

Crestline Sanitation District  
Annual Report 2017



Confined Space Entry  
Training 2017

# CRESTLINE SANITATION DISTRICT ANNUAL REPORT

**Monitoring and Reporting Program: 6-94-57**

**WDID Number: 6B360106001**

## **ANNUAL REPORT**

**Year: 2017**

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

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# CRESTLINE SANITATION DISTRICT ANNUAL REPORT

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**Crestline Sanitation District  
Annual Report  
Summation  
2017**

Crestline Sanitation District collected, treated and discharged 237.5 million gallons of wastewater in 2017. CSD had a total of 22 flow violations in 2017 between its' 3 plants, and zero constituent violations. These flow violations were attributed to a large amount of rain in the months of December 2016 through February 2017. Rainfall for December 2016 was 10.34 inches, January and February produced another 21.22 inches totaling 31.56 inches in a 3 month period. The total rainfall for 2017 was 25.68 inches.

During 2017 our Maintenance Department systematically televised 6,451 feet of pipe, and cleaned 93,747 feet throughout the year. CSD staff also raised 74 manholes to grade in repaving areas as well inspected 458 manholes throughout the District during the year.

Scheduled maintenance programs and inspections were performed along with daily lift station checks. All waterway and outfall inspections were performed immediately following all rain events, in keeping with the implemented Sanitary Sewer Management Plan.

The District contracted Sancon Technologies to slip line 3,763 feet of strategically chosen trouble areas found through the televising of our sewer system. Sancon also repaired and coated 5 aged manholes as well. CSD is allocating \$250,000.00 dollars a year to slip lining an manhole rehab in an attempt to stop I&I, this is approximately 5 percent of the Districts' operating budget.

Starting July 29<sup>th</sup>, CSD contracted Dudek Engineering & Environmental to begin a new Masterplan for the District. This Masterplan will do a process evaluation on all 3 treatment plants that will take an in depth look at each piece of equipment and each biological process as well. Part of the process will also be an I&I study. Dudek contracted ADS to do the flow monitoring process. Flow meters were installed systematically throughout the system in December. The Masterplan is anticipated to be complete by July of 2018.

An annual Audit of the District was performed in 2017 by Smith Marion & CO. Their concluding's found Crestline Sanitations records to be in a well maintained order, which produced no findings.

CSD continues to maintain a safe work environment with zero injury safety program spanning 3 years.

# CRESTLINE SANITATION DISTRICT

## ANNUAL REPORT

### Treatment Facility Total Volume Flows

YEAR: **2017**

Site	Huston Plant	Seeley Plant	Cleghorn Plant	Las Flores	Las Flores Ponds	
Readings	daily	daily	daily	daily	daily	monthly
Violations						
Design limits	0.7 mg/d design	0.5 mg/d design	0.2 mg/d design			
	total volume month	total volume month	total volume month	total volume to irrigation	total volume to ponds	free board
All flow rates in million gallons						feet
	Huston Creek	Seeley Creek	Cleghorn	District Effluent	District Effluent	Flow to ponds
<b>JANUARY</b>	22.91	12.08	0.686	37.91	0.00	empty
<b>FEBRUARY</b>	18.41	10.53	1.000	33.12	0.00	empty
<b>MARCH</b>	16.33	9.35	0.384	27.24	0.00	empty
<b>APRIL</b>	11.71	6.51	0.180	19.49	0.00	empty
<b>MAY</b>	11.14	5.63	0.238	18.27	0.00	empty
<b>JUNE</b>	9.45	4.35	0.316	15.31	0.00	empty
<b>JULY</b>	9.50	3.88	1.493	16.04	0.00	empty
<b>AUGUST</b>	9.39	3.50	0.619	14.53	0.00	empty
<b>SEPTEMBER</b>	9.19	3.41	0.212	13.68	0.00	empty
<b>OCTOBER</b>	10.25	3.48	0.115	13.85	0.00	empty
<b>NOVEMBER</b>	9.90	3.78	0.327	14.11	0.00	empty
<b>DECEMBER</b>	9.86	3.90	0.226	13.97	0.00	empty
<b>2017 Treatment Facility Total Volume Flow</b>						
<b>Totals</b>	<b>148.04</b>	<b>70.41</b>	<b>5.80</b>	<b>237.50</b>	<b>0.00</b>	

\* 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.

# CRESTLINE SANITATION DISTRICT

## ANNUAL REPORT

### Treatment Facility Maximum Instantaneous Flow Rates

Year: **2017**

Site	Huston Creek	Seeley Creek	Cleghorn	Las Flores	Las Flores
Reading	daily	daily	daily	daily	daily
Violations					
Design limits	2.5 mg maximum	1.0 mg maximum	0.4 mg maximum		
	max flow rate month	max flow rate month	max flow rate month	max flow rate month	max flow rate month
All flow rates in million gallons					
	Huston	Seeley	Cleghorn	District Effluent	Flow to ponds
<b>JANUARY</b>	2.000	0.900	0.400	2.880	empty
<b>FEBRUARY</b>	2.340	0.618	0.425	3.880	empty
<b>MARCH</b>	1.020	0.490	0.380	1.460	empty
<b>APRIL</b>	0.740	0.440	0.144	1.220	empty
<b>MAY</b>	0.740	0.400	0.320	1.200	empty
<b>JUNE</b>	0.660	0.320	0.200	1.240	empty
<b>JULY</b>	0.780	0.350	0.208	1.300	empty
<b>AUGUST</b>	0.720	0.260	0.300	1.180	empty
<b>SEPTEMBER</b>	0.960	0.305	0.180	1.215	empty
<b>OCTOBER</b>	1.246	0.340	0.100	1.615	empty
<b>NOVEMBER</b>	0.785	0.300	0.200	1.180	empty
<b>DECEMBER</b>	0.760	0.320	0.070	0.920	empty
<b>2017 Treatment Facility Maximum Instantaneous Flow Rate</b>					
<b>Maximum</b>	<b>2.340</b>	<b>0.900</b>	<b>0.425</b>	<b>3.880</b>	

# CRESTLINE SANITATION DISTRICT

## ANNUAL REPORT

### Treatment Facility Average Flow Rates

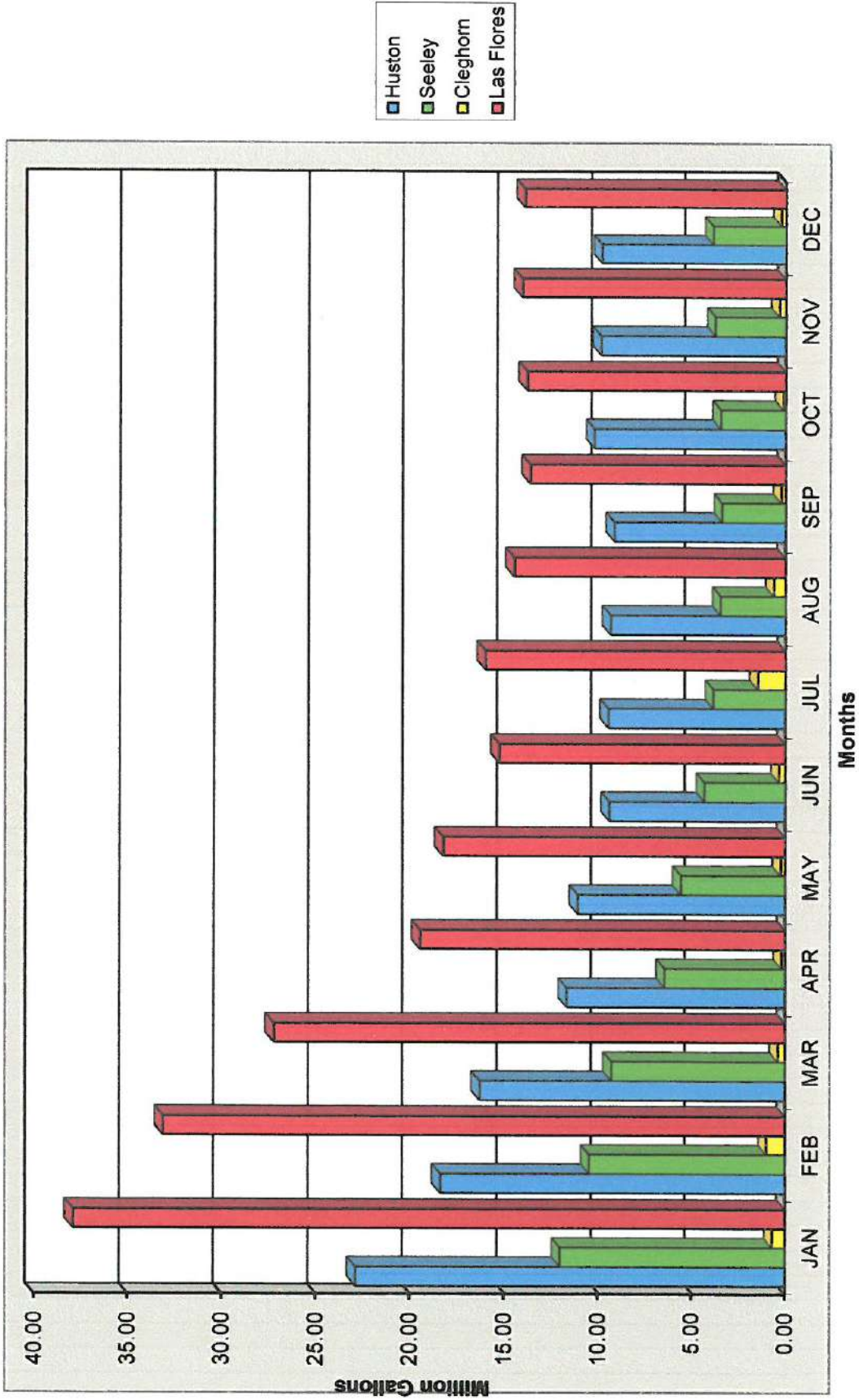
Year: **2017**

Site	Huston Creek	Seeley Creek	Cleghorn	Las Flores	Las Flores
Readings	daily	daily	daily	daily	daily
Violations					
Design limits	0.7 mg/d average	0.5 mg/d average	0.2 mg/d average		
	average flow month	average flow month	average flow month	average flow month	average flow month
All flows in million gallons per day					
	Huston	Seeley	Cleghorn	District Effluent	Flow to ponds
<b>JANUARY</b>	0.739	0.390	0.022	1.223	empty
<b>FEBRUARY</b>	0.658	0.376	0.036	1.183	empty
<b>MARCH</b>	0.527	0.302	0.012	0.879	empty
<b>APRIL</b>	0.391	0.217	0.006	0.650	empty
<b>MAY</b>	0.359	0.182	0.008	0.589	empty
<b>JUNE</b>	0.315	0.145	0.011	0.510	empty
<b>JULY</b>	0.307	0.125	0.048	0.517	empty
<b>AUGUST</b>	0.303	0.113	0.020	0.469	empty
<b>SEPTEMBER</b>	0.306	0.114	0.007	0.441	empty
<b>OCTOBER</b>	0.331	0.112	0.040	0.447	empty
<b>NOVEMBER</b>	0.319	0.122	0.011	0.455	empty
<b>DECEMBER</b>	0.318	0.126	0.007	0.451	empty
<b>2017 Treatment Facility Average Flow Rate</b>					
<b>Average</b>	<b>0.406</b>	<b>0.194</b>	<b>0.019</b>	<b>0.651</b>	



