Thousand Oaks, Environmental Programs Analyst

City of Thousand Oaks
County of Ventura and
Ventura County Watershed Protection District

Annual Trash Monitoring and Reporting Plan Report for the Malibu Creek Watershed

September 11, 2017

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Introduction

This Annual Report is for the fifth year of Trash Total Maximum Daily Load (TMDL) implementation, July 2015-June 2016. It is submitted by and for the City of Thousand Oaks (the City), the County of Ventura (the County), and the Ventura County Watershed Protection District (the District). This report fulfills requirements specified by the Los Angeles Region Water Quality Control Plan with regard to the Malibu Creek Watershed Trash TMDL, Resolution No. R4-2008-007 (effective July 7, 2009). The trash monitoring results and compliance assessments are reported for point source waste load allocations (WLAs) and non-point source load allocations (LAs). The monitoring efforts that generated these data were conducted according to the Trash Monitoring and Reporting Plan (TMRP) for the Malibu Creek Trash TMDL submitted to Los Angeles Regional Water Quality Control Board (RWQCB) on April 30, 2010.

Additionally, the monitoring data were evaluated to identify trends and factors that may help explain trash loading such as:

- Variation in monthly and yearly trash accumulation data;
- Comparison between monthly collected trash data and records of extreme weather events;
- Possible loading sources; and
- Effectiveness of the Minimum Frequency of Assessment and Collection and Best Management Practice (MFAC/BMP) program.

Based on a review of these factors, recommendations for modifications to improve BMP effectiveness or revisions to the MFAC schedule may be made.

Overview

To monitor and take steps to reduce watershed impairment by trash in Lindero and Medea Creeks, a TMRP was devised with representative locations so that trash accumulation and reduction of the baseline waste load allocations (WLAs) within the TMDL areas could be assessed. The assessment locations were selected at the lowest point of flow in each subwatershed where creek morphology is conducive to the accumulation of trash deposits. These locations were also judged to be accessible and safe for entry.

During this reporting period, critical weather events such as high winds and sufficiently significant rainstorms were tracked and recorded; however due to unsafe conditions no sampling during critical weather events were conducted. The collected monthly trash data were assessed and compared to critical weather dates for assessment of weather impact

to trash accumulation. As specified in the TMRP, a minimum of one collection per month was completed at each site, as summarized in Table 1.

Table 1. Collection Date Summary

Monitoring Date	Lindero Creek Reach 2, LC-1	Medea Creek Reach 2, MC-1
7/10/15	X	X
8/10/15	X	X
9/22/15	X	X
10/30/15	X	X
11/19/15	X	X
12/7/15	X	X
1/21/16	X	X
2/19/16	X	X
3/30/16	X	X
4/24/16	X	X
5/12/16	X	X
6/15/16	X	X

Assessment Area Characteristics

A detailed review of land uses in a drainage area offers suggests potential trash sources and likely activities responsible for inappropriate disposal of trash.

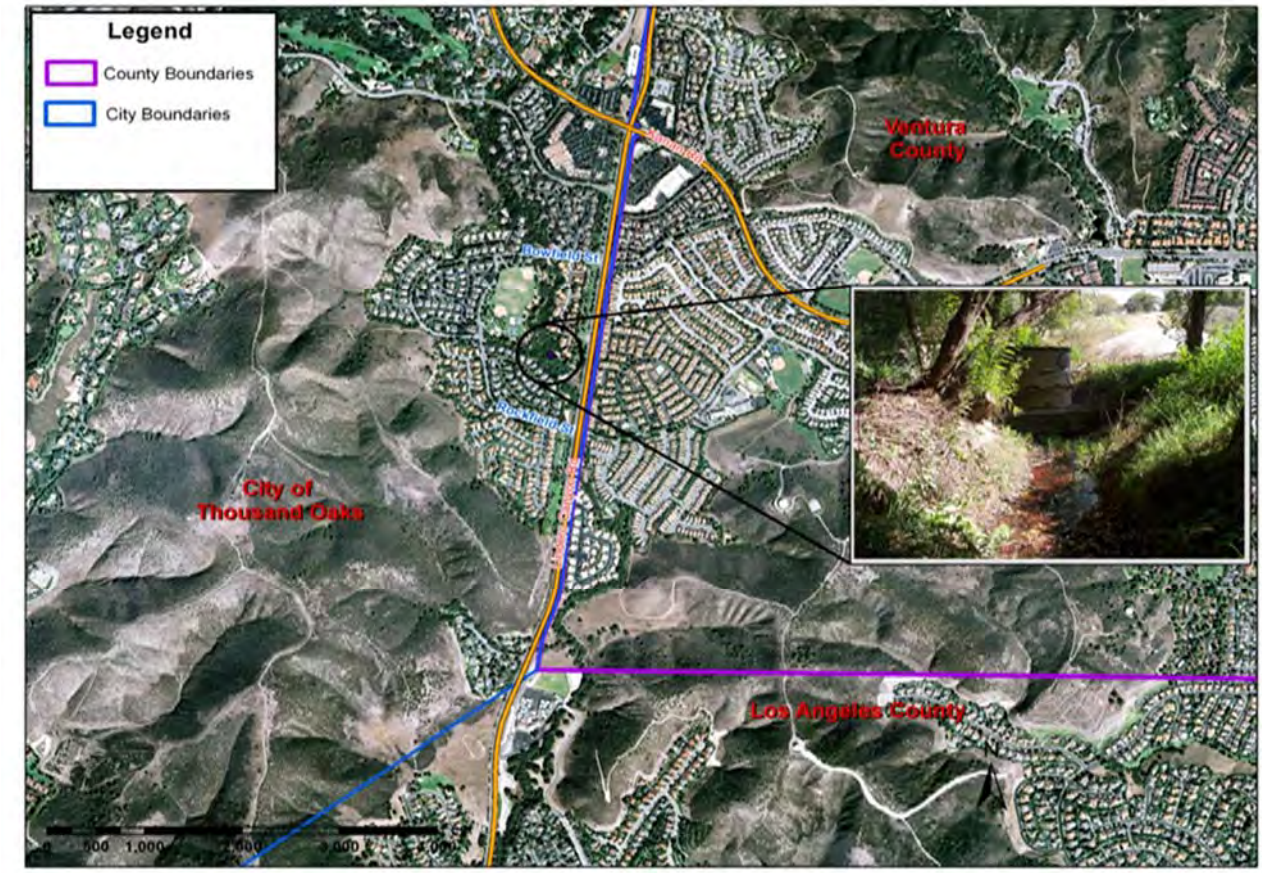
Lindero Creek Subwatershed

The area within the City of Thousand Oaks jurisdiction with drainage to Reach 2 of Lindero Creek is 2.08 square miles. A breakdown of land uses in this area is: 49.0% open space, 44.7% residential; 6.2% public and institutional lands (includes a golf course and parks); and 1.3% commercial. The population is estimated to be 1,970 persons. Areas in unincorporated Ventura County also have drainage to Lindero Creek. This area is 0.9 square miles. The land uses of this area are 9.5% commercial; 49.7% residential; and 40.8% open space. Population data for unincorporated portion of this subwatershed is not available.

The Lindero Creek assessment site is a debris basin with a creek that is typified as a braided flow that converges at a perforated stand pipe for below flood-stage discharges that bypass the overflow structure. Reduced slope at the debris basin, in addition to the standpipe's size restriction, promotes trash and debris accumulation in the flood plain. The location of the Lindero Creek assessment area is shown in Figure 1.

Visual inspections conducted by the City staff have shown that popular recreation areas and areas close to schools have a higher potential for litter generation. Observed trash was dominated by food-related packaging remains.

Figure 1. Lindero Creek Assessment Site Map (LC1)



Medea Creek Subwatershed

The area within County unincorporated community of Oak Park with drainage to Reach 2 of Medea Creek is 3.32 square miles. A breakdown of land uses for this area is: 6.9% commercial and community facilities; 30.1% residential; and 63.0% open space. The population in Oak Park is about 13,800. Oak Park offers several recreational parks, namely Medea Creek Park, Chaparral Park, Mae Boyar Park, and Sunrise Meadows Open Space owned by Rancho Simi Recreation and Park District. Medea Creek Park and Chaparral Park are directly adjacent to Medea Creek. Within Oak Park, there are also three elementary schools, one middle school, three high schools, and one preschool under jurisdiction of Oak Park Unified School District.

Medea Creek follows a single flow path as it moves through the assessment area. When flow levels rise due to a storm event, the stream configuration causes bank overflow and deposition of transported trash and debris onto an existing flood plain that is part of the assessment area. The Medea Creek assessment site is shown in Figure 2.

Figure 2. Medea Creek Assessment Site (MC1) Map

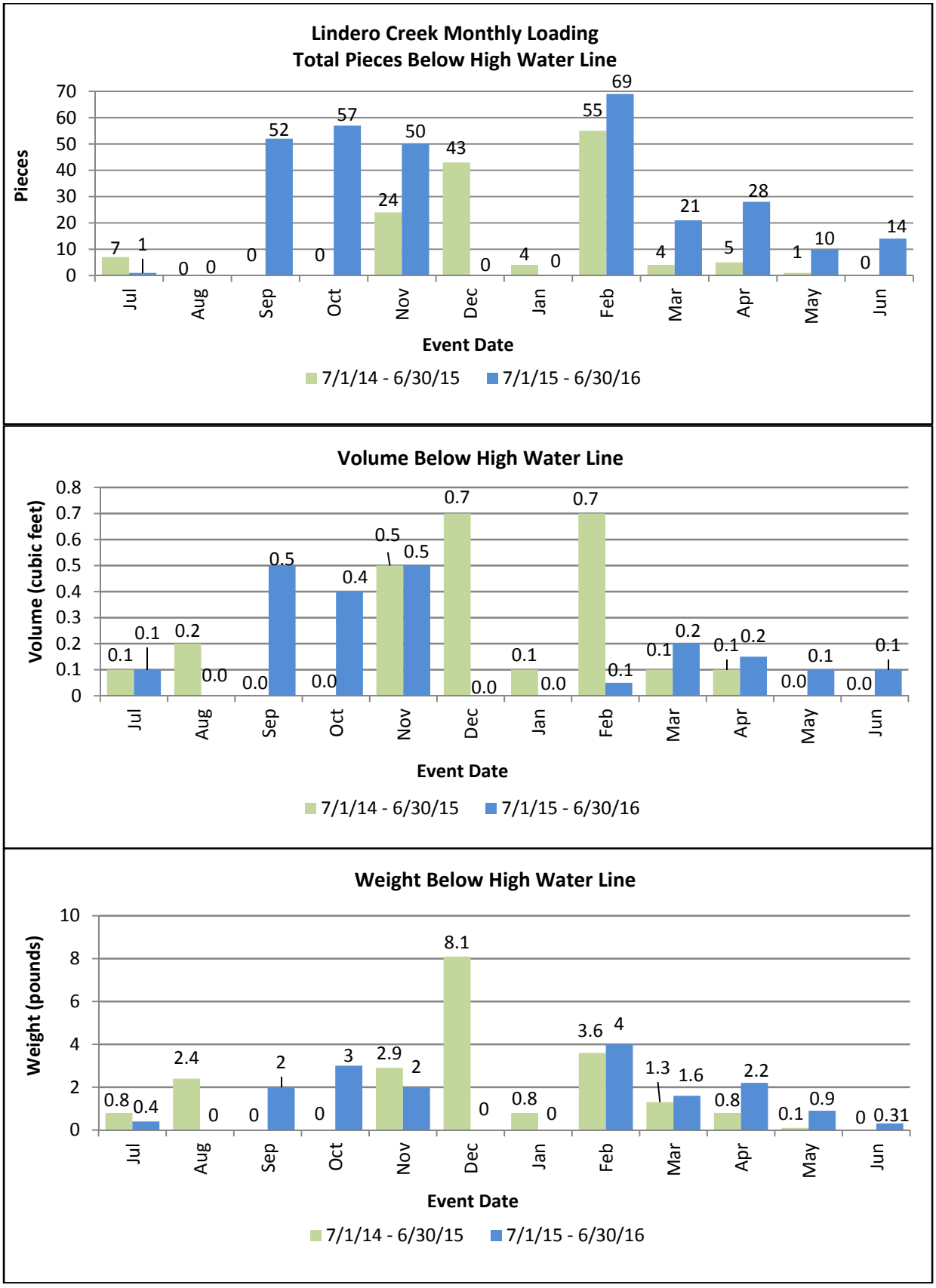
Evaluation of Trash Loading

Comparison of monthly amounts of litter collected at the assessment areas helps identify temporal patterns and impact of weather events on the loading. Using three evaluation matrices (piece, weight, and volume) can reveal something different about the sources and activities causing the loading, as well as the modes of trash transport. Figures 3 and 4 show the monthly amount of collected litter measured and expressed by three different metrics over this reporting period.

Lindero Creek

As presented in Figure 3, July and August were almost devoid of trash at the assessment site for Lindero Creek. Collection events in September, October and November, and February by contrast, had relatively high piece counts. Litter found in the LC1 assessment area was nil for December and January. February had the highest piece-count with March and April having had moderate counts. May and June had relatively low counts. The volume metric of litter shows that September, October, and November had the greatest peaks. March and April had moderate volume peaks. For the weight metric, September, October, November, and April had moderately high, respective peaks. February had the highest peak for the weight metric.

Figure 3. Current & Prior Year Monthly Trash Loading, LC1



Medea Creek

Similar to LC1, July and August had nearly no trash pieces. Peak monthly piece counts at MC1 (Figure 4) occurred in September, October, and January. A moderate levels of trash pieces were determined for all the other months. Volume peaks were seen only in January and February. For the weight metric, the peak loading occurred in October, January, and February; however, November, December and May and June had moderate levels of trash weights.

A comparison of piece counts at the two assessment locations reveals two similar patterns. July and August had nearly no trash pieces at both assessment areas. Secondly, September and October peak levels were common to both assessment areas. The relatively high November peak at LC1 was, however, only a moderate peak at MC1. February's extreme peak at LC1 was also different from the timing of extreme peak at MC1 that occurred in January. Despite these differences, the pattern during the wet and windy months was similar enough to confirm that weather transport is a significant contributor to the trash loading. In general, the reasonably similar pattern of peak levels (pieces) seen at both sites was not simply the result of a random dynamic. There was also enough difference in the pattern of peak levels to support previous observation that trash and litter accumulation was controlled by additional factors, a viewpoint derived in earlier TMRP reports.

Trash Profile: High Frequency Categories

Reviewing the relative contribution of litter by category indicates the types of litter and the relative contribution of each to the annual loading. Figures 5 and 6 depict the relative amounts of annual trash by category for LC1 and MC1, respectively.

Trash Categories at Lindero Creek

As shown in Figure 5, categories of trash that make up the largest portion of the loading at LC1 were Other/Unknown (small fragments), Sporting Goods, Plastic Bags, and Wrappers (usually plastic).

Trash Categories at Medea Creek

As seen in Figure 6, Other/Unknown, Wrappers, and Shattered Glass were the types of litter materials that were most often found at MC1.

