

CRESTLINE SANITATION DISTRICT ANNUAL REPORT

Monitoring and Reporting Program: 6-94-57

WDID Number: 6B360106001

ANNUAL REPORT

Year: 2016

The data in this report has been reviewed for violations of wastewater discharge requirements by the Operations Manager and District Manager.

Report Prepared by:

RICK DEVER, OPERATIONS MANAGER CRESTLINE SANITATION DISTRICT

Report Submitted by:

MARK PATTISON, DISTRICT MANAGE CRESTLINE SANITATION DISTRICT

Crestline Sanitation District:

24516 Lake Drive P.O. Box 3395

Crestline, CA 92325-3395 Telephone (909) 338-1751 Facsimile (909) 338-5306

CRESTLINE SANITATION DISTRICT ANNUAL REPORT

Table of Contents

Treatment Plant Effluent Monitoring	Page
District Summation	4
Treatment Facility Total Volume Flows	5
Treatment Facility Maximum Instantaneous Flow Rates	6
Treatment Facility Average Flow Rates	7
Graph - Total Volume Flows	8
Graph - Maximum Instantaneous Flow Rates	9
Graph - Average Flow Rates	10
Effluent Monitoring - Treatment Facility	11
Graph - Treatment Facility - Total Coliform	12
Graph - Treatment Facility - Chlorine Residual	13
Effluent Monitoring - Final Discharge	
District Final Effluent - Lab Monitoring Data (Monthly Data)	14
District Final Effluent - Lab Monitoring Data (Semiannual & Annual Data)	15
Graph - District Final Effluent (Total Coliform)	16
Graph - District Final Effluent (Chlorine Residual)	17
Graph - District Final Effluent (Settleable Solids)	18
Graph - District Final Effluent (Dissolved Oxygen)	19
Graph - District Final Effluent (pH)	20
Graph - District Final Effluent (BOD)	21
Graph - District Final Effluent (COD)	22
Graph - District Final Effluent (MBAS)	23
Graph - District Final Effluent (Oil & Grease)	24
Graph - District Final Effluent (TKN)	25
Graph - District Final Effluent (NO3-N)	26
Graph - District Final Effluent (NH3-N)	27
Graph - District Final Effluent (TDS)	28
Graph - District Final Effluent (Chloride)	29
Graph - District Final Effluent (Sodium)	30
Graph - District Final Effluent (Sulfate)	31
Graph - District Final Effluent (Boron)	32
Graph - District Final Effluent (Fluoride)	33
Sludge Monitoring	
Sludge Generation and Disposal Data	34
Graph - Sludge Generation per month	35
Discharge Site - Ground Water Monitoring Wells	
Monitoring Wells Site Map	36
Monitoring Well 1 - Lab Data (Background Well)	37
Monitoring Well 2 - Lab Data	38
Monitoring Well 3 - Lab Data	39
Monitoring Well 4 - Lab Data	40
Monitoring Wells - Lab Data (Annual Testing)	41

Discharge Site - Ground Water Monitoring Wells (con's)	j
Graph - All Monitoring Wells - Results (Sulfate)	42
Graph - All Monitoring Wells - Results (Sodium)	43
Graph - All Monitoring Wells - Results (MBAS)	44
Graph - All Monitoring Wells - Results (Chloride)	45
Graph - All Monitoring Wells - Results (TDS)	46
Graph - All Monitoring Wells - Results (TKN)	47
Graph - All Monitoring Wells - Results (NH3-N)	48
Graph - All Monitoring Wells - Results (NO3-N)	49
Graph - All Monitoring Wells - Results (Ground Wa	ater Level) 50
Supply Water Monitoring	
Report - Supply Water Samples - March	51
Graph - Supply Water Samples - March	52
Report - Supply Water Samples - September	53
Graph - Supply Water Samples - September	54
Violations	
Final Effluent Disposal Site Constituent Violations	55
Graph – Constituent Violations	56
Treatment Facility Flow Violations	57
Graph - Total Volume Flow Violations	58
Graph – Instantaneous Flow Violations	59
Appendix	
Final Discharge Monitoring (Annual Samples) Discharge Site - Ground Water Monitoring Wells (A	Appendix "A' Annual Samples)

Crestline Sanitation District Annual Report Summation 2016

Crestline Sanitation District collected, treated and discharged 188.03 million gallons of wastewater in 2016. We had only one violation in 2016 which was attributed to a large amount of rain in the month of December. Rainfall recorded at Huston Creek Treatment plant for the calendar year of 2016 was 30.68 inches in which 10.34 inches occurred in the last 15 days of December.

Throughout 2016 the Districts' Maintenance Crew systematically televised 9.1 miles of pipe. During 2016 the District Hydroed 22.5 miles of pipeline exceeding the Sanitary Sewer Management Plan (SSMP) mark of 15.2 miles for the year. The District also contracted with Sancon Technologies Inc. to slip line specific problem areas found during the systematic televising, Sancon completed 3972 feet of slip lining.

In 2016, Dudek Engineering & Environmental was contracted to complete a Title 22 Report enabling the Crestline Sanitation District to sell its Disinfected Secondary Effluent for the purposes of Construction Water to Skanska for the *HWY 138 Realignment Project*. Skanska began the project November 14th which complies with the Governor's Order to utilize recycled water for construction projects during this time of severe drought.

An Annual Audit of the District was performed in 2016 by Smith Marion & CO. This accounting firm did a thorough job finding Crestline Sanitation's records to be well prepared, which allowed the audit to be completed in a timely manner and concluded with no findings.

The State Water Resources Control Board Enforcement Division performed an Audit on the District's SSMP and no violations were incurred. Scheduled maintenance programs and inspections were performed routinely on the Districts' Lift Stations. Manhole, Waterway and Outfall inspections were carried out after all rain events to comply with our SSMP protocols

Crestline Sanitation District has continued to maintain a zero injury safety program spanning two years.

ANNUAL REPORT

Treatment Facility Total Volume Flows

YEAR:

2016

Creek 06 4 90 70 4	daily 0.5 mg/d design total volume month All flow Seeley Creek 6.10 6.02 5.90 4.93 4.68	0.2 mg/d design total volume month rates in million galle Cleghorn 0.151 0.155 0.188 0.130 0.194	District Effluent 19.70 18.37 18.65 16.00	total volume to ponds District Effluent 0.00 0.00 0.00 0.00	free board feet Flow to ponds empty empty empty empty
gn olume toth Creek 06 4 90 70	design total volume month All flow Seeley Creek 6.10 6.02 5.90 4.93	design total volume month rates in million galle Cleghorn 0.151 0.155 0.188 0.130	District Effluent 19.70 18.37 18.65 16.00	District Effluent 0.00 0.00 0.00	feet Flow to ponds empty empty empty
gn olume toth Creek 06 4 90 70	design total volume month All flow Seeley Creek 6.10 6.02 5.90 4.93	design total volume month rates in million galle Cleghorn 0.151 0.155 0.188 0.130	District Effluent 19.70 18.37 18.65 16.00	District Effluent 0.00 0.00 0.00	Flow to ponds empty empty empty
gn olume toth Creek 06 4 90 70	design total volume month All flow Seeley Creek 6.10 6.02 5.90 4.93	design total volume month rates in million galle Cleghorn 0.151 0.155 0.188 0.130	District Effluent 19.70 18.37 18.65 16.00	District Effluent 0.00 0.00 0.00	Flow to ponds empty empty empty
Creek 06 4 90 70	seeley Creek 6.10 6.02 5.90 4.93	total volume month rates in million galle Cleghorn 0.151 0.155 0.188 0.130	District Effluent 19.70 18.37 18.65 16.00	District Effluent 0.00 0.00 0.00	Flow to ponds empty empty empty
Creek 06 4 90 70 4	month All flow Seeley Creek 6.10 6.02 5.90 4.93	month rates in million galle Cleghorn 0.151 0.155 0.188 0.130	District Effluent 19.70 18.37 18.65 16.00	District Effluent 0.00 0.00 0.00	Flow to ponds empty empty empty
Creek 06 4 90 70	All flow Seeley Creek 6.10 6.02 5.90 4.93	Cleghorn 0.151 0.155 0.188 0.130	District Effluent 19.70 18.37 18.65 16.00	0.00 0.00 0.00	Flow to ponds empty empty empty
06 4 90 70 4	Seeley Creek 6.10 6.02 5.90 4.93	Cleghorn 0.151 0.155 0.188 0.130	District Effluent 19.70 18.37 18.65 16.00	0.00 0.00 0.00	Flow to ponds empty empty empty
06 4 90 70 4	6.10 6.02 5.90 4.93	0.151 0.155 0.188 0.130	19.70 18.37 18.65 16.00	0.00 0.00 0.00	empty empty empty
4 90 70 4	6.02 5.90 4.93	0.151 0.155 0.188 0.130	19.70 18.37 18.65 16.00	0.00 0.00	empty empty empty
90 70 4	5.90 4.93	0.188 0.130	18.65 16.00	0.00	empty empty
70 4	4.93	0.130	16.00		
4				0.00	empty
	4.68	0.104			
		0.194	15.64	0.00	empty
3	3.79	0.280	13.68	0.00	empty
8	3.55	0.418	14.47	0.00	empty
2	3.20	0.121	13.11	0.00	empty
8	3.13	0.164	13.01	0.00	empty
7	3.99	0.105	13.34	0.00	empty
4	3.42	0.087	13.49	0.00	empty
04	5.55	0.218	18.58	0.00	empty
201	6 Treatment I	Facility Total Volu	me Flow		
28	54.23	2.21	188.03	0.00	
		13.000 (1.204)			
	201	2016 Treatment	2016 Treatment Facility Total Volu	2016 Treatment Facility Total Volume Flow	2016 Treatment Facility Total Volume Flow

^{*} Las Flores Total flows are represented by the addition of the Huston Creek, Seeley Creek, Cleghorn and Pilot Rock plant flow as measured as the flow discharges to the district outfall.

ANNUAL REPORT

Treatment Facility Maximum Instantaneous Flow Rates

Year: 2016

Site	Huston Creek	Seeley Creek	Cleghorn	Las Flores	Las Flores
Reading	daily	daily	daily	daily	daily
Violations					
Design	2.5 mg	1.0 mg	0.4 mg		
limits	maximum	maximum	maximum		
	max flow rate	max flow rate	max flow rate	max flow rate	max flow rate
	month	month	month	month	month
		All flow rates in	million gallons		
	Huston	Seeley	Cleghorn	District Effluent	Flow to ponds
JANUARY	1.480	0.620	0.300	2.920	empty
FEBRUARY	0.990	0.570	0.200	1.430	empty
MARCH	1.160	0.450	0.180	1.560	empty
APRIL	1.160	0.360	0.344	1.125	empty
MAY	0.645	0.737	0.094	1.040	empty
JUNE	0.620	0.305	0.240	0.950	empty
JULY	0.630	0.315	0.184	1.120	empty
AUGUST	0.570	0.330	0.150	0.930	empty
SEPTEMBER	0.720	0.280	0.122	1.080	empty
OCTOBER	0.860	0.260	0.170	1.060	empty
NOVEMBER	0.660	0.340	0.085	1.060	empty
DECEMBER	1.450	0.640	0.150	2.040	empty
	2016 Treatm	ent Facility Maxir	num Instantaneo	us Flow Rate	
Maximum	1.480	0.737	0.344	2.920	

ANNUAL REPORT

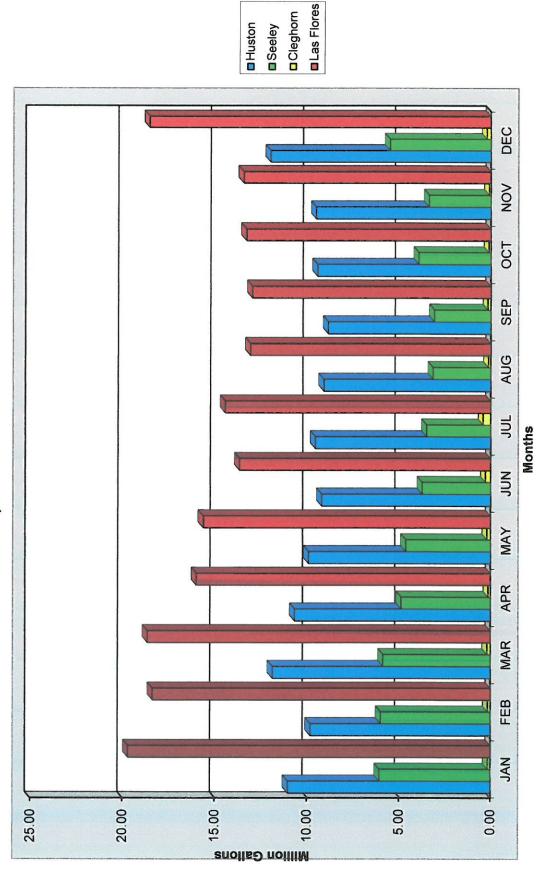
Treatment Facility Average Flow Rates

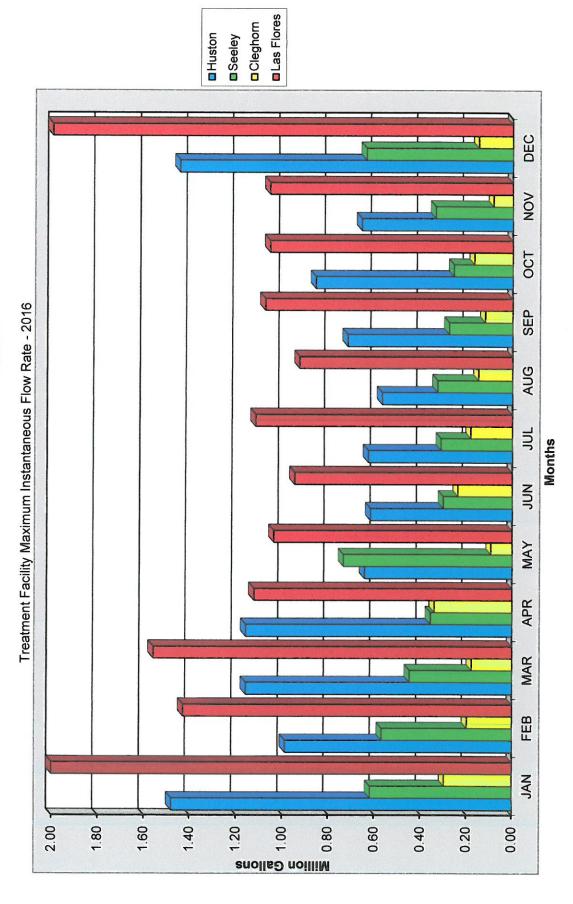
Year:

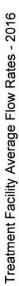
2016

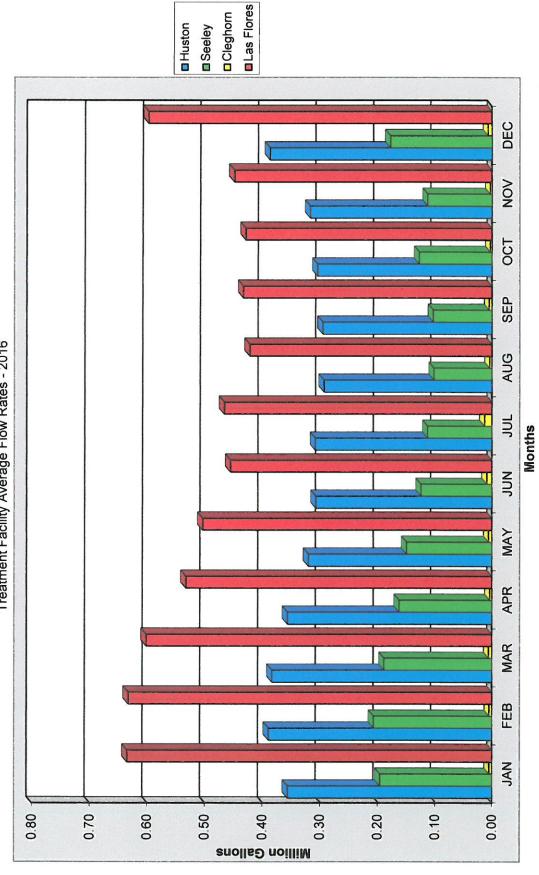
Huston Creek	Seeley Creek	Cleghorn	Las Flores	Las Flores
daily	daily	daily	daily	daily
e proposition de la company				
0.7 mg/d	0.5 mg/d	0.2 mg/d		
average	average	average		
average flow	average flow	average flow	average flow	average flow
month	month	month	month	month
	All flows in million	gallons per day		
Huston	Seeley	Cleghorn	District Effluent	Flow to ponds
0.357	0.197	0.005	0.635	empty
0.390	0.208	0.005	0.633	empty
0.384	0.190	0.006	0.602	empty
0.357	0.164	0.004	0.533	empty
0.321	0.151	0.006	0.504	empty
0.308	0.126	0.009	0.456	empty
0.309	0.114	0.013	0.467	empty
0.294	0.103	0.004	0.423	empty
0.296	0.104	0.005	0.434	empty
0.305	0.129	0.003	0.430	empty
0.318	0.114	0.003	0.450	empty
0.388	0.179	0.007	0.599	empty
2016 7	reatment Facilit	y Average Flow	Rate	
0.336	0.148	0.006	0.514	
	0.7 mg/d average average flow month Huston 0.357 0.390 0.384 0.357 0.321 0.308 0.309 0.294 0.296 0.305 0.318 0.388	daily daily 0.7 mg/d average average average flow month average flow average flow month Huston Seeley 0.357 0.197 0.390 0.208 0.384 0.190 0.357 0.164 0.321 0.151 0.308 0.126 0.309 0.114 0.294 0.103 0.296 0.104 0.305 0.129 0.318 0.114 0.388 0.179	daily daily daily 0.7 mg/d 0.5 mg/d 0.2 mg/d average average average flow month month month All flows in million gallons per day Huston Seeley Cleghorn 0.357 0.197 0.005 0.390 0.208 0.005 0.384 0.190 0.006 0.357 0.164 0.004 0.321 0.151 0.006 0.308 0.126 0.009 0.309 0.114 0.013 0.294 0.103 0.004 0.296 0.104 0.005 0.305 0.129 0.003 0.318 0.114 0.003 0.388 0.179 0.007	daily daily daily daily 0.7 mg/d average 0.5 mg/d average 0.2 mg/d average average flow average flow month by average flow month average flow month

Treatment Facility Total Volume Flows - 2016







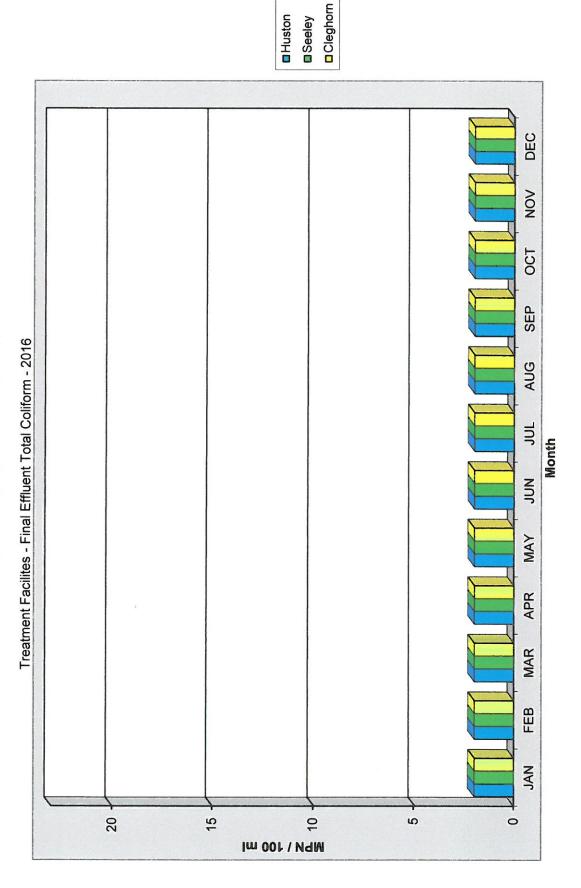


				MOILUIN MEDIAL AVELAGES		
					Year:	2016
	Husto	Huston Creek	Seeley	Seeley Creek	Cled	Cleahorn
	Disinfected Final	Final Effluent	Disinfected	Disinfected Final Effluent	Disinfected	Disinfected Final Effluent
Frequency	2 / week	daily	2 / week	daily	2 / week	daily
Requirement	23 / 100 ml *		23 / 100 ml *		23 / 100 ml *	,
Purpose Violations	Q	Σ	O	M	D	Σ
	Total Coilform	Chlorine Residual	Total Coilform	Chlorine Residual	Total Coilform	Chlorine Residual
month	MPN	l/6m	MPN	l/gm	MPN	l/gm
JANUARY	2	15.7	2	6.7	2	14.6
FEBRUARY	2	14.0	2	8.7	2	12.0
MARCH	2	15.5	2	7.8	2	12.0
APRIL	2	17.9	2	10.8	2	13.7
MAY	2	17.8	2	11.5	2	7.8
JUNE	2	16.4	2	11.6	2	9.9
JULY	2	17.1	2	10.3	2	2.0
AUGUST	2	16.3	2	9.5	2	5.3
SEPTEMBER	2	18.2	5	11.4	2	4.7
OCTOBER	2	19.0	2	9.6	2	9.2
NOVEMBER	2	18.9	2	8.8	2	7.9
DECEMBER	2	16.9	2	10.5	2	10.0