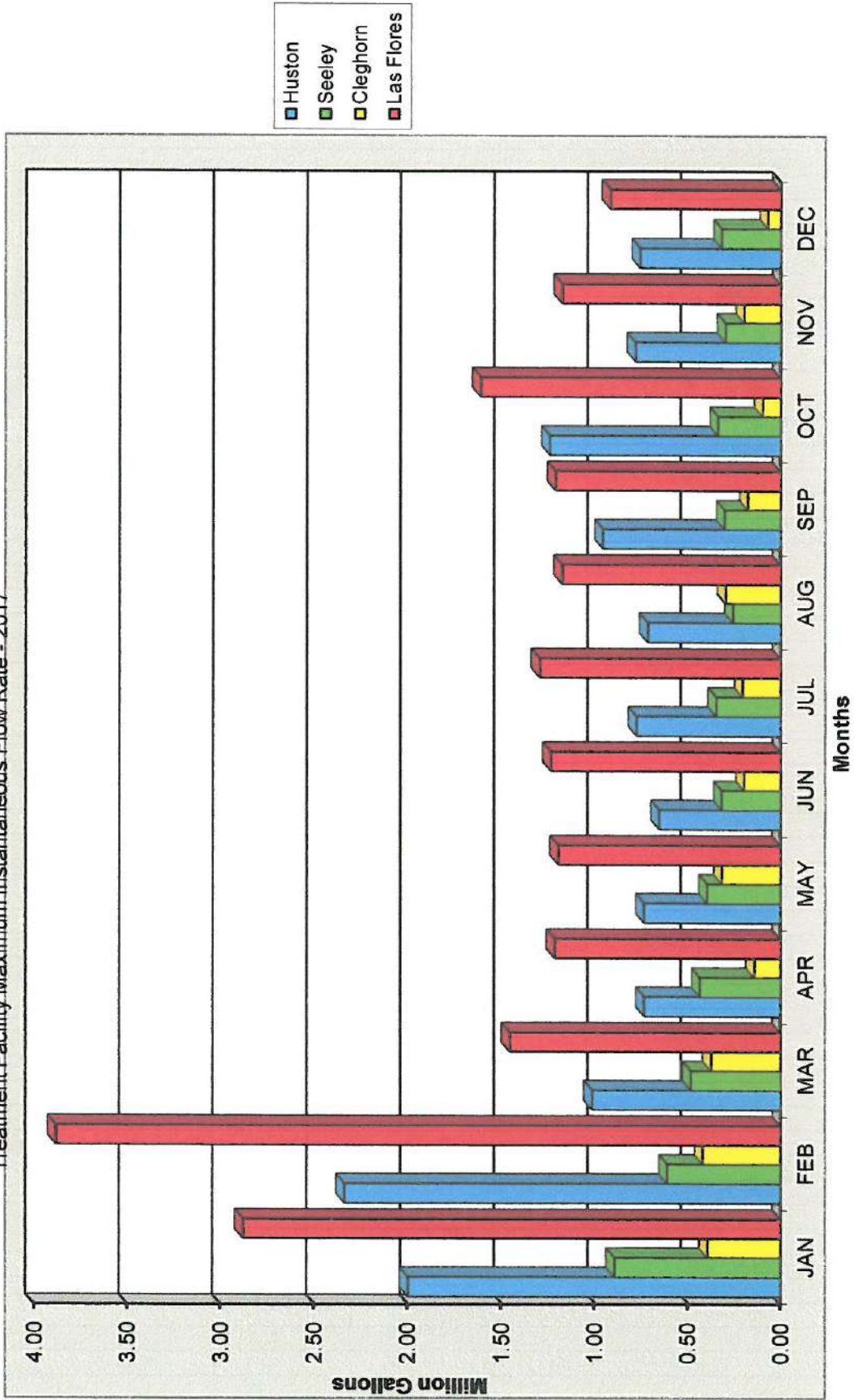
# CRESTLINE SANITATION DISTRICT

Treatment Facility Total Volume Flows - 2017



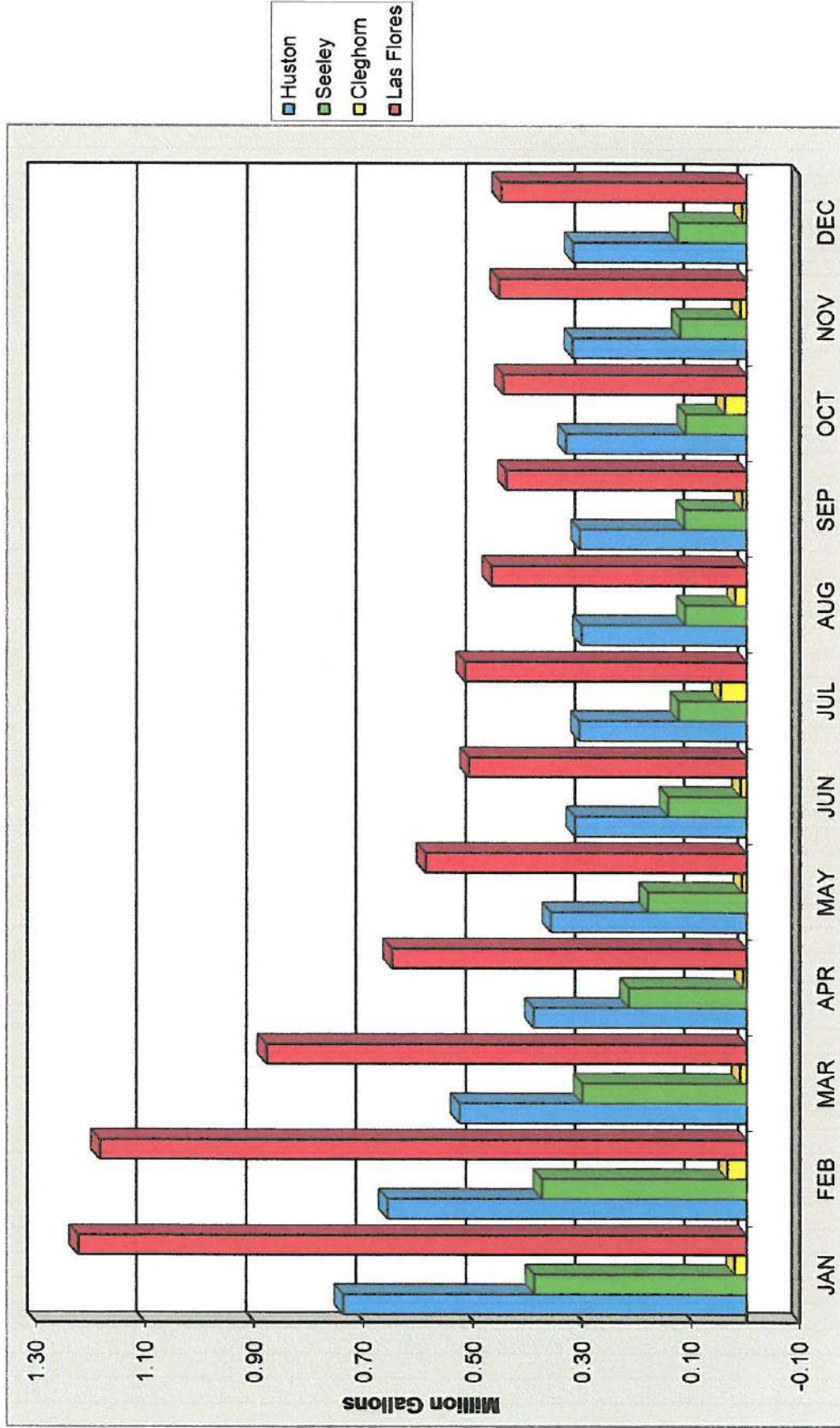
# CRESTLINE SANITATION DISTRICT

Treatment Facility Maximum Instantaneous Flow Rate - 2017



# CRESTLINE SANITATION DISTRICT

Treatment Facility Average Flow Rates - 2017



**CRESTLINE SANITATION DISTRICT**  
**ANNUAL REPORT**  
**Effluent Monitoring - Treatment Facilities**  
**Monthly Median / Averages**

Year: **2017**

Site	Huston Creek			Seeley Creek			Cleghorn		
	Disinfected Final Effluent	2 / week	daily	Disinfected Final Effluent	2 / week	daily	Disinfected Final Effluent	2 / week	daily
Requirement	23 / 100 ml *	D	M	23 / 100 ml *	D	M	23 / 100 ml *	D	M
Purpose									
Violations									
Test	Total Coliform		Chlorine Residual	Total Coliform		Chlorine Residual	Total Coliform		Chlorine Residual
	MPN	mg/l	mg/l	MPN	mg/l	mg/l	MPN	mg/l	mg/l
month									
JANUARY	2	11.3		2	6.5		2	7.4	
FEBRUARY	2	12.3		2	6.2		2	5.3	
MARCH	2	16.0		2	7.1		2	8.2	
APRIL	2	18.6		2	13.3		2	6.7	
MAY	2	20.0		2	9.8		2	6.8	
JUNE	2	21.5		2	6.6		2	6.3	
JULY	2	20.7		2	7.5		2	4.5	
AUGUST	2	20.9		2	8.1		2	7.5	
SEPTEMBER	2	18.8		2	11.5		2	5.7	
OCTOBER	2	20.8		2	10.0		2	7.0	
NOVEMBER	2	20.7		2	7.5		2	7.2	
DECEMBER	2	19.7		2	8.4		2	9.8	

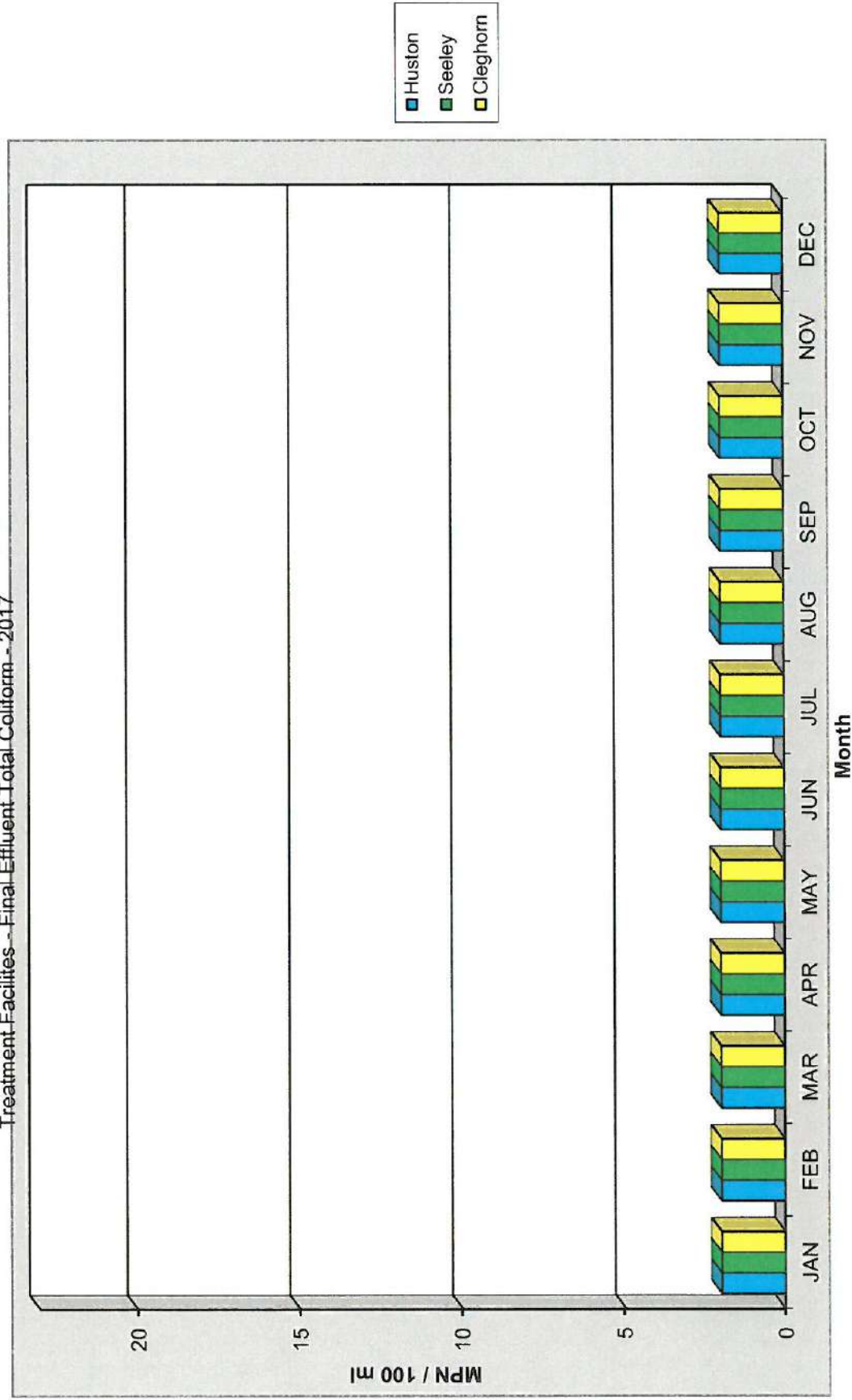
D - Sample has Effluent / Discharge Limitations