Figure 4. Current & Prior Year Monthly Trash Loading, MC1

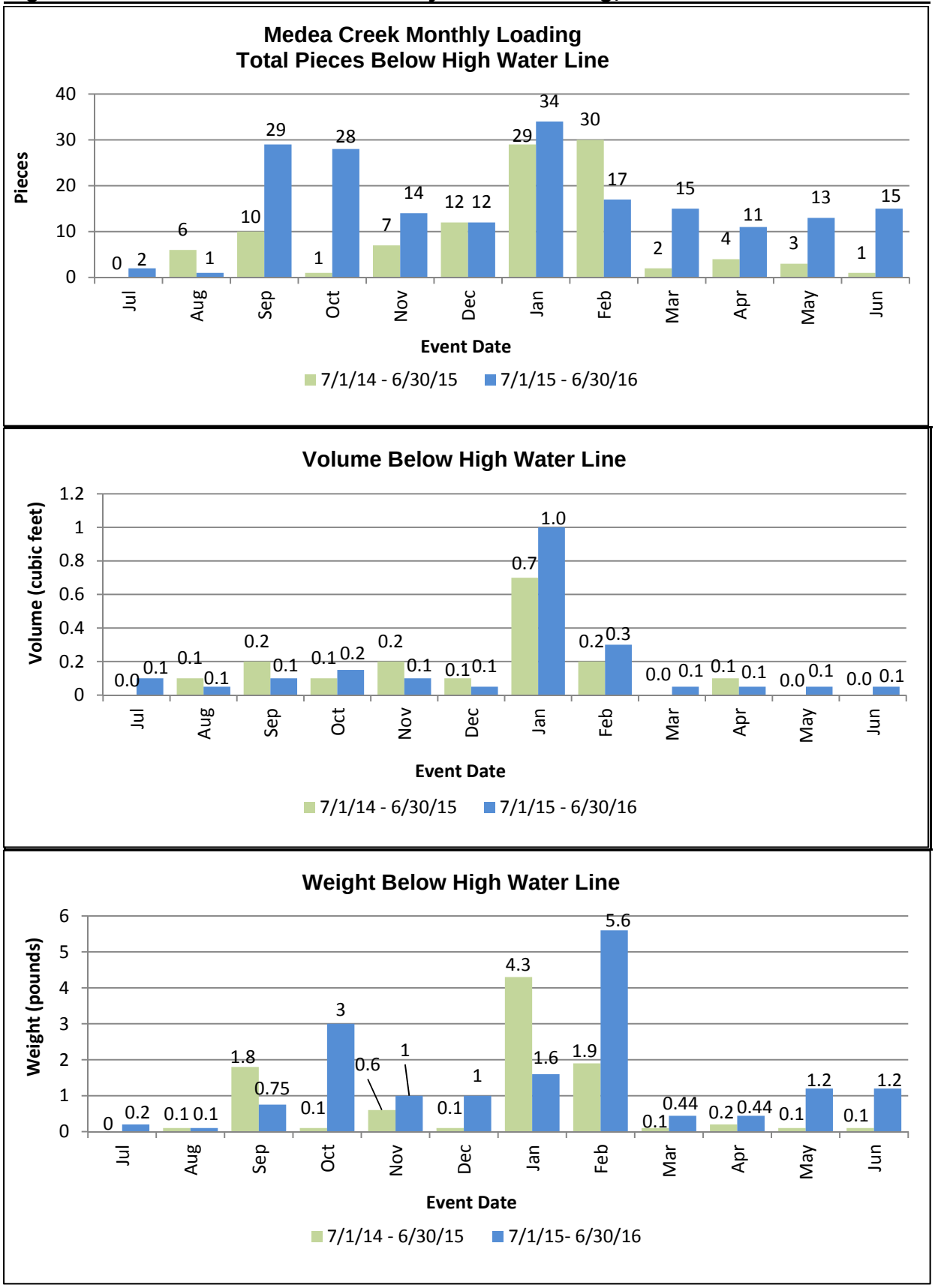


Figure 5. Lindero Creek Trash Composition

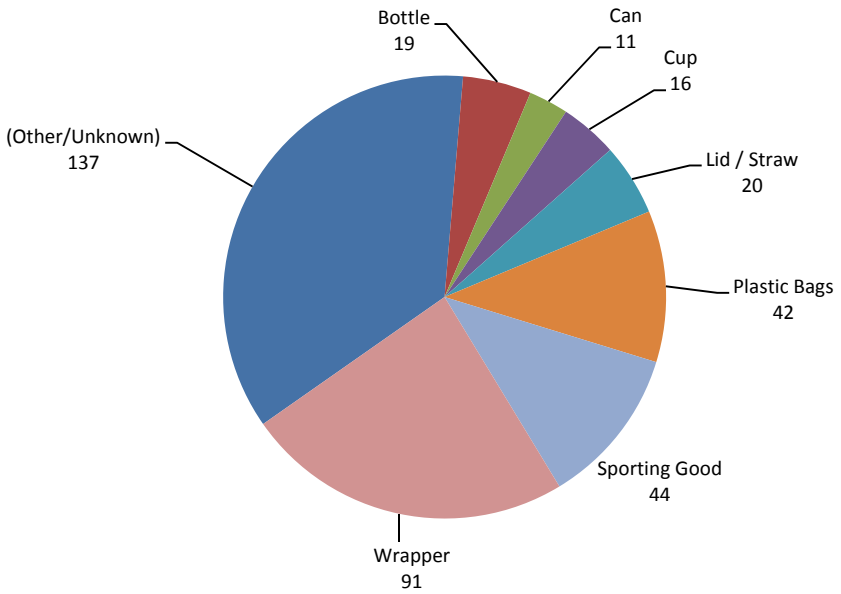
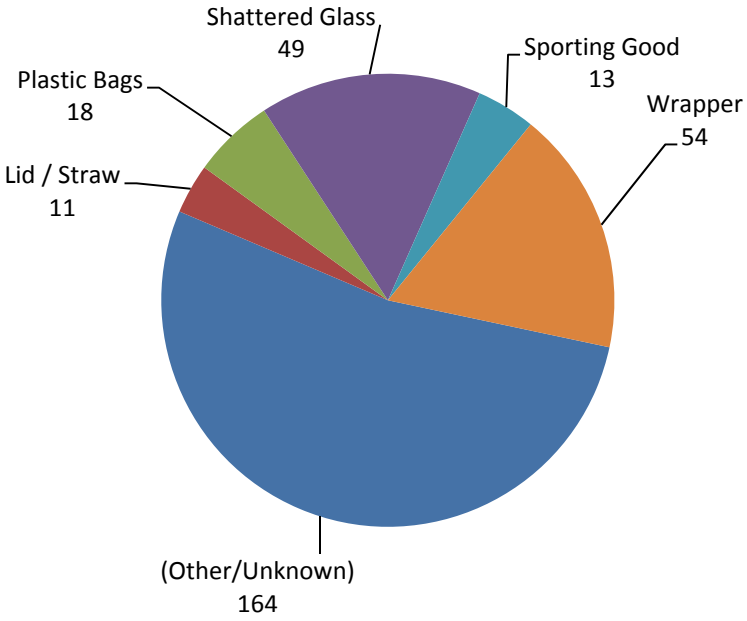


Figure 6. Medea Creek Trash Composition



Critical Weather Events

All critical weather events were tracked so that a comparison could be made with monthly trash loading values to determine if there is any correlation. Note - to obtain adequately sized data sets to determine weather impact on trash loading, the critical event thresholds in the TMRP were modified to the levels shown in Table 2. Because these values are less that the critical weather thresholds in the TMRP, the evaluation is more conservative and no data is lost.

Table 2 shows the high intensity weather events that could have had a bearing on trash and litter transport. An evaluation of the months with the greatest frequency of critical weather events shows that February had the most overall critical weather events including 6 windy days and 1 rain event. April was second with 4 high-wind days and 2 rain storms followed by January and March with 5 critical weather events each.

Unexpectedly, September had a storm event with the largest amount of precipitation occurring over a 24-hour period. It was the first event that swiped trash and litter accumulated during dry months of late spring and summer 2015.

Table 2. Critical Wind and Rain Events

Wind Events*		Rain Events	Wind Events		Rain Events
Date	Speed, > 20 mph	Depth ≥0.15”	Date	Speed, > 20 mph	Depth ≥0.15”
9/14/15		0.87	2/5/16	21	
10/18/15	23		2/6/16	24	
10/30/15	21		2/7/16	29	
11/6/15	24		2/8/16	28	
11/15/15	21		2/16/16		0.24
12/18/15		0.15	3/6/16	24	0.43
12/14/15	21		3/7/16	28	
12/22/15	26		3/10/16		0.37
12/26/15	23		3/11/16	22	
12/31/15	21		3/29/16	25	
1/4/16		0.70	4/6/16	22	
1/5/16		0.59	4/7/16		0.18
1/6/16		0.17	4/15/16	26	
1/30/16		0.64	4/25/16	25	
1/31/16	26		4/27/16	24	
2/4/16	23		5/5/16		0.57

*Weather information was gathered from the California Data Exchange Center, Station ID TOK located in Thousand Oaks.

Figures 7 through 10 show the timing of critical weather events with respect to the dates of the monthly collection events, Figures 7 and 8 present data for Lindero Canyon (LC1) and Figures 9 and 10 for Medea Creek (MC1).
The first significant rain event of the season was followed by high amounts of trash collected in September 2015 at both assessment locations (Figures 7 and 9). Windy conditions in October and November, appear to contribute to elevated trash amounts at both locations as well (Figures 8 and 10).

Combination of wind and rain may have contributed to the highest amount of trash collected at LC1 in February 2016 (Figures 7 and 8) and at MC1 in January (Figures 9 and 10).