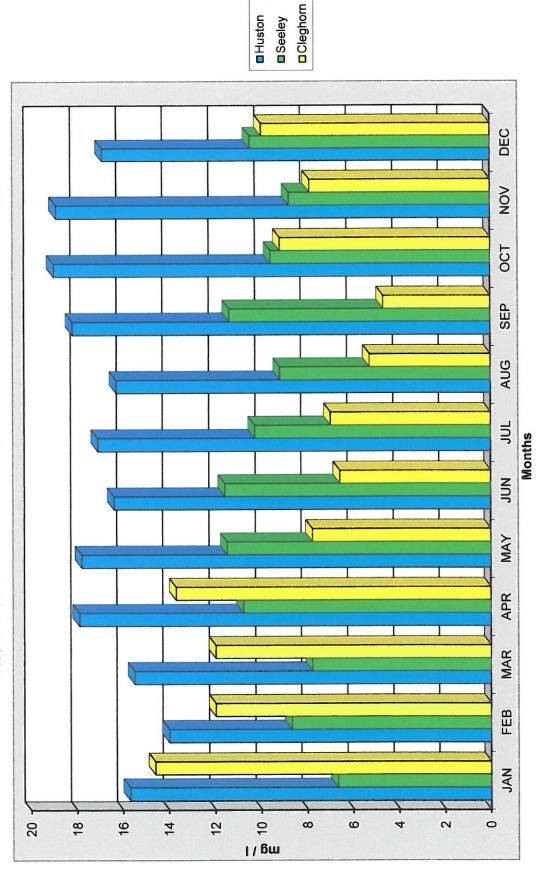
D - Sample has Effluent / Discharge Limitations

M - Sample has Effleuent Monitoring Requirements

^{*} median does not exceed 23/100 milileters and does not exceed 240/100 militers in any two consecutive samples



Treatment Facilities - Final Effluent Chlorine Residual - 2016



				CRES	TINE	CRESTI INF SANITATION	1	DISTRICT				
				Dist	ANN Efflu rict Final E	ANNUAL REPORT Effluent Monitoring District Final Effluent - Monitoring Data	_ 0 0	Data				
						n n					Year:	2016
Sample Frequency	2 / Week	2 / Week	Weekly	Weekly	Weekly	2 / Month	2 / Month	2 / Month	2 / Month	Monthly	Monthly	Monthly
Violations												
Sample Type	*		МО	DM	ΜO	ΜQ	Σ	WΩ	Σ	Σ	Σ	Σ
Maximum			0.5 ml/l		6 >	45.0		2.0		A	A	A
Mean/Minimum				> 1.0	9 <	30.0		1.0				
Median	23 / 100 *											
Test	Total	CL2	Settleable	D. O.	摄	BOD	COD	MBAS	S IIO	TKN	N-EON	NH3-N
	Coliform	Res	Solids						Grease			
										9 (0.000) (0.000)		
Units	MPN	mg/l	ml/l	mg/l	nnits	mg/l	l/gm	l/gm	l/gm	mg/l	l/gm	l/gm
Month												
JANDARY	2	3.4	<0.10	8.6	6.8	17.3	51.5	9	Q	12.50	9.20	11.50
FEBRUARY	2	4.9	<0.10	8.4	7.0	13.1	56.3	2	Q	17.40	14.70	16.80
MARCH	2	4.6	<0.10	8.5	7.0	17.3	45.5	2	Q	15.00	14.50	7.00
APRIL	2	5.4	<0.10	8.0	7.2	18.6	53.0	R	2	23.20	10.40	22.20
MAY	2	7.6	<0.10	8.0	7.0	20.3	83.5	2	Q.	22.00	10.30	21.30
JUNE	2	4.4	<0.10	7.1	7.4	18.9	58.5	Q	Q	18.50	9.20	17.30
JULY	2	4.4	<0.10	8.9	7.3	19.0	62.0	2	Q	26.80	8.20	25.80
AUGUST	7	4.6	<0.10	8.9	7.5	21.5	68.5	2	Q	35.00	10.70	34.50
SEPTEMBER	2	5.3	<0.10	7.1	7.3	23.4	71.5	Q.	Q	19.30	9.30	18.50
OCTOBER	7	9.5	<0.10	7.4	7.4	17.8	90.09	R	Q	29.50	8.80	27.00
NOVEMBER	2	8.2	<0.10	7.8	7.3	18.4	59.5	N	Q.	22.80	8.40	22.00
DECEMBER	2	7.4	<0.10	7.7	7.5	31.2	46.0	ND	Q.	21.20	12.70	20.80
AVERAGES		5.8	< 0.10	7.7	7.2	19.7	58.8	ND	QN	21.93	10.53	20.39
		1			1		· · · · ·		1			10:01

D - Sample has Effluent / Discharge Limitations

M - Sample has Effluent Monitoring Requirements

A - Result not an average (only one sample collected per month)

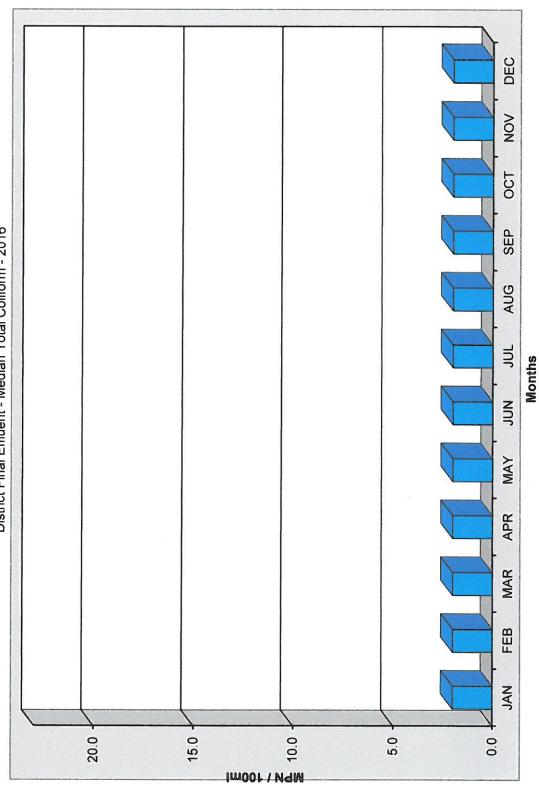
* median does not exceed 23/100 milileters and does not exceed 240/100 milliters in any two consecutive samples

	Year: 2016	Amidal Testing	M	A	Acid Heavy Total e Metals Petroleum Hydrocarbons	l/an l/an			∢	
			Σ	A	Base/Neutral/Acid Extractable Organics	l/bn)		∢	
TRICT Data lation			Σ	A	Total Phenols	ma/l	,		4	
ION DIS ORT oring fonitoring on / Perco			Σ	∢	Total Total Cyanides Phenols	ma/l			∢	
E SANITATION ANNUAL REPORT Effluent Monitoring nal Effluent - Monitoring			Σ	A	Flouride	l/bm		0.57	0.70	
CRESTLINE SANITATION DISTRICT ANNUAL REPORT Effluent Monitoring District Final Effluent - Monitoring Data Las Flores Ranch Irrigation / Percolation	8	6111	Σ	A	Boron	ma/l	o	0.19	0.38	
	C	Seminal Lesming	Σ	4	Sulfate	ma/l		140.0	149.0	
	i de ciado	Jelliaiii	Σ	A	Sodium	m//I		93.0	110.0	
			Σ	∢	Chloride Sodium	mg/l		120.0	171.0	
			Σ	4	TDS	ma/l		500.0	099	
	Sample From Const	Violations	Sample Type	Mean/Minimum Median	Test	Units	Month	JANUARY FEBRUARY MARCH APRIL MAY	JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER	

D - Sample has Effluent / Discharge Limitations M - Sample has Effleuent Monitoring Requirements

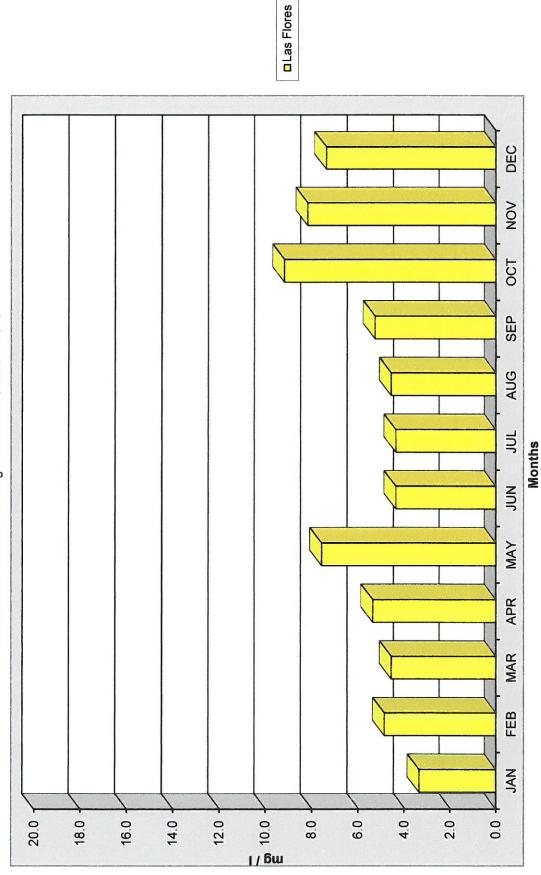
A - For Sample Results see Appendix "A"

District Final Effluent - Median Total Coliform - 2016

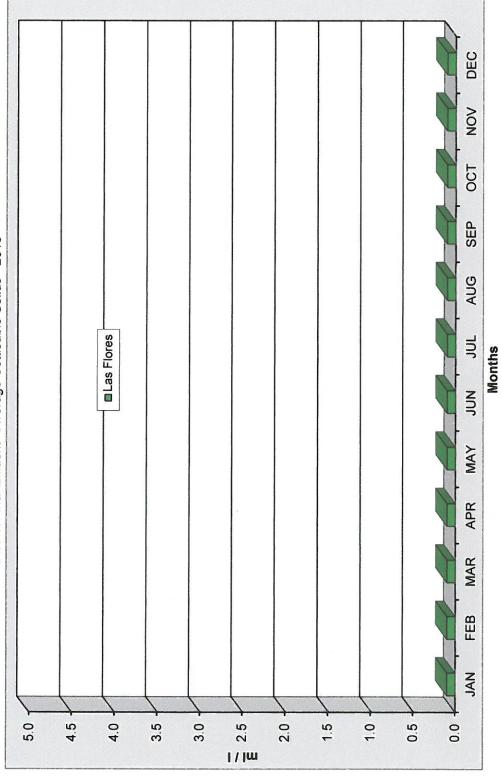


Las Flores

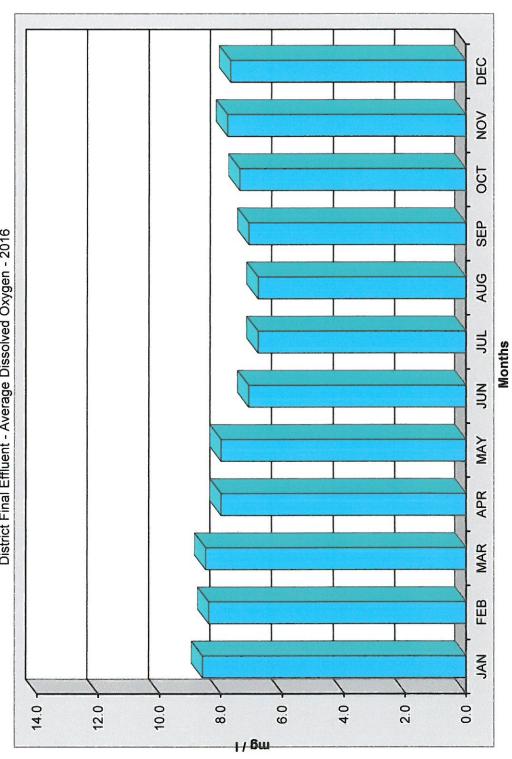
District Final Effluent - Average Chlorine Residual - 2016



District Final Effluent - Average Settleable Solids - 2016

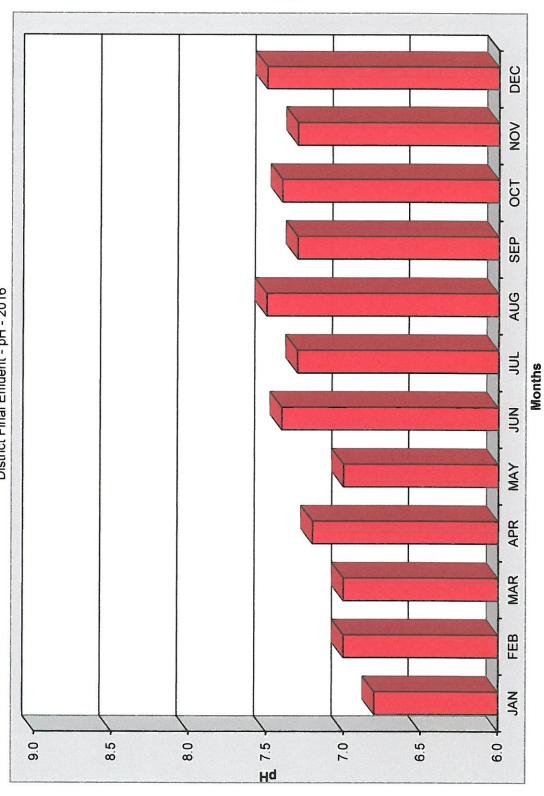






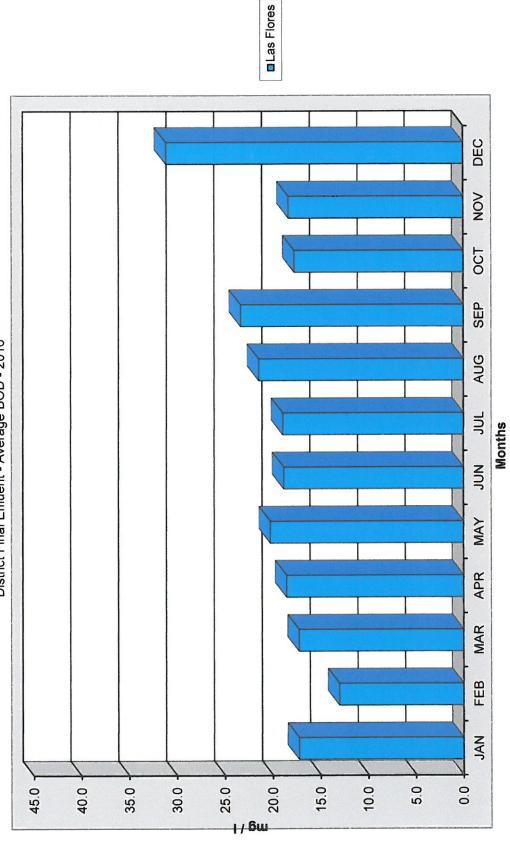
□ Las Flores

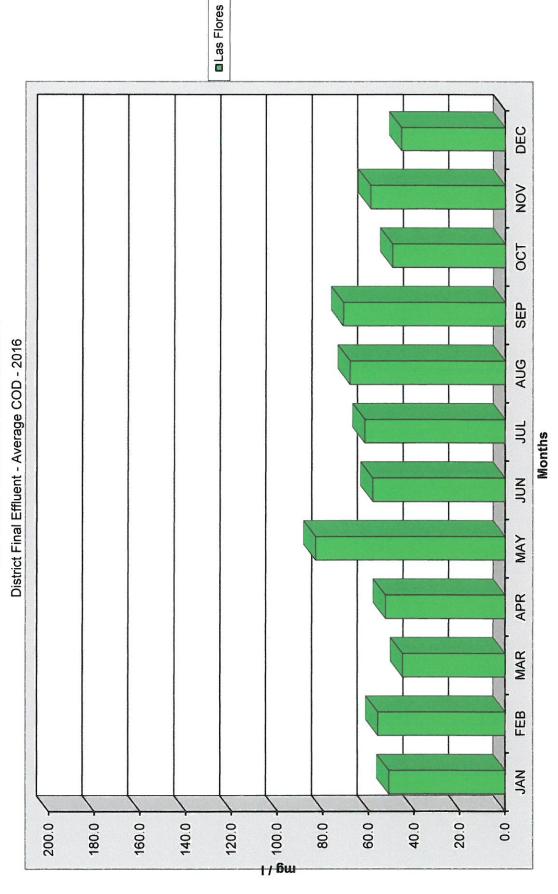
District Final Effluent - pH - 2016



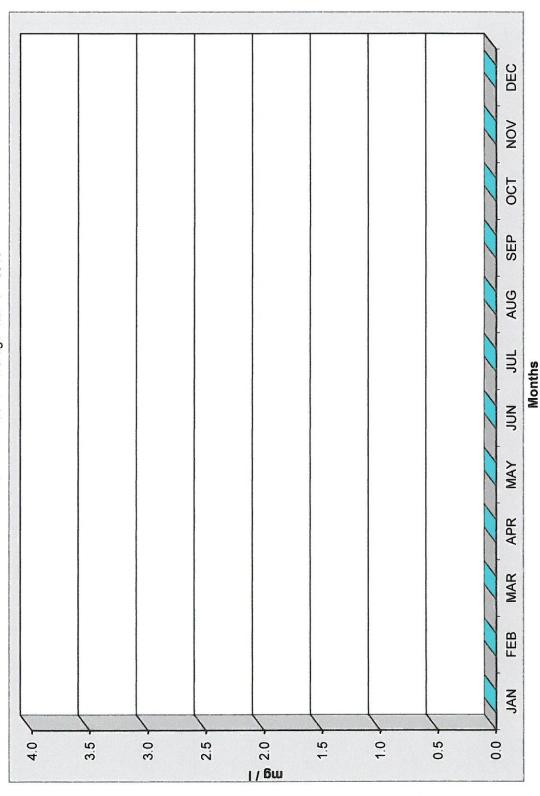
Las Flores

District Final Effluent - Average BOD - 2016





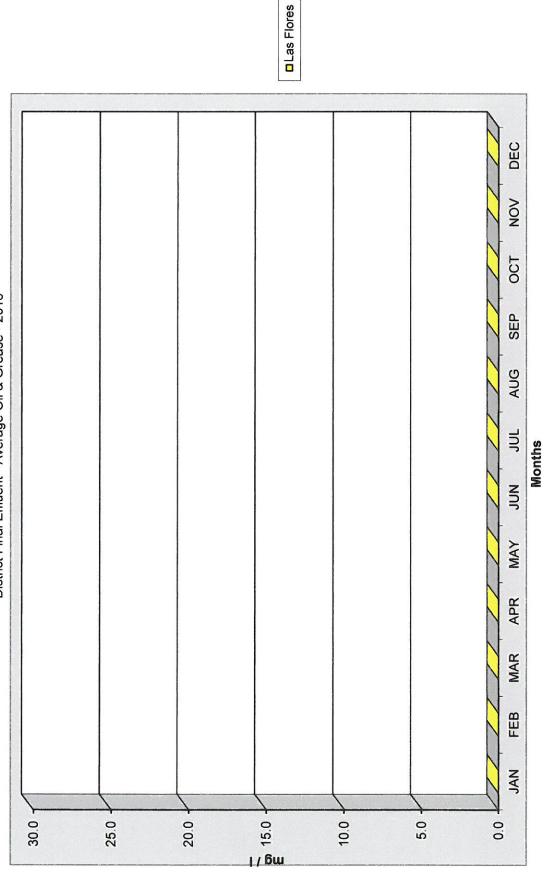
CRESTLINE SANITATION DISTRICT District Final Effluent - Average MBAS - 2016