M - Sample has Effluent Monitoring Requirements

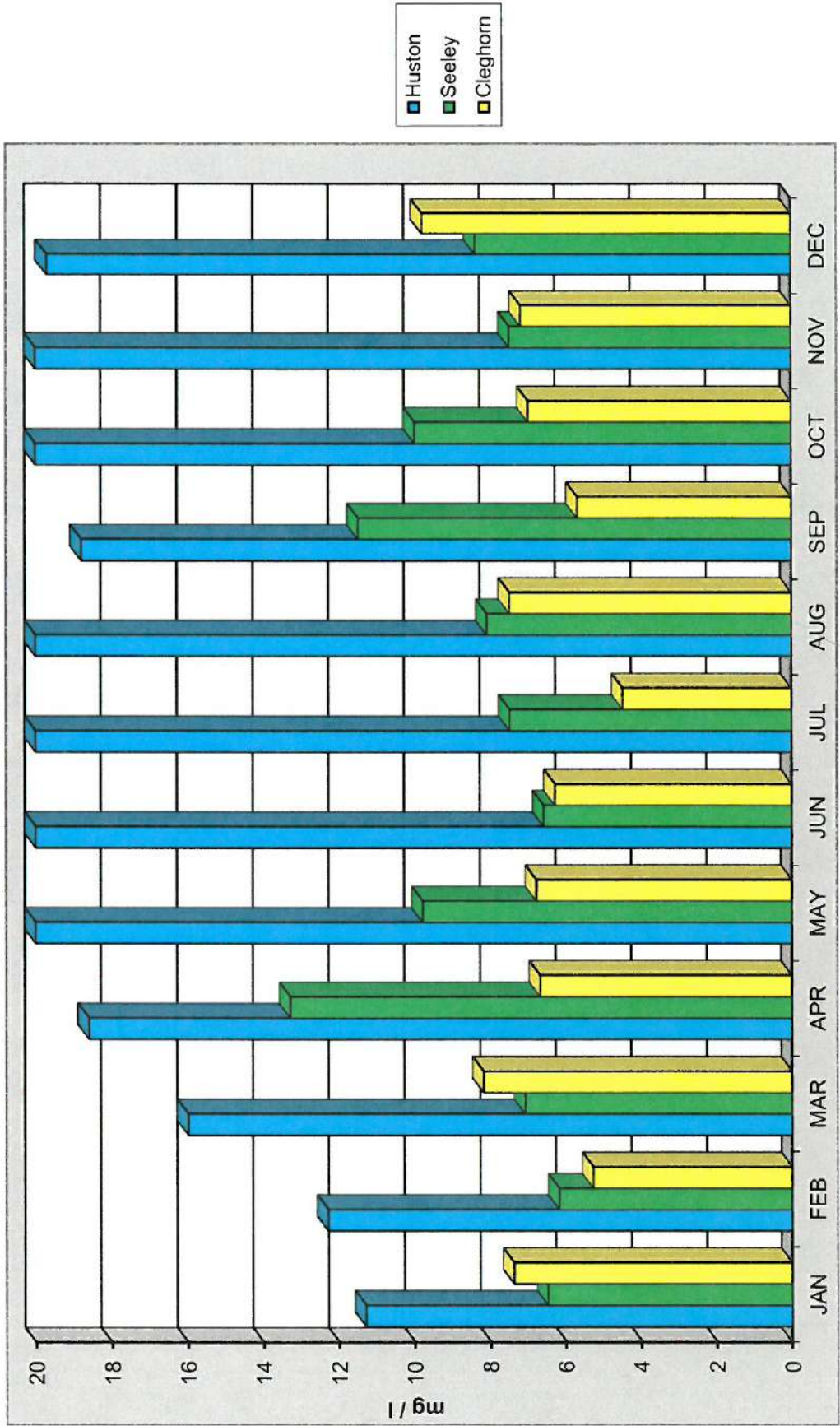
\* median does not exceed 23/100 milliliters and does not exceed 240/100 milliliters in any two consecutive samples

# CRESTLINE SANITATION DISTRICT

Treatment Facilities - Final Effluent Total Coliform - 2017



**CRESTLINE SANITATION DISTRICT**  
 Treatment Facilities - Final Effluent Chlorine Residual - 2017



**CRESTLINE SANITATION DISTRICT**  
**ANNUAL REPORT**  
**Effluent Monitoring**  
**District Final Effluent - Monitoring Data**  
**Las Flores Ranch Irrigation / Percolation**

Year: **2017**

Sample Frequency	2 / Week		Weekly	2 / Month		2 / Month		2 / Month		2 / Month		2 / Month		2 / Month	
	CL2 Res	Settleable Solids	D.O.	BOD	COD	MBAS	Oil & Grease	TKN	NO3-N	NH3-N	Violations	Sample Type	Maximum	Mean/Minimum	Median
Units	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Month															
<b>JANUARY</b>	2	6.1	<0.10	8.7	6.8	21.5	76.0	ND	ND	16.30	11.20	16.00			
<b>FEBRUARY</b>	2	6.1	<0.10	8.5	7.1	20.7	72.5	ND	ND	12.70	8.00	12.50			
<b>MARCH</b>	2	7.1	<0.10	8.3	7.1	22.8	73.0	ND	ND	11.50	8.30	11.30			
<b>APRIL</b>	2	7.2	<0.10	8.1	7.0	22.0	68.0	ND	ND	14.50	10.80	13.80			
<b>MAY</b>	2	5.8	<0.10	8.1	7.0	23.0	64.0	ND	ND	27.80	8.50	26.70			
<b>JUNE</b>	2	6.8	<0.10	7.4	7.2	21.0	77.5	ND	ND	15.30	13.50	14.80			
<b>JULY</b>	2	5.6	<0.10	7.2	7.3	19.8	53.0	ND	ND	14.00	11.00	13.20			
<b>AUGUST</b>	2	6.3	<0.10	7.6	7.2	18.5	62.0	ND	ND	13.10	9.90	12.00			
<b>SEPTEMBER</b>	2	6.5	<0.10	6.9	7.4	23.0	104.0	ND	ND	24.80	8.50	23.80			
<b>OCTOBER</b>	2	7.0	<0.10	7.2	7.5	21.5	63.0	ND	ND	14.90	11.60	14.30			
<b>NOVEMBER</b>	2	8.5	<0.10	8.2	7.4	22.5	62.0	ND	ND	13.40	10.20	12.30			
<b>DECEMBER</b>	2	9.9	<0.10	8.5	7.5	21.0	63.0	ND	ND	15.20	11.20	14.90			
<b>AVERAGES</b>		6.9	< 0.10	7.9	7.2	21.4	69.8	ND	ND	16.13	10.23	15.47			

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 milliliters and does not exceed 240/100 milliliters in any two consecutive samples

**CRESTLINE SANITATION DISTRICT**  
**ANNUAL REPORT**  
**Effluent Monitoring**  
**District Final Effluent - Monitoring Data**  
**Las Flores Ranch Irrigation / Percolation**

Year: 2017

Sample Frequency Violations	Semiannual Testing						Annual Testing				
	M	M	M	M	M	M	M	M	M	M	M
Sample Type	M	M	M	M	M	M	M	M	M	M	M
Mean/Minimum	A	A	A	A	A	A	A	A	A	A	A
Median											
Test	TDS	Chloride	Sodium	Sulfate	Boron	Flouride	Total Cyanides	Total Phenols	Base/Neutral/Acid Extractable Organics	Heavy Metals	Total Petroleum Hydrocarbons
	mg/l	mg/l	ml/l	mg/l	mg/l	mg/l	mg/l	mg/l	ug/l	ug/l	ug/l
Units											
Month											
JANUARY											
FEBRUARY											
MARCH	395.0	101.0	61.0	90.0	0.15	0.64					
APRIL											
MAY											
JUNE											
JULY											
AUGUST											
SEPTEMBER	280	157.0	120.0	75.0	0.28	0.90	A	A	A	A	A
OCTOBER	.....										
NOVEMBER											
DECEMBER											