Figure 7. Rain Effect Analysis on Loading at LC1

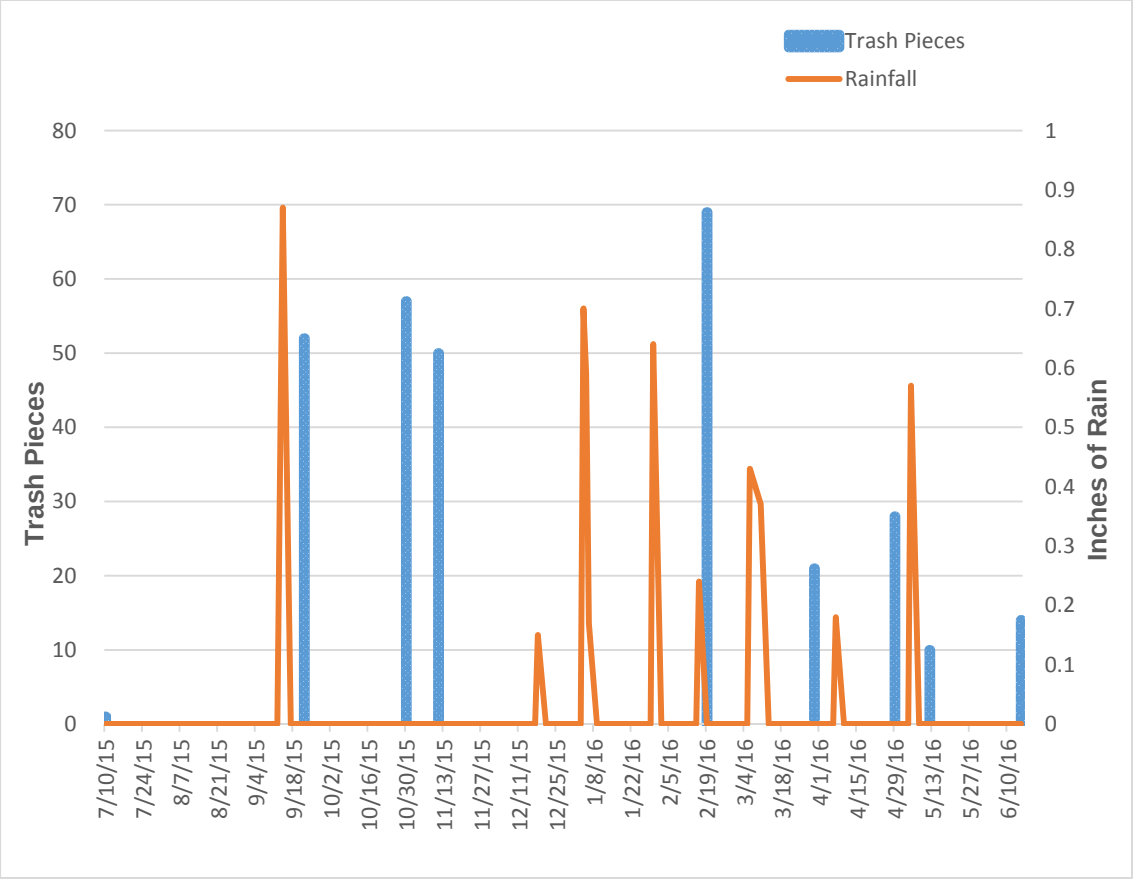


Figure 8. Wind Effect Analysis on Loading at LC1

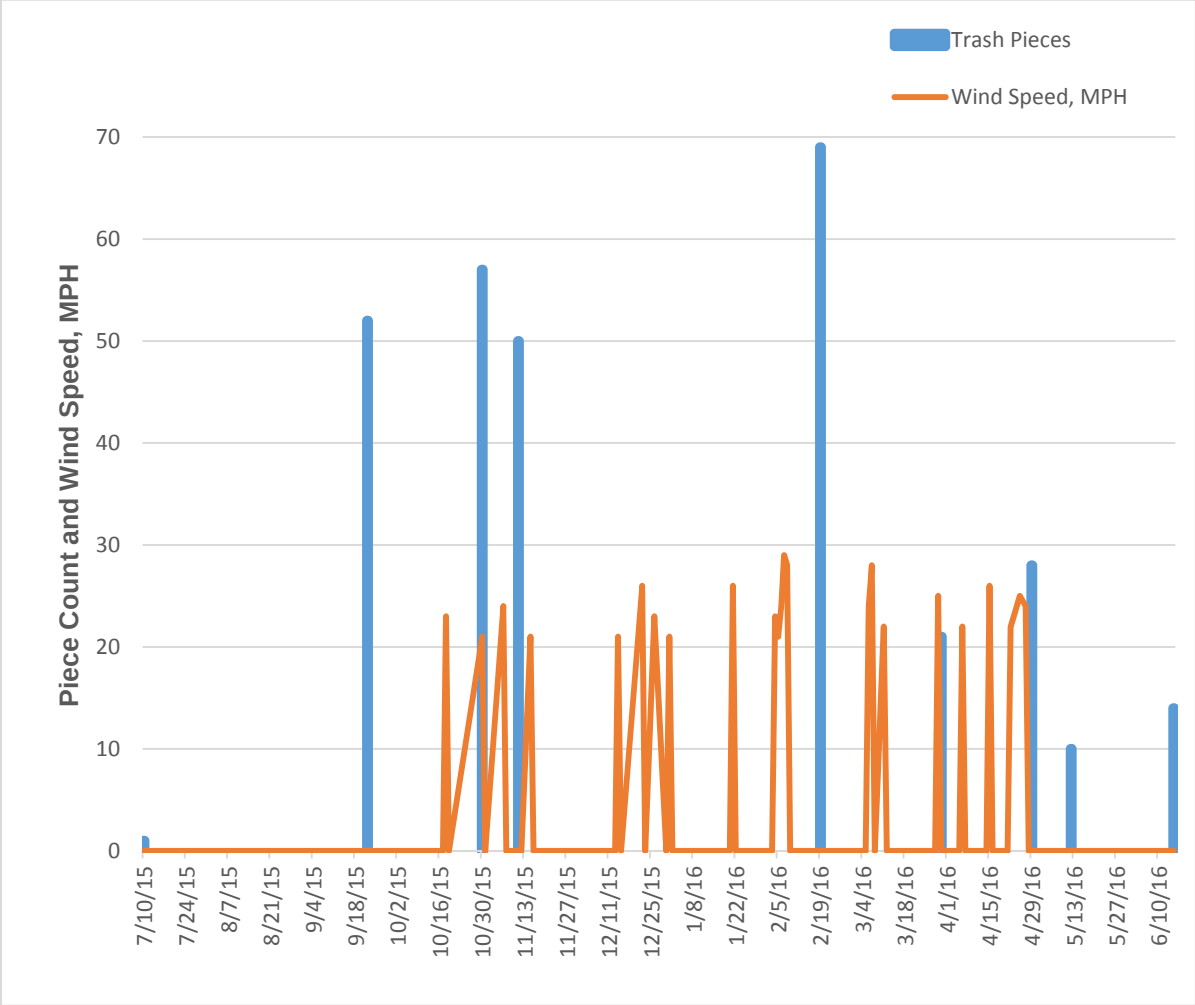


Figure 9. Rain Effect Analysis on Loading at MC1

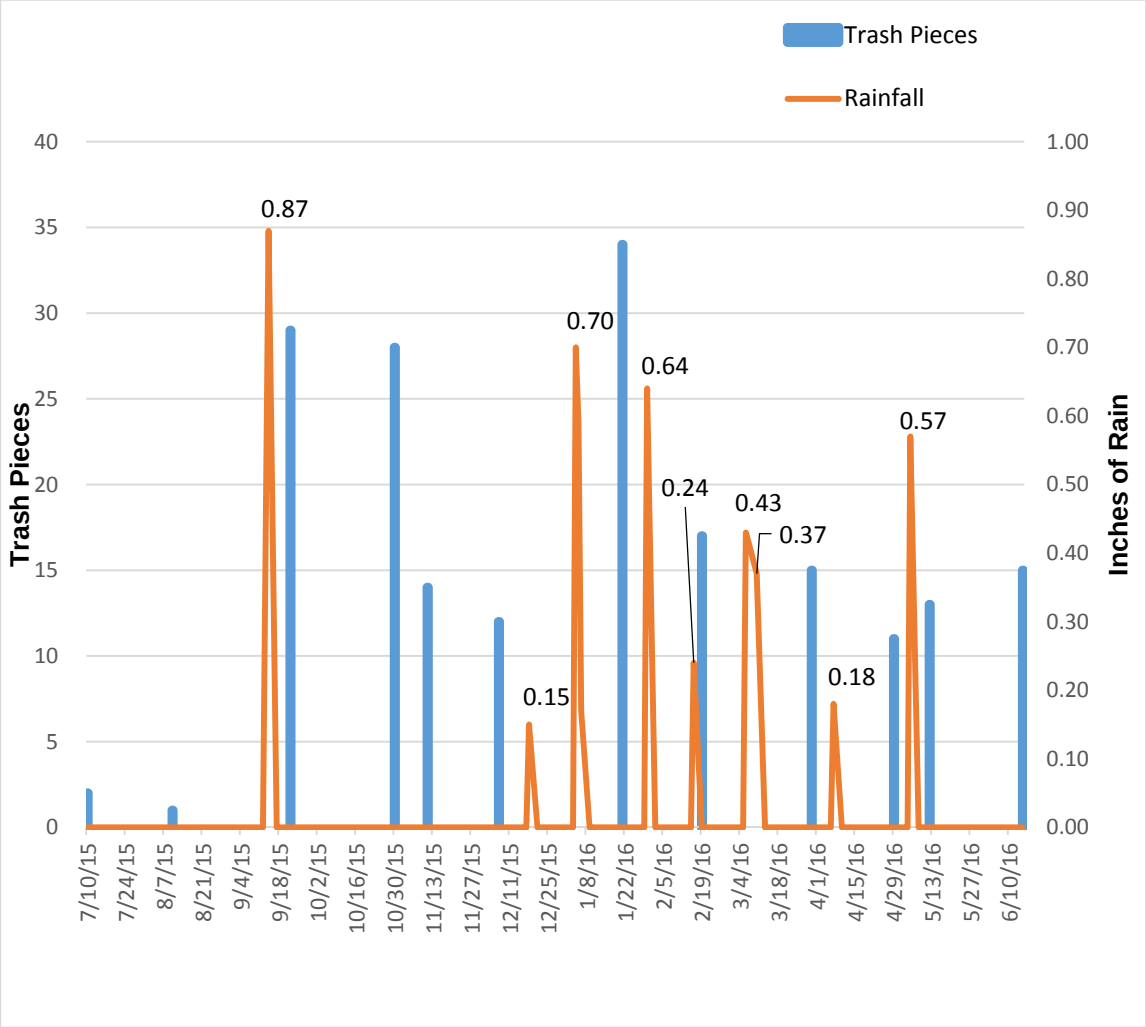
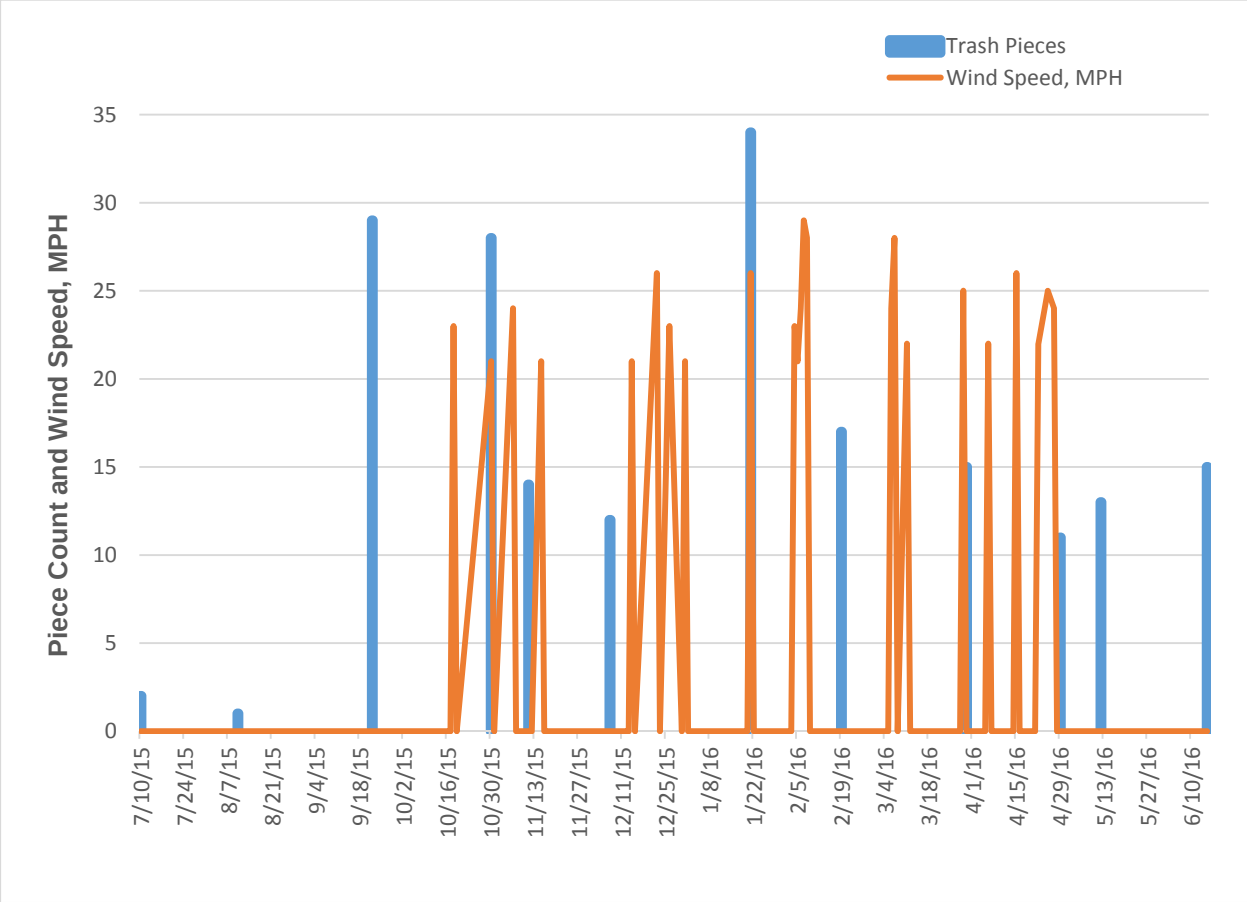


Figure 10. Wind Effect Analysis on Piece Loading at MC1



Volunteer Cleanup Events

Volunteer trash removal was done to control non-point source trash in the subwatersheds draining to Malibu Creek Watershed by preempting its transport to a municipal separate storm sewer system (MS4). Table 3 summarizes trash, litter, and debris cleanup events done during the annual cycle of this report.

Table 3. Volunteer Litter Cleanups

Date	Volunteers	Location	Pounds Removed
8/7/15	5	Lindero Creek headwater areas	Unknown - see photo in Appendix A
10/10/15	47	Upstream MC1 assessment area	148

Annual Trash and Debris Loading

The amount of litter collected at the assessment sites each month is summarized in Table 4. Annual totals were included so that these values can be compared to the point source WLAs in effect for each site.

Table 4. Annual Trash Loading at LC1 and MC1

Date	Site: LC1			Site: MC1		
	Piece Count	Volume, c.f.	Weight lbs.	Piece Count	Volume, c.f.	Weight lbs.
7/10/15	1	0.1	0.4	2	0.05	0.1
8/10/15	0	0	0	1	0.05	0.1
9/22/15	52	0.5	2.0	29	0.1	0.75
10/30/15	57	0.4	3.0	28	0.15	3.0
11/19/15	50	0.5	2.0	14	0.1	1.0
12/7/15	0	0	0	12	0.05	1.0
1/21/16	0	0	0	34	1.0	1.6
2/19/16	69	0.05	4.0	17	0.3	5.6
3/30/16	21	0.2	1.6	15	0.05	0.44
4/24/16	28	0.15	2.2	11	0.05	0.44
5/12/16	10	0.1	0.9	13	0.05	1.2
6/15/16	14	0.1	0.3	15	0.05	1.2
Total	302	2.1	16.4	191	2.0	16.4

Waste Load Allocation Compliance

Values for annual loading at the Lindero and Medea Creek assessments sites were compared with the point source WLAs for each of the three metrics (Table 5).

Table 5. Point Source WLA Compliance

Data Compliance	Lindero Creek			Medea Creek		
	Pieces	**Vol., c.f.**	**Weight, pounds**	**Pieces**	**Vol., c.f.**	**Weight, pounds**
Original Baseline	902	13.4	69	970	7.2	16.3
60% Reduction due 7/7/15	361	5.4	27.6	388	2.9	6.5
2015-16 Annual Loading	302	3.4	26.4	191	2.0	**16.4**
% Reduction 2015-16 Annual Loading from Baseline	67	75	62	80	72	-0.6

Data in Table 5 show that assessment site LC1 meets the point source WLAs for all trash and litter metrics. Data from this table show that MC1 was in compliance for the pieces and volume metrics, but in excess of the WLA for weight (shown in bold type).

BMP Evaluation

Existing BMPs were done over the course of the year and were reasonably effective at preventing an accumulation of trash in most areas. The BMPs currently in use in areas surrounding and including assessment sites LC1 and MC1 include:

City of Thousand Oaks

- Catch basin cleaning - Catch basins are inspected annually. If trash has accumulated to 25% or more of the unit's capacity, it is cleaned by a vactor truck.
- Street sweeping - All residential areas (public and private) are swept 19 times per year and commercial areas are swept once per week.
- Open channel storm drain maintenance: All city-maintained channels are inspected and cleaned as required once per year, prior to the wet season.
- Public Event Litter Control - A recycling plan is required when obtaining a permit for staging public events. This plan requires adequate facilities for trash collection and disposal and reclamation of recyclable materials.

- Public areas - Trash receptacles have been placed at public use areas. These devices are monitored and emptied regularly.

- Freeway Ramp and Interchange Collection Program - The City pays for trash and debris collection at freeway on-ramps and exits and from the freeway interchange.

- Free Landfill Day - The City sponsors two days one in April and one in September when residents may take waste and recyclables, including electronics, to the Simi Valley Landfill for free disposal.

- The City-sponsored "Neighborhood Cleanup Program" provides 40-yard dumpsters and free disposal to residential neighborhoods desiring to organize and conduct cleanup events.

- Residents may safely and legally dispose of household hazardous waste at the City's Hazardous Waste Collection Facility on Fridays and Saturdays. In addition, the City provides household battery collection services at twelve locations.

- Thousand Oaks residents may dispose of up to four "bulky items" per year, such as appliances, mattresses and old furniture, simply by calling their trash company and arranging for free pickup.

- Thousand Oaks Municipal Code Sec.7-8.201 (7) prohibits the disposal and accumulation of trash in public and private areas.

- Catch basins are labeled "Drains to Creek, Do Not Dump" or "Drains to Lake, Do Not Dump."

- Public outreach/education addressing trash pollution is conducted at multiple public events, through radio and newspapers ads, and on the City's website.

- Utility bill inserts - Promotional inserts are used to advertise Coastal Clean-up Day, Community Clean-up Day, Free Landfill Day, and other City-sponsored trash reduction/clean-up programs.

County of Ventura and VCWPD

- In July 2017, thirty-five (35) full trash capture devices (connector pipe screens) were installed within high trash areas of County unincorporated areas for the TMDL point-source compliance. More details will be provided in next Annual Report.
- Catch basin cleaning - Catch basins are inspected at least once a year and cleaned when filled to 25% or more of the catch basin's capacity. During the storm season, all drainage facilities are inspected and cleaned as necessary.

- Ventura County's catch basins are labeled, "Don't Pollute, Flows to Waterways."
- Open channel storm drain maintenance - All channels owned and maintained by VCWPD are cleared, inspected, and cleaned as required, at least once per year.
- "Big Sunday" event took place on May 1, 2016. It was another event under on-going program "Annual Big Sunday Trash Removal and Catch Basin Stenciling" (first Sunday of each May) organized by the Oak Park Unified School District, see Appendix A.
- In Fall 2016, the County sponsored 5-part Watershed Friendly Garden™ program, which was open and free to the general public to increase drought awareness and promote water conserving approaches to landscaping. Hands-on workshops were conducted by experts that assisted participants with how to design and implement such gardens. These landscapes can decrease runoff to lessen the potential of trash transport (Appendix B).
- Trash Management at Public Events - A trash and litter management plan is required when obtaining a permit for staging public events. This plan requires adequate facilities for trash collection and disposal.
- Public areas - Trash receptacles have been placed within high trash generation areas. These devices are cleaned and maintained regularly to prevent trash overflow.
- The amended Ventura County Stormwater Quality Management Ordinance for Unincorporated Areas (Ventura County Ordinance No. 4450) has been in effect since August 2012. It includes litter and trash specific prohibitions (§ 6942) on the discharge or deposition of trash that may enter the County storm drain system or receiving waters. The revised ordinance includes increased civil penalties for violations and provisions for issuing administrative fines, recovery of costs, and misdemeanor violations.
- The County and VCWPD participate in the Ventura Countywide Stormwater Quality Management Program that provides outreach and education facilitated by contracted services from "The Agency," a professional advertisement group that designs and conducts countywide, bilingual outreach programs advocating proper trash disposal. Outreach includes social media messages about litter prevention and the protection of stormwater quality.
- The County conducts commercial, industrial, and construction facility/site inspections to ensure pollution prevention BMPs are adequate and maintained and to educate employees about the importance of pollution prevention.

Recommended/Future BMPs

Ongoing activities by each responsible agency continue to assess and improve litter control in urban and recreational areas.

Lindero Creek

Catch basin loading survey was conducted to evaluate maintenance procedures and currently used BMPs.

Additional BMPs:

- Thousand Oaks is in the process of retrofitting 28 catch basins with full-capture devices at catch basins identified in the loading survey.

Medea Creek

The County successfully secured funding under Proposition 84 Stormwater Grant Program for an Oak Park Green Streets Retrofit project. Ten modular wetlands and two biofilters will be installed in the Oak Park located within Medea Creek subdrainage area. The ten modular wetlands are being installed with completion scheduled for October 30, 2017.

MFAC Program Changes

No changes to the MFAC plan are currently recommended.

Appendix A
2016 Volunteer Cleanup Photos

Lindero Creek Cleanup

2016 Big Sunday Participant Photo

Appendix B
2016 Watershed Friendly Garden Program at Oak Park High School

WATERSHED FRIENDLY GARDEN PROGRAM AT OAK PARK HIGH SCHOOL

September 10, 2016 through October 22, 2016

Ventura County Public Works Agency's Watershed Protection District

Oak Park Unified School District & Oak Park High School

Surfrider Foundation & Green Gardens Group (G3)

G3 Instructors: Kathy Nolan, ASLA; John Tikotsky, ASLA; Laura Bauer, Natasha Elliott, and Jan Bird

Dufau Landscaping, Inc.

Water Boards

Funding has been provided in full or in part through an agreement with the State Water Resources Control Board.

Surfrider Foundation

G3

Watershed Friendly Garden Program

1st Seminar: **Get the Basics**
September 24, 2016

Instructor:
Kathy Nolan, Green Garden Group

47 Participants at Oak Park High School

Watershed Friendly Garden Program

2nd Seminar: **Evaluate the Site**
October, 1 2016

Instructor:
Jan Bird and Laura Bauer, Green Gardens Group

49 Participants at Oak Park High School

Watershed Friendly Garden Program

3rd Seminar: Landscape Design
October 8, 2016

Instructor:
Kathy Nolan and Natasha Elliott, Green Gardens Group

49 Participants at Oak Park High School

Watershed Friendly Garden Program

4th Seminar: Lawn Be Gone – Build Soil and Capture Rain
October 29, 2016

Instructor:
John Tikotsky and Jan Bird, Green Garden Group

24 Participants at Oak Park High School

Watershed Friendly Garden Program

5th Seminar: Planting and Irrigation
November 5, 2016

Instructor:
John Tikotsky and Jan Bird, Green Garden Group

23 Participants at Oak Park High School

Oak Park High School

Watershed Friendly Garden

Completion

November 30, 2016

Watershed Friendly Garden at Oak Park High School

September - November 2016

Watershed Friendly Garden Oak Park High School Photos

Spring 2017

Summer 2017

county of ventura

PUBLIC WORKS
VENTURA COUNTY

JEFF PRATT
Agency Director

Central Services Department
J. Tabin Cosio, Director

Engineering Services Department
Christopher Cooper, Director

Transportation Department
David Fleisch, Director

Water & Sanitation Department
Michaela Brown, Director

Watershed Protection District
Glenn Shephard, Director

July 24, 2017

Kangshi Wang, Ph.D.
California Regional Water Quality Control Board
Los Angeles Region
Standards & TMDL Unit
320 West 4th Street, Suite 200
Los Angeles, CA 90013
(213) 576-6780

Subject: MALIBU CREEK AND LAGOON BACTERIA TMDL COMPLIANCE MONITORING FOR VENTURA COUNTY AND CITY OF THOUSAND OAKS

Dear Dr. Wang:

The table below summarizes the results of the weekly monitoring effort required by the Malibu Creek and Lagoon Bacteria TMDL (TMDL) Compliance Monitoring Plan (CMP) for the month of June 2017. Sites were sampled weekly on Tuesdays (June 6, 13, 20), except for one instance when sites were sampled Monday (June 26) due to staffing conflicts. Sites without results reported were not sampled due to insufficient flow and are labeled "Dry." Daily geomeans were calculated using results from the previous 30 days (actual sampling date marked with ♦). Weeks with wet weather samples (collected less than 72 hours after a day with > 0.1" rain) use the previous non-rain single sample value to calculate the geomean. Half the detection limit was used for the purpose of calculating the daily geomean for sites with results reported as < 20 MPN/100ml or for dry weather when no sample was taken.

Fecal coliform monitoring has been discontinued, as approved by the Los Angeles Regional Water Quality Control Board on October 31, 2014, in alignment with the Regional Board's removal of the fecal coliform objective for REC-1 freshwaters from the TMDL on June 7, 2012 and subsequent approval by the U.S. Environmental Protection Agency on July 2, 2014.

If you have any questions regarding this matter, please contact me at (805) 654-3942.