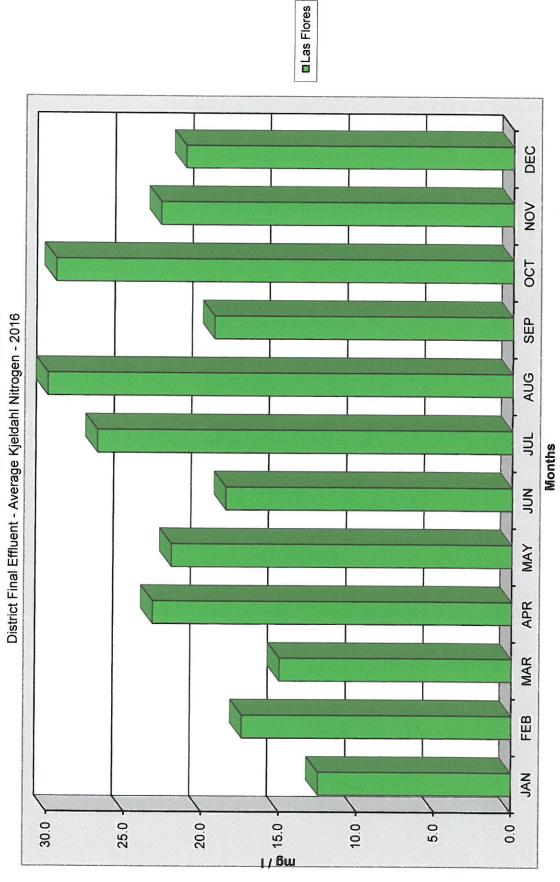
□ Las Flores

23

District Final Effluent - Average Oil & Grease - 2016



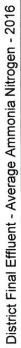
24

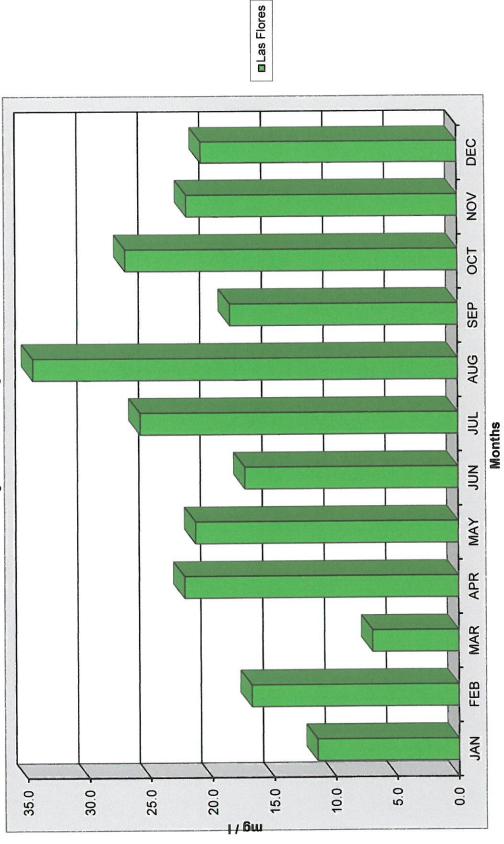


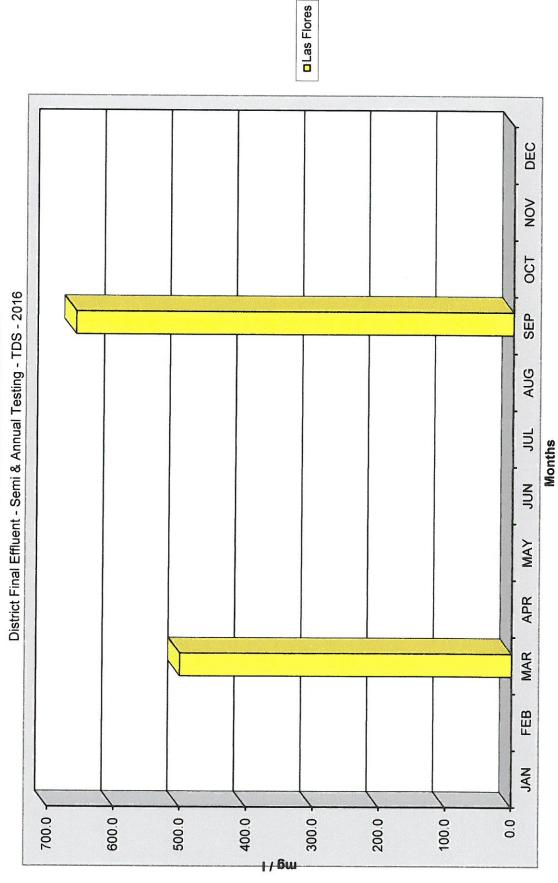
CRESTLINE SANITATION DISTRICT

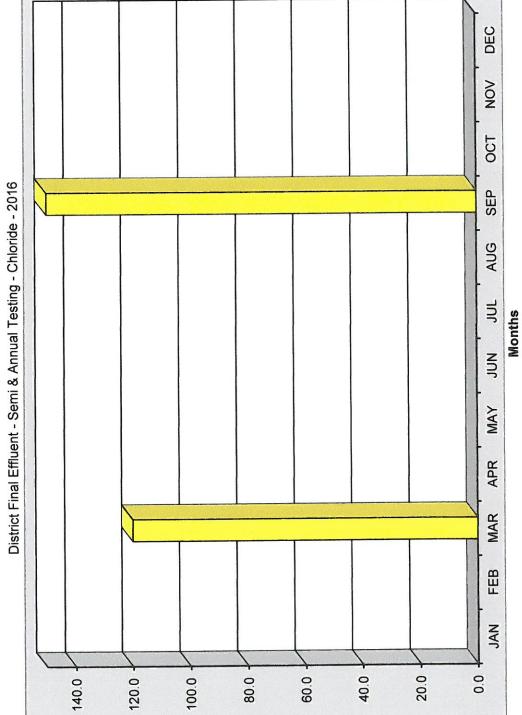
District Final Effluent - Average Nitrate Nitrogen - 2016





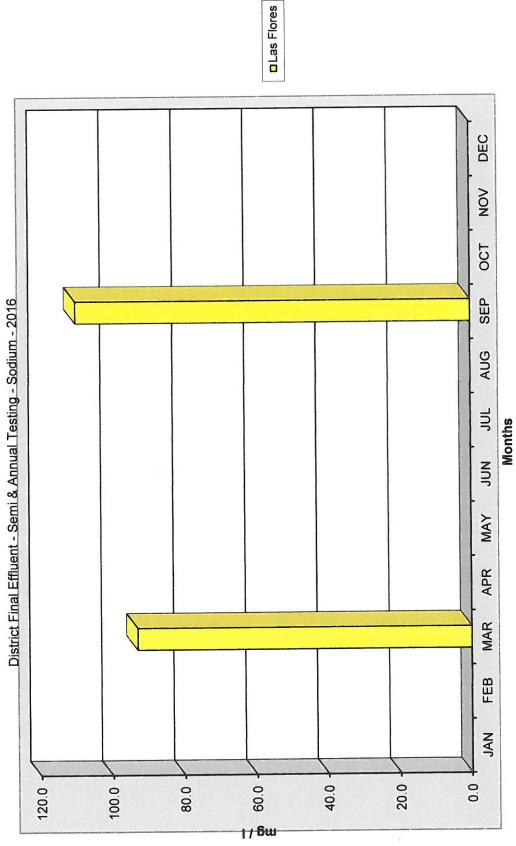


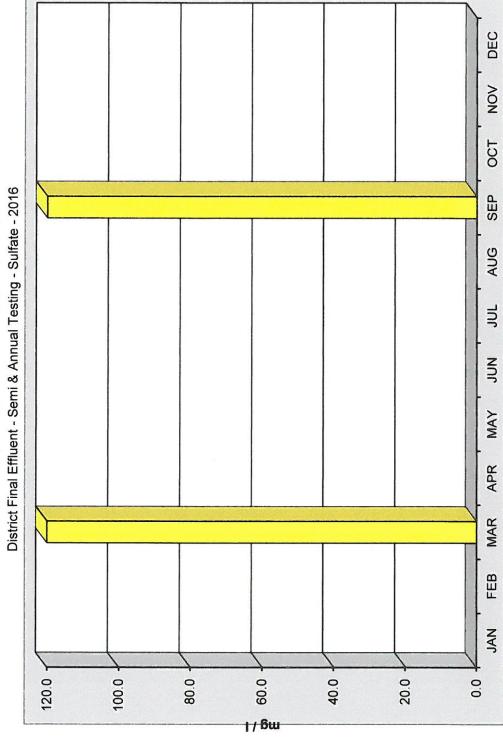




1 / 6w

□ Las Flores

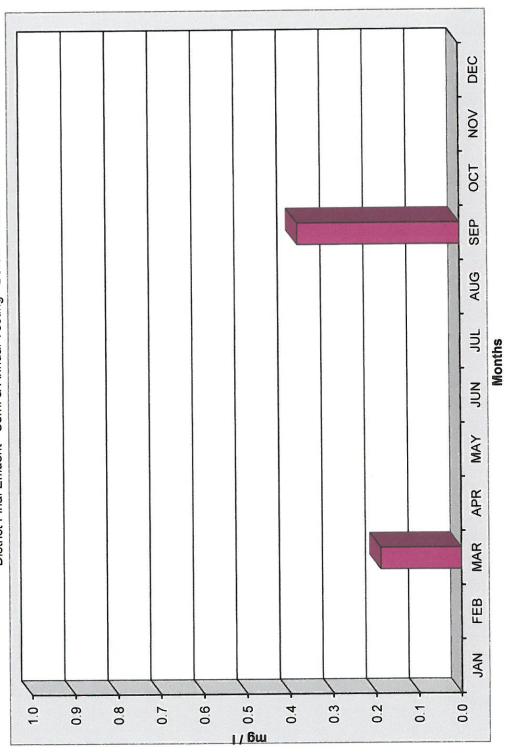




□ Las Flores

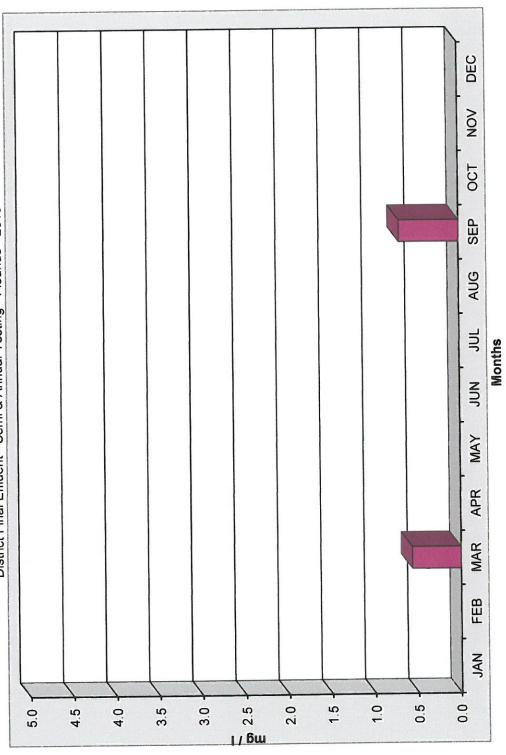
Months

District Final Effluent - Semi & Annual Testing - Boron - 2016



■Las Flores





■Las Flores

CRESTLINE SANITATION DISTRICT ANNUAL REPORT

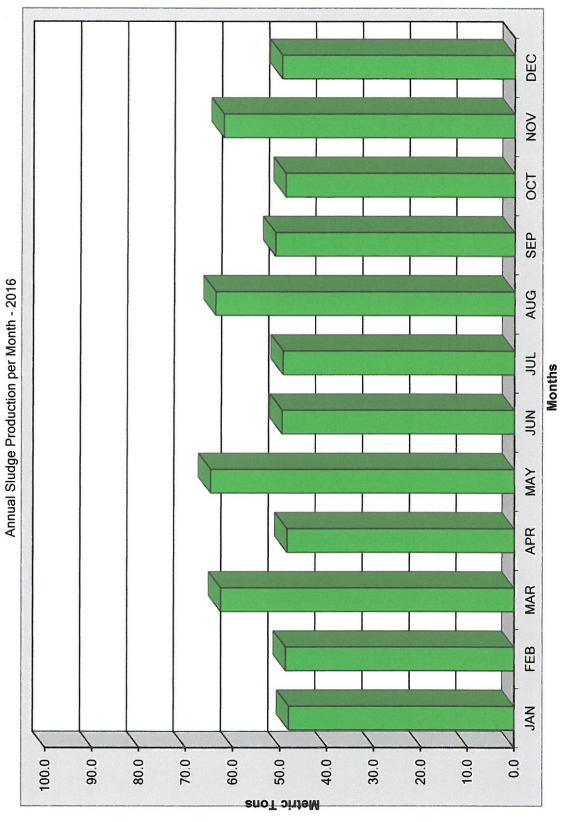
Sludge Monitoring

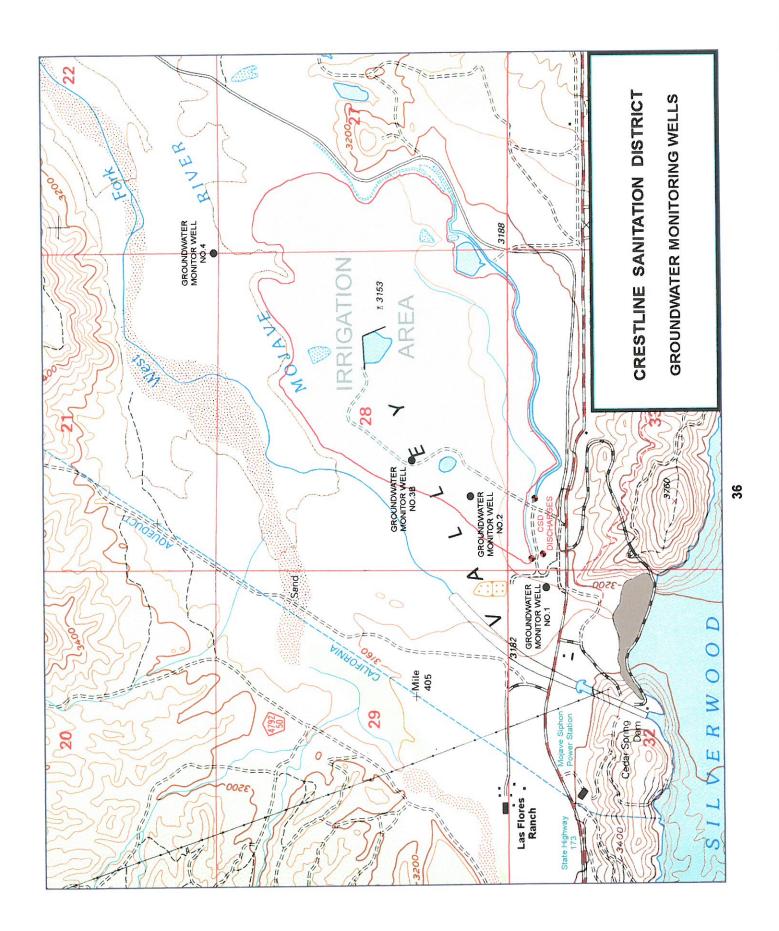
Year: 2016

	Sludge Generated	Sludge Removed from Site	Sludge Disposal Method	Sludge Stockpiled on Site
Month				
January	48.2 tons	48.2 Tons	(a)	0.0 Tons
February	48.9 tons	48.9 Tons	(a)	0.0 Tons
March	62.6 tons	62.6 Tons	(a)	0.0 Tons
April	48.6 tons	48.6 Tons	(a)	0.0 Tons
May	64.8 tons	64.8 Tons	(a)	0.0 Tons
June	49.7 tons	49.7 Tons	(a)	0.0 Tons
July	49.5 tons	49.5 Tons	(a)	0.0 Tons
August	63.8 tons	63.8 Tons	(a)	0.0 Tons
September	51.2 tons	51.2 Tons	(a)	0.0 Tons
October	49.0 tons	49.0 Tons	(a)	0.0 Tons
November	62.2 tons	62.2 Tons	(a)	0.0 Tons
December	49.8 tons	49.8 Tons	(a)	0.0 Tons
TOTAL	648.3 tons	648.3 Tons	(a)	0.0 Tons

 (a) Sludge is collected from Crestline's three treatment plants and Pilot Rock, mixed and pressed at the Huston Creek Treatment Plant. After pressing; the solids are disposed of at One Stop Landscape
 (13024 San Timoteo Canyon Road, Redlands, CA 92373) for composting and eventual recycling.

Note: Laboratory Analysis of the sludge is not required at this time in recognition that there are no significant industrial waste imputs to the sewer system, and because sludge sampling is required by the disposal facility that accepts the Discharger's sludge. The Regional Board may require qualitative laboratory testing of the sludge if sludge disposal practices and/or locations, as disclosed in the waste discharge requirements, are altered. (Monitoring and Reporting Program 94-57)





ANNUAL REPORT

Pasture Monitoring Well Number 1 Laboratory Monitoring Data

Year:

2016

Frequency	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	
Sample Type	Α	Α	Α	Α	Α	Α	Α	Α	Α	
Sample	Sulfate	Sodium	MBAS	Chloride	TDS	TKN	NH3-N	NO3-N	Water Depth	Well
Units	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	feet *	Number
JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY	130.0 118.0	79.0 85.0	ND ND	54.6 23.2	360 280	0.46 0.18	0.44	2.30	3153.7 3149.7	1
AUGUST SEPTEMBER OCTOBER	136.0	76.0	ND	16.2	285	0.43	0.41	1.30	3149.0	1
NOVEMBER DECEMBER		82.0	ND	15.8	250	ND	ND	1.40	3150.0	1
					3 20 10 2 4		PARTICION DE			

A - Monitoring Requirement

^{* =} Depth in feet from surface to groundwater

Pasture Monitoring Well Number 2 Laboratory Monitoring Data

Year:

2016

requency	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	
Sample Type	Α	Α	Α	Α	Α	Α	Α	Α	Α	
Sample	Sulfate	Sodium	MBAS	Chloride	TDS	TKN	NH3-N	NO3-N	Water Depth	Well
Units	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	feet *	Number
JANUARY FEBRUARY MARCH APRIL MAY JUNE	100.0	96.0 96.0	ND ND	153.0 105.0	520 440	0.26 0.14	0.24	4.80 1.00	3153.5 3151.5	2
JULY AUGUST SEPTEMBER OCTOBER		88.0	ND	151.0	610	0.39	0.37	6.20	3151.2	2
NOVEMBER DECEMBER	3	90.0	ND	141.0	480	0.20	0.18	6.40	3153.2	2

A - Monitoring Requirement

^{* =} Depth in feet from surface to groundwater

ANNUAL REPORT

Pasture Monitoring Well Number 3 Laboratory Monitoring Data

Year: 2016

requency	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	
Sample Type	Α	Α	Α	Α	Α	Α	Α	Α	Α	
Sample	Sulfate	Sodium	MBAS	Chloride	TDS	TKN	NH3-N	NO3-N	Water Depth	Well
Units	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	feet *	Number
JANUARY FEBRUARY MARCH APRIL MAY JUNE	90.0 101.0	81.0 79.0	ND ND	124.0 126.0	450 490	0.17 0.15	0.16 0.13	2.40 1.40	3150.7 3148.2	3
JULY AUGUST SEPTEMBER OCTOBER		56.0	ND	116.0	500	ND	ND	3.70	3146.7	3
NOVEMBER DECEMBER	The construction of the con-	88.0	ND	132.0	460	0.21	0.19	2.40	3148.5	3

A - Monitoring Requirement

^{* =} Depth in feet from surface to groundwater

ANNUAL REPORT Pasture Monitoring Well Number 4 Laboratory Monitoring Data

Year:

2016

Frequency	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	
Sample Type	Α	Α	Α	Α	Α	Α	Α	Α	Α	
Sample	Sulfate	Sodium	MBAS	Chloride	TDS	TKN	NH3-N	NO3-N	Water Depth	Well
Units	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	feet *	Number
JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY	80.0 94.0	55.0 54.0	ND ND	159.0 154.0	516 560	0.23 0.16	0.21	0.90	3112.2 3109.7	4
AUGUST SEPTEMBER OCTOBER	117.0	48.0	ND	158.0	580	0.12	0.11	2.70	3108.8	4
NOVEMBER DECEMBER	The second secon	56.0	ND	164.0	540	0.13	0.12	2.70	3109.4	4

A - Monitoring Requirement

^{* =} Depth in feet from surface to groundwater

ANNUAL REPORT

Pasture Monitoring Wells Labroratory Monitoring Data

Annual Samples

2016

	Annual		
A	Α	A	
Purgable Halocarbons *	Purgable Aromatics	Base/Neutral/Acid Extractable Organics	Well Number
ug/l	ug/l	ug/l	
В	В	В	1
В	В	В	2
В	В	В	3
В	В	В	4
	Purgable Halocarbons * ug/l B B	Purgable Halocarbons * Purgable Aromatics ug/l ug/l B B B B B B	Purgable Halocarbons * Purgable Aromatics Extractable Organics ug/l ug/l ug/l ug/l B B B B B B B B B B B B B

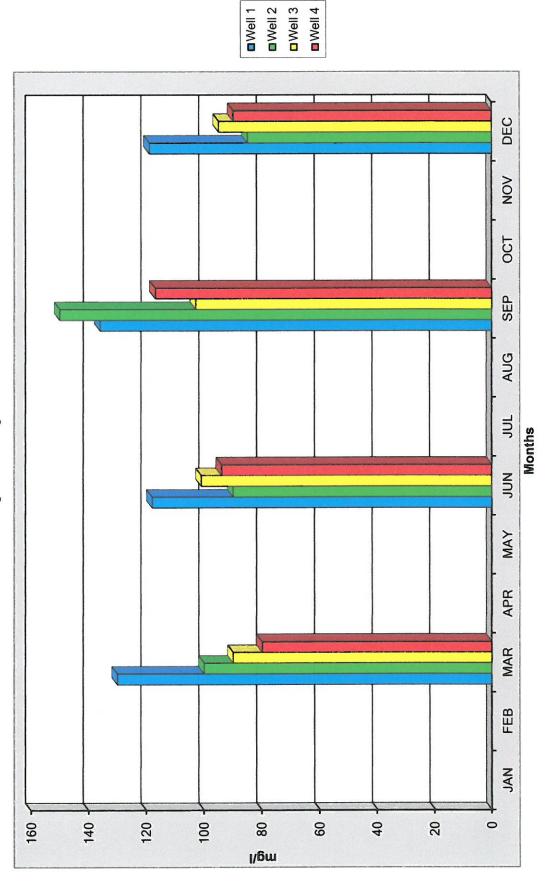
A - Monitoring Requirement

B - For Sample Results see Appendix "B"

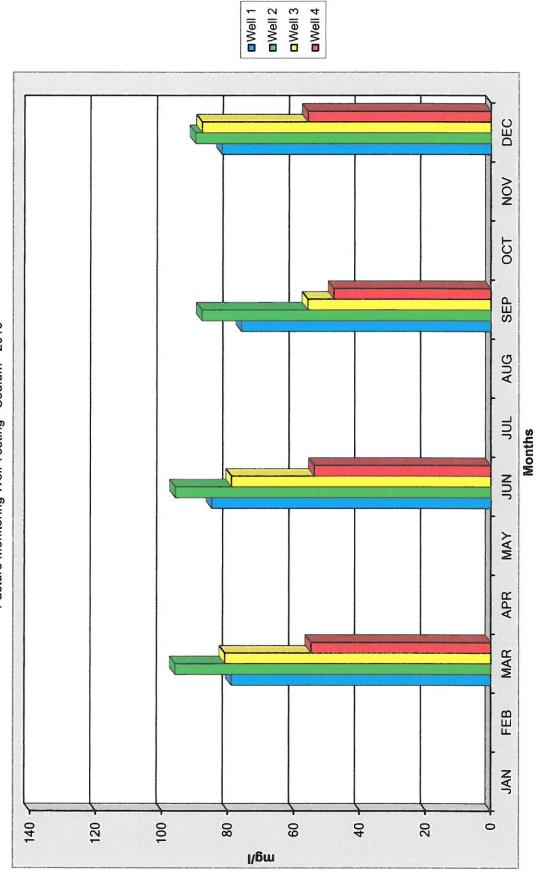
^{*} Analysis shall be conducted for those substances included on the EPA list of priority pollutants and all other toxic substances known to be discharged to the Discharger's system using EPA test methods 603, 608, 624, 625 and other appropriate tests for heavy metals.