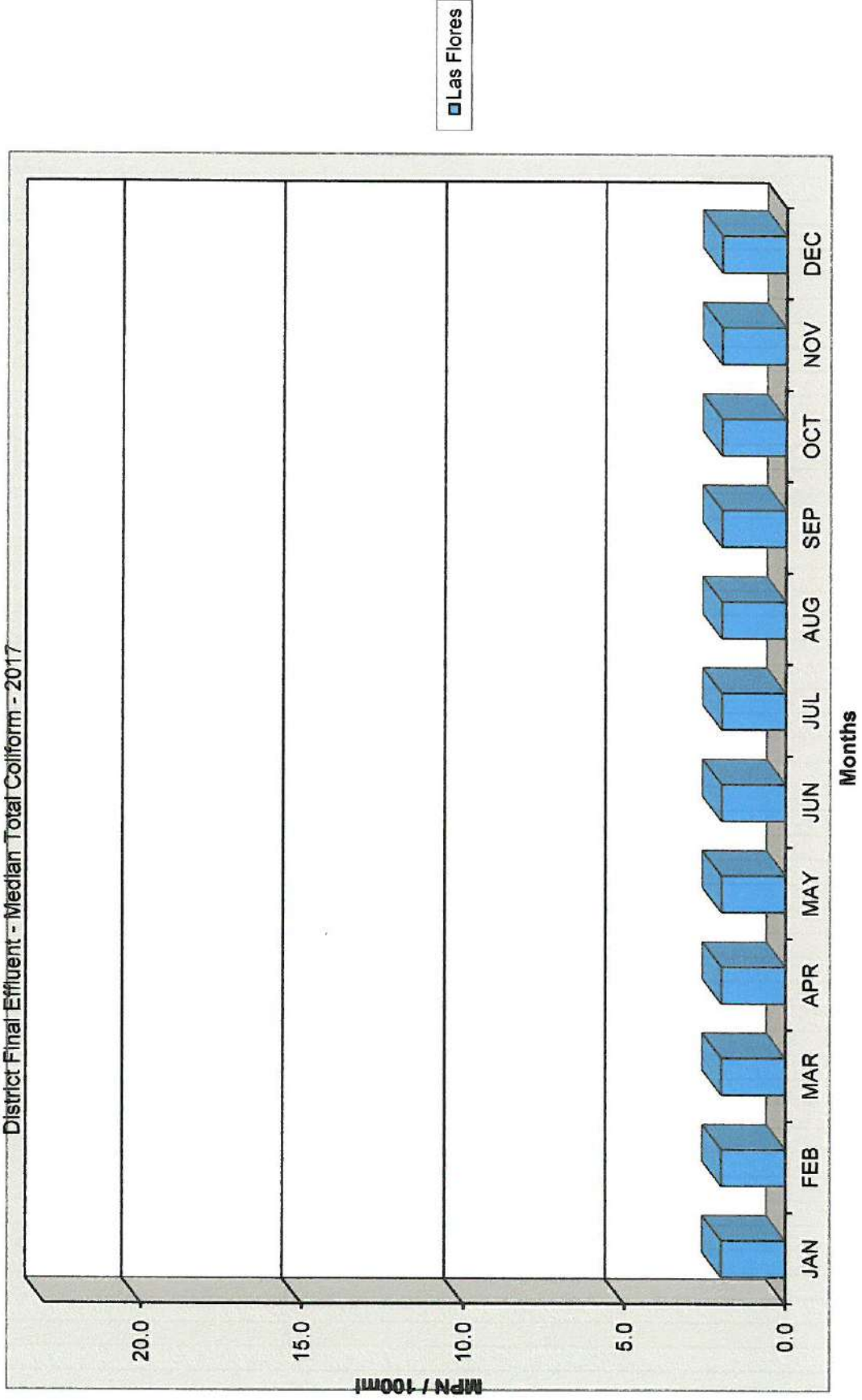
D - Sample has Effluent / Discharge Limitations      M - Sample has Effluent Monitoring Requirements

A - For Sample Results see Appendix " A "