Sincerely,

Arne Anselm
Deputy Director, Watershed Protection District

CC: Glenn Shephard, Director Watershed Protection District
Ewelina Mutkowska, County of Ventura
Paul Jorgensen, City of Thousand Oaks (via email)
Joe Bellomo, Willdan Associates (via email)
Kelly Fisher, City of Agoura Hills (via email)
Allen Ma, County of Los Angeles (via email)

Table 1. Weekly sampling results

				Single Sample (as sampled)	
Location	Time	Date	Rain		E. coli
					(235 MPN)
MCW-8b	1230	6/6/2017♦		=	40
MCW-8b	1140	6/13/2017♦		<	20
MCW-8b	1255	6/20/2017♦		<	20
MCW-8b	1230	6/26/2017♦		<	20
MCW-9	-	6/6/2017♦			Dry
MCW-9	-	6/13/2017♦			Dry
MCW-9	-	6/20/2017♦			Dry
MCW-9	-	6/26/2017♦			Dry
MCW-12	1130	6/6/2017♦		=	80
MCW-12	1100	6/13/2017♦		=	300
MCW-12	1200	6/20/2017♦		=	110
MCW-12	1125	6/26/2017♦		=	330
MCW-14b	1040	6/6/2017♦		<	20
MCW-14b	1030	6/13/2017♦		=	20
MCW-14b	1115	6/20/2017♦		=	110
MCW-14b	1030	6/26/2017♦		=	78
MCW-15c	1000	6/6/2017♦		<	20
MCW-15c	1000	6/13/2017♦		=	500
MCW-15c	1040	6/20/2017♦		=	110
MCW-15c	940	6/26/2017♦		=	1,300
MCW-17	920	6/6/2017♦		=	40
MCW-17	935	6/13/2017♦		=	230
MCW-17	-	6/20/2017♦			Dry
MCW-17	-	6/26/2017♦			Dry
MCW-18	-	6/6/2017♦			Dry
MCW-18	-	6/13/2017♦			Dry
MCW-18	-	6/20/2017♦			Dry
MCW-18	-	6/26/2017♦			Dry

Notes:
* The RWQCB granted permission to replace site MCW-15b with site Special-05 (renamed MCW-15c) on August 11th, 2010.
♦Date of sampling

Table 2. Computation of daily geomean

				Single Sample (adjusted for rain, dry and NDs)		Geomean
Location	Time	Date	Rain		E. coli	E. coli
					(235 MPN)	(126 MPN)
MCW-8b	1240	6/1/2017		=	40	285
MCW-8b	1240	6/2/2017		=	40	292
MCW-8b	1240	6/3/2017		=	40	298
MCW-8b	1240	6/4/2017		=	40	305
MCW-8b	1240	6/5/2017		=	40	313
MCW-8b	1230	6/6/2017♦		=	40	320
MCW-8b	1230	6/7/2017		=	40	327
MCW-8b	1230	6/8/2017		=	40	301
MCW-8b	1230	6/9/2017		=	40	277
MCW-8b	1230	6/10/2017		=	40	254
MCW-8b	1230	6/11/2017		=	40	234
MCW-8b	1230	6/12/2017		=	40	215
MCW-8b	1140	6/13/2017♦		<	10	189
MCW-8b	1140	6/14/2017		<	10	166
MCW-8b	1140	6/15/2017		<	10	152
MCW-8b	1140	6/16/2017		<	10	139
MCW-8b	1140	6/17/2017		<	10	128
MCW-8b	1140	6/18/2017		<	10	118
MCW-8b	1140	6/19/2017		<	10	108
MCW-8b	1255	6/20/2017♦		<	10	99
MCW-8b	1255	6/21/2017		<	10	91
MCW-8b	1255	6/22/2017		<	10	84
MCW-8b	1255	6/23/2017		<	10	65
MCW-8b	1255	6/24/2017		<	10	51
MCW-8b	1255	6/25/2017		<	10	40
MCW-8b	1230	6/26/2017♦		<	10	31
MCW-8b	1230	6/27/2017		<	10	24
MCW-8b	1230	6/28/2017		<	10	19
MCW-8b	1230	6/29/2017		<	10	18
MCW-8b	1230	6/30/2017		<	10	17
MCW-9		6/1/2017	Dry	<	10	10
MCW-9	-	6/2/2017	Dry	<	10	10
MCW-9	-	6/3/2017	Dry	<	10	10
MCW-9	-	6/4/2017	Dry	<	10	10
MCW-9	-	6/5/2017	Dry	<	10	10
MCW-9	-	6/6/2017♦	Dry	<	10	10
MCW-9	-	6/7/2017	Dry	<	10	10
MCW-9	-	6/8/2017	Dry	<	10	10
MCW-9	-	6/9/2017	Dry	<	10	10
MCW-9	-	6/10/2017	Dry	<	10	10
MCW-9	-	6/11/2017	Dry	<	10	10
MCW-9	-	6/12/2017	Dry	<	10	10
MCW-9	-	6/13/2017♦	Dry	<	10	10
MCW-9	-	6/14/2017	Dry	<	10	10

				Single Sample (adjusted for rain, dry and NDs)		Geomean
Location	Time	Date	Rain		E. coli	E. coli
					(235 MPN)	(126 MPN)
MCW-9	-	6/15/2017	Dry	<	10	10
MCW-9	-	6/16/2017	Dry	<	10	10
MCW-9	-	6/17/2017	Dry	<	10	10
MCW-9	-	6/18/2017	Dry	<	10	10
MCW-9	-	6/19/2017	Dry	<	10	10
MCW-9	-	6/20/2017♦	Dry	<	10	10
MCW-9	-	6/21/2017	Dry	<	10	10
MCW-9	-	6/22/2017	Dry	<	10	10
MCW-9	-	6/23/2017	Dry	<	10	10
MCW-9	-	6/24/2017	Dry	<	10	10
MCW-9	-	6/25/2017	Dry	<	10	10
MCW-9	-	6/26/2017♦	Dry	<	10	10
MCW-9	-	6/27/2017	Dry	<	10	10
MCW-9	-	6/28/2017	Dry	<	10	10
MCW-9	-	6/29/2017	Dry	<	10	10
MCW-9	-	6/30/2017	Dry	<	10	10
MCW-12	1000	6/1/2017		=	40	236
MCW-12	1000	6/2/2017		=	40	224
MCW-12	1000	6/3/2017		=	40	214
MCW-12	1000	6/4/2017		=	40	204
MCW-12	1000	6/5/2017		=	40	194
MCW-12	1130	6/6/2017♦		=	80	189
MCW-12	1130	6/7/2017		=	80	185
MCW-12	1130	6/8/2017		=	80	177
MCW-12	1130	6/9/2017		=	80	169
MCW-12	1130	6/10/2017		=	80	162
MCW-12	1130	6/11/2017		=	80	155
MCW-12	1130	6/12/2017		=	80	148
MCW-12	1100	6/13/2017♦		=	300	148
MCW-12	1100	6/14/2017		=	300	148
MCW-12	1100	6/15/2017		=	300	162
MCW-12	1100	6/16/2017		=	300	177
MCW-12	1100	6/17/2017		=	300	194
MCW-12	1100	6/18/2017		=	300	213
MCW-12	1100	6/19/2017		=	300	233
MCW-12	1200	6/20/2017♦		=	110	246
MCW-12	1200	6/21/2017		=	110	261
MCW-12	1200	6/22/2017		=	110	276
MCW-12	1200	6/23/2017		=	110	234
MCW-12	1200	6/24/2017		=	110	198
MCW-12	1200	6/25/2017		=	110	168
MCW-12	1125	6/26/2017♦		=	330	147
MCW-12	1125	6/27/2017		=	330	129
MCW-12	1125	6/28/2017		=	330	114

				Single Sample (adjusted for rain, dry and NDs)		Geomean
Location	Time	Date	Rain		E. coli	E. coli
					(235 MPN)	(126 MPN)
MCW-12	1125	6/29/2017		=	330	122
MCW-12	1125	6/30/2017		=	330	131
MCW-14b	1040	6/1/2017		=	20	73
MCW-14b	1040	6/2/2017		=	20	71
MCW-14b	1040	6/3/2017		=	20	69
MCW-14b	1040	6/4/2017		=	20	68
MCW-14b	1040	6/5/2017		=	20	66
MCW-14b	1040	6/6/2017♦		<	10	63
MCW-14b	1040	6/7/2017		<	10	60
MCW-14b	1040	6/8/2017		<	10	54
MCW-14b	1040	6/9/2017		<	10	48
MCW-14b	1040	6/10/2017		<	10	43
MCW-14b	1040	6/11/2017		<	10	39
MCW-14b	1040	6/12/2017		<	10	35
MCW-14b	1030	6/13/2017♦		=	20	33
MCW-14b	1030	6/14/2017		=	20	30
MCW-14b	1030	6/15/2017		=	20	30
MCW-14b	1030	6/16/2017		=	20	30
MCW-14b	1030	6/17/2017		=	20	30
MCW-14b	1030	6/18/2017		=	20	30
MCW-14b	1030	6/19/2017		=	20	30
MCW-14b	1115	6/20/2017♦		=	110	32
MCW-14b	1115	6/21/2017		=	110	34
MCW-14b	1115	6/22/2017		=	110	36
MCW-14b	1115	6/23/2017		=	110	34
MCW-14b	1115	6/24/2017		=	110	33
MCW-14b	1115	6/25/2017		=	110	32
MCW-14b	1030	6/26/2017♦		=	78	30
MCW-14b	1030	6/27/2017		=	78	29
MCW-14b	1030	6/28/2017		=	78	27
MCW-14b	1030	6/29/2017		=	78	29
MCW-14b	1030	6/30/2017		=	78	30
MCW-15c	1000	6/1/2017		=	40	156
MCW-15c	1000	6/2/2017		=	40	155
MCW-15c	1000	6/3/2017		=	40	155
MCW-15c	1000	6/4/2017		=	40	154
MCW-15c	1000	6/5/2017		=	40	154
MCW-15c	1000	6/6/2017♦		<	10	146
MCW-15c	1000	6/7/2017		<	10	139
MCW-15c	1000	6/8/2017		<	10	128
MCW-15c	1000	6/9/2017		<	10	117
MCW-15c	1000	6/10/2017		<	10	108
MCW-15c	1000	6/11/2017		<	10	99
MCW-15c	1000	6/12/2017		<	10	91
MCW-15c	1000	6/13/2017♦		=	500	95

					Single Sample (adjusted for rain, dry and NDs)	Geomean
Location		Date	Rain		E. coli	E. coli
					(235 MPN)	(126 MPN)
MCW-15c	1000	6/14/2017		=	500	99
MCW-15c	1000	6/15/2017		=	500	102
MCW-15c	1000	6/16/2017		=	500	104
MCW-15c	1000	6/17/2017		=	500	107
MCW-15c	1000	6/18/2017		=	500	110
MCW-15c	1000	6/19/2017		=	500	113
MCW-15c	1040	6/20/2017♦		=	110	110
MCW-15c	1040	6/21/2017		=	110	107
MCW-15c	1040	6/22/2017		=	110	105
MCW-15c	1040	6/23/2017		=	110	98
MCW-15c	1040	6/24/2017		=	110	92
MCW-15c	1040	6/25/2017		=	110	86
MCW-15c	940	6/26/2017♦		=	1,300	88
MCW-15c	940	6/27/2017		=	1,300	89
MCW-15c	940	6/28/2017		=	1,300	90
MCW-15c	940	6/29/2017		=	1,300	102
MCW-15c	940	6/30/2017		=	1,300	114
MCW-17	920	6/1/2017		=	800	178
MCW-17	920	6/2/2017		=	800	201
MCW-17	920	6/3/2017		=	800	227
MCW-17	920	6/4/2017		=	800	257
MCW-17	920	6/5/2017		=	800	291
MCW-17	920	6/6/2017♦		=	40	298
MCW-17	920	6/7/2017		=	40	305
MCW-17	920	6/8/2017		=	40	292
MCW-17	920	6/9/2017		=	40	280
MCW-17	920	6/10/2017		=	40	269
MCW-17	920	6/11/2017		=	40	258
MCW-17	920	6/12/2017		=	40	247
MCW-17	935	6/13/2017♦		=	230	251
MCW-17	935	6/14/2017		=	230	256
MCW-17	935	6/15/2017		=	230	256
MCW-17	935	6/16/2017		=	230	256
MCW-17	935	6/17/2017		=	230	256
MCW-17	935	6/18/2017		=	230	256
MCW-17	935	6/19/2017		=	230	256
MCW-17	-	6/20/2017♦	Dry	<	10	230
MCW-17	-	6/21/2017	Dry	<	10	207
MCW-17	-	6/22/2017	Dry	<	10	187
MCW-17	-	6/23/2017	Dry	<	10	162
MCW-17	-	6/24/2017	Dry	<	10	141
MCW-17	-	6/25/2017	Dry	<	10	122
MCW-17	-	6/26/2017♦	Dry	<	10	106
MCW-17	-	6/27/2017	Dry	<	10	92
MCW-17	-	6/28/2017	Dry	<	10	80
MCW-17	-	6/29/2017	Dry	<	10	69

				Single Sample (adjusted for rain, dry and NDs)		Geomean
Location	Time	Date	Rain		E. coli	E. coli
					(235 MPN)	(126 MPN)
MCW-17	-	6/30/2017	Dry	<	10	60
MCW-18	-	6/1/2017	Dry	<	10	10
MCW-18	-	6/2/2017	Dry	<	10	10
MCW-18	-	6/3/2017	Dry	<	10	10
MCW-18	-	6/4/2017	Dry	<	10	10
MCW-18	-	6/5/2017	Dry	<	10	10
MCW-18	-	6/6/2017♦	Dry	<	10	10
MCW-18	-	6/7/2017	Dry	<	10	10
MCW-18	-	6/8/2017	Dry	<	10	10
MCW-18	-	6/9/2017	Dry	<	10	10
MCW-18	-	6/10/2017	Dry	<	10	10
MCW-18	-	6/11/2017	Dry	<	10	10
MCW-18	-	6/12/2017	Dry	<	10	10
MCW-18	-	6/13/2017♦	Dry	<	10	10
MCW-18	-	6/14/2017	Dry	<	10	10
MCW-18	-	6/15/2017	Dry	<	10	10
MCW-18	-	6/16/2017	Dry	<	10	10
MCW-18	-	6/17/2017	Dry	<	10	10
MCW-18	-	6/18/2017	Dry	<	10	10
MCW-18	-	6/19/2017	Dry	<	10	10
MCW-18	-	6/20/2017♦	Dry	<	10	10
MCW-18	-	6/21/2017	Dry	<	10	10
MCW-18	-	6/22/2017	Dry	<	10	10
MCW-18	-	6/23/2017	Dry	<	10	10
MCW-18	-	6/24/2017	Dry	<	10	10
MCW-18	-	6/25/2017	Dry	<	10	10
MCW-18	-	6/26/2017♦	Dry	<	10	10
MCW-18	-	6/27/2017	Dry	<	10	10
MCW-18	-	6/28/2017	Dry	<	10	10
MCW-18	-	6/29/2017	Dry	<	10	10
MCW-18	-	6/30/2017	Dry	<	10	10

Notes:
Weeks with wet weather samples (collected less than 72 hours after a day with >0.1" rain) use the previous non-rain single sample value to calculate the geomean.
Results of <20 are adjusted to use half the MDL (=10) in the calculation of the geomean
* The RWQCB granted permission to replace site MCW-15b with site Special-05 (renamed MCW-15c) on August 11th, 2010
♦ Date of sampling

county of ventura

PUBLIC WORKS
VENTURA COUNTY

JEFF PRATT
Agency Director

Central Services Department
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Transportation Department
David Fleisch, Director

Water & Sanitation Department
Michaela Brown, Director

Watershed Protection District
Glenn Shephard, Director

September 25, 2017

Kangshi Wang, Ph.D.
California Regional Water Quality Control Board
Los Angeles Region
Standards & TMDL Unit
320 West 4th Street, Suite 200
Los Angeles, CA 90013
(213) 576-6780

Subject: MALIBU CREEK AND LAGOON BACTERIA TMDL COMPLIANCE MONITORING FOR VENTURA COUNTY AND CITY OF THOUSAND OAKS

Dear Dr. Wang,

The Table 1 below summarizes the results of the weekly monitoring effort required by the Malibu Creek and Lagoon Bacteria TMDL (TMDL) Compliance Monitoring Plan (CMP) for the month of August 2017. Sites were sampled weekly on Tuesdays (August 1, 8, 15, 22 and 29). Sites without results reported were not sampled due to insufficient flow and are labeled "Dry." Daily geomeans were calculated using results from the previous 30 days (actual sampling date marked with ♦), refer to Table 2. Weeks with wet weather samples (collected less than 72 hours after a day with > 0.1" rain) use the previous non-rain single sample value to calculate the geomean. Half the detection limit was used for the purpose of calculating the daily geomean for sites with results reported as < 20 MPN/100ml or for dry weather when no sample was taken.

Fecal coliform monitoring has been discontinued, as approved by the Los Angeles Regional Water Quality Control Board on October 31, 2014, in alignment with the Regional Board's removal of the fecal coliform objective for REC-1 freshwaters from the TMDL on June 7, 2012 and subsequent approval by the U.S. Environmental Protection Agency on July 2, 2014.

If you have any questions regarding this matter, please contact me at (805) 654-3942.