CRESTLINE SANITATION DISTRICT

Pasture Monitoring Well Testing - Sulfate - 2016

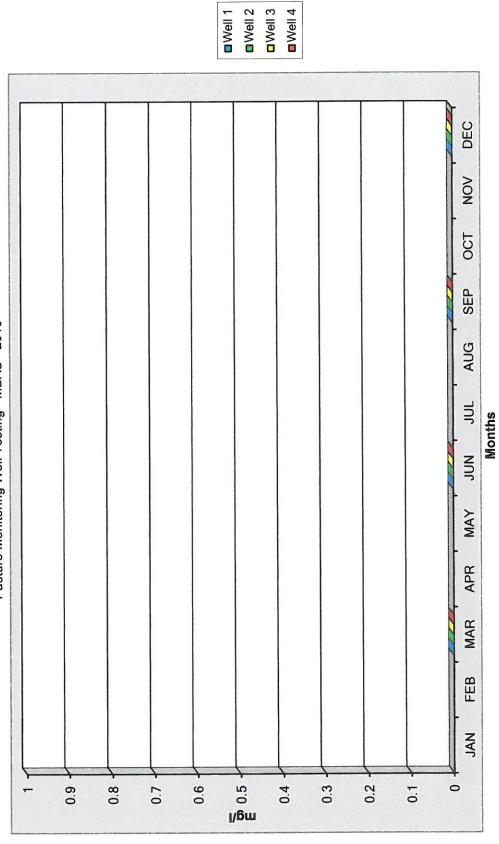


Pasture Monitoring Well Testing - Sodium - 2016

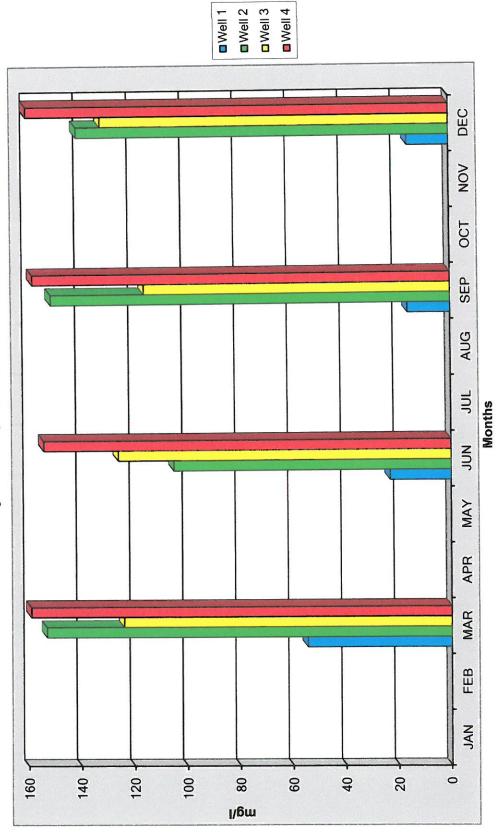


CRESTLINE SANITATION DISTRICT

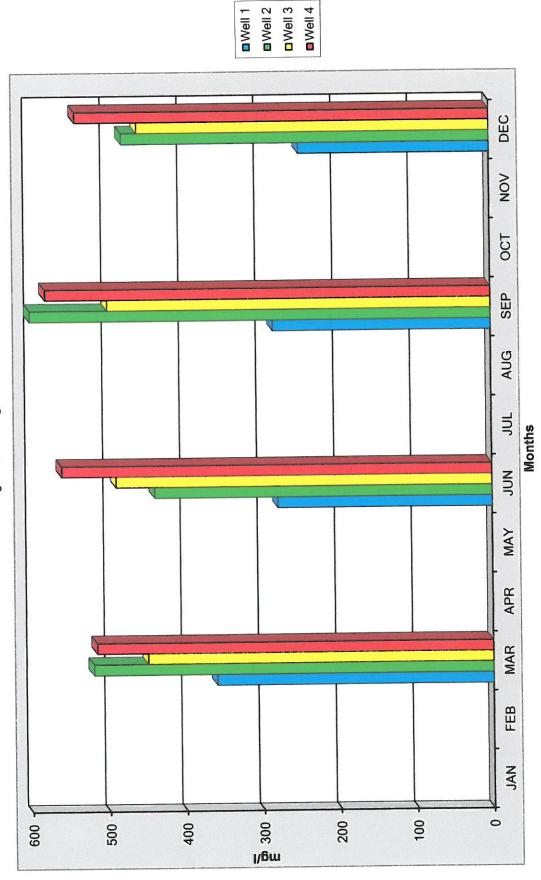
Pasture Monitoring Well Testing - MBAS - 2016



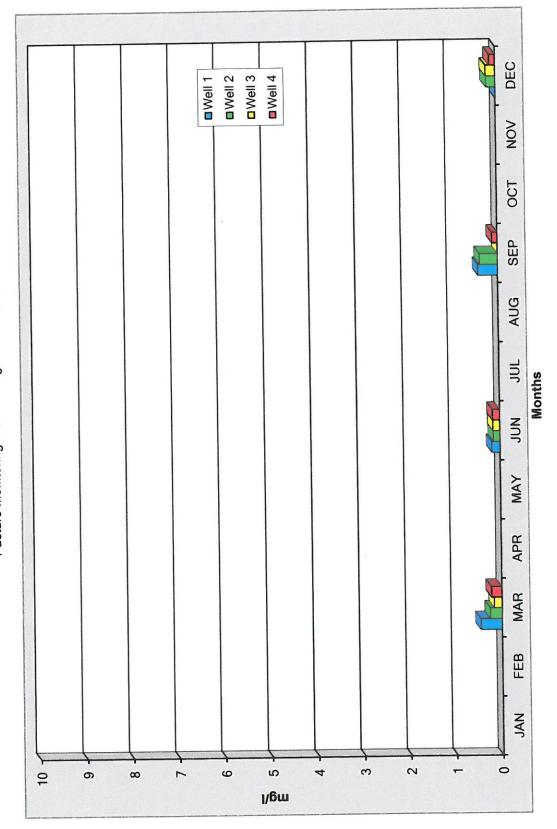
Pasture Monitoring Well Testing - Chloride - 2016



Pasture Monitoring Well Testing - TDS - 2016

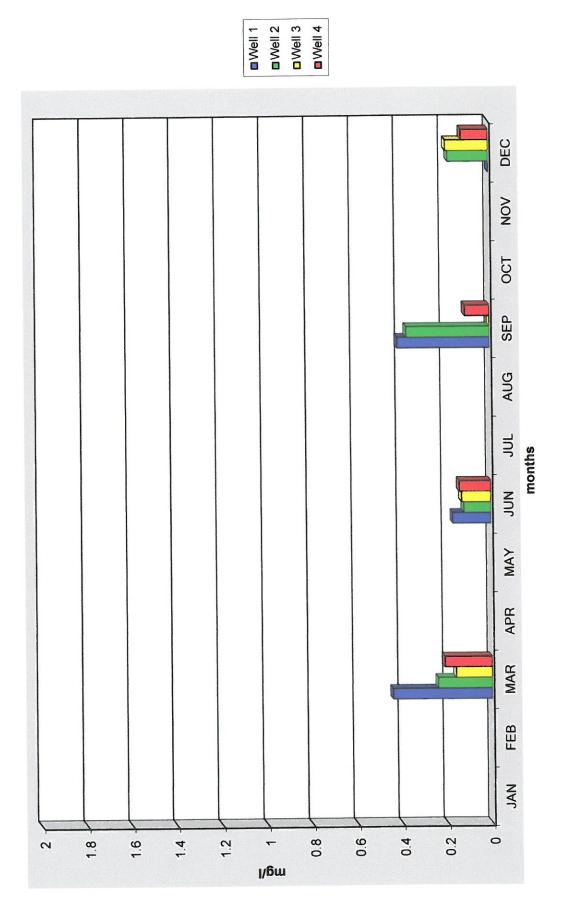


CRESTLINE SANITATION DISTRICT Pasture Monitoring Well Testing - TKN - 2016



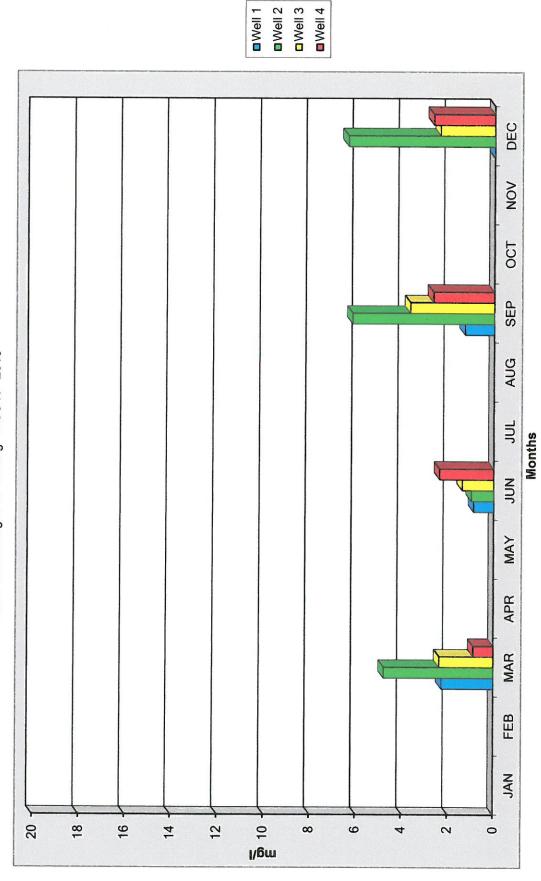
01/02 des

CRESTLINE SANITATION DISTRICT Pasture Monitoring Well Testing - NH3-N - 2016



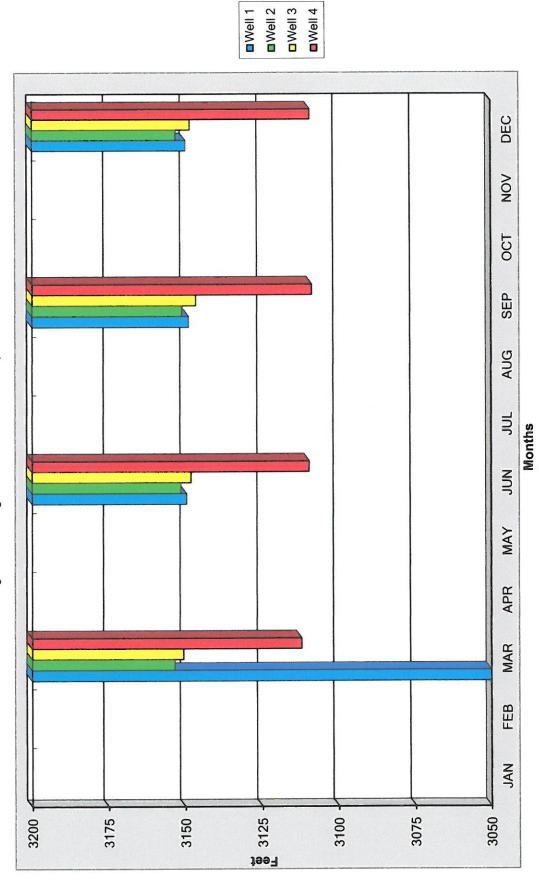
CRESTLINE SANITATION DISTRICT

Pasture Monitoring Well Testing - NO3-N - 2016



CRESTLINE SANITATION DISTRICT

Pasture Monitoring Well Testing - Elevation of Water Depth - 2016



	Data
UDISTRICT	Water Monitoring D
STE	ţ
<u></u>	Mon
٥	ter
TA	Wat
SANITATION	
	Supply
CRESTLINE	
ES.	Annua
2	ni 4
	Sen

2016

Year:

			Purchased	Water								53.13		36.44			
			Local	Water								33.70		10.06			
			Total	Flow	٤	MG		98.58		5.25		86.90		46.50		138.7	
Semi-	Annual		Monitor				Sulfate	140.0	115,102	130.0	5,692	76.0	55,081	115.0	44,598	91.1	105,371
Semi-	Annual		Monitor		H		Sodium	93.0	76,461	0.06	3,941	62.0	44,934	76.0	29,474	8.79	78,348
Semi-	Annual		Monitor				Chloride	120.0	98,659	117.0	5,123	82.4	59,719	92.2	35,756	87.0	100,598
Semi-	Annual		Monitor				TDS	500.0	411,079	470	20,579	352	255,111	405	157,063	374.2	432,753
Frequency		Violations	Sample Type	Maximum	Mean/Minimum	Median		MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS
			Sample	ş	Dates												
								Crestline Sanitation District	(Final Effluent)	Crestline Lake Arrowhead	Water Agency (Silverwood)	Crestline Village	Water District	Valley of Enchantment	Mutual Water Company	Calculated Constituent	Concentrations

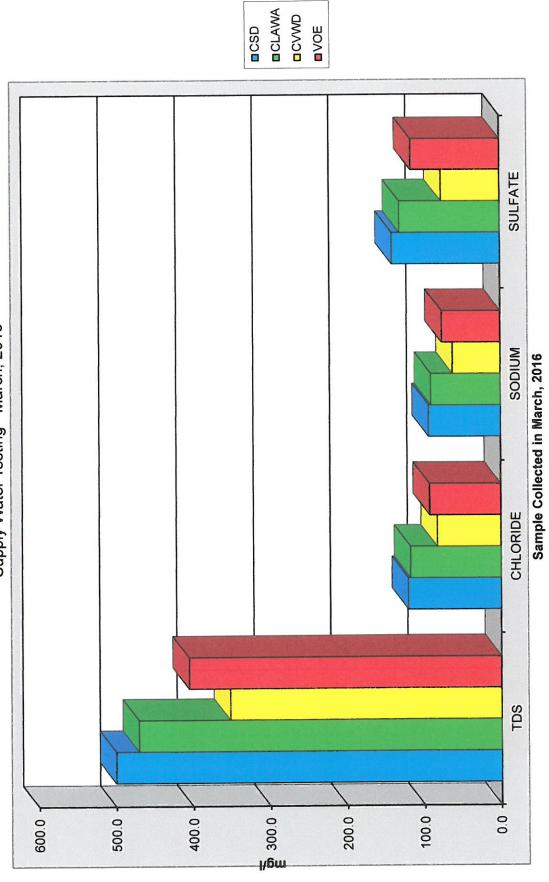
"CALCULATED CONSTITUENT CONCENTRATIONS" above, were mathematically calculated on samples collected from the three water purveyors contributing to the sewer system.

Samples collected in March

Flow Dates: October 1, 2015 thru March 31, 2016

CRESTLINE SANITATION DISTRICT Supply Water Testing - March, 2016

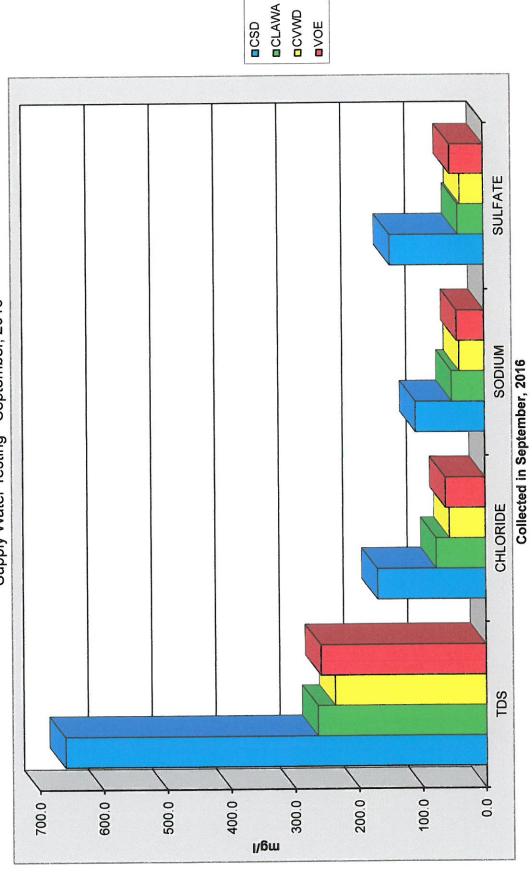




		CRESTLINE SANITATION DISTRICT Semi Annual Supply Water Monitoring Data	∉E SANITAT Supply Wat	CRESTLINE SANITATION DISTRICT ii Annual Supply Water Monitoring	CT ng Data			>	
								Year	2016
		Frequency	Semi- Annual	Semi- Annual	Semi- Annual	Semi- Annual			
		Violations							
	Sample	Sample type	Monitor	Monitor	Monitor	Monitor	Total	Local	Purchased
		Maximum					Flow	Water	Water
	Dates	Mean/Min.					ء.		
		Median					S S		
			TDS	Chloride	Sodium	Sulfate			
Crestline Sanitation District		MG/L	660.0	171.0	110.0	149.0	85.91		
(Final Effluent)		POUNDS	472,883	122,520	78,814	106,757			
Crestline Lake Arrowhead		MG/L	265.0	78.4	52.0	41.0	12.78		
Water Agency (Silverwood)		POUNDS	28,245	8,356	5,542	4,370			
Crestline Village		MG/L	238.0	56.8	40.0	37.5	109.80	33.88	76.00
Water District		POUNDS	217,944	52,014	36,629	34,340			
Valley of Enchantment		MG/L	260.0	63.4	44.0	53.4	24.95	5.56	19.39
Mutual Water Company		POUNDS	54,102	13,192	9,156	11,112			
Calculated Constituent		MG/L	244.1	59.8	41.7	40.5	147.6		
Concentrations		POUNDS	300,483	73,613	51,332	49,855			
	"CALCULATED	"CALCULATED CONSTITUENT CONCENTRATIONS" above, were mathematically calculated on samples	CONCENTRA	TIONS" abov	e, were mathe	ematically cal	culated on s	amples	
-	collected from t	collected from the three water purveyors contributing to the sewer system.	rveyors contri	buting to the s	ewer system				
	Samples coll	Samples collected in SEPTEMBER	MBER		Flow Dates :	Flow Dates : April 1, 2016 thru		September 30, 2016	16