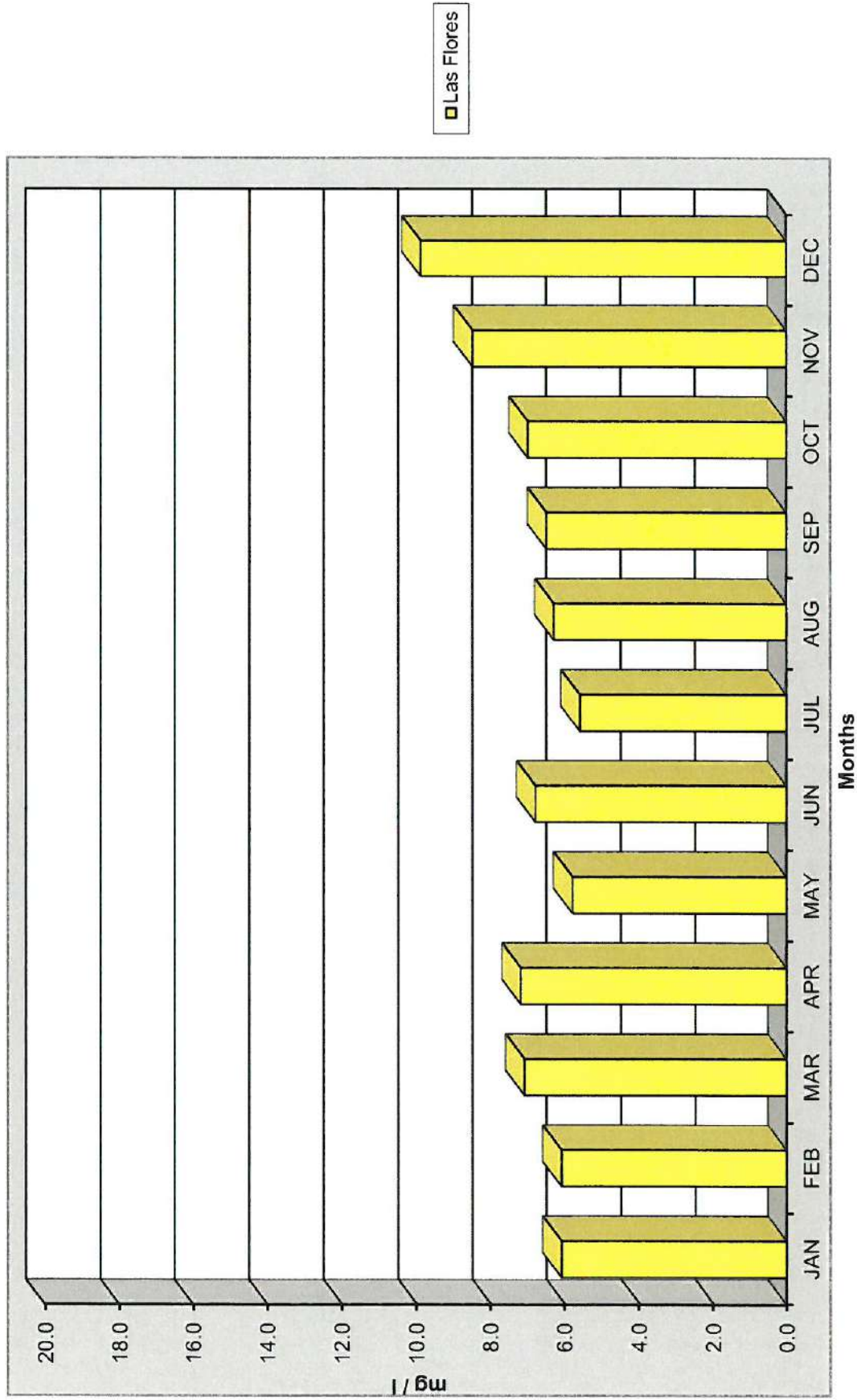
# CRESTLINE SANITATION DISTRICT

District Final Effluent - Median Total Coliform - 2017



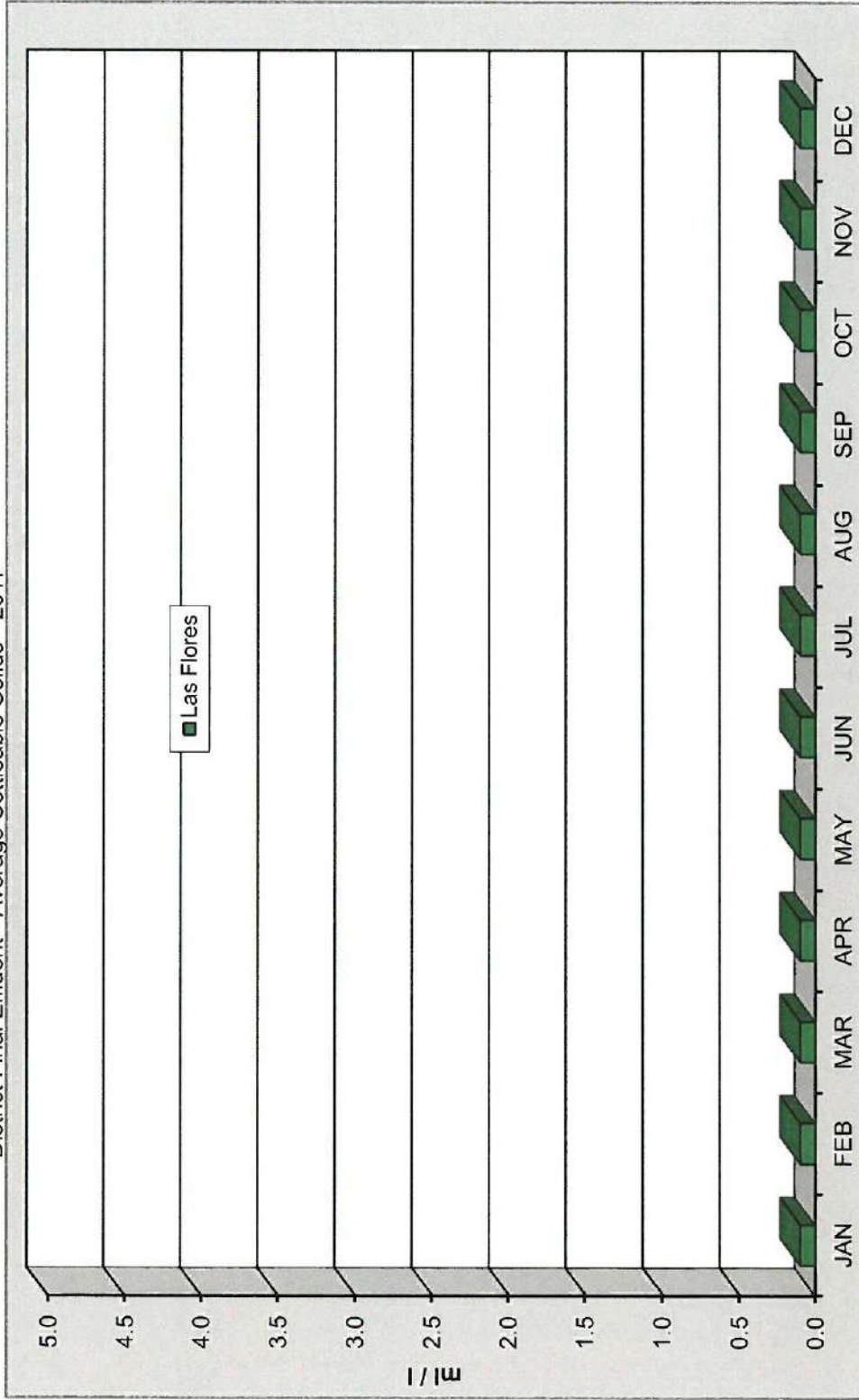
# CRESTLINE SANITATION DISTRICT

District Final Effluent - Average Chlorine Residual - 2017



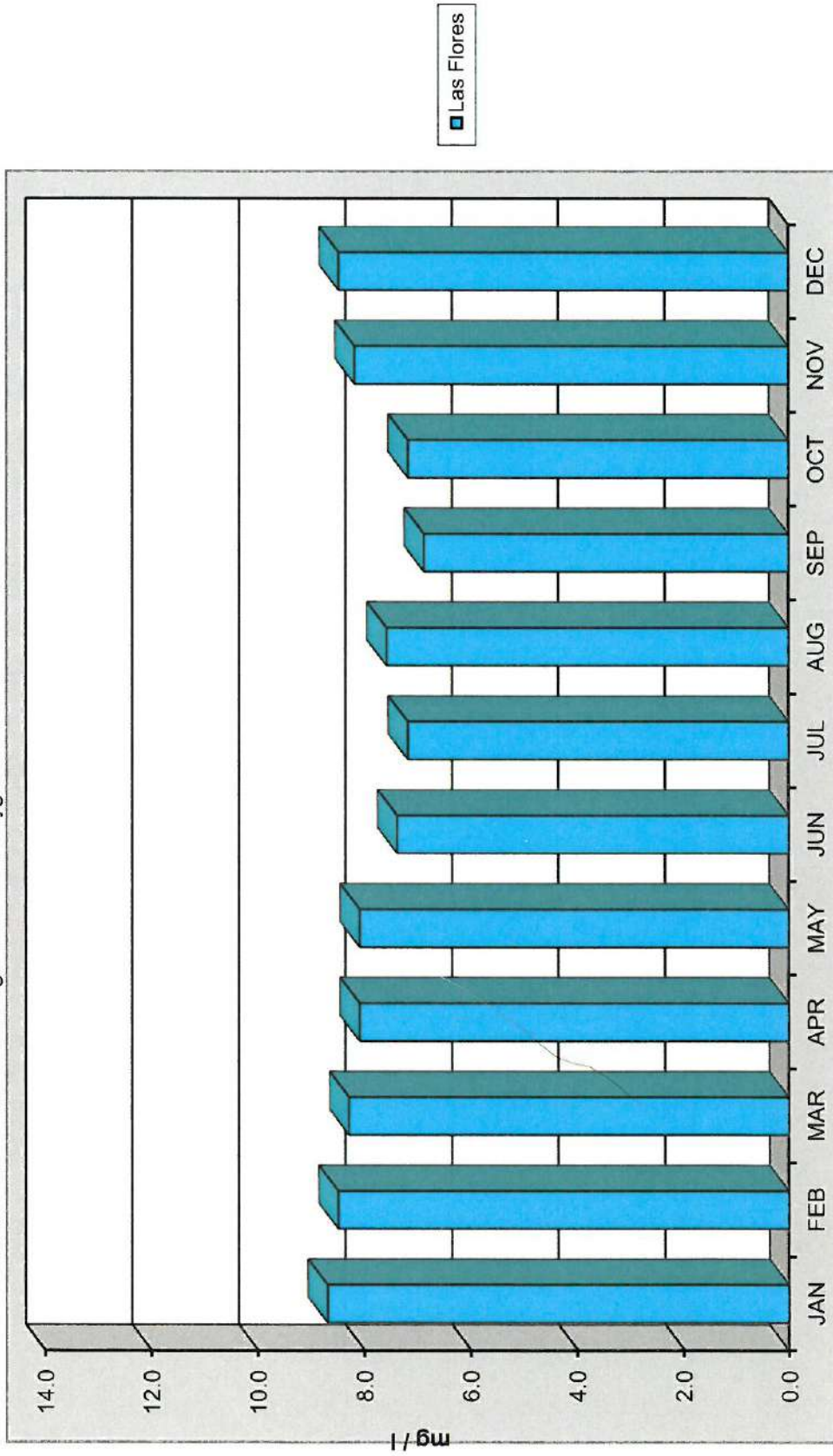
# CRESTLINE SANITATION DISTRICT

District Final Effluent - Average Settleeable Solids - 2017



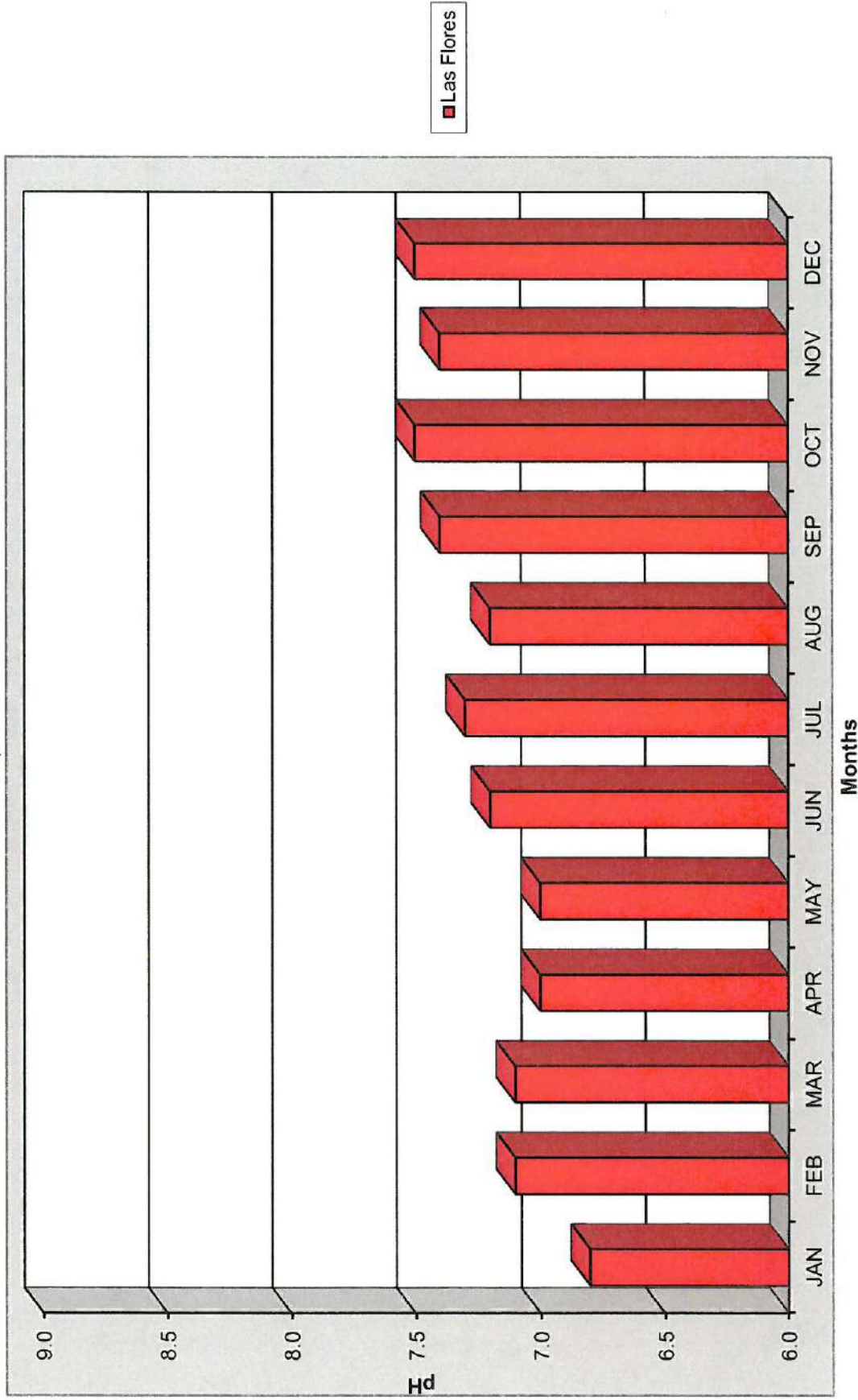