Sincerely,

Arne Anselm
Deputy Director, Watershed Protection District

CC: Glenn Shephard, Director Watershed Protection District
Ewelina Mutkowska, County of Ventura
Paul Jorgensen, City of Thousand Oaks (via email)
Joe Bellomo, Willdan Associates (via email)
Kelly Fisher, City of Agoura Hills (via email)
Allen Ma, County of Los Angeles (via email)

Table 1. Weekly sampling results

					Single Sample (as sampled)
Location	Time	Date	Rain		E. coli
					(235 MPN)
MCW-8b	1245	8/1/2017♦		=	2,400
MCW-8b	1250	8/8/2017♦			Dry
MCW-8b	1200	8/15/2017♦			Dry
MCW-8b	1215	8/22/2017♦			Dry
MCW-8b	1220	8/29/2017♦			Dry
MCW-9	-	8/1/2017♦			Dry
MCW-9	-	8/8/2017♦			Dry
MCW-9	-	8/15/2017♦			Dry
MCW-9	-	8/22/2017♦			Dry
MCW-9	-	8/29/2017♦			Dry
MCW-12	1130	8/1/2017♦		=	2,200
MCW-12	1200	8/8/2017♦		=	220
MCW-12	1115	8/15/2017♦			Dry
MCW-12	1125	8/22/2017♦			Dry
MCW-12	1130	8/29/2017♦			Dry
MCW-14b	1030	8/1/2017♦		=	800
MCW-14b	1115	8/8/2017♦		=	230
MCW-14b	1030	8/15/2017♦		=	9,000
MCW-14b	1045	8/22/2017♦		=	500
MCW-14b	1045	8/29/2017♦		=	170
MCW-15c	945	8/1/2017♦		=	9,000
MCW-15c	1035	8/8/2017♦		=	5,000
MCW-15c	945	8/15/2017♦		=	9,000
MCW-15c	1000	8/22/2017♦		=	2,400
MCW-15c	1000	8/29/2017♦		=	270
MCW-17	-	8/1/2017♦			Dry
MCW-17	-	8/8/2017♦			Dry
MCW-17	-	8/15/2017♦			Dry
MCW-17	-	8/22/2017♦			Dry
MCW-17	-	8/29/2017♦			Dry
MCW-18	-	8/1/2017♦			Dry
MCW-18	-	8/8/2017♦			Dry
MCW-18	-	8/15/2017♦			Dry
MCW-18	-	8/22/2017♦			Dry
MCW-18	-	8/29/2017♦			Dry

Notes:
* The RWQCB granted permission to replace site MCW-15b with site Special-05 (renamed MCW-15c) on August 11th, 2010.
♦Date of sampling

Table 2. Computation of daily geomean

				Single Sample (adjusted for rain, dry and NDs)		Geomean
Location	Time	Date	Rain		E. coli	E. coli
					(235 MPN)	(126 MPN)
MCW-8b	1245	8/1/2017♦		=	2,400	14
MCW-8b	1245	8/2/2017		=	2,400	17
MCW-8b	1245	8/3/2017		=	2,400	20
MCW-8b	1245	8/4/2017		=	2,400	24
MCW-8b	1245	8/5/2017		=	2,400	29
MCW-8b	1245	8/6/2017		=	2,400	35
MCW-8b	1245	8/7/2017		=	2,400	42
MCW-8b	1250	8/8/2017♦	Dry	<	10	42
MCW-8b	1250	8/9/2017	Dry	<	10	42
MCW-8b	1250	8/10/2017	Dry	<	10	41
MCW-8b	1250	8/11/2017	Dry	<	10	40
MCW-8b	1250	8/12/2017	Dry	<	10	39
MCW-8b	1250	8/13/2017	Dry	<	10	39
MCW-8b	1250	8/14/2017	Dry	<	10	38
MCW-8b	1200	8/15/2017♦	Dry	<	10	37
MCW-8b	1200	8/16/2017	Dry	<	10	36
MCW-8b	1200	8/17/2017	Dry	<	10	36
MCW-8b	1200	8/18/2017	Dry	<	10	36
MCW-8b	1200	8/19/2017	Dry	<	10	36
MCW-8b	1200	8/20/2017	Dry	<	10	36
MCW-8b	1200	8/21/2017	Dry	<	10	36
MCW-8b	1215	8/22/2017♦	Dry	<	10	36
MCW-8b	1215	8/23/2017	Dry	<	10	36
MCW-8b	1215	8/24/2017	Dry	<	10	36
MCW-8b	1215	8/25/2017	Dry	<	10	36
MCW-8b	1215	8/26/2017	Dry	<	10	36
MCW-8b	1215	8/27/2017	Dry	<	10	36
MCW-8b	1215	8/28/2017	Dry	<	10	36
MCW-8b	1220	8/29/2017♦	Dry	<	10	36
MCW-8b	1220	8/30/2017	Dry	<	10	36
MCW-8b	1220	8/31/2017	Dry	<	10	30
MCW-9	-	8/1/2017♦	Dry	<	10	10
MCW-9	-	8/2/2017	Dry	<	10	10
MCW-9	-	8/3/2017	Dry	<	10	10
MCW-9	-	8/4/2017	Dry	<	10	10
MCW-9	-	8/5/2017	Dry	<	10	10
MCW-9	-	8/6/2017	Dry	<	10	10
MCW-9	-	8/7/2017	Dry	<	10	10
MCW-9	-	8/8/2017♦	Dry	<	10	10
MCW-9	-	8/9/2017	Dry	<	10	10
MCW-9	-	8/10/2017	Dry	<	10	10
MCW-9	-	8/11/2017	Dry	<	10	10
MCW-9	-	8/12/2017	Dry	<	10	10
MCW-9	-	8/13/2017	Dry	<	10	10

				Single Sample (adjusted for rain, dry and NDs)		Geomean
Location	Time	Date	Rain		E. coli	E. coli
					(235 MPN)	(126 MPN)
MCW-9	-	8/14/2017	Dry	<	10	10
MCW-9	-	8/15/2017♦	Dry	<	10	10
MCW-9	-	8/16/2017	Dry	<	10	10
MCW-9	-	8/17/2017	Dry	<	10	10
MCW-9	-	8/18/2017	Dry	<	10	10
MCW-9	-	8/19/2017	Dry	<	10	10
MCW-9	-	8/20/2017	Dry	<	10	10
MCW-9	-	8/21/2017	Dry	<	10	10
MCW-9	-	8/22/2017♦	Dry	<	10	10
MCW-9	-	8/23/2017	Dry	<	10	10
MCW-9	-	8/24/2017	Dry	<	10	10
MCW-9	-	8/25/2017	Dry	<	10	10
MCW-9	-	8/26/2017	Dry	<	10	10
MCW-9	-	8/27/2017	Dry	<	10	10
MCW-9	-	8/28/2017	Dry	<	10	10
MCW-9	-	8/29/2017♦	Dry	<	10	10
MCW-9	-	8/30/2017	Dry	<	10	10
MCW-9	-	8/31/2017	Dry	<	10	10
MCW-12	1130	8/1/2017♦		=	2,200	166
MCW-12	1130	8/2/2017		=	2,200	177
MCW-12	1130	8/3/2017		=	2,200	188
MCW-12	1130	8/4/2017		=	2,200	198
MCW-12	1130	8/5/2017		=	2,200	208
MCW-12	1130	8/6/2017		=	2,200	219
MCW-12	1130	8/7/2017		=	2,200	230
MCW-12	1200	8/8/2017♦		=	220	223
MCW-12	1200	8/9/2017		=	220	217
MCW-12	1200	8/10/2017		=	220	230
MCW-12	1200	8/11/2017		=	220	244
MCW-12	1200	8/12/2017		=	220	258
MCW-12	1200	8/13/2017		=	220	273
MCW-12	1200	8/14/2017		=	220	289
MCW-12	1115	8/15/2017♦	Dry	<	10	276
MCW-12	1115	8/16/2017	Dry	<	10	263
MCW-12	1115	8/17/2017	Dry	<	10	237
MCW-12	1115	8/18/2017	Dry	<	10	214
MCW-12	1115	8/19/2017	Dry	<	10	192
MCW-12	1115	8/20/2017	Dry	<	10	173
MCW-12	1115	8/21/2017	Dry	<	10	156
MCW-12	1125	8/22/2017♦	Dry	<	10	141
MCW-12	1125	8/23/2017	Dry	<	10	127
MCW-12	1125	8/24/2017	Dry	<	10	117
MCW-12	1125	8/25/2017	Dry	<	10	108
MCW-12	1125	8/26/2017	Dry	<	10	100

				Single Sample (adjusted for rain, dry and NDs)		Geomean
Location	Time	Date	Rain		E. coli	E. coli
					(235 MPN)	(126 MPN)
MCW-12	1125	8/27/2017	Dry	<	10	92
MCW-12	1125	8/28/2017	Dry	<	10	85
MCW-12	1130	8/29/2017♦	Dry	<	10	78
MCW-12	1130	8/30/2017	Dry	<	10	72
MCW-12	1130	8/31/2017	Dry	<	10	60
MCW-14b	1030	8/1/2017♦		=	800	753
MCW-14b	1030	8/2/2017		=	800	814
MCW-14b	1030	8/3/2017		=	800	880
MCW-14b	1030	8/4/2017		=	800	954
MCW-14b	1030	8/5/2017		=	800	1035
MCW-14b	1030	8/6/2017		=	800	1122
MCW-14b	1030	8/7/2017		=	800	1217
MCW-14b	1115	8/8/2017♦		=	230	1267
MCW-14b	1115	8/9/2017		=	230	1318
MCW-14b	1115	8/10/2017		=	230	1318
MCW-14b	1115	8/11/2017		=	230	1318
MCW-14b	1115	8/12/2017		=	230	1318
MCW-14b	1115	8/13/2017		=	230	1318
MCW-14b	1115	8/14/2017		=	230	1318
MCW-14b	1030	8/15/2017♦		=	9,000	1489
MCW-14b	1030	8/16/2017		=	9,000	1683
MCW-14b	1030	8/17/2017		=	9,000	1683
MCW-14b	1030	8/18/2017		=	9,000	1683
MCW-14b	1030	8/19/2017		=	9,000	1683
MCW-14b	1030	8/20/2017		=	9,000	1683
MCW-14b	1030	8/21/2017		=	9,000	1683
MCW-14b	1045	8/22/2017♦		=	500	1528
MCW-14b	1045	8/23/2017		=	500	1388
MCW-14b	1045	8/24/2017		=	500	1307
MCW-14b	1045	8/25/2017		=	500	1232
MCW-14b	1045	8/26/2017		=	500	1160
MCW-14b	1045	8/27/2017		=	500	1093
MCW-14b	1045	8/28/2017		=	500	1030
MCW-14b	1045	8/29/2017♦		=	170	936
MCW-14b	1045	8/30/2017		=	170	850
MCW-14b	1045	8/31/2017		=	170	808
MCW-15c	945	8/1/2017♦		=	9,000	4285
MCW-15c	945	8/2/2017		=	9,000	4570
MCW-15c	945	8/3/2017		=	9,000	4874
MCW-15c	945	8/4/2017		=	9,000	5056
MCW-15c	945	8/5/2017		=	9,000	5245
MCW-15c	945	8/6/2017		=	9,000	5440
MCW-15c	945	8/7/2017		=	9,000	5643
MCW-15c	1035	8/8/2017♦		=	5,000	5740
MCW-15c	1035	8/9/2017		=	5,000	5839

Location		Date	Rain		Single Sample (adjusted for rain, dry and NDs) E. coli (235 MPN)	Geomean E. coli (126 MPN)
MCW-15c	1035	8/10/2017		=	5,000	5839
MCW-15c	1035	8/11/2017		=	5,000	5839
MCW-15c	1035	8/12/2017		=	5,000	5839
MCW-15c	1035	8/13/2017		=	5,000	5839
MCW-15c	1035	8/14/2017		=	5,000	5839
MCW-15c	945	8/15/2017♦		=	9,000	5954
MCW-15c	945	8/16/2017		=	9,000	6072
MCW-15c	945	8/17/2017		=	9,000	6299
MCW-15c	945	8/18/2017		=	9,000	6534
MCW-15c	945	8/19/2017		=	9,000	6777
MCW-15c	945	8/20/2017		=	9,000	7030
MCW-15c	945	8/21/2017		=	9,000	7292
MCW-15c	1000	8/22/2017♦		=	2,400	7238
MCW-15c	1000	8/23/2017		=	2,400	7185
MCW-15c	1000	8/24/2017		=	2,400	6875
MCW-15c	1000	8/25/2017		=	2,400	6579
MCW-15c	1000	8/26/2017		=	2,400	6295
MCW-15c	1000	8/27/2017		=	2,400	6024
MCW-15c	1000	8/28/2017		=	2,400	5764
MCW-15c	1000	8/29/2017♦		=	270	5128
MCW-15c	1000	8/30/2017		=	270	4563
MCW-15c	1000	8/31/2017		=	270	4059
MCW-17	-	8/1/2017♦	Dry	<	10	52
MCW-17	-	8/2/2017	Dry	<	10	45
MCW-17	-	8/3/2017	Dry	<	10	38
MCW-17	-	8/4/2017	Dry	<	10	33
MCW-17	-	8/5/2017	Dry	<	10	29
MCW-17	-	8/6/2017	Dry	<	10	27
MCW-17	-	8/7/2017	Dry	<	10	26
MCW-17	-	8/8/2017♦	Dry	<	10	25
MCW-17	-	8/9/2017	Dry	<	10	24
MCW-17	-	8/10/2017	Dry	<	10	23
MCW-17	-	8/11/2017	Dry	<	10	22
MCW-17	-	8/12/2017	Dry	<	10	21
MCW-17	-	8/13/2017	Dry	<	10	19
MCW-17	-	8/14/2017	Dry	<	10	17
MCW-17	-	8/15/2017♦	Dry	<	10	15
MCW-17	-	8/16/2017	Dry	<	10	14
MCW-17	-	8/17/2017	Dry	<	10	12
MCW-17	-	8/18/2017	Dry	<	10	11
MCW-17	-	8/19/2017	Dry	<	10	10
MCW-17	-	8/20/2017	Dry	<	10	10
MCW-17	-	8/21/2017	Dry	<	10	10
MCW-17	-	8/22/2017♦	Dry	<	10	10
MCW-17	-	8/23/2017	Dry	<	10	10
MCW-17	-	8/24/2017	Dry	<	10	10

Location	Time	Date	Rain	Single Sample (adjusted for rain, dry and NDs)		Geomean
					E. coli (235 MPN)	E. coli (126 MPN)
MCW-17	-	8/25/2017	Dry	<	10	10
MCW-17	-	8/26/2017	Dry	<	10	10
MCW-17	-	8/27/2017	Dry	<	10	10
MCW-17	-	8/28/2017	Dry	<	10	10
MCW-17	-	8/29/2017♦	Dry	<	10	10
MCW-17	-	8/30/2017	Dry	<	10	10
MCW-17	-	8/31/2017	Dry	<	10	10
MCW-18	-	8/1/2017♦	Dry	<	10	10
MCW-18	-	8/2/2017	Dry	<	10	10
MCW-18	-	8/3/2017	Dry	<	10	10
MCW-18	-	8/4/2017	Dry	<	10	10
MCW-18	-	8/5/2017	Dry	<	10	10
MCW-18	-	8/6/2017	Dry	<	10	10
MCW-18	-	8/7/2017	Dry	<	10	10
MCW-18	-	8/8/2017♦	Dry	<	10	10
MCW-18	-	8/9/2017	Dry	<	10	10
MCW-18	-	8/10/2017	Dry	<	10	10
MCW-18	-	8/11/2017	Dry	<	10	10
MCW-18	-	8/12/2017	Dry	<	10	10
MCW-18	-	8/13/2017	Dry	<	10	10
MCW-18	-	8/14/2017	Dry	<	10	10
MCW-18	-	8/15/2017♦	Dry	<	10	10
MCW-18	-	8/16/2017	Dry	<	10	10
MCW-18	-	8/17/2017	Dry	<	10	10
MCW-18	-	8/18/2017	Dry	<	10	10
MCW-18	-	8/19/2017	Dry	<	10	10
MCW-18	-	8/20/2017	Dry	<	10	10
MCW-18	-	8/21/2017	Dry	<	10	10
MCW-18	-	8/22/2017♦	Dry	<	10	10
MCW-18	-	8/23/2017	Dry	<	10	10
MCW-18	-	8/24/2017	Dry	<	10	10
MCW-18	-	8/25/2017	Dry	<	10	10
MCW-18	-	8/26/2017	Dry	<	10	10
MCW-18	-	8/27/2017	Dry	<	10	10
MCW-18	-	8/28/2017	Dry	<	10	10
MCW-18	-	8/29/2017♦	Dry	<	10	10
MCW-18	-	8/30/2017	Dry	<	10	10
MCW-18	-	8/31/2017	Dry	<	10	10

Notes:
Weeks with wet weather samples (collected less than 72 hours after a day with >0.1" rain) use the previous non-rain single sample value to calculate the geomean.
Results of <20 are adjusted to use half the MDL (=10) in the calculation of the geomean
* The RWQCB granted permission to replace site MCW-15b with site Special-05 (renamed MCW-15c) on August 11th, 2010
♦Date of sampling

county of ventura

PUBLIC VENTURA COUNTY WORKS

JEFF PRATT
Agency Director

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October 26, 2017

Kangshi Wang, Ph.D.
California Regional Water Quality Control Board
Los Angeles Region
Standards & TMDL Unit
320 West 4th Street, Suite 200
Los Angeles, CA 90013
(213) 576-6780

Subject: MALIBU CREEK AND LAGOON BACTERIA TMDL COMPLIANCE MONITORING FOR VENTURA COUNTY AND CITY OF THOUSAND OAKS

Dear Dr. Wang:

Table 1 below summarizes the results of the weekly monitoring effort required by the Malibu Creek and Lagoon Bacteria TMDL (TMDL) Compliance Monitoring Plan (CMP) for the month of September 2017. Sites were sampled weekly on Tuesdays (September 5, 12, 19 and 26). Sites without results reported were not sampled due to insufficient flow and are labeled "Dry." Daily geomeans were calculated using results from the previous 30 days (actual sampling date marked with♦), refer to Table 2. Weeks with wet weather samples (collected less than 72 hours after a day with > 0.1" rain) use the previous non-rain single sample value to calculate the geomean. Half the detection limit was used for the purpose of calculating the daily geomean for sites with results reported as < 20 MPN/100ml or for dry weather when no sample was taken.

Fecal coliform monitoring has been discontinued, as approved by the Los Angeles Regional Water Quality Control Board on October 31, 2014, in alignment with the Regional Board's removal of the fecal coliform objective for REC-1 freshwaters from the TMDL on June 7, 2012 and subsequent approval by the U.S. Environmental Protection Agency on July 2, 2014.

If you have any questions regarding this matter, please contact me at (805) 654-3942.