53

CRESTLINE SANITATION DISTRICT Supply Water Testing - September, 2016

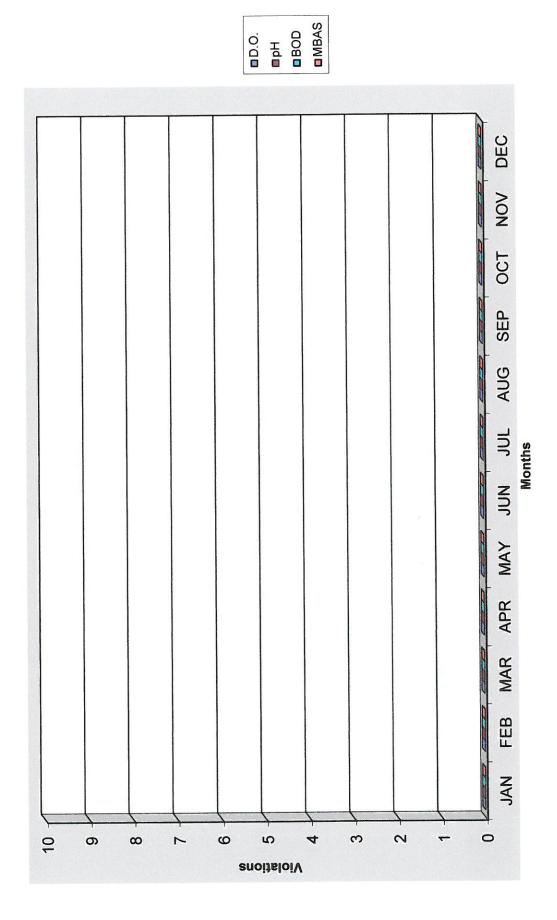


				ANA	ANNUAL REPORT	ORT					
		Final E	:ffluent Di	sposal Sil	Final Effluent Disposal Site (Las Flores) Constituent Violations	res) Con	stituent Vi	olations		Year:	2016
Frequency	2 week	weekly	weekly	weekly	2 month	2 month	2 month	2 month	monthly	monthly	monthly
Violations											
Sample Type	D/M	D/M	D/M	D/M	D/M	Σ	D/M	Σ	Σ	Σ	Σ
Maximum		0.5 ml/l		6 >	45.0		2.0				
Mean/Min.*	23.0 *		> 1	> 6	30.0		1.0				
	Total	Settleable						Oil &			
	Coliform	Solids	D.O.	Hd	BOD	COD	MBAS	Grease	TKN	NO3-N	NH3-N
	MPN	l/lm	l/gm	Hd	l/gm	l/gm	l/gm	l/gm	l/gm	l/gm	l/gm
January	1			1		,	t	t		ì	1
February	ı	ı	,	ı	•	ľ	1	1	i	ī	ı
March	1	,	ì	ı	ı	ı	1	,	ï	Ē	É
April		,	1	ſ.	1	,	1	ı	ı	1	
May	1	1	•	ı	9	1	1	ı	1	1	,
June	ľ	ı	ı	1	ı	ı	ı	•	ı	ì	1
July	ľ	п	ı	1	ı	ı	ı	ı	,	1	1
August	ı	1	1	ŗ	ı	ı	1	1	ı	ţ	ı,
September	1		,		ı,	1	1	1	1	ı	t
October	1	ı	ı	•	1	,	1	ı	!	ſ	1
November	1	ı	ľ	1	1	,	ı	1		1	ı
December	ï	ı	1	,	-		-	1	-	1	•
	,		,	(c	c	c	C	c	<u> </u>	_

D - Has Effluent / Discharge Limitations

M - Has Effluent Monitoring Requirements

CRESTLINE SANITATION DISTRICT Final Effluent Constituent Violations - 2016



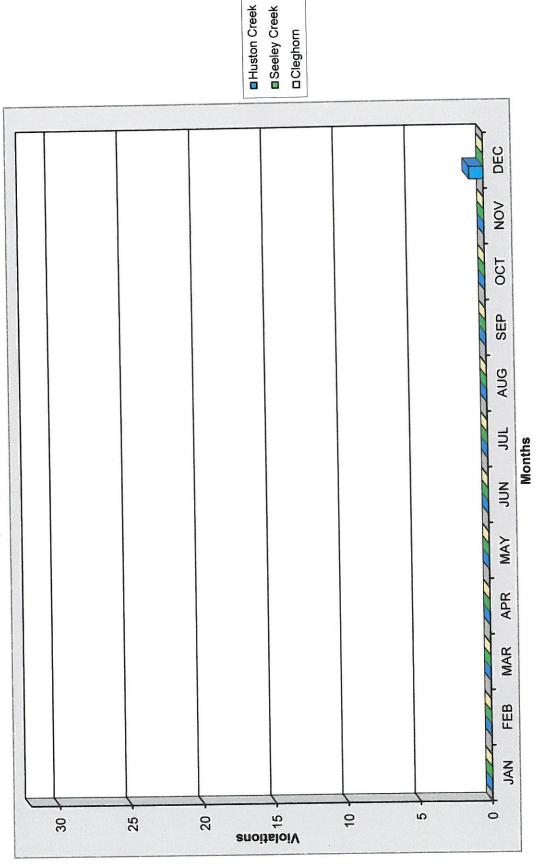
ANNUAL REPORT

Treatment Facilities Flow Violations

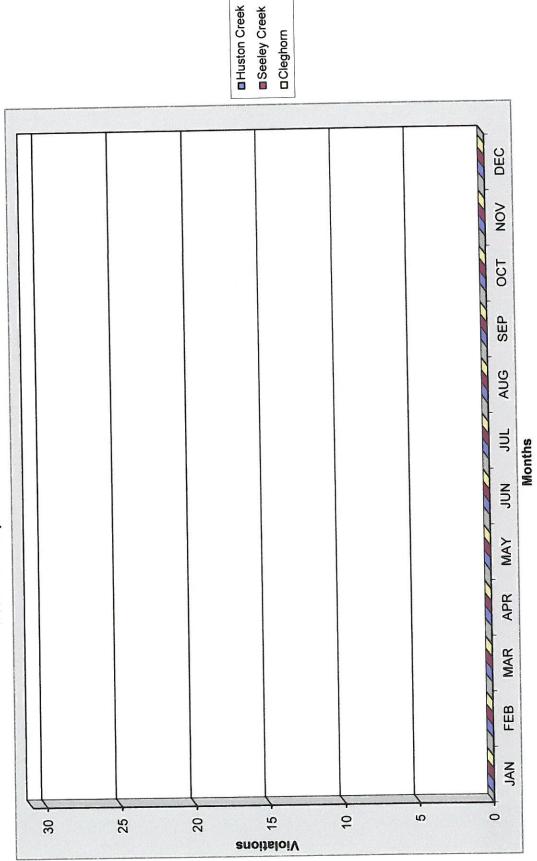
Year: 2016

· · · · · · · · · · · · · · · · · · ·					rear:	2016
Facility name	Huston	Plant	Seeley	Plant	Cleghorn	Plant
Reading	daily	daily	daily	daily	daily	
Average	monthly		monthly		monthly	
Design	design	maximum	design	maximum	design	maximum
limits	0.7 mg/d	2.50 mg	0.5 mg/d	1.00 mg	0.2 mg/d	0.4 mg
	design capacity	instantaneous peak	design capacity	instantaneous peak	design capacity	instantaneou peak
	Huston	HC peak	Seeley	SC peak	Cleghorn	CH peak
Months	violations	violations	violations	violations	violations	violations
January	-	-	-	-	-	-
February	-	-	-	1-	-	-
March	-	-		- 1	_	_
April	-	-		-	-	-
May	-	-	=	-	-	=:
June	-	-	-	- 1	-	=
July	-	-	-2	- 1	-	_
August	-	-	- 2	-	-	-:
September	=	-	=	- 1	-	=
October	-	-	-8	-	-	
November	-	-	- ⊼	-	-	-:
December	1	-	_	-	-	-

Treatment Facility Design Capacity Flow Violations - 2016



Treatment Facility Instantaneous Flow Violations - 2016



CRESTLINE SANITATION DISTRICT ANNUAL REPORT

APPENDIX "A"

Sample Results
Las Flores Stand Pipe
District Final Effluent

Annual Testing

Tests Results for:
Purgable Organics
Base / Neutral / Acid Extractable Organics
Heavy Metals



P.O. Box 3395

Crestline CA, 92325-3395

Project: NA

Project Number: Las Flores Outfall Annual

Project Manager: Rick Dever

Reported: 09/13/16 12:25

Conventional Chemistry Parameters by APHA/EPA Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
L.F. 9-1 (1609016-01) Liquid	Sampled: 09/01/16 10:00	Received	09/01/16	12:45	480 5				
Cyanide (total)	ND	0.0200	mg/L	1	B610205	09/02/16	09/02/16 17:07	EPA 335.2	
Phenolics	ND	0.0500	0	**		**	"	EPA 420.1	



P.O. Box 3395 Crestline CA, 92325-3395 Project: NA

Project Number: Las Flores Outfall Annual

Project Manager: Rick Dever

Reported: 09/13/16 12:25

Metals by EPA 200 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
L.F. 9-1 (1609016-01) Liquid	Sampled: 09/01/16 10:00	Received:	09/01/16	12:45					
Silver	ND	0.0050	mg/L	1	B6I0145	09/01/16	09/02/16 10:32	EPA 200.7	W-4:
Cadmium	ND	0.0090	**	н	"	11	R		
Chromium	ND	0.0070	н	"	Ü	н	11	н	
Copper	ND	0.042	**	11	"	**		n	
Nickel	ND	0.0050	n	n	"	11	11	n	
Lead	ND	0.0080	н	"	"	**	9	н	
Zinc	0.038	0.034	н	н	,,	н	"	п	



P.O. Box 3395 Crestline CA, 92325-3395 Project: NA

Project Number: Las Flores Outfall Annual

Project Manager: Rick Dever

Reported: 09/13/16 12:25

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
L.F. 9-1 (1609016-01) Liquid	Sampled: 09/01/16 10:00	Received:	09/01/16	12:45					
HC < C8	ND	0.010	mg/L	1	B6H2338	09/02/16	09/06/16 15:5:	5 EPA 8015B	
C8 <= HC < C9	ND	0.010	Ħ	ü	11	*1	п	н	
C9 <= HC < C10	ND	0.010	Ħ	ũ	"	**	u	н	
C10 <= HC < C11	ND	0.010	Ħ	ii	u	**	n .	н	
C11 <= HC < C12	ND	0.010	Ħ	ii ii	11	Ħ	U	н	
C12 <= HC < C14	ND	0.010	**	ŭ	u	**	u	и	
C14 <= HC < C16	ND	0.010	н	Œ.	"	**	u.	н	
C16 <= HC < C18	ND	0.010	н	u	tt.	Ħ	U	н	
C18 <= HC < C20	ND	0.010	n	ű	"	**	II .	н	
C20 <= HC < C24	ND	0.010	**	"	"	**	u	н	
C24 <= HC < C28	ND	0.010	**	Œ.	11	H	11	н	
C28 <= HC < C32	ND	0.010	н		tt	H	u	11	
HC >= C32	ND	0.010	ЭHC	"		11	0	THE STATE OF THE S	
Total Petroleum Hydrocarbons (C7-C36)	ND	0.050	. 11	u	u	:#	.0	н	
Surrogate: o-Terphenyl		80.4 %	60-	-175	"	"	"	"	



Project: NA

Project Manager: Rick Dever

P.O. Box 3395

Project Number: Las Flores Outfall Annual

Reported: 09/13/16 12:25

Crestline CA, 92325-3395

Volatile Organics by EPA Method 624

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
L.F. 9-1 (1609016-01) Liquid	Sampled: 09/01/16 10:00	Received:	09/01/16	12:45					
Acrolein	ND	5.0	μg/L	1	B610203	09/02/16	09/06/16 08:29	EPA 624	
Acrylonitrile	ND	2.0	"	H	н	11	u.	n .	
Benzene	ND	1.0	"	н	"	11	u	"	
Bromobenzene	ND	1.0	11	п	.11	U	n	п	
Bromodichloromethane	4.7	1.0	0	11	"	"	.00	н	
Bromoform	ND	1.0	**	11		"	u	u.	
Bromomethane	ND	1.0	**	41	11	0	н	<u>u</u>	
Carbon tetrachloride	ND	1.0	30.	п	n	n	u.	"	
Chlorobenzene	ND	1.0	**	II .	u u	"		"	
Chloroethane	ND	1.0	н	11	11	u	"	"	
2-Chloroethylvinyl ether	ND	1.0		н	н	H	"	"	
Chloroform	41	1.0	**	н	11		"	0	
Chloromethane	ND	1.0	**	u	"	11	н	11	
Dibromochloromethane	ND	1.0		"	"	**	"	,,	
1,2-Dichlorobenzene	ND	1.0	п	**	H	10	u		
1,3-Dichlorobenzene	ND	1.0			u	.11	н	"	
1,4-Dichlorobenzene	ND	1.0	"	н	34.5	.#		н	
1,1-Dichloroethane	ND	1.0	u	"	18.0	.00	11	o	
1,2-Dichloroethane	ND	1.0	н	e.	11	.11	н	11	
1,1-Dichloroethene	ND	1.0		11	#1	н	н	н	
cis-1,2-Dichloroethene	ND	1.0	0	"	"	11		"	
trans-1,2-Dichloroethene	ND	1.0	11	"	u	"	"	u	
1,2-Dichloropropane	ND	1.0	11	"	11	Ħ	"	"	
1,1-Dichloropropene	ND	1.0	"	н	н	11	n	н	
cis-1,3-Dichloropropene	ND	1.0	"	u	U	"	"	0	
trans-1,3-Dichloropropene	ND	1.0	н	u	**	"	энг	111	
Ethylbenzene	ND	1.0	Ü	.11	н	n	п	н	
Methylene chloride	ND	1.0	"		0	11	"	u	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"		
Tetrachloroethene	ND	1.0	"	"	"	.11			
Toluene	ND	1.0		n	11	11	"	· · ·	
1,1,1-Trichloroethane	ND	1.0	н	п	"	**	н	"	
1,1,2-Trichloroethane	ND	1.0	11	**	н	"	"	11	
Trichloroethene	ND	1.0	All .	316	"	H	"	u u	
Trichlorofluoromethane	ND	1.0	11	.00	11	н	ŭ	n	
Vinyl chloride	ND	1.0	u	It	H	н	U		
m,p-Xylene	ND	1.0			"	11	"		
o-Xylene	ND	1.0	н	"	"	н	"	11	
Methyl tert-butyl ether	ND	1.0	н	н	н	"	н		
Surrogate: Dibromofluoromet	hane	106 %	86	5-118	"	"	"	"	
Surrogate: Toluene-d8	00,000,000	91.4 %		3-110	"	"	"	"	
Darroguie. Pomene-uo									



P.O. Box 3395 Crestline CA, 92325-3395 Project: NA

Project Number: Las Flores Outfall Annual

Project Manager: Rick Dever

Reported: 09/13/16 12:25

Volatile Organics by EPA Method 624

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
L.F. 9-1 (1609016-01) Liquid	Sampled: 09/01/16 10:00	Received:	09/01/16	12:45					
Surrogate: 4-Bromofluorobenze	ene	94.4 %	86-	115	B610203	09/02/16	09/06/16 08:29	EPA 624	



Project: NA

P.O. Box 3395 Crestline CA, 92325-3395 Project Number: Las Flores Outfall Annual Project Manager: Rick Dever Reported: 09/13/16 12:25

Semivolatile Organics by EPA Method 625

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
L.F. 9-1 (1609016-01) Liquid	Sampled: 09/01/16 10:00								
Acenaphthene	ND	5.0	μg/L	1	B6H2337	09/02/16	09/06/16 16:29	EPA 625	
Acenaphthylene	ND	5.0	0	11	ii.	11	"	"	
Anthracene	ND	5.0	0	"	"	н	n	n	
Benzidine	ND	5.0	30	11	"	н	"	"	
Benzo (a) anthracene	ND	5.0	30.	300	н	Ħ	н	"	
Benzo (b) fluoranthene	ND	5.0	.0		H	n	н	"	
Benzo (k) fluoranthene	ND	5.0	.00	0	**	.H	н ;		
Benzo (a) pyrene	ND	5.0	u	u	**	n	н	10	
Benzo (g,h,i) perylene	ND	5.0	11	11	н	**	"	"	
Butyl benzyl phthalate	ND	5.0	u	"	н	**	n	"	
Bis(2-chloroethyl)ether	ND	5.0	11	u	н	**	н	"	
Bis(2-chloroethoxy)methane	ND	5.0	O	и .	n	H	н	н	
Bis(2-ethylhexyl)phthalate	ND	5.0	0	U	н	н	"	н	
Bis(2-chloroisopropyl)ether	ND	5.0	.0	"	н	.11	H	**	
4-Bromophenyl phenyl ether	ND	5.0	11	u u	n	11	н	n	
2-Chlorophenol	ND	1.0	n	u u	11	H		11	
4-Chloro-3-methylphenol	ND	5.0	11	11	н	н	**		
2-Chloronaphthalene	ND	5.0	н	11	11	310	"	"	
4-Chlorophenyl phenyl ether	ND	5.0	m	TI .	11	n	**	"	
Chrysene	ND	5.0	H	n	H	3113	11	u :	
Dibenz (a,h) anthracene	ND	5.0	11	n n	н	н	11	#	
1,3-Dichlorobenzene	ND	5.0		n n	н	н	"	"	
1,2-Dichlorobenzene	ND	5.0		"	н	**	n	"	
1,4-Dichlorobenzene	ND	5.0	и	n	н	н	ii .	H	
3,3'-Dichlorobenzidine	ND	5.0	н	n	11	11	н	"	
2,4-Dichlorophenol	ND	1.0	**		**	**	"	"	
Diethyl phthalate	ND	5.0	11		**	**	"	"	
2,4-Dimethylphenol	ND	1.0	н	н	**	**	"	"	
Dimethyl phthalate	ND	5.0	11	**	**	11	"	"	
Di-n-butyl phthalate	ND	5.0	**	"	"	**	"	"	
2,4-Dinitrophenol	ND	1.0	11	"	11	11	"	"	
2,4-Dinitrotoluene	ND	5.0	н	п	н	н	**	n	
2,6-Dinitrotoluene	ND	5.0	n	н	11	9#8	"	11	
Di-n-octyl phthalate	ND	5.0	310	11	H	H	11	11	
1,2-Diphenylhydrazine	ND	5.0	.01	OF.	11	m		11	
Fluoranthene	ND	5.0	o.	11		н	o o	"	
Fluorene	ND	5.0	u	н	n	**	U	u	
Hexachlorobenzene	ND	5.0	u	н	11	**	ũ	,,	
Hexachlorobutadiene	ND	5.0	n .	н	**	н	ū	o o	
Hexachlorocyclopentadiene	ND	5.0	u	n	11	H	0		
Hexachloroethane	ND	5.0	п	н	н	n	Ü	Ü	



P.O. Box 3395 Crestline CA, 92325-3395 Project: NA

Project Number: Las Flores Outfall Annual

Project Manager: Rick Dever

Reported: 09/13/16 12:25

Semivolatile Organics by EPA Method 625 Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
L.F. 9-1 (1609016-01) Liquid	Sampled: 09/01/16 10:00	Received:	09/01/16 1	2:45					
Indeno (1,2,3-cd) pyrene	ND	5.0	μg/L	1	B6H2337	09/02/16	09/06/16 16:29	EPA 625	
Isophorone	ND	5.0	31.	"	"	***	11	11	
2-Methyl-4,6-dinitrophenol	ND	5.0	11	11	"	**	"	н	
Naphthalene	ND	5.0	и	11	11	11	0	"	
Nitrobenzene	ND	5.0	н	u	**	0	Ĭr	#1	
2-Nitrophenol	ND	1.0	н	n	9	U	н	"	
4-Nitrophenol	ND	1.0	11	n	U	.0	н	n	
N-Nitrosodimethylamine	ND	5.0	u	n	0	11	н	9	
Diphenylamine	ND	5.0	U	n	0	"	n	ÿ	
N-Nitrosodi-n-propylamine	ND	5.0	u	н		"	"	ū	
Pentachlorophenol	ND	1.0	10	н	"	"	"	Ü	
Phenanthrene	ND	5.0	H	·n	н	H	**	н	
Phenol	ND	1.0	.H.	н	н	н	0	"	
Pyrene	ND	5.0	11.	100	"	en c	u	n	
1,2,4-Trichlorobenzene	ND	5.0	"	u	"	30.	19	#	
2,4,6-Trichlorophenol	ND	1.0	11	н	ii .	n	Ħ	**	
Surrogate: 2-Fluorophenol		76.7 %	25-12	1	"	"	"	"	
Surrogate: Phenol-d6		71.3 %	24-11	3	"	"	"	"	
Surrogate: Nitrobenzene-d5		81.3 %	23-12	0	"	"	"	"	
Surrogate: 2-Fluorobiphenyl		83.9 %	30-11	5	н	"	.,,	"	
Surrogate: 2,4,6-Tribromophene	ol	66.7 %	19-12	2	"	"	"	"	
Surrogate: Terphenyl-d14		84.3 %	18-13	7	"	"	"	"	