# CRESTLINE SANITATION DISTRICT

District Final Effluent - Average Dissolved Oxygen - 2017



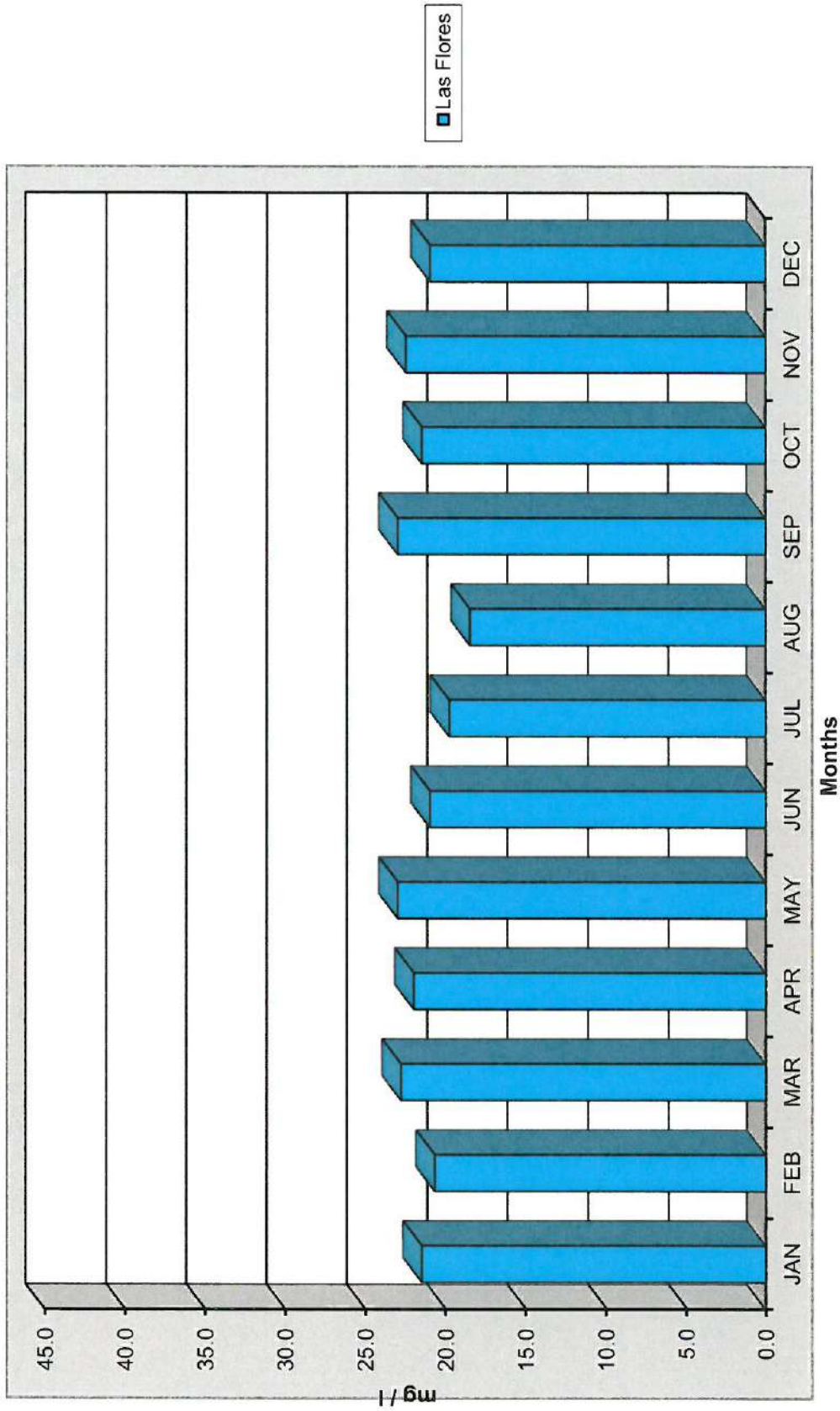
# CRESTLINE SANITATION DISTRICT

District Final Effluent - pH - 2017



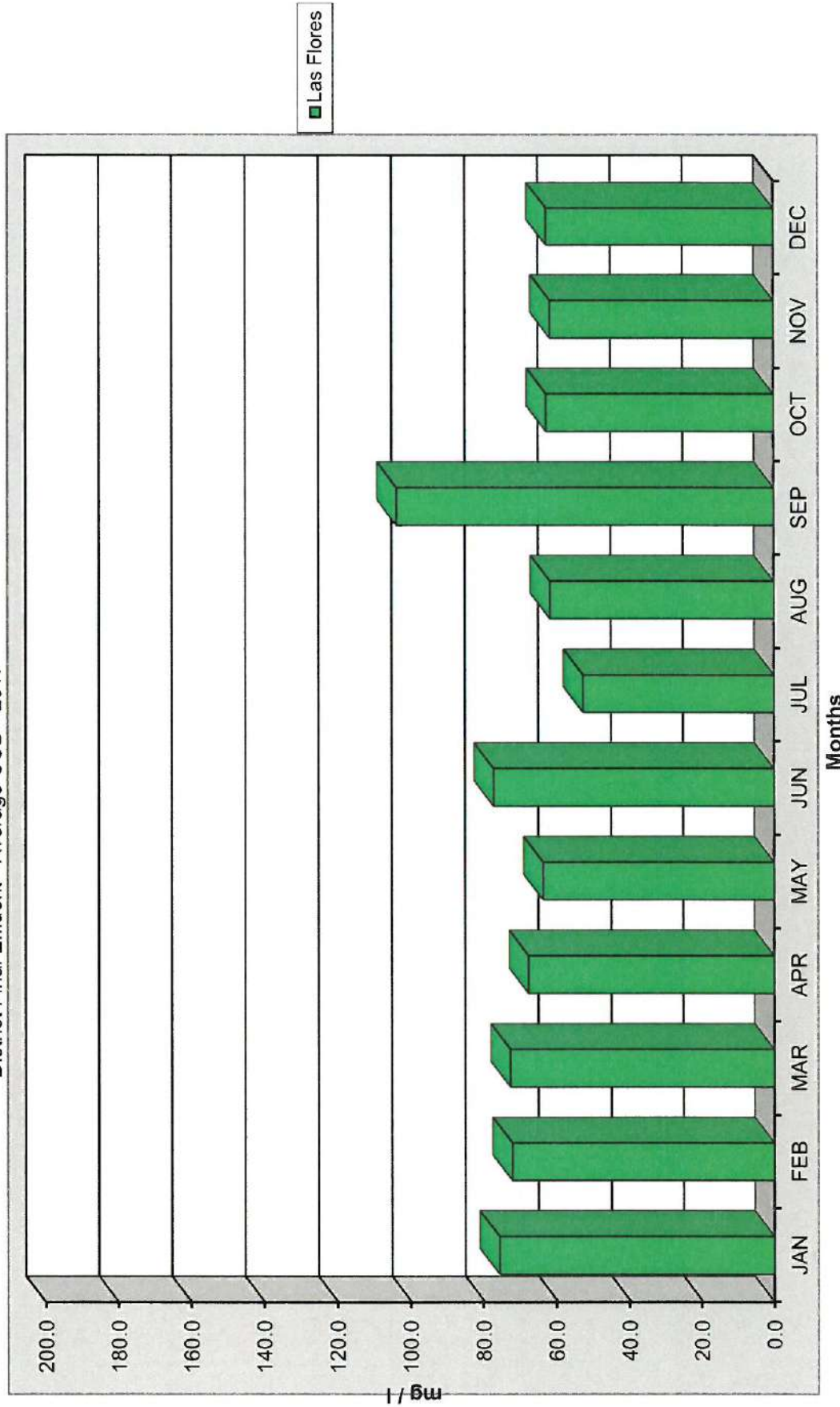
# CRESTLINE SANITATION DISTRICT

District Final Effluent - Average BOD - 2017



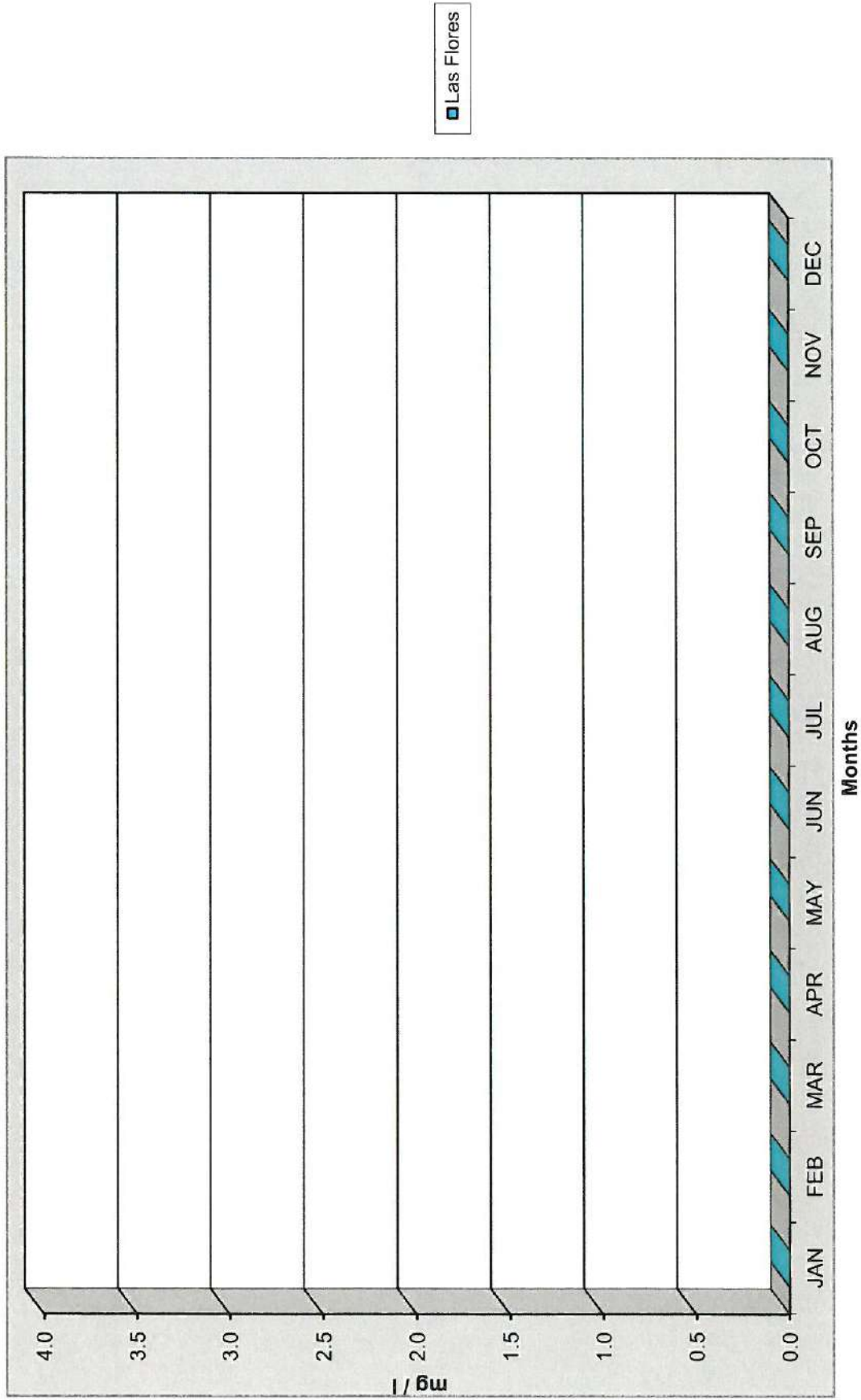
# CRESTLINE SANITATION DISTRICT

District Final Effluent - Average COD - 2017



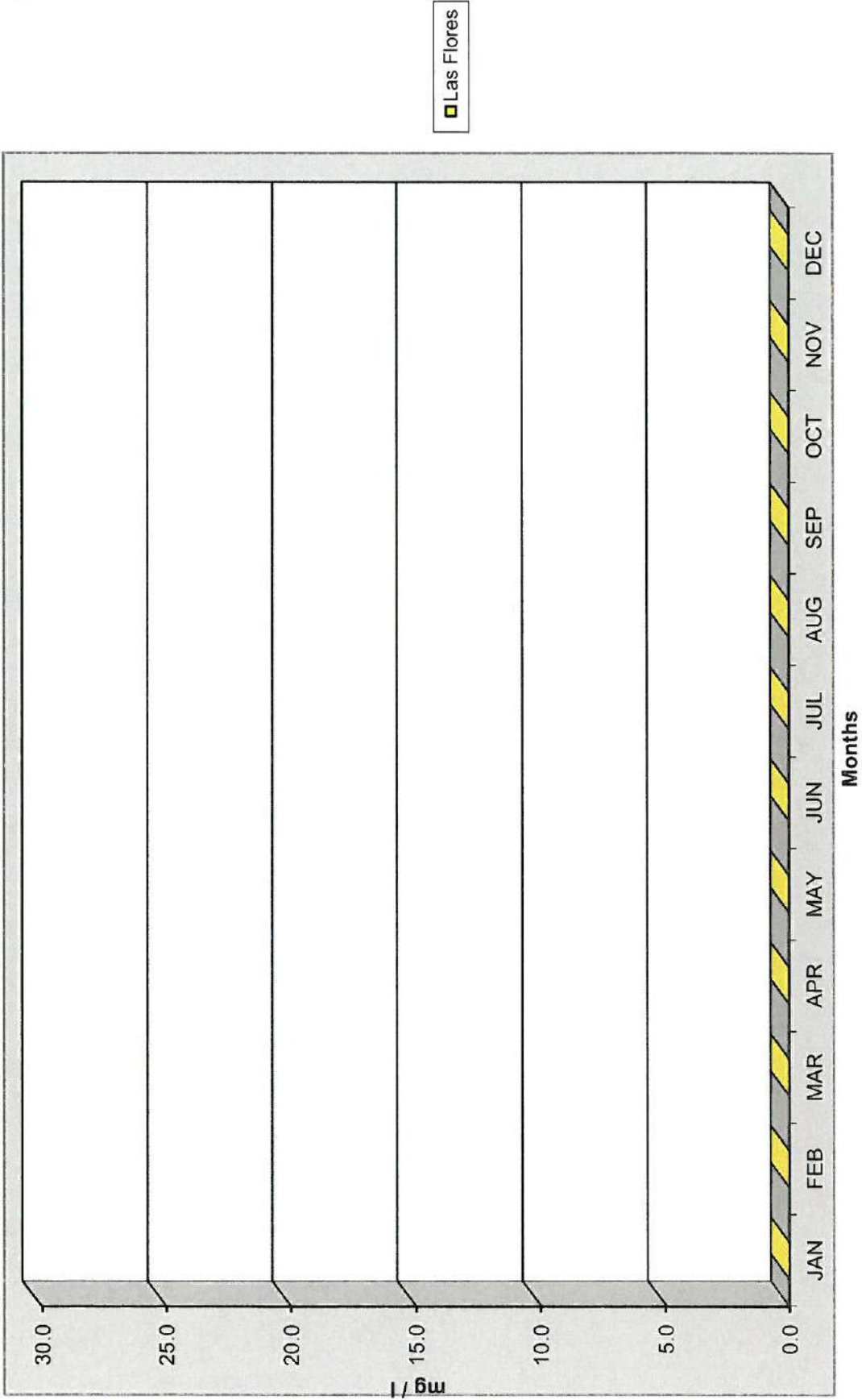