Sincerely,

Arne Anselm
Deputy Director, Watershed Protection District

CC: Glenn Shephard, Director Watershed Protection District
Ewelina Mutkowska, County of Ventura
Paul Jorgensen, City of Thousand Oaks (via email)
Joe Bellomo, Willdan Associates (via email)
Kelly Fisher, City of Agoura Hills (via email)
Allen Ma, County of Los Angeles (via email)

Table 1. Weekly sampling results

					Single Sample (as sampled)
Location	Time	Date	Rain		E. coli
					(235 MPN)
MCW-8b		9/5/2017♦			Dry
MCW-8b		9/12/2017♦			Dry
MCW-8b		9/19/2017♦			Dry
MCW-8b		9/26/2017♦			Dry
MCW-9	-	9/5/2017♦			Dry
MCW-9	-	9/12/2017♦			Dry
MCW-9	-	9/19/2017♦			Dry
MCW-9	-	9/26/2017♦			Dry
MCW-12	-	9/5/2017♦			Dry
MCW-12	-	9/12/2017♦			Dry
MCW-12	-	9/19/2017♦			Dry
MCW-12	-	9/26/2017♦			Dry
MCW-14b	1100	9/5/2017♦		=	9,000
MCW-14b	1100	9/12/2017♦		=	230
MCW-14b	1115	9/19/2017♦		=	40
MCW-14b	1115	9/26/2017♦		=	300
MCW-15c	1015	9/5/2017♦		=	5,000
MCW-15c	1015	9/12/2017♦		=	230
MCW-15c	1030	9/19/2017♦		=	130
MCW-15c	1015	9/26/2017♦		=	240
MCW-17	-	9/5/2017♦			Dry
MCW-17	-	9/12/2017♦			Dry
MCW-17	-	9/19/2017♦			Dry
MCW-17	-	9/26/2017♦			Dry
MCW-18	-	9/5/2017♦			Dry
MCW-18	-	9/12/2017♦			Dry
MCW-18	-	9/19/2017♦			Dry
MCW-18	-	9/26/2017♦			Dry

Notes:
* The RWQCB granted permission to replace site MCW-15b with site Special-05 (renamed MCW-15c) on August 11th, 2010.
♦Date of sampling

Table 2. Computation of daily geomean

				Single Sample (adjusted for rain, dry and NDs)		Geomean
Location	Time	Date	Rain		E. coli	E. coli
					(235 MPN)	(126 MPN)
MCW-8b	-	9/1/2017	Dry	<	10	25
MCW-8b	-	9/2/2017	Dry	<	10	21
MCW-8b	-	9/3/2017	Dry	<	10	17
MCW-8b	-	9/4/2017	Dry	<	10	14
MCW-8b	-	9/5/2017♦	Dry	<	10	12
MCW-8b	-	9/6/2017	Dry	<	10	10
MCW-8b	-	9/7/2017	Dry	<	10	10
MCW-8b	-	9/8/2017	Dry	<	10	10
MCW-8b	-	9/9/2017	Dry	<	10	10
MCW-8b	-	9/10/2017	Dry	<	10	10
MCW-8b	-	9/11/2017	Dry	<	10	10
MCW-8b	-	9/12/2017♦	Dry	<	10	10
MCW-8b	-	9/13/2017	Dry	<	10	10
MCW-8b	-	9/14/2017	Dry	<	10	10
MCW-8b	-	9/15/2017	Dry	<	10	10
MCW-8b	-	9/16/2017	Dry	<	10	10
MCW-8b	-	9/17/2017	Dry	<	10	10
MCW-8b	-	9/18/2017	Dry	<	10	10
MCW-8b	-	9/19/2017♦	Dry	<	10	10
MCW-8b	-	9/20/2017	Dry	<	10	10
MCW-8b	-	9/21/2017	Dry	<	10	10
MCW-8b	-	9/22/2017	Dry	<	10	10
MCW-8b	-	9/23/2017	Dry	<	10	10
MCW-8b	-	9/24/2017	Dry	<	10	10
MCW-8b	-	9/25/2017	Dry	<	10	10
MCW-8b	-	9/26/2017♦	Dry	<	10	10
MCW-8b	-	9/27/2017	Dry	<	10	10
MCW-8b	-	9/28/2017	Dry	<	10	10
MCW-8b	-	9/29/2017	Dry	<	10	10
MCW-8b	-	9/30/2017	Dry	<	10	10
MCW-9	-	9/1/2017	Dry	<	10	10
MCW-9	-	9/2/2017	Dry	<	10	10
MCW-9	-	9/3/2017	Dry	<	10	10
MCW-9	-	9/4/2017	Dry	<	10	10
MCW-9	-	9/5/2017♦	Dry	<	10	10
MCW-9	-	9/6/2017	Dry	<	10	10
MCW-9	-	9/7/2017	Dry	<	10	10
MCW-9	-	9/8/2017	Dry	<	10	10
MCW-9	-	9/9/2017	Dry	<	10	10
MCW-9	-	9/10/2017	Dry	<	10	10
MCW-9	-	9/11/2017	Dry	<	10	10
MCW-9	-	9/12/2017♦	Dry	<	10	10
MCW-9	-	9/13/2017	Dry	<	10	10
MCW-9	-	9/14/2017	Dry	<	10	10

				Single Sample (adjusted for rain, dry and NDs)		Geomean
Location	Time	Date	Rain		E. coli	E. coli
					(235 MPN)	(126 MPN)
MCW-9	-	9/15/2017	Dry	<	10	10
MCW-9	-	9/16/2017	Dry	<	10	10
MCW-9	-	9/17/2017	Dry	<	10	10
MCW-9	-	9/18/2017	Dry	<	10	10
MCW-9	-	9/19/2017♦	Dry	<	10	10
MCW-9	-	9/20/2017	Dry	<	10	10
MCW-9	-	9/21/2017	Dry	<	10	10
MCW-9	-	9/22/2017	Dry	<	10	10
MCW-9	-	9/23/2017	Dry	<	10	10
MCW-9	-	9/24/2017	Dry	<	10	10
MCW-9	-	9/25/2017	Dry	<	10	10
MCW-9	-	9/26/2017♦	Dry	<	10	10
MCW-9	-	9/27/2017	Dry	<	10	10
MCW-9	-	9/28/2017	Dry	<	10	10
MCW-9	-	9/29/2017	Dry	<	10	10
MCW-9	-	9/30/2017	Dry	<	10	10
MCW-12	-	9/1/2017	Dry	<	10	51
MCW-12	-	9/2/2017	Dry	<	10	42
MCW-12	-	9/3/2017	Dry	<	10	35
MCW-12	-	9/4/2017	Dry	<	10	29
MCW-12	-	9/5/2017♦	Dry	<	10	25
MCW-12	-	9/6/2017	Dry	<	10	21
MCW-12	-	9/7/2017	Dry	<	10	19
MCW-12	-	9/8/2017	Dry	<	10	17
MCW-12	-	9/9/2017	Dry	<	10	15
MCW-12	-	9/10/2017	Dry	<	10	14
MCW-12	-	9/11/2017	Dry	<	10	12
MCW-12	-	9/12/2017♦	Dry	<	10	11
MCW-12	-	9/13/2017	Dry	<	10	10
MCW-12	-	9/14/2017	Dry	<	10	10
MCW-12	-	9/15/2017	Dry	<	10	10
MCW-12	-	9/16/2017	Dry	<	10	10
MCW-12	-	9/17/2017	Dry	<	10	10
MCW-12	-	9/18/2017	Dry	<	10	10
MCW-12	-	9/19/2017♦	Dry	<	10	10
MCW-12	-	9/20/2017	Dry	<	10	10
MCW-12	-	9/21/2017	Dry	<	10	10
MCW-12	-	9/22/2017	Dry	<	10	10
MCW-12	-	9/23/2017	Dry	<	10	10
MCW-12	-	9/24/2017	Dry	<	10	10
MCW-12	-	9/25/2017	Dry	<	10	10
MCW-12	-	9/26/2017♦	Dry	<	10	10
MCW-12	-	9/27/2017	Dry	<	10	10
MCW-12	-	9/28/2017	Dry	<	10	10

				Single Sample (adjusted for rain, dry and NDs)		Geomean
Location	Time	Date	Rain		E. coli	E. coli
					(235 MPN)	(126 MPN)
MCW-12	-	9/29/2017	Dry	<	10	10
MCW-12	-	9/30/2017	Dry	<	10	10
MCW-14b	1045	9/1/2017		=	170	767
MCW-14b	1045	9/2/2017		=	170	728
MCW-14b	1045	9/3/2017		=	170	692
MCW-14b	1045	9/4/2017		=	170	657
MCW-14b	1100	9/5/2017♦		=	9,000	712
MCW-14b	1100	9/6/2017		=	9,000	772
MCW-14b	1100	9/7/2017		=	9,000	872
MCW-14b	1100	9/8/2017		=	9,000	986
MCW-14b	1100	9/9/2017		=	9,000	1114
MCW-14b	1100	9/10/2017		=	9,000	1259
MCW-14b	1100	9/11/2017		=	9,000	1422
MCW-14b	1100	9/12/2017♦		=	230	1422
MCW-14b	1100	9/13/2017		=	230	1422
MCW-14b	1100	9/14/2017		=	230	1259
MCW-14b	1100	9/15/2017		=	230	1114
MCW-14b	1100	9/16/2017		=	230	986
MCW-14b	1100	9/17/2017		=	230	872
MCW-14b	1100	9/18/2017		=	230	772
MCW-14b	1115	9/19/2017♦		=	40	644
MCW-14b	1115	9/20/2017		=	40	538
MCW-14b	1115	9/21/2017		=	40	494
MCW-14b	1115	9/22/2017		=	40	455
MCW-14b	1115	9/23/2017		=	40	418
MCW-14b	1115	9/24/2017		=	40	384
MCW-14b	1115	9/25/2017		=	40	353
MCW-14b	1115	9/26/2017♦		=	300	347
MCW-14b	1115	9/27/2017		=	300	341
MCW-14b	1115	9/28/2017		=	300	348
MCW-14b	1115	9/29/2017		=	300	354
MCW-14b	1115	9/30/2017		=	300	361
MCW-15c	1000	9/1/2017		=	270	3612
MCW-15c	1000	9/2/2017		=	270	3213
MCW-15c	1000	9/3/2017		=	270	2859
MCW-15c	1000	9/4/2017		=	270	2543
MCW-15c	1015	9/5/2017♦		=	5,000	2494
MCW-15c	1015	9/6/2017		=	5,000	2446
MCW-15c	1015	9/7/2017		=	5,000	2446
MCW-15c	1015	9/8/2017		=	5,000	2446
MCW-15c	1015	9/9/2017		=	5,000	2446
MCW-15c	1015	9/10/2017		=	5,000	2446
MCW-15c	1015	9/11/2017		=	5,000	2446
MCW-15c	1015	9/12/2017♦		=	230	2207
MCW-15c	1015	9/13/2017		=	230	1992

Location		Date	Rain		Single Sample (adjusted for rain, dry and NDs) E. coli (235 MPN)	Geomean E. coli (126 MPN)
MCW-15c	1015	9/14/2017		=	230	1763
MCW-15c	1015	9/15/2017		=	230	1560
MCW-15c	1015	9/16/2017		=	230	1380
MCW-15c	1015	9/17/2017		=	230	1222
MCW-15c	1015	9/18/2017		=	230	1081
MCW-15c	1030	9/19/2017♦		=	130	939
MCW-15c	1030	9/20/2017		=	130	815
MCW-15c	1030	9/21/2017		=	130	739
MCW-15c	1030	9/22/2017		=	130	671
MCW-15c	1030	9/23/2017		=	130	609
MCW-15c	1030	9/24/2017		=	130	552
MCW-15c	1030	9/25/2017		=	130	501
MCW-15c	1015	9/26/2017♦		=	240	464
MCW-15c	1015	9/27/2017		=	240	430
MCW-15c	1015	9/28/2017		=	240	428
MCW-15c	1015	9/29/2017		=	240	427
MCW-15c	1015	9/30/2017		=	240	425
MCW-17	-	9/1/2017	Dry	<	10	10
MCW-17	-	9/2/2017	Dry	<	10	10
MCW-17	-	9/3/2017	Dry	<	10	10
MCW-17	-	9/4/2017	Dry	<	10	10
MCW-17	-	9/5/2017♦	Dry	<	10	10
MCW-17	-	9/6/2017	Dry	<	10	10
MCW-17	-	9/7/2017	Dry	<	10	10
MCW-17	-	9/8/2017	Dry	<	10	10
MCW-17	-	9/9/2017	Dry	<	10	10
MCW-17	-	9/10/2017	Dry	<	10	10
MCW-17	-	9/11/2017	Dry	<	10	10
MCW-17	-	9/12/2017♦	Dry	<	10	10
MCW-17	-	9/13/2017	Dry	<	10	10
MCW-17	-	9/14/2017	Dry	<	10	10
MCW-17	-	9/15/2017	Dry	<	10	10
MCW-17	-	9/16/2017	Dry	<	10	10
MCW-17	-	9/17/2017	Dry	<	10	10
MCW-17	-	9/18/2017	Dry	<	10	10
MCW-17	-	9/19/2017♦	Dry	<	10	10
MCW-17	-	9/20/2017	Dry	<	10	10
MCW-17	-	9/21/2017	Dry	<	10	10
MCW-17	-	9/22/2017	Dry	<	10	10
MCW-17	-	9/23/2017	Dry	<	10	10
MCW-17	-	9/24/2017	Dry	<	10	10
MCW-17	-	9/25/2017	Dry	<	10	10
MCW-17	-	9/26/2017♦	Dry	<	10	10
MCW-17	-	9/27/2017	Dry	<	10	10
MCW-17	-	9/28/2017	Dry	<	10	10
MCW-17	-	9/29/2017	Dry	<	10	10

					Single Sample (adjusted for rain, dry and NDs)	Geomean
Location	Time	Date	Rain		E. coli	E. coli
					(235 MPN)	(126 MPN)
MCW-17	-	9/30/2017	Dry	<	10	10
MCW-18	-	9/1/2017	Dry	<	10	10
MCW-18	-	9/2/2017	Dry	<	10	10
MCW-18	-	9/3/2017	Dry	<	10	10
MCW-18	-	9/4/2017	Dry	<	10	10
MCW-18	-	9/5/2017♦	Dry	<	10	10
MCW-18	-	9/6/2017	Dry	<	10	10
MCW-18	-	9/7/2017	Dry	<	10	10
MCW-18	-	9/8/2017	Dry	<	10	10
MCW-18	-	9/9/2017	Dry	<	10	10
MCW-18	-	9/10/2017	Dry	<	10	10
MCW-18	-	9/11/2017	Dry	<	10	10
MCW-18	-	9/12/2017♦	Dry	<	10	10
MCW-18	-	9/13/2017	Dry	<	10	10
MCW-18	-	9/14/2017	Dry	<	10	10
MCW-18	-	9/15/2017	Dry	<	10	10
MCW-18	-	9/16/2017	Dry	<	10	10
MCW-18	-	9/17/2017	Dry	<	10	10
MCW-18	-	9/18/2017	Dry	<	10	10
MCW-18	-	9/19/2017♦	Dry	<	10	10
MCW-18	-	9/20/2017	Dry	<	10	10
MCW-18	-	9/21/2017	Dry	<	10	10
MCW-18	-	9/22/2017	Dry	<	10	10
MCW-18	-	9/23/2017	Dry	<	10	10
MCW-18	-	9/24/2017	Dry	<	10	10
MCW-18	-	9/25/2017	Dry	<	10	10
MCW-18	-	9/26/2017♦	Dry	<	10	10
MCW-18	-	9/27/2017	Dry	<	10	10
MCW-18	-	9/28/2017	Dry	<	10	10
MCW-18	-	9/29/2017	Dry	<	10	10
MCW-18	-	9/30/2017	Dry	<	10	10

Notes:
Weeks with wet weather samples (collected less than 72 hours after a day with >0.1" rain) use the previous non-rain single sample value to calculate the geomean.
Results of <20 are adjusted to use half the MDL (=10) in the calculation of the geomean
* The RWQCB granted permission to replace site MCW-15b with site Special-05 (renamed MCW-15c) on August 11th, 2010
♦Date of sampling

county of ventura

PUBLIC WORKS
VENTURA COUNTY

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November 29, 2017

Kangshi Wang, Ph.D.
California Regional Water Quality Control Board
Los Angeles Region
Standards & TMDL Unit
320 West 4th Street, Suite 200
Los Angeles, CA 90013
(213) 576-6780

Subject: MALIBU CREEK AND LAGOON BACTERIA TMDL COMPLIANCE MONITORING FOR COUNTY OF VENTURA, VENTURA COUNTY WATERSHED PROTECTION DISTRICT, AND CITY OF THOUSAND OAKS

Dear Dr. Wang:

Table 1 below summarizes the results of the weekly monitoring effort required by the Malibu Creek and Lagoon Bacteria TMDL (TMDL) Compliance Monitoring Plan (CMP) for the month of October 2017. Sites were sampled weekly on Tuesdays (October 3, 17, 24 and 31), except for one instance when sites were sampled Monday (October 9) due to staffing conflicts. Sites without results reported were not sampled due to insufficient flow and are labeled "Dry." Daily geomeans were calculated using results from the previous 30 days (actual sampling date marked with ♦), refer to Table 2. Weeks with wet weather samples (collected less than 72 hours after a day with > 0.1" rain) use the previous non-rain single sample value to calculate the geomean. Half the detection limit was used for the purpose of calculating the daily geomean for sites with results reported as < 20 MPN/100ml or for dry weather when no sample was taken.

Fecal coliform monitoring has been discontinued, as approved by the Los Angeles Regional Water Quality Control Board on October 31, 2014, in alignment with the Regional Board's removal of the fecal coliform objective for REC-1 freshwaters from the TMDL on June 7, 2012 and subsequent approval by the U.S. Environmental Protection Agency on July 2, 2014.