CRESTLINE SANITATION DISTRICT ANNUAL REPORT

APPENDIX "B"

Sample Results
Ground Water Monitoring Wells
Final Effluent Disposal Site

Annual Testing

Tests Results for:
Purgable Halocarbons and Aromatics
Base / Neutral / Acid Extractable Organics

Special Quarterly Testing

Disinfection Biproducts
Trihalomethanes (EPA Method 524.2)
Haloacetic Acids (EPA Method 552.2)



Crestline CA, 92325-3395

P.O. Box 3395

Project: NA

Project Number: Las Flores Monitor Well #1

Project Manager: Rick Dever

Reported: 09/14/16 11:24

Conventional Chemistry Parameters by APHA/EPA Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW1-9-8 (1609100-01) Liquid	Sampled: 09/08/16 10:30	Receive	d: 09/08/1	6 13:30					
Ammonia as N	0.410	0.100	mg/L	1	B610928	09/08/16	09/09/16 16:31	SM 4500-NH3	
Chloride	16.2	0.500	O.	n n	н	н	н	SM 4500-CI- B	
Methylene Blue Active Substances	ND	0.100	"	n.	u		н	EPA 425.1	
Nitrate as N	1.30	0.0200	111	11	н	11	"	EPA 353.3	
Sulfate as SO4	136	0.500	л	н	n	н	"	EPA 375.4	
Total Dissolved Solids	285	1.00	п	н	n	310	**	EPA 160.1	
Total Kjeldahl Nitrogen	0.43	0.10	н	11	30	310	**	EPA 351.3	



P.O. Box 3395 Crestline CA, 92325-3395 Project: NA

Project Number: Las Flores Monitor Well #1

Project Manager: Rick Dever

Reported:

09/14/16 11:24

Metals by EPA 200 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW1-9-8 (1609100-01) Liquid	Sampled: 09/08/16 10:30	Received	1: 09/08/	16 13:30					
Sodium	76	0.71	mg/L	1	B6I0924	09/09/16	09/09/16 20:06	EPA 200.7	



P.O. Box 3395

Crestline CA, 92325-3395

Project: NA

Project Number: Las Flores Monitor Well #1

Project Manager: Rick Dever

Reported:

09/14/16 11:24

Trihalomethanes by EPA Method 524.2 Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW1-9-8 (1609100-01) Liquid	Sampled: 09/08/16 10:30	Received	1: 09/08/16	13:30					
Bromodichloromethane	ND	0.500	μg/L	1	B6I1234	09/09/16	09/12/16 09:26	EPA 524.2	
Bromoform	ND	0.500	u	11	11		"	н	
Chloroform	ND	0.500	n	n	н	11	0	н	
Dibromochloromethane	ND	0.500	"	"	B	11	ñ	н	
Total Trihalomethanes	ND	0.500	n	н	Ħ	n	u u	н	
Surrogate: Dibromofluoromethane		100 %	86-1	18	,,	"	"	"	
Surrogate: Toluene-d8		91.4%	88-1	10	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.0 %	86-1	15	"	"	"	"	



P.O. Box 3395

Project: NA

Project Number: Las Flores Monitor Well #1

Reported:

Crestline CA, 92325-3395

Project Manager: Rick Dever 09/14/16 11:24

Haloacetic Acids (GC/ECD) by EPA Method 552.2

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW1-9-8 (1609100-01) Liquid	Sampled: 09/08/16 10:30	Received	1: 09/08/1	6 13:30	9-3,00				
Monochloroacetic Acid	ND	2.00	μg/L	1	B6I1236	09/12/16	09/13/16 09:22	EPA 552.2	***
Dichloroacetic Acid	ND	1.00	11	"	<u>u</u>	н	Ti I	"	
Trichloroacetic Acid	ND	1.00	11	n	H	**	ū	н	
Monobromoacetic Acid	ND	1.00	11	n	It	**	9	"	
Dibromoacetic Acid	ND	1.00	11	11	н	11		n	
Total Haloacetic Acids	ND	1.00	110	111	"	H.S.	9	н	
Surrogate: 2,3-Dibromopropionio	c Acid	100 %	60-	150	"	"	"	"	



Project: NA

P.O. Box 3395

Project Number: Las Flores Monitor Well #1 Project Manager: Rick Dever Crestline CA, 92325-3395

Reported: 09/14/16 11:24

Volatile Organics by EPA Method 624 Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW1-9-8 (1609100-01) Liquid	Sampled: 09/08/16 10:30	Received	: 09/08/1	6 13:30					
Acrolein	ND	5.0	μg/L	1	B610919	09/09/16	09/12/16 08:40	EPA 624	
Acrylonitrile	ND	2.0	311	11	#	0	"	**	
Benzene	ND	1.0	0		"	"	Ü	ii	
Bromobenzene	ND	1.0	.0	II .	Ü	"	ti .	н	
Bromodichloromethane	ND	1.0	11	н	íi .	"	"		
Bromoform	ND	1.0	н	н	ii.	10	н	"	
Bromomethane	ND	1.0	н	н	H	II	н	11	
Carbon tetrachloride	ND	1.0	11	n.	H	н	"	"	
Chlorobenzene	ND	1.0	U	"	U	n	2	n n	
Chloroethane	ND	1.0	0	11	II .	11	"	n	
2-Chloroethylvinyl ether	ND	1.0	10	"	tt	D	"	11	
Chloroform	ND	1.0		н	"	.U	н	U	
Chloromethane	ND	1.0	H	"	11	811	"	"	
Dibromochloromethane	ND	1.0	10	11	11	H.	u	**	
1,2-Dichlorobenzene	ND	1.0	0.	а	"	.11	n	н	
1,3-Dichlorobenzene	ND	1.0	30.	.11	**	0	н	n .	
1,4-Dichlorobenzene	ND	1.0	310	11.	**		н	0	
1,1-Dichloroethane	ND	1.0	н	н	11	11	п	11	
1,2-Dichloroethane	ND	1.0	n	и	n.	н	n	н	
1,1-Dichloroethene	ND	1.0	•	п	"	Ħ	"	n	
cis-1,2-Dichloroethene	ND	1.0	n	u	"	"	п	11	
trans-1,2-Dichloroethene	ND	1.0	u	11	н	u	"	U	
1,2-Dichloropropane	ND	1.0	u	"	n	u	и	ti.	
1,1-Dichloropropene	ND	1.0	**	н	"	11	"	11	
cis-1,3-Dichloropropene	ND	1.0	н	н	II.	н	TI.	н	
trans-1,3-Dichloropropene	ND	1.0	ij.	u	u	п	0	н	
Ethylbenzene	ND	1.0	0	0	11	: II	10	n	
Methylene chloride	ND	1.0	9	11	**	u	и	11	
1,1,2,2-Tetrachloroethane	ND	1.0	9	н	н	.10	н	n .	
Tetrachloroethene	ND	1.0	11	н	11	н	**	u	
Toluene	ND	1.0	**	"		n	"	"	
1,1,1-Trichloroethane	ND	1.0	н	"	u	"	u	н	
1,1,2-Trichloroethane	ND	1.0	11	u	11	ū	11	n	
Trichloroethene	ND	1.0	0	11	н	Ħ	н	0	
Trichlorofluoromethane	ND	1.0	9	n	"	H	"	"	
Vinyl chloride	ND	1.0	11	n	"	н	"	"	
m,p-Xylene	ND	1.0	n	n	u	"		н	
o-Xylene	ND	1.0	н	0	11	ü	11	11	
Methyl tert-butyl ether	ND	1.0	н	"	n	"	SHE	0.0.	
Surrogate: Dibromofluoromethan	ne	98.0 %	86-	-118	n	"	"	"	
Surrogate: Toluene-d8		91.4%		-110	"	n	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Project: NA

P.O. Box 3395

Crestline CA, 92325-3395

Project Number: Las Flores Monitor Well #1

Project Manager: Rick Dever

Reported: 09/14/16 11:24

Volatile Organics by EPA Method 624

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW1-9-8 (1609100-01) Liquid	Sampled: 09/08/16 10:30	Received	1: 09/08/	16 13:30					
Surrogate: 4-Bromofluorobenzen	2	106 %	86-	115	B610919	09/09/16	09/12/16 08:40	EPA 624	



P.O. Box 3395 Crestline CA, 92325-3395 Project: NA

Project Number: Las Flores Monitor Well #1

Project Manager: Rick Dever

Reported: 09/14/16 11:24

Semivolatile Organics by EPA Method 625 Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW1-9-8 (1609100-01) Liquid	Sampled: 09/08/16 10:30	Received	1: 09/08/1	6 13:30					
Acenaphthene	ND	5.0	μg/L	1	В6Н2337	09/09/16	09/12/16 17:04	EPA 625	
Acenaphthylene	ND	5.0	"	н	u	ii.	n	0	
Anthracene	ND	5.0		"	и.	"	n	an .	
Benzidine	ND	5.0	11	u	II.	"	en e	н	
Benzo (a) anthracene	ND	5.0	н	n	u	11	н	. 11	
Benzo (b) fluoranthene	ND	5.0	11		"	н	310	.0	
Benzo (k) fluoranthene	ND	5.0	u	22	н	"	100		
Benzo (a) pyrene	ND	5.0	ii	"	311	U	"	"	
Benzo (g,h,i) perylene	ND	5.0	n.	н	эн	н	п	u	
Butyl benzyl phthalate	ND	5.0	97	11	H	"	u u	11	
Bis(2-chloroethyl)ether	ND	5.0	110		U	n	н	"	
Bis(2-chloroethoxy)methane	ND	5.0	ЭН	10.	ü	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	5.0	311	"	'n	**	n n	n	
Bis(2-chloroisopropyl)ether	ND	5.0		"	ii.	D	ü	"	
4-Bromophenyl phenyl ether	ND	5.0	11	11	0	11	"	"	
2-Chlorophenol	ND	1.0	11	н		н	"	0	
4-Chloro-3-methylphenol	ND	5.0	11	н	н	"	2	#	
2-Chloronaphthalene	ND	5.0	u	n	"	n.	н	и	
4-Chlorophenyl phenyl ether	ND	5.0	11	11		11	"	u.	
Chrysene	ND	5.0	н	н	"	H	U	u	
Dibenz (a,h) anthracene	ND	5.0		н	п	.00	**	н	
1.3-Dichlorobenzene	ND	5.0		u	"	· u	"	"	
1,2-Dichlorobenzene	ND	5.0	11	н	30	.110		11	
1.4-Dichlorobenzene	ND	5.0	ж	н		и	u	u	
3,3'-Dichlorobenzidine	ND	5.0	TH.	:0	и	11	n	н	
2,4-Dichlorophenol	ND	1.0	. 0		"	11	**	11	
Diethyl phthalate	ND	5.0	310	н	11	11	"	U	
2,4-Dimethylphenol	ND	1.0	111	"	11	n	v	н	
Dimethyl phthalate	ND	5.0	ü	ū	u	n	н	"	
	ND	5.0	ü	11	ш	н	"	11	
Di-n-butyl phthalate	ND ND	1.0	11	n	n	"	11	11	
2,4-Dinitrophenol 2,4-Dinitrotoluene	ND ND	5.0	н	ij.	n	u		и	
\$ 100 miles of the control of the co	ND ND	5.0	0	"		"	ж	н	
2,6-Dinitrotoluene	ND ND	5.0		"	11	"	11	.0	
Di-n-octyl phthalate	ND ND	5.0	11	n	н	"	0.0	п	
1,2-Diphenylhydrazine	ND ND	5.0	,,	"	u	0	11	н	
Fluoranthene	ND ND	5.0	,,	11		ñ	н	u	
Fluorene		5.0	,,	н		**	u	ű	
Hexachlorobenzene	ND	5.0	н :	an c		10	u	н	
Hexachlorobutadiene	ND		n	u	u.	"	н	н	
Hexachlorocyclopentadiene	ND	5.0		н	п	"		,,	
Hexachloroethane	ND	5.0		(88)7					



P.O. Box 3395 Crestline CA, 92325-3395 Project: NA

Project Number: Las Flores Monitor Well #1

Project Manager: Rick Dever

Reported: 09/14/16 11:24

Semivolatile Organics by EPA Method 625

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW1-9-8 (1609100-01) Liquid	Sampled: 09/08/16 10:30	Received	1: 09/08/16	13:30					
Indeno (1,2,3-cd) pyrene	ND	5.0	μg/L	1	B6H2337	09/09/16	09/12/16 17:04	EPA 625	
Isophorone	ND	5.0	"	"	0	"		"	
2-Methyl-4,6-dinitrophenol	ND	5.0	н	**	"	"	a.	0	
Naphthalene	ND	5.0	"	u	н	"	11	n	
Nitrobenzene	ND	5.0	TO .	.11	"		n	"	
2-Nitrophenol	ND	1.0	at .	н	11	11	n n	,,	
4-Nitrophenol	ND	1.0	30	u	n	и	**	"	
N-Nitrosodimethylamine	ND	5.0	300	н	u	u	B	"	
Diphenylamine	ND	5.0	н	"	"	n	"	II.	
N-Nitrosodi-n-propylamine	ND	5.0	0		n	н	"	н	
Pentachlorophenol	ND	1.0	11	н	"	U	"	11	
Phenanthrene	ND	5.0	н	н	н	n	u	30.	
Phenol	ND	1.0		u	11	.11	80.0	11	
Pyrene	ND	5.0	u	"	u	200	n		
1,2,4-Trichlorobenzene	ND	5.0	11	"	и	. 11	tt.	u	
2,4,6-Trichlorophenol	ND	1.0	0	0	11	н	н	н	
Surrogate: 2-Fluorophenol		74.7 %	25-1	21	"	"	"	"	
Surrogate: Phenol-d6		67.3 %	24-1	13	"	"	"	"	
Surrogate: Nitrobenzene-d5		83.8 %	23-1	20	"	"	"	"	
Surrogate: 2-Fluorobiphenyl		74.4 %	30-1	15	"	"	"	"	
Surrogate: 2,4,6-Tribromopheno	I	68.7 %	19-1	22	"	"	"	"	
Surrogate: Terphenyl-d14	•	82.7 %	18-1	37	"	"	"	"	



Project: NA

P.O. Box 3395

Project Number: Las Flores Monitor Well #2

Reported: 09/14/16 11:24

Crestline CA, 92325-3395

Project Manager: Rick Dever

Conventional Chemistry Parameters by APHA/EPA Methods Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Sampled: 09/08/16 11:00								
Ammonia as N	0.370	0.100	mg/L	1	B610928	09/08/16	09/09/16 16:31	SM 4500-NH3	
Chloride	151	0.500	0	n		n	, n	SM 4500-Cl- B	
Methylene Blue Active Substances	ND	0.100	u	.01	"	н	"	EPA 425.1	
Nitrate as N	6.20	0.0200	"	"	"	н	н	EPA 353.3	
Sulfate as SO4	150	0.500	11	п	11	11	n	EPA 375.4	
Total Dissolved Solids	610	1.00	"	н	U	30	u	EPA 160.1	
Total Kjeldahl Nitrogen	0.39	0.10	п	ıı	3117	.01	u	EPA 351.3	



P.O. Box 3395

Crestline CA, 92325-3395

Project: NA

Project Number: Las Flores Monitor Well #2

Project Manager: Rick Dever

Reported:

09/14/16 11:24

Metals by EPA 200 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW2-9-8 (1609101-01) Liquid	Sampled: 09/08/16 11:00	Receive	d: 09/08/1	16 13:30					
Sodium	88	0.71	mg/L	1	B610924	09/09/16	09/09/16 20:06	EPA 200.7	



P.O. Box 3395 Crestline CA, 92325-3395 Project: NA

Project Number: Las Flores Monitor Well #2 Project Manager: Rick Dever Reported: 09/14/16 11:24

Trihalomethanes by EPA Method 524.2

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW2-9-8 (1609101-01) Liquid	Sampled: 09/08/16 11:00	Received	l: 09/08/1	6 13:30					
Bromodichloromethane	ND	0.500	μg/L	1	B6I1234	09/09/16	09/12/16 09:26	EPA 524.2	
Bromoform	ND	0.500	u	н	"	н		tt.	
Chloroform	2.17	0.500	н	n	α	н	11	н	
Dibromochloromethane	ND	0.500	11	H	u	u	11	н	
Total Trihalomethanes	2.17	0.500	W	и	"	.0	n .	11	
Surrogate: Dibromofluoromethar	ne	112%	86-	118	"	"	"	"	
Surrogate: Toluene-d8		109 %	88-	110	"	"	"	"	
Surrogate: 4-Bromofluorobenzen	е	98.6 %	86-	115	"	"	"	"	



P.O. Box 3395 Crestline CA, 92325-3395 Project: NA

Project Number: Las Flores Monitor Well #2

Project Manager: Rick Dever

Reported: 09/14/16 11:24

Haloacetic Acids (GC/ECD) by EPA Method 552.2

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW2-9-8 (1609101-01) Liquid	Sampled: 09/08/16 11:00	Received	1: 09/08/1	16 13:30					
Monochloroacetic Acid	ND	2.00	μg/L	1	B6I1236	09/12/16	09/13/16 09:22	EPA 552.2	
Dichloroacetic Acid	ND	1.00	"	"	n	D.	n	"	
Trichloroacetic Acid	ND	1.00	н	11			u u	11	
Monobromoacetic Acid	ND	1.00	0	"	311.	**	. "	ш	
Dibromoacetic Acid	ND	1.00		U	n	Ü	W	**	
Total Haloacetic Acids	ND	1.00	**	"	"	11	п	"	
Surrogate: 2,3-Dibromopropioni	c Acid	86.8 %	60-	150	"	"	"	"	



Project: NA

P.O. Box 3395

Crestline CA, 92325-3395

Project Number: Las Flores Monitor Well #2

Project Manager: Rick Dever

Reported: 09/14/16 11:24

Volatile Organics by EPA Method 624 Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW2-9-8 (1609101-01) Liquid	Sampled: 09/08/16 11:00	Received	: 09/08/1	6 13:30					
Acrolein	ND	5.0	μg/L	1	B610919	09/09/16	09/12/16 08:40	EPA 624	12
Acrylonitrile	ND	2.0	ti .	**	**	"	11	u	
Benzene	ND	1.0	11	n	н	**	**	u	
Bromobenzene	ND	1.0	11		n	Ħ	н	н	
Bromodichloromethane	ND	1.0	0	**	11	n.	"	"	
Bromoform	ND	1.0	11	11	п	0	u	"	
Bromomethane	ND	1.0	н	11	н	**	**	"	
Carbon tetrachloride	ND	1.0	21	.0	"	ï	"	"	
Chlorobenzene	ND	1.0	11		u.	v	"	н	
Chloroethane	ND	1.0	u	н	11	9	U	n	
2-Chloroethylvinyl ether	ND	1.0	н	11	н	tt I	"	u	
Chloroform	1.4	1.0	Ħ	н	0	tt	n.	"	
Chloromethane	ND	1.0	n	11	n	31%	11	"	
Dibromochloromethane	ND	1.0	U	111	ti .	0		"	
1.2-Dichlorobenzene	ND	1.0	30%		н	11		ū	
1,3-Dichlorobenzene	ND	1.0	111	311	"	**	н	**	
1,4-Dichlorobenzene	ND	1.0	.00	11	0	11		n	
1,1-Dichloroethane	ND	1.0	0	11	**	U		n	
1,2-Dichloroethane	ND	1.0	11	11	н	n	"	u	
1,1-Dichloroethene	ND	1.0	•	"	н	н	"	н	
cis-1,2-Dichloroethene	ND	1.0	н	u	U	"	"	н	
trans-1,2-Dichloroethene	ND	1.0	11	11	"	u	u	11	
1,2-Dichloropropane	ND	1.0	U	n	н	11	n	0	
1,1-Dichloropropene	ND	1.0	11	11	"	11	11.0	TI.	
cis-1,3-Dichloropropene	ND	1.0	11		"	11	11	н	
trans-1,3-Dichloropropene	ND	1.0	н	п	n	30	:0:	н	
Ethylbenzene	ND	1.0	U	н	Ħ	***	u	n	
Methylene chloride	ND	1.0	u		340	Э.		11	
1,1,2,2-Tetrachloroethane	ND	1.0		u	n	н	н	н	
Tetrachloroethene	ND	1.0	EH.	*1	u	u	н	н	
Toluene	ND	1.0		**	"	11	u	u	
1,1,1-Trichloroethane	ND	1.0	u.	"	н	**	n	u	
1,1,2-Trichloroethane	ND	1.0	ü	"	n		*	"	
Trichloroethene	ND	1.0	н	11	11	U	н	n	
Trichlorofluoromethane	ND	1.0	n	11	11	11	u		
Vinyl chloride	ND	1.0	Ü	n	н	11	и	u	
m,p-Xylene	ND	1.0	o	"	11	"	н	146	
o-Xylene	ND	1.0	н	u	u	0	n	.10	
Methyl tert-butyl ether	ND	1.0	н	"	и	**	316	0	
Surrogate: Dibromofluorometha.		110 %	86	-118	n.	"	"	"	
Surrogate: Toluene-d8	The state of the s	91.2 %		-110	H.	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Project: NA