# CRESTLINE SANITATION DISTRICT

District Final Effluent - Average MBAS - 2017



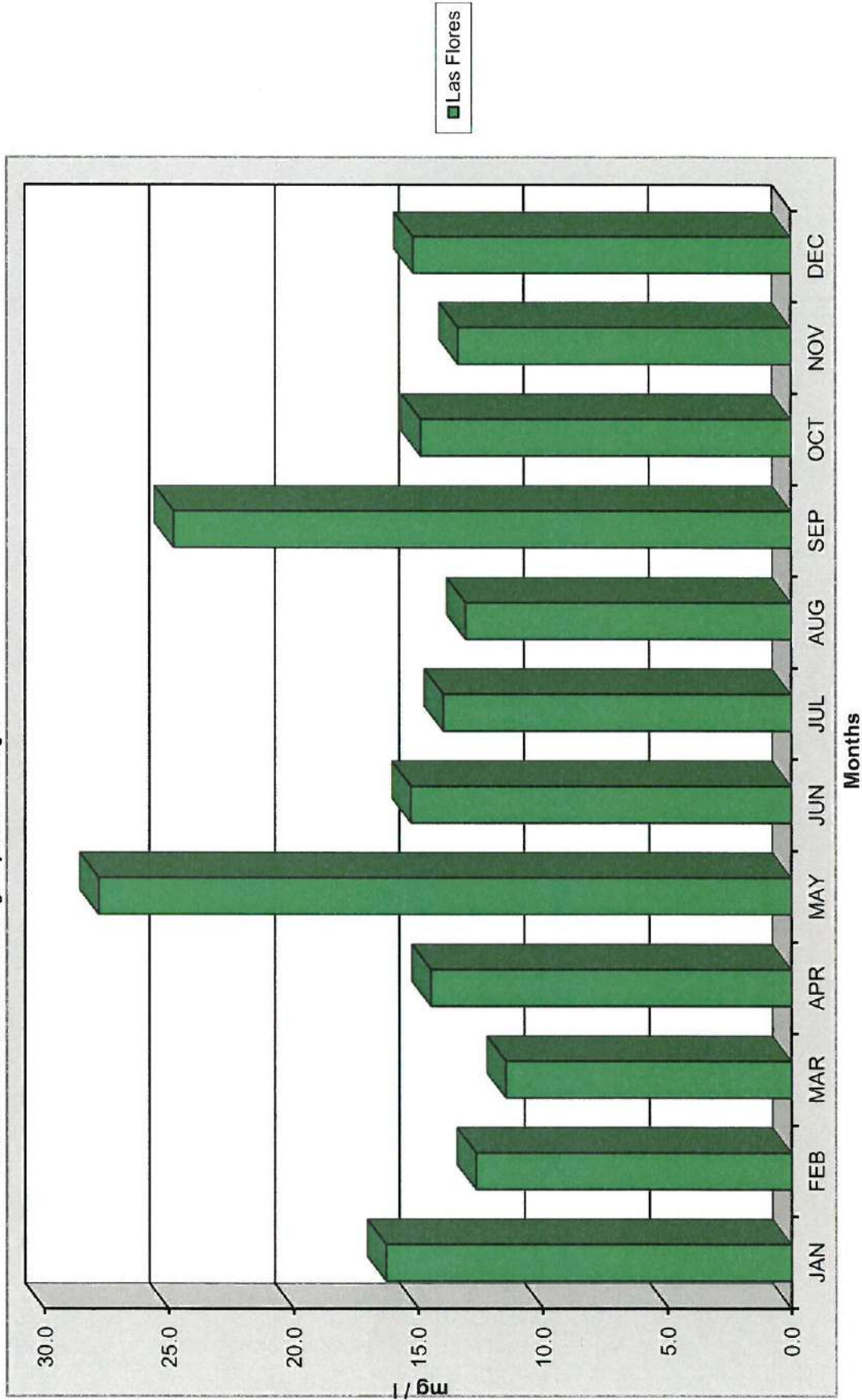


**CRESTLINE SANITATION DISTRICT**  
 District Final Effluent - Average Oil & Grease - 2017

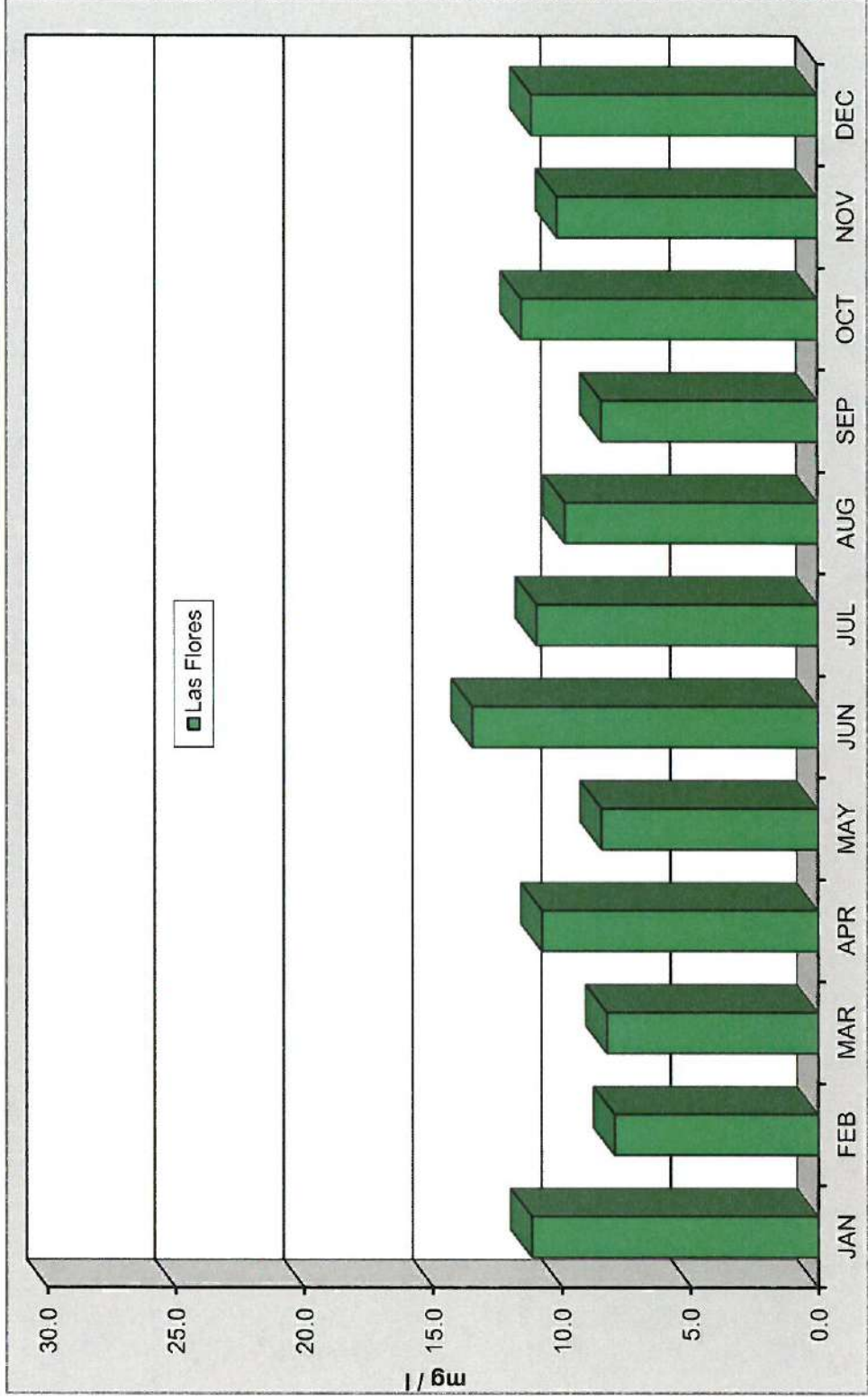


# CRESTLINE SANITATION DISTRICT

District Final Effluent - Average Kjeldahl Nitrogen - 2017

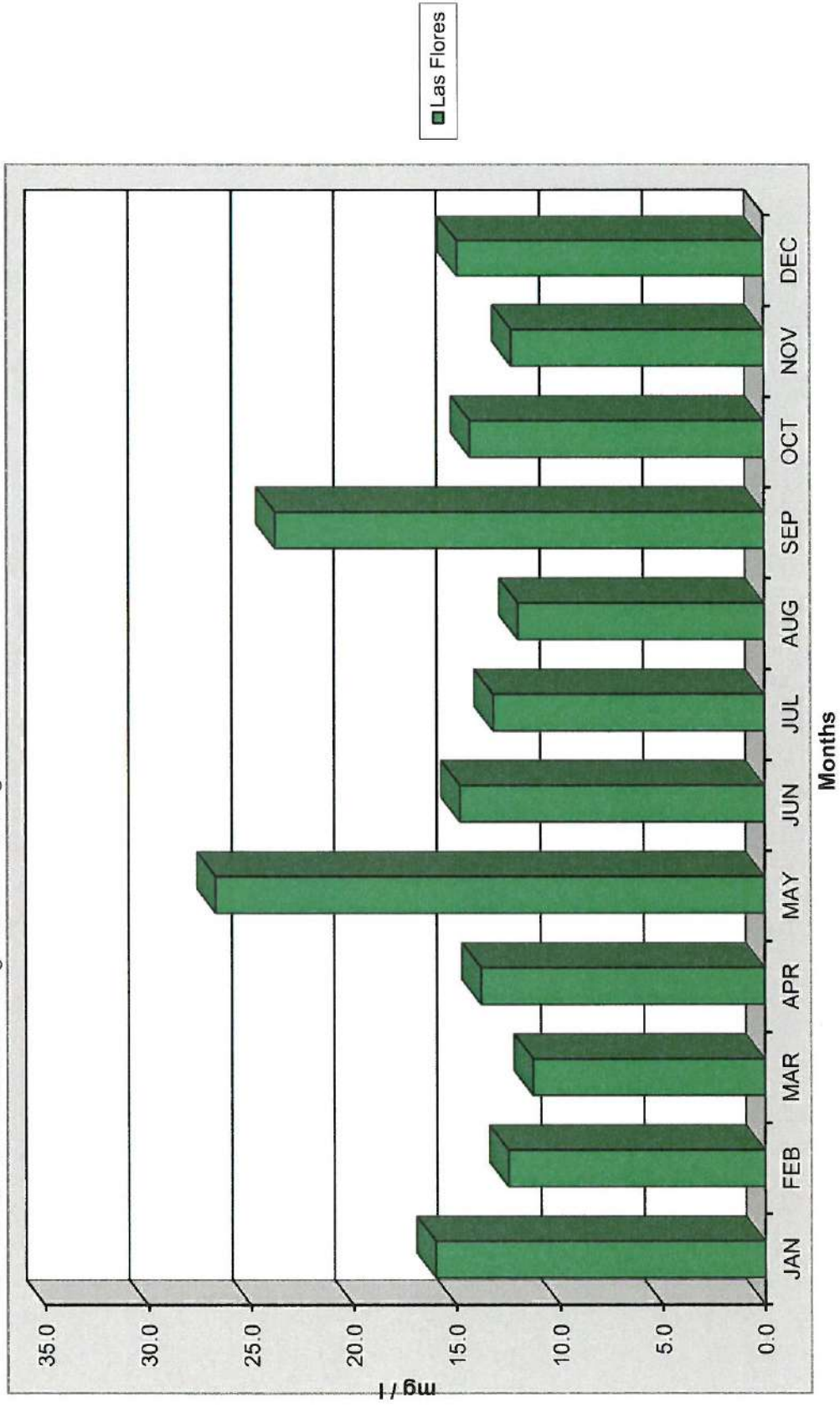


**CRESTLINE SANITATION DISTRICT**  
District Final Effluent - Average Nitrate Nitrogen -2017