If you have any questions regarding this matter, please contact me at (805) 654-3942.

Sincerely,

Arne Anselm
Deputy Director, Watershed Protection District

CC: Glenn Shephard, Director Watershed Protection District
Ewelina Mutkowska, County of Ventura
Paul Jorgensen, City of Thousand Oaks (via email)
Joe Bellomo, Willdan Associates (via email)
Kelly Fisher, City of Agoura Hills (via email)
Allen Ma, County of Los Angeles (via email)

Table 1. Weekly sampling results

				Single Sample (as sampled)	
Location	Time	Date	Rain		E. coli
					(235 MPN)
MCW-8b		10/3/2017♦			Dry
MCW-8b		10/9/2017♦			Dry
MCW-8b		10/17/2017♦			Dry
MCW-8b		10/24/2017♦			Dry
MCW-8b		10/31/2017♦			Dry
MCW-9	-	10/3/2017♦			Dry
MCW-9	-	10/9/2017♦			Dry
MCW-9	-	10/17/2017♦			Dry
MCW-9	-	10/24/2017♦			Dry
MCW-9	-	10/31/2017♦			Dry
MCW-12	-	10/3/2017♦			Dry
MCW-12	-	10/9/2017♦			Dry
MCW-12	-	10/17/2017♦			Dry
MCW-12	-	10/24/2017♦			Dry
MCW-12	-	10/31/2017♦			Dry
MCW-14b	1110	10/3/2017♦		<	20
MCW-14b	1135	10/9/2017♦		=	3,000
MCW-14b	1115	10/17/2017♦		<	20
MCW-14b	1115	10/24/2017♦		=	40
MCW-14b	1130	10/31/2017♦		=	20
MCW-15c	1015	10/3/2017♦		=	40
MCW-15c	1045	10/9/2017♦		=	340
MCW-15c	1040	10/17/2017♦		<	20
MCW-15c	1015	10/24/2017♦		=	130
MCW-15c	1030	10/31/2017♦		=	40
MCW-17	-	10/3/2017♦			Dry
MCW-17	-	10/9/2017♦			Dry
MCW-17	-	10/17/2017♦			Dry
MCW-17	-	10/24/2017♦			Dry
MCW-17	-	10/31/2017♦			Dry
MCW-18	-	10/3/2017♦			Dry
MCW-18	-	10/9/2017♦			Dry
MCW-18	-	10/17/2017♦			Dry
MCW-18	-	10/24/2017♦			Dry
MCW-18	-	10/31/2017♦			Dry

Notes:
* The RWQCB granted permission to replace site MCW-15b with site Special-05 (renamed MCW-15c) on August 11th, 2010.
♦Date of sampling

Table 2. Computation of daily geomean

				Single Sample (adjusted for rain, dry and NDs)		Geomean
Location	Time	Date	Rain		E. coli	E. coli
					(235 MPN)	(126 MPN)
MCW-8b	-	10/1/2017	Dry	<	10	25
MCW-8b	-	10/2/2017	Dry	<	10	21
MCW-8b	-	10/3/2017♦	Dry	<	10	17
MCW-8b	-	10/4/2017	Dry	<	10	14
MCW-8b	-	10/5/2017	Dry	<	10	12
MCW-8b	-	10/6/2017	Dry	<	10	10
MCW-8b	-	10/7/2017	Dry	<	10	10
MCW-8b	-	10/8/2017	Dry	<	10	10
MCW-8b	-	10/9/2017♦	Dry	<	10	10
MCW-8b	-	10/10/2017	Dry	<	10	10
MCW-8b	-	10/11/2017	Dry	<	10	10
MCW-8b	-	10/12/2017	Dry	<	10	10
MCW-8b	-	10/13/2017	Dry	<	10	10
MCW-8b	-	10/14/2017	Dry	<	10	10
MCW-8b	-	10/15/2017	Dry	<	10	10
MCW-8b	-	10/16/2017	Dry	<	10	10
MCW-8b	-	10/17/2017♦	Dry	<	10	10
MCW-8b	-	10/18/2017	Dry	<	10	10
MCW-8b	-	10/19/2017	Dry	<	10	10
MCW-8b	-	10/20/2017	Dry	<	10	10
MCW-8b	-	10/21/2017	Dry	<	10	10
MCW-8b	-	10/22/2017	Dry	<	10	10
MCW-8b	-	10/23/2017	Dry	<	10	10
MCW-8b	-	10/24/2017♦	Dry	<	10	10
MCW-8b	-	10/25/2017	Dry	<	10	10
MCW-8b	-	10/26/2017	Dry	<	10	10
MCW-8b	-	10/27/2017	Dry	<	10	10
MCW-8b	-	10/28/2017	Dry	<	10	10
MCW-8b	-	10/29/2017	Dry	<	10	10
MCW-8b	-	10/30/2017	Dry	<	10	10
MCW-8b	-	10/31/2017♦	Dry	<	10	10
MCW-9	-	10/1/2017	Dry	<	10	10
MCW-9	-	10/2/2017	Dry	<	10	10
MCW-9	-	10/3/2017♦	Dry	<	10	10
MCW-9	-	10/4/2017	Dry	<	10	10
MCW-9	-	10/5/2017	Dry	<	10	10
MCW-9	-	10/6/2017	Dry	<	10	10
MCW-9	-	10/7/2017	Dry	<	10	10
MCW-9	-	10/8/2017	Dry	<	10	10
MCW-9	-	10/9/2017♦	Dry	<	10	10
MCW-9	-	10/10/2017	Dry	<	10	10
MCW-9	-	10/11/2017	Dry	<	10	10
MCW-9	-	10/12/2017	Dry	<	10	10
MCW-9	-	10/13/2017	Dry	<	10	10

					Single Sample (adjusted for rain, dry and NDs)	Geomean
Location	Time	Date	Rain		E. coli	E. coli
					(235 MPN)	(126 MPN)
MCW-9	-	10/14/2017	Dry	<	10	10
MCW-9	-	10/15/2017	Dry	<	10	10
MCW-9	-	10/16/2017	Dry	<	10	10
MCW-9	-	10/17/2017♦	Dry	<	10	10
MCW-9	-	10/18/2017	Dry	<	10	10
MCW-9	-	10/19/2017	Dry	<	10	10
MCW-9	-	10/20/2017	Dry	<	10	10
MCW-9	-	10/21/2017	Dry	<	10	10
MCW-9	-	10/22/2017	Dry	<	10	10
MCW-9	-	10/23/2017	Dry	<	10	10
MCW-9	-	10/24/2017♦	Dry	<	10	10
MCW-9	-	10/25/2017	Dry	<	10	10
MCW-9	-	10/26/2017	Dry	<	10	10
MCW-9	-	10/27/2017	Dry	<	10	10
MCW-9	-	10/28/2017	Dry	<	10	10
MCW-9	-	10/29/2017	Dry	<	10	10
MCW-9	-	10/30/2017	Dry	<	10	51
MCW-9	-	10/31/2017♦	Dry	<	10	42
MCW-12	-	10/1/2017	Dry	<	10	35
MCW-12	-	10/2/2017	Dry	<	10	29
MCW-12	-	10/3/2017♦	Dry	<	10	25
MCW-12	-	10/4/2017	Dry	<	10	21
MCW-12	-	10/5/2017	Dry	<	10	19
MCW-12	-	10/6/2017	Dry	<	10	17
MCW-12	-	10/7/2017	Dry	<	10	15
MCW-12	-	10/8/2017	Dry	<	10	14
MCW-12	-	10/9/2017♦	Dry	<	10	12
MCW-12	-	10/10/2017	Dry	<	10	11
MCW-12	-	10/11/2017	Dry	<	10	10
MCW-12	-	10/12/2017	Dry	<	10	10
MCW-12	-	10/13/2017	Dry	<	10	10
MCW-12	-	10/14/2017	Dry	<	10	10
MCW-12	-	10/15/2017	Dry	<	10	10
MCW-12	-	10/16/2017	Dry	<	10	10
MCW-12	-	10/17/2017♦	Dry	<	10	10
MCW-12	-	10/18/2017	Dry	<	10	10
MCW-12	-	10/19/2017	Dry	<	10	10
MCW-12	-	10/20/2017	Dry	<	10	10
MCW-12	-	10/21/2017	Dry	<	10	10
MCW-12	-	10/22/2017	Dry	<	10	10
MCW-12	-	10/23/2017	Dry	<	10	10
MCW-12	-	10/24/2017♦	Dry	<	10	10
MCW-12	-	10/25/2017	Dry	<	10	10
MCW-12	-	10/26/2017	Dry	<	10	10

				Single Sample (adjusted for rain, dry and NDs)		Geomean
Location	Time	Date	Rain		E. coli	E. coli
					(235 MPN)	(126 MPN)
MCW-12	-	10/27/2017	Dry	<	10	10
MCW-12	-	10/28/2017	Dry	<	10	10
MCW-12	-	10/29/2017	Dry	<	10	10
MCW-12	-	10/30/2017	Dry	<	10	10
MCW-12	-	10/31/2017♦	Dry	<	10	10
MCW-14b	1115	10/1/2017		=	300	368
MCW-14b	1115	10/2/2017		=	300	375
MCW-14b	1110	10/3/2017♦		<	10	341
MCW-14b	1110	10/4/2017		<	10	311
MCW-14b	1110	10/5/2017		<	10	248
MCW-14b	1110	10/6/2017		<	10	197
MCW-14b	1110	10/7/2017		<	10	157
MCW-14b	1110	10/8/2017		<	10	125
MCW-14b	1135	10/9/2017♦		=	3,000	121
MCW-14b	1135	10/10/2017		=	3,000	117
MCW-14b	1135	10/11/2017		=	3,000	112
MCW-14b	1135	10/12/2017		=	3,000	122
MCW-14b	1135	10/13/2017		=	3,000	133
MCW-14b	1135	10/14/2017		=	3,000	145
MCW-14b	1135	10/15/2017		=	3,000	158
MCW-14b	1135	10/16/2017		=	3,000	172
MCW-14b	1115	10/17/2017♦		<	10	155
MCW-14b	1115	10/18/2017		<	10	140
MCW-14b	1115	10/19/2017		<	10	134
MCW-14b	1115	10/20/2017		<	10	128
MCW-14b	1115	10/21/2017		<	10	122
MCW-14b	1115	10/22/2017		<	10	116
MCW-14b	1115	10/23/2017		<	10	111
MCW-14b	1115	10/24/2017♦		=	40	111
MCW-14b	1115	10/25/2017		=	40	111
MCW-14b	1115	10/26/2017		=	40	104
MCW-14b	1115	10/27/2017		=	40	97
MCW-14b	1115	10/28/2017		=	40	91
MCW-14b	1115	10/29/2017		=	40	85
MCW-14b	1115	10/30/2017		=	40	79
MCW-14b	1130	10/31/2017♦		=	20	72
MCW-15c	1015	10/1/2017		=	240	423
MCW-15c	1015	10/2/2017		=	240	422
MCW-15c	1015	10/3/2017♦		=	240	420
MCW-15c	1015	10/4/2017		=	40	394
MCW-15c	1015	10/5/2017		=	40	335
MCW-15c	1015	10/6/2017		=	40	286
MCW-15c	1015	10/7/2017		=	40	243
MCW-15c	1015	10/8/2017		=	40	207
MCW-15c	1045	10/9/2017♦		=	340	189

Location		Date	Rain	Single Sample (adjusted for rain, dry and NDs)		Geomean
					E. coli	E. coli
					(235 MPN)	(126 MPN)
MCW-15c	1045	10/10/2017		=	340	173
MCW-15c	1045	10/11/2017		=	340	158
MCW-15c	1045	10/12/2017		=	340	160
MCW-15c	1045	10/13/2017		=	340	162
MCW-15c	1045	10/14/2017		=	340	165
MCW-15c	1045	10/15/2017		=	340	167
MCW-15c	1045	10/16/2017		=	340	169
MCW-15c	1040	10/17/2017♦		<	10	152
MCW-15c	1040	10/18/2017		<	10	137
MCW-15c	1040	10/19/2017		<	10	126
MCW-15c	1040	10/20/2017		<	10	115
MCW-15c	1040	10/21/2017		<	10	106
MCW-15c	1040	10/22/2017		<	10	97
MCW-15c	1040	10/23/2017		<	10	89
MCW-15c	1015	10/24/2017♦		=	130	89
MCW-15c	1015	10/25/2017		=	130	89
MCW-15c	1015	10/26/2017		=	130	88
MCW-15c	1015	10/27/2017		=	130	86
MCW-15c	1015	10/28/2017		=	130	84
MCW-15c	1015	10/29/2017		=	130	82
MCW-15c	1015	10/30/2017		=	130	81
MCW-15c	1030	10/31/2017♦		=	40	76
MCW-17	-	10/1/2017	Dry	<	10	10
MCW-17	-	10/2/2017	Dry	<	10	10
MCW-17	-	10/3/2017♦	Dry	<	10	10
MCW-17	-	10/4/2017	Dry	<	10	10
MCW-17	-	10/5/2017	Dry	<	10	10
MCW-17	-	10/6/2017	Dry	<	10	10
MCW-17	-	10/7/2017	Dry	<	10	10
MCW-17	-	10/8/2017	Dry	<	10	10
MCW-17	-	10/9/2017♦	Dry	<	10	10
MCW-17	-	10/10/2017	Dry	<	10	10
MCW-17	-	10/11/2017	Dry	<	10	10
MCW-17	-	10/12/2017	Dry	<	10	10
MCW-17	-	10/13/2017	Dry	<	10	10
MCW-17	-	10/14/2017	Dry	<	10	10
MCW-17	-	10/15/2017	Dry	<	10	10
MCW-17	-	10/16/2017	Dry	<	10	10
MCW-17	-	10/17/2017♦	Dry	<	10	10
MCW-17	-	10/18/2017	Dry	<	10	10
MCW-17	-	10/19/2017	Dry	<	10	10
MCW-17	-	10/20/2017	Dry	<	10	10
MCW-17	-	10/21/2017	Dry	<	10	10
MCW-17	-	10/22/2017	Dry	<	10	10
MCW-17	-	10/23/2017	Dry	<	10	10
MCW-17	-	10/24/2017♦	Dry	<	10	10

				Single Sample (adjusted for rain, dry and NDs)		Geomean
Location	Time	Date	Rain		E. coli	E. coli
					(235 MPN)	(126 MPN)
MCW-17	-	10/25/2017	Dry	<	10	10
MCW-17	-	10/26/2017	Dry	<	10	10
MCW-17	-	10/27/2017	Dry	<	10	10
MCW-17	-	10/28/2017	Dry	<	10	10
MCW-17	-	10/29/2017	Dry	<	10	10
MCW-17	-	10/30/2017	Dry	<	10	10
MCW-17	-	10/31/2017♦	Dry	<	10	10
MCW-18	-	10/1/2017	Dry	<	10	10
MCW-18	-	10/2/2017	Dry	<	10	10
MCW-18	-	10/3/2017♦	Dry	<	10	10
MCW-18	-	10/4/2017	Dry	<	10	10
MCW-18	-	10/5/2017	Dry	<	10	10
MCW-18	-	10/6/2017	Dry	<	10	10
MCW-18	-	10/7/2017	Dry	<	10	10
MCW-18	-	10/8/2017	Dry	<	10	10
MCW-18	-	10/9/2017♦	Dry	<	10	10
MCW-18	-	10/10/2017	Dry	<	10	10
MCW-18	-	10/11/2017	Dry	<	10	10
MCW-18	-	10/12/2017	Dry	<	10	10
MCW-18	-	10/13/2017	Dry	<	10	10
MCW-18	-	10/14/2017	Dry	<	10	10
MCW-18	-	10/15/2017	Dry	<	10	10
MCW-18	-	10/16/2017	Dry	<	10	10
MCW-18	-	10/17/2017♦	Dry	<	10	10
MCW-18	-	10/18/2017	Dry	<	10	10
MCW-18	-	10/19/2017	Dry	<	10	10
MCW-18	-	10/20/2017	Dry	<	10	10
MCW-18	-	10/21/2017	Dry	<	10	10
MCW-18	-	10/22/2017	Dry	<	10	10
MCW-18	-	10/23/2017	Dry	<	10	10
MCW-18	-	10/24/2017♦	Dry	<	10	10
MCW-18	-	10/25/2017	Dry	<	10	10
MCW-18	-	10/26/2017	Dry	<	10	10
MCW-18	-	10/27/2017	Dry	<	10	10
MCW-18	-	10/28/2017	Dry	<	10	10
MCW-18	-	10/29/2017	Dry	<	10	10
MCW-18	-	10/30/2017	Dry	<	10	10
MCW-18	-	10/31/2017♦	Dry	<	10	10

Notes:
Weeks with wet weather samples (collected less than 72 hours after a day with >0.1" rain) use the previous non-rain single sample value to calculate the geomean.
Results of <20 are adjusted to use half the MDL (=10) in the calculation of the geomean
* The RWQCB granted permission to replace site MCW-15b with site Special-05 (renamed MCW-15c) on August 11th, 2010
♦Date of sampling

county of ventura

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December 21, 2017

Kangshi Wang, Ph.D.
California Regional Water Quality Control Board
Los Angeles Region
Standards & TMDL Unit
320 West 4th Street, Suite 200
Los Angeles, CA 90013
(213) 576-6780

Subject: MALIBU CREEK AND LAGOON BACTERIA TMDL COMPLIANCE MONITORING FOR COUNTY OF VENTURA, VENTURA COUNTY WATERSHED PROTECTION DISTRICT, AND CITY OF THOUSAND OAKS

Dear Dr. Wang:

Table 1 below summarizes the results of the weekly monitoring effort required by the Malibu Creek and Lagoon Bacteria TMDL (TMDL) Compliance Monitoring Plan (CMP) for the month of November 2017. Sites were sampled weekly on Tuesdays (November 7, 14, 21 and 28). Sites without results reported were not sampled due to insufficient flow and are labeled "Dry." Daily geomeans were calculated using results from the previous 30 days (actual sampling date marked with♦), refer to Table 2. Weeks with wet weather samples (collected less than 72 hours after a day with > 0.1" rain) use the previous non-rain single sample value to calculate the geomean. Half the detection limit was used for the purpose of calculating the daily geomean for sites with results reported as < 18 MPN/100ml or for dry weather when no sample was taken. Coliform tables from SM9221 in standard methods 22nd and 23rd have been adopted thus changing the reporting limit from 2.0 MPN/100 ml to 1.8 MPN/100 ml as of November 7, 2017.