P.O. Box 3395

Crestline CA, 92325-3395

Project Number: Las Flores Monitor Well #2

Project Manager: Rick Dever

Reported: 09/14/16 11:24

Volatile Organics by EPA Method 624

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW2-9-8 (1609101-01) Liquid	Sampled: 09/08/16 11:00	Received	1: 09/08/1	6 13:30					
Surrogate: 4-Bromofluorobenzen	e	108 %	86-	115	B610919	09/09/16	09/12/16 08:40	EPA 624	



Project: NA

P.O. Box 3395

Crestline CA, 92325-3395

Project Number: Las Flores Monitor Well #2

Project Manager: Rick Dever

Reported: 09/14/16 11:24

Semivolatile Organics by EPA Method 625 Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW2-9-8 (1609101-01) Liquid	Sampled: 09/08/16 11:00	Received	1: 09/08/16	5 13:30					
Acenaphthene	ND	5.0	μg/L	1	B6H2337	09/09/16	09/12/16 17:45	EPA 625	
Acenaphthylene	ND	5.0	u	U	н	0	"	"	
Anthracene	ND	5.0	н	н	"	н	н	"	
Benzidine	ND	5.0	и	11	"	11	"		
Benzo (a) anthracene	ND	5.0	u	"	"	0	u	"	
Benzo (b) fluoranthene	ND	5.0	11	"	n	11	"	"	
Benzo (k) fluoranthene	ND	5.0	11	н	u	€ИВ	n	11	
Benzo (a) pyrene	ND	5.0	U	n	11	11	u	"	
Benzo (g,h,i) perylene	ND	5.0	11	ાત	н		"	"	
Butyl benzyl phthalate	ND	5.0	н	н		н	н	и	
Bis(2-chloroethyl)ether	ND	5.0	n .	**	11	U	u	11	
Bis(2-chloroethoxy)methane	ND	5.0	0.00	"	н	11		11	
Bis(2-ethylhexyl)phthalate	ND	5.0	110	"	U	"	"	"	
Bis(2-chloroisopropyl)ether	ND	5.0	0	"	u	"	u	"	
4-Bromophenyl phenyl ether	ND	5.0	u.	Ü	н	u	п	11	
2-Chlorophenol	ND	1.0	ű	11	н	11	и	и	
4-Chloro-3-methylphenol	ND	5.0	ï	11	11	"	n	n	
2-Chloronaphthalene	ND	5.0	Ü	"	н	"	30	11	
4-Chlorophenyl phenyl ether	ND	5.0	ÿ	"	н	H	н	н	
Chrysene	ND	5.0	H	"		11	.11	**	
Dibenz (a,h) anthracene	ND	5.0	11	"	110	"	u u	u .	
1,3-Dichlorobenzene	ND	5.0	U	u	H	11	"	u	
1,2-Dichlorobenzene	ND	5.0	n	u	n n	н	н	н	
1,4-Dichlorobenzene	ND	5.0	n	**	u.	н	Ü	"	
3,3'-Dichlorobenzidine	ND	5.0	0	11	11	"	ū	U	
2,4-Dichlorophenol	ND	1.0	u	11	и	**	н	"	
Diethyl phthalate	ND	5.0	110	"	Ü	H	ij		
2,4-Dimethylphenol	ND	1.0	n	"	ũ	n	<u>0</u>	9	
Dimethyl phthalate	ND	5.0		u	н	п	<u>u</u>	22	
Di-n-butyl phthalate	ND	5.0	11	11	U	**	n	'n	
2,4-Dinitrophenol	ND	1.0	п	,,	u	u	D.	11	
2,4-Dinitrotoluene	ND	5.0	U	0	И	n		900	
2,6-Dinitrotoluene	ND	5.0	11	**	11	"	н	M.	
Di-n-octyl phthalate	ND	5.0	н	н	U	11	u s	and a	
1,2-Diphenylhydrazine	ND	5.0	n		н	in	0 (11	
Fluoranthene	ND	5.0	"	u	**	н	**	11	
Fluorene	ND	5.0	"	:н	.00	u	u	11	
Hexachlorobenzene	ND	5.0	н	3.00	н	u	u	II.	
Hexachlorobutadiene	ND	5.0	·U	0.	М	н	11	11	
Hexachlorocyclopentadiene	ND	5.0	н	Ħ	U	u	n	И	
Hexachloroethane	ND	5.0	н	ű	11	"	"	u	



Crestline CA, 92325-3395

P.O. Box 3395

Project: NA

Project Number: Las Flores Monitor Well #2 Project Manager: Rick Dever Reported: 09/14/16 11:24

Semivolatile Organics by EPA Method 625

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW2-9-8 (1609101-01) Liquid	Sampled: 09/08/16 11:00	Received	1: 09/08/16	13:30				Total House	
Indeno (1,2,3-cd) pyrene	ND	5.0	μg/L	1	B6H2337	09/09/16	09/12/16 17:45	EPA 625	
Isophorone	ND	5.0	11	n.	11	"	н		
2-Methyl-4,6-dinitrophenol	ND	5.0	11	v	11	"	"	u	
Naphthalene	ND	5.0	n	"	11	11	н	U	
Nitrobenzene	ND	5.0	11	"	19	11	н	ш	
2-Nitrophenol	ND	1.0	11	"	**	•	**	u	
4-Nitrophenol	ND	1.0	"	"	"	"	н	u	
N-Nitrosodimethylamine	ND	5.0	n	u	H	u	н	и	
Diphenylamine	ND	5.0	n	11	11			"	
N-Nitrosodi-n-propylamine	ND	5.0	*	u	"	0	"		
Pentachlorophenol	ND	1.0	н	0	"	U	н	II .	
Phenanthrene	ND	5.0	110	o	н	0	н	u	
Phenol	ND	1.0	11	.0.	**	.0		30	
Pyrene	ND	5.0	11	u	,,		11	u.	
1,2,4-Trichlorobenzene	ND	5.0	11	O.	11	U	"	n.	
2,4,6-Trichlorophenol	ND	1.0	n .	"	н	Ü.	n	н	
Surrogate: 2-Fluorophenol		79.3 %	25-12	21	"	**	"	"	
Surrogate: Phenol-d6		67.3 %	24-11	13	"	"	"	"	
Surrogate: Nitrobenzene-d5		80.0 %	23-12	20	"	"	"	"	
Surrogate: 2-Fluorobiphenyl		81.8 %	30-11	15	"	"	"	n	
Surrogate: 2,4,6-Tribromophenol		73.3 %	19-12	22	"	"	"	"	
Surrogate: Terphenyl-d14		94.0 %	18-13	37	n	"	"	"	



Project: NA

P.O. Box 3395

Sulfate as SO4

Total Dissolved Solids

Total Kjeldahl Nitrogen

Project Number: Las Flores Monitor Well #3

Reported: 09/14/16 11:26

EPA 375.4

EPA 160.1

EPA 351.3

Crestline CA, 92325-3395

Project Manager: Rick Dever

Conventional Chemistry Parameters by APHA/EPA Methods Sierra Analytical Labs, Inc.

	1000								
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW3-9-8 (1609102-01) Liquid	Sampled: 09/08/16 11:15	Receive	d: 09/08/1	16 13:30					
Ammonia as N	ND	0.100	mg/L	1	B6I0928	09/08/16	09/09/16 16	6:3 ISM 4500-NH3	
Chloride	116	0.500	11	u	**	**	0.0	SM 4500-Cl- B	
Methylene Blue Active Substances	s ND	0.100	н	n	11	11		EPA 425.1	
Nitrate as N	3.70	0.0200	"	и	U	н	**	EPA 353.3	

0.500

1.00

0.10

103

500

ND



P.O. Box 3395

Crestline CA, 92325-3395

Project: NA

Project Number: Las Flores Monitor Well #3

Project Manager: Rick Dever

Reported: 09/14/16 11:26

Metals by EPA 200 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW3-9-8 (1609102-01) Liquid	Sampled: 09/08/16 11:15	Received	d: 09/08/1	16 13:30					
Sodium	56	0.71	mg/L	l	B610924	09/09/16	09/09/16 20:06	EPA 200.7	



Project: NA

P.O. Box 3395 Crestline CA, 92325-3395 Project Number: Las Flores Monitor Well #3

Project Manager: Rick Dever

Reported: 09/14/16 11:26

Trihalomethanes by EPA Method 524.2 Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW3-9-8 (1609102-01) Liquid	Sampled: 09/08/16 11:15	Received	1: 09/08/1	6 13:30					
Bromodichloromethane	ND	0.500	μg/L	1	B6I1234	09/09/16	09/12/16 09:26	EPA 524.2	
Bromoform	ND	0.500	10	0.	11	30.	.0	"	
Chloroform	ND	0.500	н	310	"	0	9	n:	
Dibromochloromethane	ND	0.500	11	3H3		311	u	11	
Total Trihalomethanes	ND	0.500	ж	н	"	**	11		
Surrogate: Dibromofluoromethan	е	106 %	86-1	18	"	"	"	"	
Surrogate: Toluene-d8		107 %	88-1	10	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	86-1	15	"	"	"	"	



Crestline CA, 92325-3395

P.O. Box 3395

Project: NA

Project Number: Las Flores Monitor Well #3

Project Manager: Rick Dever

Reported: 09/14/16 11:26

Haloacetic Acids (GC/ECD) by EPA Method 552.2

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW3-9-8 (1609102-01) Liquid	Sampled: 09/08/16 11:15	Received	1: 09/08/1	6 13:30					
Monochloroacetic Acid	ND	2.00	μg/L	1	B6I1236	09/12/16	09/13/16 09:22	EPA 552.2	
Dichloroacetic Acid	ND	1.00	11	11	11	0	9		
Trichloroacetic Acid	ND	1.00	11	11	D _	0	"		
Monobromoacetic Acid	ND	1.00	н	н	ü	11	"		
Dibromoacetic Acid	ND	1.00	"	"	25	11	"	"	
Total Haloacetic Acids	ND	1.00	D	u u	n	н	n	D.	
Surrogate: 2,3-Dibromopropionio	c Acid	115 %	60-	150	"	"	"	n.	



Project: NA

P.O. Box 3395 Crestline CA, 92325-3395 Project Number: Las Flores Monitor Well #3

Project Manager: Rick Dever

Reported: 09/14/16 11:26

Volatile Organics by EPA Method 624 Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW3-9-8 (1609102-01) Liquid	Sampled: 09/08/16 11:15	Received	1: 09/08/1	6 13:30			a 4 44		
Acrolein	ND	5.0	μg/L	1	B610919	09/09/16	09/12/16 08:40	EPA 624	
Acrylonitrile	ND	2.0	11	"	0	0	"	н	
Benzene	ND	1.0	11	II.	Ü	**	n	п	
Bromobenzene	ND	1.0	11	II.	"		Ü	u	
Bromodichloromethane	ND	1.0	н	u	"	н	n	11	
Bromoform	ND	1.0	11	11	н	н	н	11	
Bromomethane	ND	1.0	11	н	"	"	n	н	
Carbon tetrachloride	ND	1.0	n	н	"	0	н	н	
Chlorobenzene	ND	1.0	u	n	"	31	н	н	
Chloroethane	ND	1.0	11	11	"	41	u .	ЭН .	
2-Chloroethylvinyl ether	ND	1.0	11	a a	ж.	H	н	n .	
Chloroform	ND	1.0	н	11	31	i Mil	ж	800	
Chloromethane	ND	1.0	H	- 11	910		n	"	
Dibromochloromethane	ND	1.0	TH.	н	"	10	н	н	
1,2-Dichlorobenzene	ND	1.0	11	**	n	.11	H .	н	
1,3-Dichlorobenzene	ND	1.0	u u	"	"	11	11	n	
1,4-Dichlorobenzene	ND	1.0	п	n	11	"	u	II.	
1,1-Dichloroethane	ND	1.0	u	Ü	**	**	11	II .	
1,2-Dichloroethane	ND	1.0	11	e e	11	n	11	11	
1,1-Dichloroethene	ND	1.0	11	"	н	"	н	**	
cis-1,2-Dichloroethene	ND	1.0	"	11	"	"	н	11	
trans-1,2-Dichloroethene	ND	1.0	11	н	n n	n n	н	н	
1,2-Dichloropropane	ND	1.0	ü	н	· ·	· ·	D	н	
1,1-Dichloropropene	ND	1.0	u.	0	"	11	:0:	H	
cis-1,3-Dichloropropene	ND	1.0	ü	"	u.	310	:00	1002	
trans-1,3-Dichloropropene	ND	1.0	11	17	311	SH.	(31)	0.003	
Ethylbenzene	ND	1.0	н	II.	ж		11	0	
Methylene chloride	ND	1.0	11	11	H	n	н	u u	
1,1,2,2-Tetrachloroethane	ND	1.0	н	11	n	u u	н	11	
Tetrachloroethene	ND	1.0	11	п		ű.	n	#	
Toluene	ND	1.0	11	n	11	11	U	н	
1,1,1-Trichloroethane	ND	1.0	ii	н	ti .	н	n	н	
1,1,2-Trichloroethane	ND	1.0	Ü	"	11	"	11	п	
Trichloroethene	ND	1.0	u	Ü	11	"	н	u	
Trichlorofluoromethane	ND	1.0	**	u	н	ü	н	"	
Vinyl chloride	ND	1.0	11	"	n	9	и	"	
m,p-Xylene	ND	1.0	н	"	п	"	н	н	
o-Xylene	ND	1.0	Н	n	u	"	.0		
Methyl tert-butyl ether	ND	1.0	0	н	и	н	· u	II .	
Surrogate: Dibromofluoromethan	ne	101 %	86-	118	n	"	"	"	
Surrogate: Toluene-d8	O.E.K	98.6 %		110	u	"	"	"	



P.O. Box 3395 Crestline CA, 92325-3395 Project: NA

Project Number: Las Flores Monitor Well #3

Project Manager: Rick Dever

Reported: 09/14/16 11:26

Volatile Organics by EPA Method 624

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW3-9-8 (1609102-01) Liquid	Sampled: 09/08/16 11:15	Received	1: 09/08/1	16 13:30					
Surrogate: 4-Bromofluorobenzen	е	106 %	86-	115	B610919	09/09/16	09/12/16 08:40	EPA 624	



Project: NA

P.O. Box 3395 Crestline CA, 92325-3395 Project Number: Las Flores Monitor Well #3

Project Manager: Rick Dever

Reported: 09/14/16 11:26

Semivolatile Organics by EPA Method 625 Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW3-9-8 (1609102-01) Liquid	Sampled: 09/08/16 11:15	Received	d: 09/08/10	6 13:30					
Acenaphthene	ND	5.0	μg/L	1	B6H2337	09/09/16	09/12/16 18:25	EPA 625	
Acenaphthylene	ND	5.0	311.8	н	11	**	U	**	
Anthracene	ND	5.0	11	n	"	11	U	11	
Benzidine	ND	5.0	11	н	"	"	"	н	
Benzo (a) anthracene	ND	5.0	н	"	"	11	ü	11	
Benzo (b) fluoranthene	ND	5.0	н	н	Ü	"	n	H	
Benzo (k) fluoranthene	ND	5.0	н			0	11	"	
Benzo (a) pyrene	ND	5.0	н	"	0	u ·	й	n	
Benzo (g,h,i) perylene	ND	5.0	н	u	"	0	н	D	
Butyl benzyl phthalate	ND	5.0	и	u	0	U	н	n	
Bis(2-chloroethyl)ether	ND	5.0	н	n	"	u u	Ħ		
Bis(2-chloroethoxy)methane	ND	5.0	н	u	n	n.	8	U	
Bis(2-ethylhexyl)phthalate	ND	5.0	н	u	"	w.	n	u u	
Bis(2-chloroisopropyl)ether	ND	5.0	310	THE STATE OF THE S	Ħ	310		"	
4-Bromophenyl phenyl ether	ND	5.0	ш	a.	н	310	0	11	
2-Chlorophenol	ND	1.0	11	11	н	3403		w	
4-Chloro-3-methylphenol	ND	5.0	.0.	11	н	H.		n	
2-Chloronaphthalene	ND	5.0	II.	11	Ħ	н		11	
4-Chlorophenyl phenyl ether	ND	5.0	ıı	11	n	n	ÿ	"	
Chrysene	ND	5.0		11	**	"	0		
Dibenz (a,h) anthracene	ND	5.0		"	"	"	0	īi	
1,3-Dichlorobenzene	ND	5.0	11	н	**	H	ū	n	
1.2-Dichlorobenzene	ND	5.0	n	н	11	11	,,	11	
1,4-Dichlorobenzene	ND	5.0		н	"	"	"	"	
3,3'-Dichlorobenzidine	ND	5.0	U	н	n		"	н	
2,4-Dichlorophenol	ND	1.0	0	п		n	"	н	
Diethyl phthalate	ND	5.0	u	n	0	0	"	н	
2,4-Dimethylphenol	ND	1.0		н	"	u.	"	н	
Dimethyl phthalate	ND	5.0	0	11	0	30.3	,,	н	
Di-n-butyl phthalate	ND	5.0	306	8116	11	SUE	"	n	
2,4-Dinitrophenol	ND	1.0	.0	æ	u		,,	me.	
2,4-Dinitrotoluene	ND ND	5.0	0	и.	"	11	,,	,,	
	ND ND		0	11	"	u	н		
2,6-Dinitrotoluene		5.0 5.0	u	п	u	11	"		
Di-n-octyl phthalate	ND		11	"	"	"	,,		
1,2-Diphenylhydrazine	ND ND	5.0	0	"	"	"	,,		
Fluoranthene	ND	5.0			"	"	,,		
Fluorene	ND	5.0	11	н	"	n	"	,,	
Hexachlorobenzene	ND	5.0	0	"	"	"	,		
Hexachlorobutadiene	ND	5.0	11	"	"	"		"	
Hexachlorocyclopentadiene	ND	5.0		"	"	" "	,,		
Hexachloroethane	ND	5.0	11	u u		H	"		



P.O. Box 3395 Crestline CA, 92325-3395 Project: NA

Project Number: Las Flores Monitor Well #3

Project Manager: Rick Dever

Reported:

09/14/16 11:26

Semivolatile Organics by EPA Method 625

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW3-9-8 (1609102-01) Liquid	Sampled: 09/08/16 11:15	Received	l: 09/08/16	13:30					
Indeno (1,2,3-cd) pyrene	ND	5.0	μg/L	1	B6H2337	09/09/16	09/12/16 18:25	EPA 625	
Isophorone	ND	5.0	.000	U	u	0		u.	
2-Methyl-4,6-dinitrophenol	ND	5.0	tt.	"	н	"	"	"	
Naphthalene	ND	5.0	3110	n	"	"	"	н	
Nitrobenzene	ND	5.0	.00	0	11	11	"	11	
2-Nitrophenol	ND	1.0	11	н	н	н	n	11	
4-Nitrophenol	ND	1.0	11	н	11	"	"	н	
N-Nitrosodimethylamine	ND	5.0	u.	u	11	ii.	и	n	
Diphenylamine	ND	5.0	11	"	н	н	11	u .	
N-Nitrosodi-n-propylamine	ND	5.0		н	11	311	310	"	
Pentachlorophenol	ND	1.0	.0	u		41	н	"	
Phenanthrene	ND	5.0	11	u	н	H	0	u	
Phenol	ND	1.0		"	н	n	11	n	
Pyrene	ND	5.0	0	u	.11	11	н	n	
1,2,4-Trichlorobenzene	ND	5.0	н	н	н	n		11	
2,4,6-Trichlorophenol	ND	1.0	Ħ	"	0	u	н	Ħ	
Surrogate: 2-Fluorophenol		75.3 %	25-1	21	"	"	"	"	
Surrogate: Phenol-d6		71.3 %	24-1	13	"	"	"	"	
Surrogate: Nitrobenzene-d5		80.1 %	23-1	20	"	"	"	"	
Surrogate: 2-Fluorobiphenyl		89.5 %	30-1		"	"	"	"	
Surrogate: 2,4,6-Tribromopheno	I	66.1 %	19-1		"	"	"	<i>m</i> 2	
Surrogate: Terphenyl-d14	ı	87.4 %	18-1		"	"	n	<i>11</i> %	



P.O. Box 3395 Crestline CA, 92325-3395 Project: NA

Project Number: Las Flores Monitor Well #4

Project Manager: Rick Dever

Reported: 09/14/16 11:38

Conventional Chemistry Parameters by APHA/EPA Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW4-9-8 (1609103-01) Liquid	Sampled: 09/08/16 11:45	Receive	d: 09/08/1	6 13:30					2004-2000-4
Ammonia as N	0.110	0.100	mg/L	1	B610928	09/08/16	09/09/16 16:3	1 SM 4500-NH3	
Chloride	158	0.500	"	Ħ	ш	11	"	SM 4500-Cl- B	
Methylene Blue Active Substances	ND ND	0.100	11	11	11	11	n.	EPA 425.1	
Nitrate as N	2.70	0.0200	11	30		н	n	EPA 353.3	
Sulfate as SO4	117	0.500		"		"	0	EPA 375.4	
Total Dissolved Solids	580	1.00	ü	**	"	u	"	EPA 160.1	
Total Kjeldahl Nitrogen	0.12	0.10	U	#	п	u.	n	EPA 351.3	



P.O. Box 3395

Crestline CA, 92325-3395

Project: NA

Project Number: Las Flores Monitor Well #4

Project Manager: Rick Dever

Reported:

09/14/16 11:38

Metals by EPA 200 Series Methods Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW4-9-8 (1609103-01) Liquid	Sampled: 09/08/16 11:45	Receive	d: 09/08/	16 13:30					
Sodium	48	0.71	mg/L	1	B610924	09/09/16	09/09/16 20:06	EPA 200.7	



P.O. Box 3395

Crestline CA, 92325-3395

Project: NA

Project Number: Las Flores Monitor Well #4

Project Manager: Rick Dever

Reported:

09/14/16 11:38

Trihalomethanes by EPA Method 524.2 Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW4-9-8 (1609103-01) Liquid	Sampled: 09/08/16 11:45	Received	1: 09/08/16	13:30					
Bromodichloromethane	ND	0.500	μg/L	1	B611234	09/09/16	09/12/16 09:26	EPA 524.2	
Bromoform	ND	0.500		"	n .	н	"		
Chloroform	ND	0.500	11	**		"	11	U	
Dibromochloromethane	ND	0.500	. 19	,,	n	"	н	11	
Total Trihalomethanes	ND	0.500	н	u	п	"	Ü	н	
Surrogate: Dibromofluoromethan	16	104 %	86-1	18	"	"	"	"	
Surrogate: Toluene-d8		108 %	88-1	10	**	"	"	"	
Surrogate: 4-Bromofluorobenzen	e	103 %	86-1	15	"	"	"	H	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Page 4 of 10



P.O. Box 3395

Crestline CA, 92325-3395

Project: NA

Project Number: Las Flores Monitor Well #4

Project Manager: Rick Dever

Reported:

09/14/16 11:38

Haloacetic Acids (GC/ECD) by EPA Method 552.2

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW4-9-8 (1609103-01) Liquid	Sampled: 09/08/16 11:45	Received: 09/08/16 13:30							
Monochloroacetic Acid	ND	2.00	μg/L	1	B6I1236	09/12/16	09/13/16 09:22	EPA 552.2	
Dichloroacetic Acid	ND	1.00	"	**	n	0	o o	0	
Trichloroacetic Acid	ND	1.00	"	"	"	11	W	<u>u</u>	
Monobromoacetic Acid	ND	1.00	"	ж	11	110	900	11	
Dibromoacetic Acid	ND	1.00	"	n	11	11		н	
Total Haloacetic Acids	ND	1.00	,,	n	n	n	н		
Surrogate: 2,3-Dibromopropioni	c Acid	72.6 %	60-1	50	"	"	n	"	



P.O. Box 3395 Crestline CA, 92325-3395 Project: NA

Project Number: Las Flores Monitor Well #4

Project Manager: Rick Dever

Reported: 09/14/16 11:38

Volatile Organics by EPA Method 624 Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW4-9-8 (1609103-01) Liquid	Sampled: 09/08/16 11:45	Received	l: 09/08/1	6 13:30					
Acrolein	ND	5.0	μg/L	1	B610919	09/09/16	09/12/16 08:40	EPA 624	
Acrylonitrile	ND	2.0	"	"	"	"	ii.		
Benzene	ND	1.0	"	**	in.	11	***	31	
Bromobenzene	ND	1.0	41	316	1,840	11	"	.0	
Bromodichloromethane	ND	1.0	"	ш	**	H		u u	
Bromoform	ND	1.0	11	"	"	"	TI .	"	
Bromomethane	ND	1.0	"	**	"		"	u ·	
Carbon tetrachloride	ND	1.0	H	11	"		.41	31 %	
Chlorobenzene	ND	1.0	н	**	"	"	11	н	
Chloroethane	ND	1.0	11	н	"	"	н	н	
2-Chloroethylvinyl ether	ND	1.0	11	n	"	11	11	u .	
Chloroform	ND	1.0	"	11	"		и	10.7	
Chloromethane	ND	1.0	.11	.11	n	"	.00	0	
Dibromochloromethane	ND	1.0	11	11	ii.	u	H	ii .	
1,2-Dichlorobenzene	ND	1.0	"	н	9	0	**	**	
1,3-Dichlorobenzene	ND	1.0	"	**	"	11	**		
1,4-Dichlorobenzene	ND	1.0	11	H	"	.10	210	300	
1,1-Dichloroethane	ND	1.0	"		n	.11	u	•	
1,2-Dichloroethane	ND	1.0	**	**	н	n	11	u	
1,1-Dichloroethene	ND	1.0	"	iii	H	"	10		
cis-1,2-Dichloroethene	ND	1.0	11	"	"	an:	1786	310	
trans-1,2-Dichloroethene	ND	1.0	H	**	"		9.00	11	
1,2-Dichloropropane	ND	1.0	11	11		11	tt.	11	
1,1-Dichloropropene	ND	1.0	n	**	Ü	11	11	11	
cis-1,3-Dichloropropene	ND	1.0	n	"		11	n n	11	
trans-1,3-Dichloropropene	ND	1.0	11	n	11	(III)	u	316	
Ethylbenzene	ND	1.0			**	11	o o	D	
Methylene chloride	ND	1.0		"	11	n	**	u	
1,1,2,2-Tetrachloroethane	ND	1.0			н	0	16	11	
Tetrachloroethene	ND	1.0	11	"	n	ti.	н	11	
Toluene	ND	1.0	010	*1	.00	tt	n n	н	
1,1,1-Trichloroethane	ND	1.0	н	71	n n	H	ï.		
1.1.2-Trichloroethane	ND	1.0		0	н	"	"	n	
Trichloroethene	ND	1.0	11		н		••	u	
Trichlorofluoromethane	ND	1.0	n.	"	n	0	**	20	
Vinyl chloride	ND	1.0	310		"	"	ïi	11	
m,p-Xylene	ND	1.0	11	"	,,	11	ŭ	н	
o-Xylene	ND	1.0	***	"	n	11		н	
Methyl tert-butyl ether	ND	1.0	н	n	"	14	w i	÷u-	
Surrogate: Dibromofluorometha		103 %	86-	-118	"	"	"	"	
Surrogate: Toluene-d8		98.4 %		-110	"	,,	"	,,	



P.O. Box 3395 Crestline CA, 92325-3395

Surrogate: 4-Bromofluorobenzene

Project: NA

Project Number: Las Flores Monitor Well #4

Project Manager: Rick Dever

Reported: 09/14/16 11:38

EPA 624

09/09/16 09/12/16 08:40

Volatile Organics by EPA Method 624 Sierra Analytical Labs, Inc.

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW4-9-8 (1609103-01) Liquid	Sampled: 09/08/16 11:45	Received	1: 09/08/	16 13:30					

86-115

B610919

113 %



Project: NA

P.O. Box 3395 Crestline CA, 92325-3395 Project Number: Las Flores Monitor Well #4

Project Manager: Rick Dever

Reported: 09/14/16 11:38

Semivolatile Organics by EPA Method 625 Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
					Battii	riepaied	Anaryzeu	MEHIOU	notes
MW4-9-8 (1609103-01) Liquid	Sampled: 09/08/16 11:45		1: 09/08/	16 13:30					
Acenaphthene	ND	5.0	$\mu g/L$	1	B6H2337	09/09/16	09/12/16 19:06	EPA 625	
Acenaphthylene	ND	5.0	9	"	"		i.e	u	
Anthracene	ND	5.0	900	0		10.	3011	10.0	
Benzidine	ND	5.0	11	"	"			н	
Benzo (a) anthracene	ND	5.0	10	"	"	u	11	If	
Benzo (b) fluoranthene	ND	5.0	11	"	"	11	"	30	
Benzo (k) fluoranthene	ND	5.0	11	*1	n	316	100	30	
Benzo (a) pyrene	ND	5.0		н	"	н	"	30.	
Benzo (g,h,i) perylene	ND	5.0	**	*1	"	н	ti ti	u	
Butyl benzyl phthalate	ND	5.0	11	11	n	н	e e	41	
Bis(2-chloroethyl)ether	ND	5.0		21	u u		"	.0	
Bis(2-chloroethoxy)methane	ND	5.0		"	"	2.00	**	311	
Bis(2-ethylhexyl)phthalate	ND	5.0		ü	n .	10	ñ	"	
Bis(2-chloroisopropyl)ether	ND	5.0	**	n n	u	u	Ü	н	
4-Bromophenyl phenyl ether	ND	5.0	11	11	u		Ü	H	
2-Chlorophenol	ND	1.0		"	n	20	n	2112	
4-Chloro-3-methylphenol	ND	5.0	310		н	ii.	ü		
2-Chloronaphthalene	ND	5.0	11	11	н	11	Ü	u	
4-Chlorophenyl phenyl ether	ND	5.0	**	11	н	11		n	
Chrysene	ND	5.0	"	"	"	**			
Dibenz (a,h) anthracene	ND	5.0	311	*1	31.0	1111	u	80%	
1,3-Dichlorobenzene	ND	5.0	:11:	**	n		Ü	**	
1,2-Dichlorobenzene	ND	5.0	**	,,	11		**	**	
1,4-Dichlorobenzene	ND	5.0	11	"	u	0	11	11	
3,3'-Dichlorobenzidine	ND	5.0		n	n .	u u	**	8116	
2,4-Dichlorophenol	ND	1.0				ü	,,		
Diethyl phthalate	ND	5.0	"	ii.	11		Ü	11	
2,4-Dimethylphenol	ND	1.0	11		11	11	,,	H	
Dimethyl phthalate	ND	5.0	11	11	н	н	"	M.	
Di-n-butyl phthalate	ND	5.0	· ·	**	н	11			
2,4-Dinitrophenol	ND	1.0		"	,,	,,			
2,4-Dinitrotoluene	ND	5.0	п	**		,,		,,	
2,4-Dinitrotoluene	ND	5.0	11	**		11	"	u .	
	ND ND	5.0	"	"	10	D	tt.	11	
Di-n-octyl phthalate	ND ND	5.0	н	"	.0.		**	"	
1,2-Diphenylhydrazine	ND ND	5.0	"	"		.,	11	,,	
Fluoranthene		5.0	н	и.		ĵi	,,	w	
Fluorene	ND		11	n	11	11	n	n	
Hexachlorobenzene	ND	5.0	"	"	"	11	"	10	
Hexachlorobutadiene	ND	5.0	"	,,		,,		"	
Hexachlorocyclopentadiene	ND	5.0			"	,,		"	
Hexachloroethane	ND	5.0	.45	31.	.11				



P.O. Box 3395

Crestline CA, 92325-3395

Project: NA

Project Number: Las Flores Monitor Well #4

Project Manager: Rick Dever

Reported:

09/14/16 11:38

Semivolatile Organics by EPA Method 625

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW4-9-8 (1609103-01) Liquid	Sampled: 09/08/16 11:45	Received	1: 09/08/16	13:30					
Indeno (1,2,3-cd) pyrene	ND	5.0	$\mu g/L$	1	B6H2337	09/09/16	09/12/16 19:06	EPA 625	
Isophorone	ND	5.0	11	н		11	"	11	
2-Methyl-4,6-dinitrophenol	ND	5.0	"		"	"		·u	
Naphthalene	ND	5.0	11	**	u	11	**	**	
Nitrobenzene	ND	5.0	11	**	н	30		u.	
2-Nitrophenol	ND	1.0	"	0	"	п	11	11	
4-Nitrophenol	ND	1.0	11	110	11	11	0	ij	
N-Nitrosodimethylamine	ND	5.0		"	н	"	"	17	
Diphenylamine	ND	5.0	n .		n	11	**	11	
N-Nitrosodi-n-propylamine	ND	5.0	**	н	н	11	"	и	
Pentachlorophenol	ND	1.0	II.	311	**	.00	"	9	
Phenanthrene	ND	5.0			"	11	11		
Phenol	ND	1.0	11	"	н		30	u.:	
	ND	5.0	"	6	"	310	111	11	
Pyrene	ND	5.0	11	п	11	н		н	
1,2,4-Trichlorobenzene 2,4,6-Trichlorophenol	ND	1.0	n	n	"	· ·	Œ	u	
Surrogate: 2-Fluorophenol		78.0 %	25-1	21	,,	"	"	"	
Surrogate: Phenol-d6		73.3 %	24-1		"	"	"	"	
		88.0 %	23-1		n	"	"	"	
Surrogate: Nitrobenzene-d5		82.7 %	30-1		,,	"	"	"	
Surrogate: 2-Fluorobiphenyl	1	60.2 %	19-1		"	"	"	"	
Surrogate: 2,4,6-Tribromopheno Surrogate: Terphenyl-d14	ı	83.6 %	18-1		"	Tr.	"	н	



Project: NA

P.O. Box 3395

Crestline CA, 92325-3395

Project Manager: Rick Dever

Project Number: Las Flores Monitor Wells

Reported: 03/17/16 15:27

Trihalomethanes by EPA Method 524.2

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1-3-10 (1603168-01) Liquid	Sampled: 03/10/16 10	0:00 Receiv	ed: 03/10/	16 12:50		9/4	- W Brown - W		
Bromodichloromethane	ND	0.500	μg/L	1	B6C1676	03/16/16	03/17/16 08:31	EPA 524.2	
Bromoform	ND	0.500	"	11	11	ü	11	.11	
Chloroform	ND	0.500	U		11	11	"	u	
Dibromochloromethane	ND	0.500	o .	u	"	Ü	"	и	
Total Trihalomethanes	ND	0.500	11	"	,,,			"	
Surrogate: Dibromofluoromethane		101 %	86-1	18	"	"	"	"	
Surrogate: Toluene-d8		101 %	88-110		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.2 %	86-1	15	"	"	"	n ·	
MW-2-3-10 (1603168-02) Liquid	Sampled: 03/10/16 10	0:15 Receiv	ed: 03/10/	16 12:50					
Bromodichloromethane	ND	0.500	μg/L	1	B6C1676	03/16/16	03/17/16 08:31	EPA 524.2	
Bromoform	ND	0.500	"	**	"	11		"	
Chloroform	1.43	0.500	п	11	**	n	.11	ü	
Dibromochloromethane	ND	0.500	11	п	"	n .	п	"	
Total Trihalomethanes	1.43	0.500	11	**	"	11.	п	Ü	
Surrogate: Dibromofluoromethane		101 %	86-1	18	n	"	ri .	"	
Surrogate: Toluene-d8		98.2 %	88-1	10	"	"	"	u	
Surrogate: 4-Bromofluorobenzene		91.6 %	86-1	15	"	"	"	"	
MW-3-3-10 (1603168-03) Liquid	Sampled: 03/10/16 1	0:30 Receiv	ed: 03/10/	16 12:50					
Bromodichloromethane	ND	0.500	μg/L	1	B6C1676	03/16/16	03/17/16 08:31	EPA 524.2	
Bromoform	ND	0.500	'n	n	**	н	"	us	
Chloroform	ND	0.500	11		***	n	u ·	108	
Dibromochloromethane	ND	0.500	11	u	11	ш	•••	HE	
Total Trihalomethanes	ND	0.500	п	u	11	311	11%	H	
Surrogate: Dibromofluoromethane		103 %	86-1	18	"	"	"	"	
Surrogate: Toluene-d8		95.2 %	88-1	10	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.4 %	86-1	15	"	n	"	"	



P.O. Box 3395

Crestline CA, 92325-3395

Project: NA

Project Number: Las Flores Monitor Wells

Project Manager: Rick Dever

Reported: 03/17/16 15:27

Trihalomethanes by EPA Method 524.2 Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-4-3-10 (1603168-04) Liquid	Sampled: 03/10/16 10	:50 Receiv	ed: 03/10/	16 12:50			100000		
Bromodichloromethane	ND	0.500	μg/L	1	B6C1676	03/16/16	03/17/16 08:31	EPA 524.2	
Bromoform	ND	0.500	11	"	"	"		Ü	
Chloroform	ND	0.500	11	"	"	и :	**	u	
Dibromochloromethane	ND	0.500	11		"	0.7	"	19	
Total Trihalomethanes	ND	0.500	16	11	11	11.	"	"	
Surrogate: Dibromofluoromethane		100 %	86-1	18	"	u	"	"	
Surrogate: Toluene-d8		102 %	88-1	10	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.2 %	86-1	15	"	"	"	"	



P.O. Box 3395

Crestline CA, 92325-3395

Project: NA

Project Number: Las Flores Monitor Wells

Project Manager: Rick Dever

Reported: 03/17/16 15:27

Haloacetic Acids (GC/ECD) by EPA Method 552.2

Sierra Analytical Labs, Inc.

	r)							
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1-3-10 (1603168-01) Liquid	Sampled: 03/10/16 10:00	Receiv	ed: 03/10	0/16 12:50					
Monochloroacetic Acid	ND	2.00	μg/L	1	B6C1733	03/17/16	03/17/16 14:27	EPA 552.2	
Dichloroacetic Acid	ND	1.00	**	и	***	"	"		
Trichloroacetic Acid	ND	1.00	n	н	-11	51	н	II .	
Monobromoacetic Acid	ND	1.00	u	11		19	n	11	
Dibromoacetic Acid	ND	1.00	11	.11	**	"	11	н	
Total Haloacetic Acids	ND	1.00	11	"	"	11	**	n	
Surrogate: 2,3-Dibromopropionic	1cid	120 %	60-	150	"	"	"	"	
MW-2-3-10 (1603168-02) Liquid	Sampled: 03/10/16 10:15	Receiv	ved: 03/1	0/16 12:50			W		
Monochloroacetic Acid	ND	2.00	μg/L	1	B6C1733	03/17/16	03/17/16 14:27		
Dichloroacetic Acid	ND	1.00	"	**	,,,	**	"	m:	
Trichloroacetic Acid	ND	1.00	n	D	u u	11	"	3000	
Monobromoacetic Acid	ND	1.00	11	"	**	11	**		
Dibromoacetic Acid	ND	1.00	11	"		11	11	H	
Total Haloacetic Acids	ND	1.00	11	н	11	11	"	п	
Surrogate: 2,3-Dibromopropionic	Acid	127 %	60-	-150	"	"	"	"	
MW-3-3-10 (1603168-03) Liquid	Sampled: 03/10/16 10:30	Receiv	ved: 03/1	0/16 12:50					
Monochloroacetic Acid	ND	2.00	μg/L	1	B6C1733	03/17/16	03/17/16 14:27	EPA 552.2	
Dichloroacetic Acid	ND	1.00	11	**	11	11	u	и	
Trichloroacetic Acid	ND	1.00	11	0	11	п	**	u	
Monobromoacetic Acid	ND	1.00		ü	11	16	"		
Dibromoacetic Acid	ND	1.00	11	n		11	**		
Total Haloacetic Acids	ND	1.00	**	**	11	n	11	II	
Surrogate: 2,3-Dibromopropionic	Acid	75.6 %	60	-150	"	"	"	· 11	



P.O. Box 3395

Crestline CA, 92325-3395

Project: NA

Project Number: Las Flores Monitor Wells

Project Manager: Rick Dever

Reported:

03/17/16 15:27

Haloacetic Acids (GC/ECD) by EPA Method 552.2

Sierra Analytical Labs, Inc.

Analyte	R Result	eporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-4-3-10 (1603168-04) Liquid	Sampled: 03/10/16 10:50	Receiv	ed: 03/10/	16 12:50			197.33		
Monochloroacetic Acid	ND	2.00	μg/L	1	B6C1733	03/17/16	03/17/16 14:27	EPA 552.2	
Dichloroacetic Acid	ND	1.00	.11	u	**	н	Œ	11	
Trichloroacetic Acid	ND	1.00	**	**	"	n	"	н	
Monobromoacetic Acid	ND	1.00	"	"		11	"	n	
Dibromoacetic Acid	ND	1.00	11	11		16		п	
Total Haloacetic Acids	ND	1.00	n	n	u	н		ш	
Surrogate: 2,3-Dibromopropionic A	Acid	82.2 %	60-1	50	"	"	"	"	