Fecal coliform monitoring has been discontinued, as approved by the Los Angeles Regional Water Quality Control Board on October 31, 2014, in alignment with the Regional Board's removal of the fecal coliform objective for REC-1 freshwaters from the TMDL on June 7, 2012 and subsequent approval by the U.S. Environmental Protection Agency on July 2, 2014.

If you have any questions regarding this matter, please contact me at (805) 654-3942.

Sincerely,

Arne Anselm
Deputy Director, Watershed Protection District

CC: Glenn Shephard, Director Watershed Protection District
Ewelina Mutkowska, County of Ventura
Paul Jorgensen, City of Thousand Oaks (via email)
Joe Bellomo, Willdan Associates (via email)
Kelly Fisher, City of Agoura Hills (via email)
Allen Ma, County of Los Angeles (via email)

Table 1. Weekly sampling results

					Single Sample (as sampled)
Location	Time	Date	Rain		E. coli
					(235 MPN)
MCW-8b		11/7/2017♦			Dry
MCW-8b		11/14/2017♦			Dry
MCW-8b		11/21/2017♦			Dry
MCW-8b		11/28/2017♦			Dry
MCW-9	-	11/7/2017♦			Dry
MCW-9	-	11/14/2017♦			Dry
MCW-9	-	11/21/2017♦			Dry
MCW-9	-	11/28/2017♦			Dry
MCW-12	-	11/7/2017♦			Dry
MCW-12	-	11/14/2017♦			Dry
MCW-12	-	11/21/2017♦			Dry
MCW-12	-	11/28/2017♦			Dry
MCW-14b	1100	11/7/2017♦		<	18
MCW-14b	1045	11/14/2017♦		=	36
MCW-14b	1000	11/21/2017♦		=	20
MCW-14b	1045	11/28/2017♦		<	18
MCW-15c	1015	11/7/2017♦		<	18
MCW-15c	1000	11/14/2017♦		=	45
MCW-15c	930	11/21/2017♦		<	18
MCW-15c	1000	11/28/2017♦		<	18
MCW-17	-	11/7/2017♦			Dry
MCW-17	-	11/14/2017♦			Dry
MCW-17	-	11/21/2017♦			Dry
MCW-17	-	11/28/2017♦			Dry
MCW-18	-	11/7/2017♦			Dry
MCW-18	-	11/14/2017♦			Dry
MCW-18	-	11/21/2017♦			Dry
MCW-18	-	11/28/2017♦			Dry

Notes:
* The RWQCB granted permission to replace site MCW-15b with site Special-05 (renamed MCW-15c) on August 11th, 2010.
♦Date of sampling
- Reporting limit has been changed from 2.0 MPN/100 ml to 1.8 MPN/100 ml.

Table 2. Computation of daily geomean

				Single Sample (adjusted for rain, dry and NDs)		Geomean
Location	Time	Date	Rain		E. coli	E. coli
					(235 MPN)	(126 MPN)
MCW-8b	-	11/1/2017	Dry	<	10	10
MCW-8b	-	11/2/2017	Dry	<	10	10
MCW-8b	-	11/3/2017	Dry	<	10	10
MCW-8b	-	11/4/2017	Dry	<	10	10
MCW-8b	-	11/5/2017	Dry	<	10	10
MCW-8b	-	11/6/2017	Dry	<	10	10
MCW-8b	-	11/7/2017♦	Dry	<	9	10
MCW-8b	-	11/8/2017	Dry	<	9	10
MCW-8b	-	11/9/2017	Dry	<	9	10
MCW-8b	-	11/10/2017	Dry	<	9	10
MCW-8b	-	11/11/2017	Dry	<	9	10
MCW-8b	-	11/12/2017	Dry	<	9	10
MCW-8b	-	11/13/2017	Dry	<	9	10
MCW-8b	-	11/14/2017♦	Dry	<	9	10
MCW-8b	-	11/15/2017	Dry	<	9	10
MCW-8b	-	11/16/2017	Dry	<	9	10
MCW-8b	-	11/17/2017	Dry	<	9	10
MCW-8b	-	11/18/2017	Dry	<	9	10
MCW-8b	-	11/19/2017	Dry	<	9	10
MCW-8b	-	11/20/2017	Dry	<	9	10
MCW-8b	-	11/21/2017♦	Dry	<	9	9
MCW-8b	-	11/22/2017	Dry	<	9	9
MCW-8b	-	11/23/2017	Dry	<	9	9
MCW-8b	-	11/24/2017	Dry	<	9	9
MCW-8b	-	11/25/2017	Dry	<	9	9
MCW-8b	-	11/26/2017	Dry	<	9	9
MCW-8b	-	11/27/2017	Dry	<	9	9
MCW-8b	-	11/28/2017♦	Dry	<	9	9
MCW-8b	-	11/29/2017	Dry	<	9	9
MCW-8b	-	11/30/2017	Dry	<	9	9
MCW-9	-	11/1/2017	Dry	<	10	10
MCW-9	-	11/2/2017	Dry	<	10	10
MCW-9	-	11/3/2017	Dry	<	10	10
MCW-9	-	11/4/2017	Dry	<	10	10
MCW-9	-	11/5/2017	Dry	<	10	10
MCW-9	-	11/6/2017	Dry	<	10	10
MCW-9	-	11/7/2017♦	Dry	<	9	10
MCW-9	-	11/8/2017	Dry	<	9	10
MCW-9	-	11/9/2017	Dry	<	9	10
MCW-9	-	11/10/2017	Dry	<	9	10
MCW-9	-	11/11/2017	Dry	<	9	10
MCW-9	-	11/12/2017	Dry	<	9	10
MCW-9	-	11/13/2017	Dry	<	9	10
MCW-9	-	11/14/2017♦	Dry	<	9	10

				Single Sample (adjusted for rain, dry and NDs)		Geomean
Location	Time	Date	Rain		E. coli	E. coli
					(235 MPN)	(126 MPN)
MCW-9	-	11/15/2017	Dry	<	9	10
MCW-9	-	11/16/2017	Dry	<	9	10
MCW-9	-	11/17/2017	Dry	<	9	10
MCW-9	-	11/18/2017	Dry	<	9	10
MCW-9	-	11/19/2017	Dry	<	9	10
MCW-9	-	11/20/2017	Dry	<	9	10
MCW-9	-	11/21/2017♦	Dry	<	9	9
MCW-9	-	11/22/2017	Dry	<	9	9
MCW-9	-	11/23/2017	Dry	<	9	9
MCW-9	-	11/24/2017	Dry	<	9	9
MCW-9	-	11/25/2017	Dry	<	9	9
MCW-9	-	11/26/2017	Dry	<	9	9
MCW-9	-	11/27/2017	Dry	<	9	9
MCW-9	-	11/28/2017♦	Dry	<	9	9
MCW-9	-	11/29/2017	Dry	<	9	9
MCW-9	-	11/30/2017	Dry	<	9	9
MCW-12	-	11/1/2017	Dry	<	10	10
MCW-12	-	11/2/2017	Dry	<	10	10
MCW-12	-	11/3/2017	Dry	<	10	10
MCW-12	-	11/4/2017	Dry	<	10	10
MCW-12	-	11/5/2017	Dry	<	10	10
MCW-12	-	11/6/2017	Dry	<	10	10
MCW-12	-	11/7/2017♦	Dry	<	9	10
MCW-12	-	11/8/2017	Dry	<	9	10
MCW-12	-	11/9/2017	Dry	<	9	10
MCW-12	-	11/10/2017	Dry	<	9	10
MCW-12	-	11/11/2017	Dry	<	9	10
MCW-12	-	11/12/2017	Dry	<	9	10
MCW-12	-	11/13/2017	Dry	<	9	10
MCW-12	-	11/14/2017♦	Dry	<	9	10
MCW-12	-	11/15/2017	Dry	<	9	10
MCW-12	-	11/16/2017	Dry	<	9	10
MCW-12	-	11/17/2017	Dry	<	9	10
MCW-12	-	11/18/2017	Dry	<	9	10
MCW-12	-	11/19/2017	Dry	<	9	10
MCW-12	-	11/20/2017	Dry	<	9	10
MCW-12	-	11/21/2017♦	Dry	<	9	9
MCW-12	-	11/22/2017	Dry	<	9	9
MCW-12	-	11/23/2017	Dry	<	9	9
MCW-12	-	11/24/2017	Dry	<	9	9
MCW-12	-	11/25/2017	Dry	<	9	9
MCW-12	-	11/26/2017	Dry	<	9	9
MCW-12	-	11/27/2017	Dry	<	9	9
MCW-12	-	11/28/2017♦	Dry	<	9	9

				Single Sample (adjusted for rain, dry and NDs)		Geomean
Location	Time	Date	Rain		E. coli	E. coli
					(235 MPN)	(126 MPN)
MCW-12	-	11/29/2017	Dry	<	9	9
MCW-12	-	11/30/2017	Dry	<	9	9
MCW-14b	1130	11/1/2017		=	20	66
MCW-14b	1130	11/2/2017		=	20	68
MCW-14b	1130	11/3/2017		=	20	69
MCW-14b	1130	11/4/2017		=	20	71
MCW-14b	1130	11/5/2017		=	20	73
MCW-14b	1130	11/6/2017		=	20	74
MCW-14b	1100	11/7/2017♦		<	9	74
MCW-14b	1100	11/8/2017		<	9	61
MCW-14b	1100	11/9/2017		<	9	50
MCW-14b	1100	11/10/2017		<	9	41
MCW-14b	1100	11/11/2017		<	9	34
MCW-14b	1100	11/12/2017		<	9	28
MCW-14b	1100	11/13/2017		<	9	23
MCW-14b	1045	11/14/2017♦		=	36	20
MCW-14b	1045	11/15/2017		=	36	17
MCW-14b	1045	11/16/2017		=	36	18
MCW-14b	1045	11/17/2017		=	36	19
MCW-14b	1045	11/18/2017		=	36	20
MCW-14b	1045	11/19/2017		=	36	20
MCW-14b	1045	11/20/2017		=	36	21
MCW-14b	1000	11/21/2017♦		=	20	22
MCW-14b	1000	11/22/2017		=	20	22
MCW-14b	1000	11/23/2017		=	20	22
MCW-14b	1000	11/24/2017		=	20	21
MCW-14b	1000	11/25/2017		=	20	21
MCW-14b	1000	11/26/2017		=	20	20
MCW-14b	1000	11/27/2017		=	20	20
MCW-14b	1045	11/28/2017♦		<	9	19
MCW-14b	1045	11/29/2017		<	9	18
MCW-14b	1045	11/30/2017		<	9	18
MCW-15c	1030	11/1/2017		=	40	72
MCW-15c	1030	11/2/2017		=	40	67
MCW-15c	1030	11/3/2017		=	40	67
MCW-15c	1030	11/4/2017		=	40	67
MCW-15c	1030	11/5/2017		=	40	67
MCW-15c	1030	11/6/2017		=	40	67
MCW-15c	1015	11/7/2017♦		<	9	64
MCW-15c	1015	11/8/2017		<	9	57
MCW-15c	1015	11/9/2017		<	9	50
MCW-15c	1015	11/10/2017		<	9	45
MCW-15c	1015	11/11/2017		<	9	40
MCW-15c	1015	11/12/2017		<	9	35
MCW-15c	1015	11/13/2017		<	9	31

Location		Date	Rain		Single Sample (adjusted for rain, dry and NDs) E. coli (235 MPN)	Geomean E. coli (126 MPN)
MCW-15c	1000	11/14/2017♦		=	45	29
MCW-15c	1000	11/15/2017		=	45	27
MCW-15c	1000	11/16/2017		=	45	29
MCW-15c	1000	11/17/2017		=	45	30
MCW-15c	1000	11/18/2017		=	45	32
MCW-15c	1000	11/19/2017		=	45	33
MCW-15c	1000	11/20/2017		=	45	35
MCW-15c	930	11/21/2017♦		<	9	35
MCW-15c	930	11/22/2017		<	9	35
MCW-15c	930	11/23/2017		<	9	32
MCW-15c	930	11/24/2017		<	9	29
MCW-15c	930	11/25/2017		<	9	26
MCW-15c	930	11/26/2017		<	9	24
MCW-15c	930	11/27/2017		<	9	22
MCW-15c	1000	11/28/2017♦		<	9	20
MCW-15c	1000	11/29/2017		<	9	19
MCW-15c	1000	11/30/2017		<	9	18
MCW-17	-	11/1/2017	Dry	<	10	10
MCW-17	-	11/2/2017	Dry	<	10	10
MCW-17	-	11/3/2017	Dry	<	10	10
MCW-17	-	11/4/2017	Dry	<	10	10
MCW-17	-	11/5/2017	Dry	<	10	10
MCW-17	-	11/6/2017	Dry	<	10	10
MCW-17	-	11/7/2017♦	Dry	<	9	10
MCW-17	-	11/8/2017	Dry	<	9	10
MCW-17	-	11/9/2017	Dry	<	9	10
MCW-17	-	11/10/2017	Dry	<	9	10
MCW-17	-	11/11/2017	Dry	<	9	10
MCW-17	-	11/12/2017	Dry	<	9	10
MCW-17	-	11/13/2017	Dry	<	9	10
MCW-17	-	11/14/2017♦	Dry	<	9	10
MCW-17	-	11/15/2017	Dry	<	9	10
MCW-17	-	11/16/2017	Dry	<	9	10
MCW-17	-	11/17/2017	Dry	<	9	10
MCW-17	-	11/18/2017	Dry	<	9	10
MCW-17	-	11/19/2017	Dry	<	9	10
MCW-17	-	11/20/2017	Dry	<	9	10
MCW-17	-	11/21/2017♦	Dry	<	9	9
MCW-17	-	11/22/2017	Dry	<	9	9
MCW-17	-	11/23/2017	Dry	<	9	9
MCW-17	-	11/24/2017	Dry	<	9	9
MCW-17	-	11/25/2017	Dry	<	9	9
MCW-17	-	11/26/2017	Dry	<	9	9
MCW-17	-	11/27/2017	Dry	<	9	9
MCW-17	-	11/28/2017♦	Dry	<	9	9
MCW-17	-	11/29/2017	Dry	<	9	9

Location	Time	Date	Rain		Single Sample (adjusted for rain, dry and NDs) E. coli (235 MPN)	Geomean E. coli (126 MPN)
MCW-17	-	11/30/2017	Dry	<	9	9
MCW-18	-	11/1/2017	Dry	<	9	10
MCW-18	-	11/2/2017	Dry	<	9	10
MCW-18	-	11/3/2017	Dry	<	9	10
MCW-18	-	11/4/2017	Dry	<	9	10
MCW-18	-	11/5/2017	Dry	<	9	10
MCW-18	-	11/6/2017	Dry	<	9	10
MCW-18	-	11/7/2017♦	Dry	<	9	10
MCW-18	-	11/8/2017	Dry	<	9	10
MCW-18	-	11/9/2017	Dry	<	9	10
MCW-18	-	11/10/2017	Dry	<	9	10
MCW-18	-	11/11/2017	Dry	<	9	10
MCW-18	-	11/12/2017	Dry	<	9	10
MCW-18	-	11/13/2017	Dry	<	9	10
MCW-18	-	11/14/2017♦	Dry	<	9	10
MCW-18	-	11/15/2017	Dry	<	9	10
MCW-18	-	11/16/2017	Dry	<	9	10
MCW-18	-	11/17/2017	Dry	<	9	10
MCW-18	-	11/18/2017	Dry	<	9	10
MCW-18	-	11/19/2017	Dry	<	9	10
MCW-18	-	11/20/2017	Dry	<	9	10
MCW-18	-	11/21/2017♦	Dry	<	9	9
MCW-18	-	11/22/2017	Dry	<	9	9
MCW-18	-	11/23/2017	Dry	<	9	9
MCW-18	-	11/24/2017	Dry	<	9	9
MCW-18	-	11/25/2017	Dry	<	9	9
MCW-18	-	11/26/2017	Dry	<	9	9
MCW-18	-	11/27/2017	Dry	<	9	9
MCW-18	-	11/28/2017♦	Dry	<	9	9
MCW-18	-	11/29/2017	Dry	<	9	9
MCW-18	-	11/30/2017	Dry	<	9	9

Notes:
Weeks with wet weather samples (collected less than 72 hours after a day with >0.1" rain) use the previous non-rain single sample value to calculate the geomean.
Results of <18 are adjusted to use half the MDL (=9) in the calculation of the geomean
Reporting limit changed from 2.0 MPN/100 ml to 1.8 MPN/100 ml beginning November 7, 2017.
* The RWQCB granted permission to replace site MCW-15b with site Special-05 (renamed MCW-15c) on August 11th, 2010
♦ Date of sampling