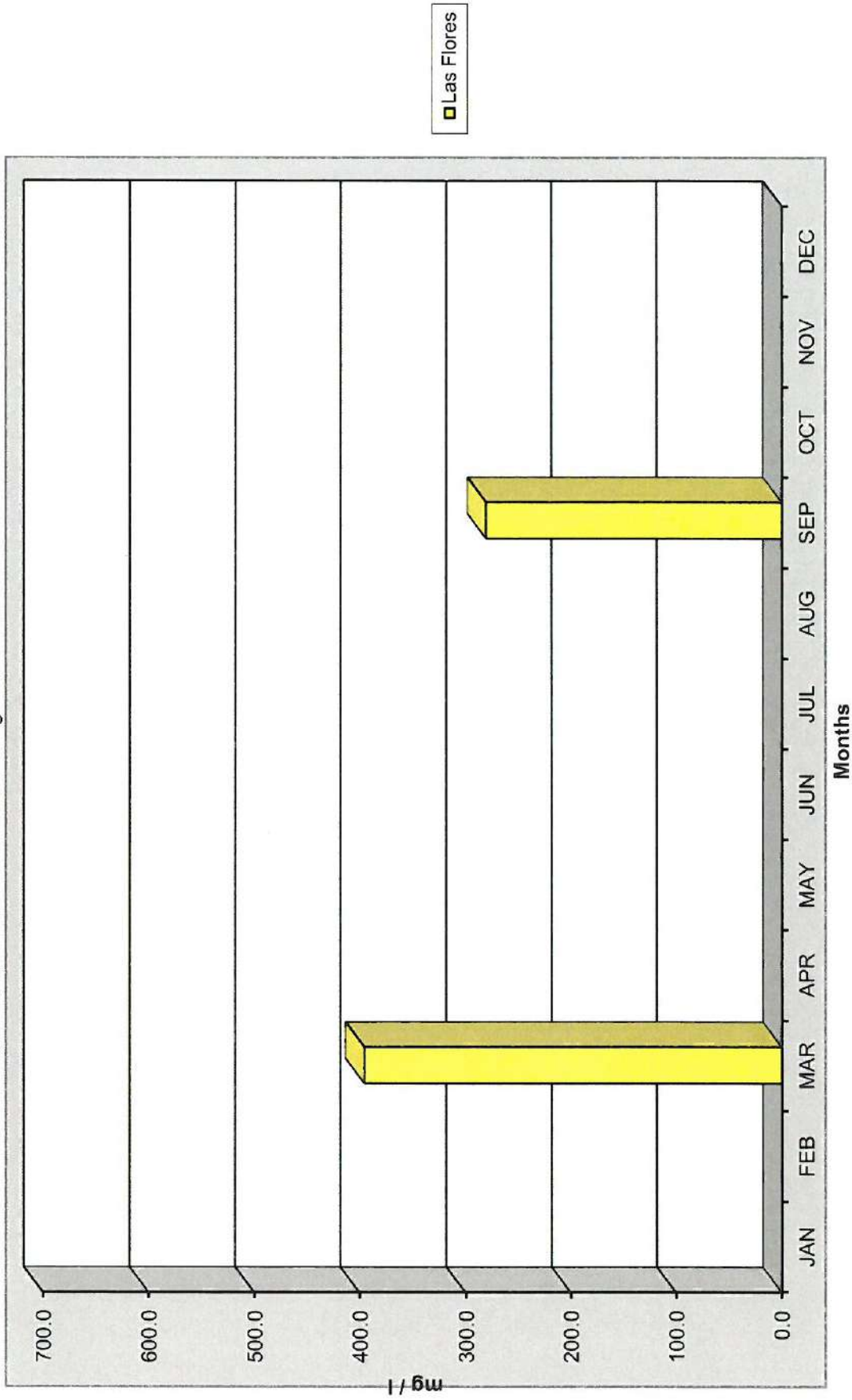
# CRESTLINE SANITATION DISTRICT

District Final Effluent - Average Ammonia Nitrogen - 2017



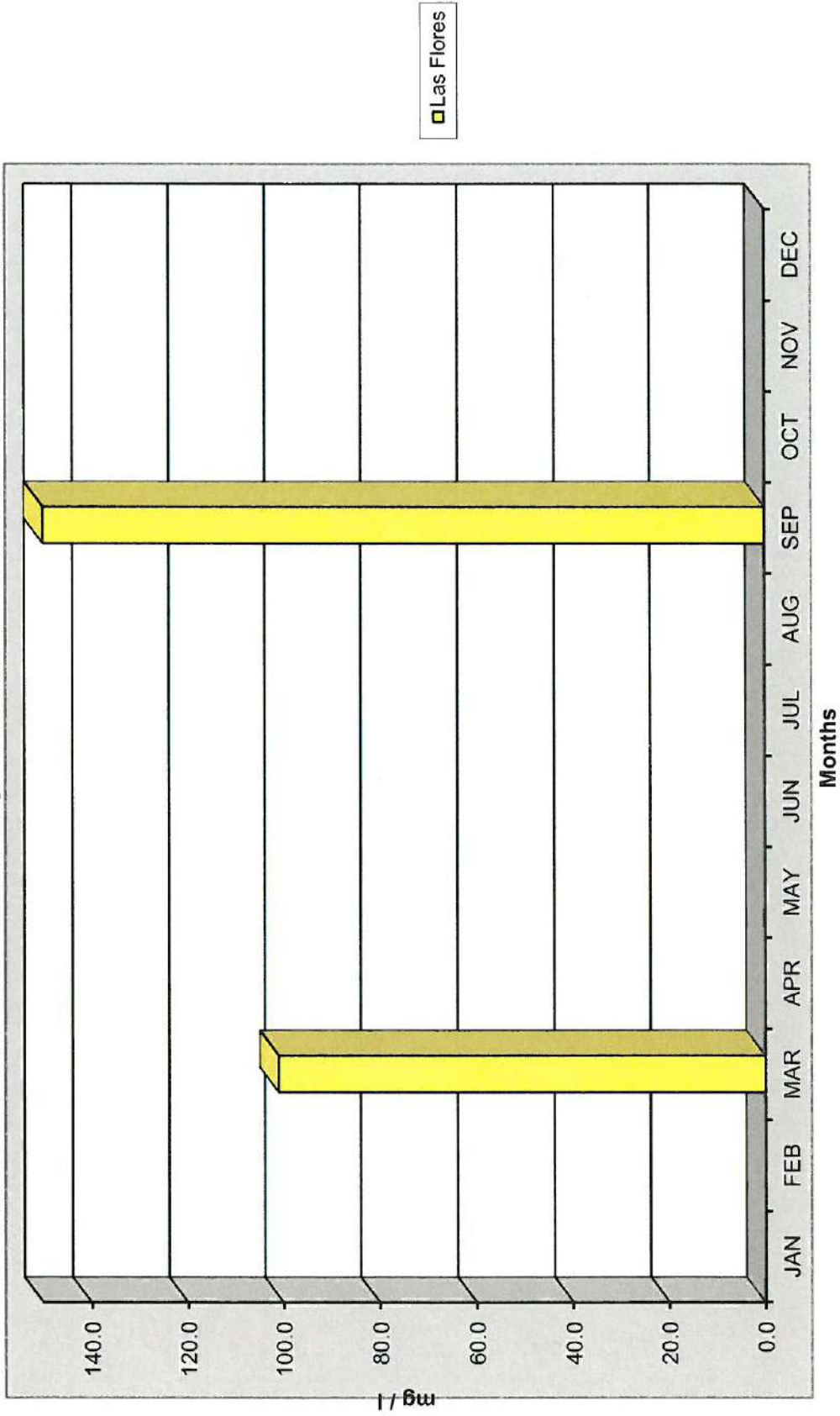
# CRESTLINE SANITATION DISTRICT

District Final Effluent - Semi & Annual Testing - TDS - 2017

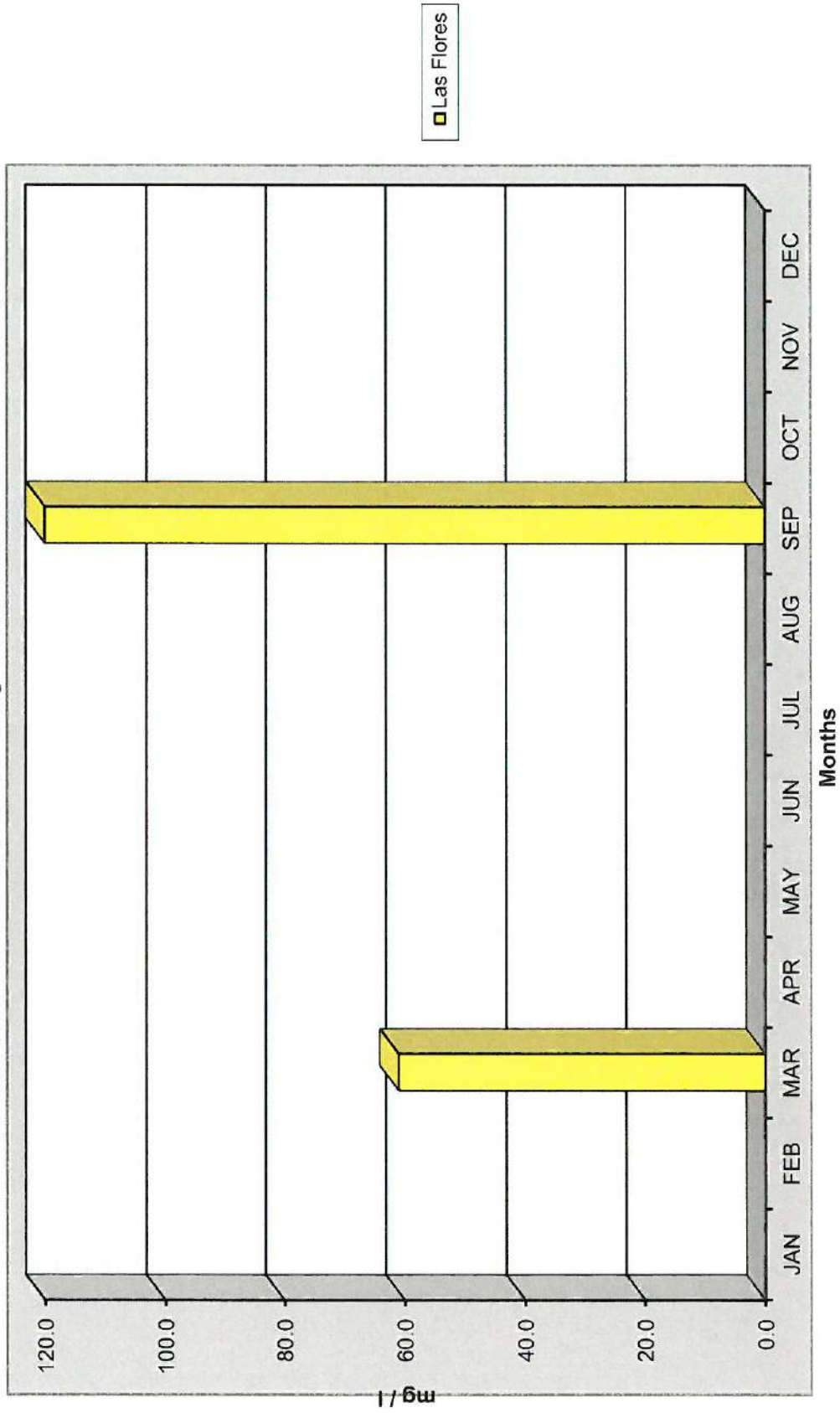


# CRESTLINE SANITATION DISTRICT

District Final Effluent - Semi & Annual Testing - Chloride - 2017

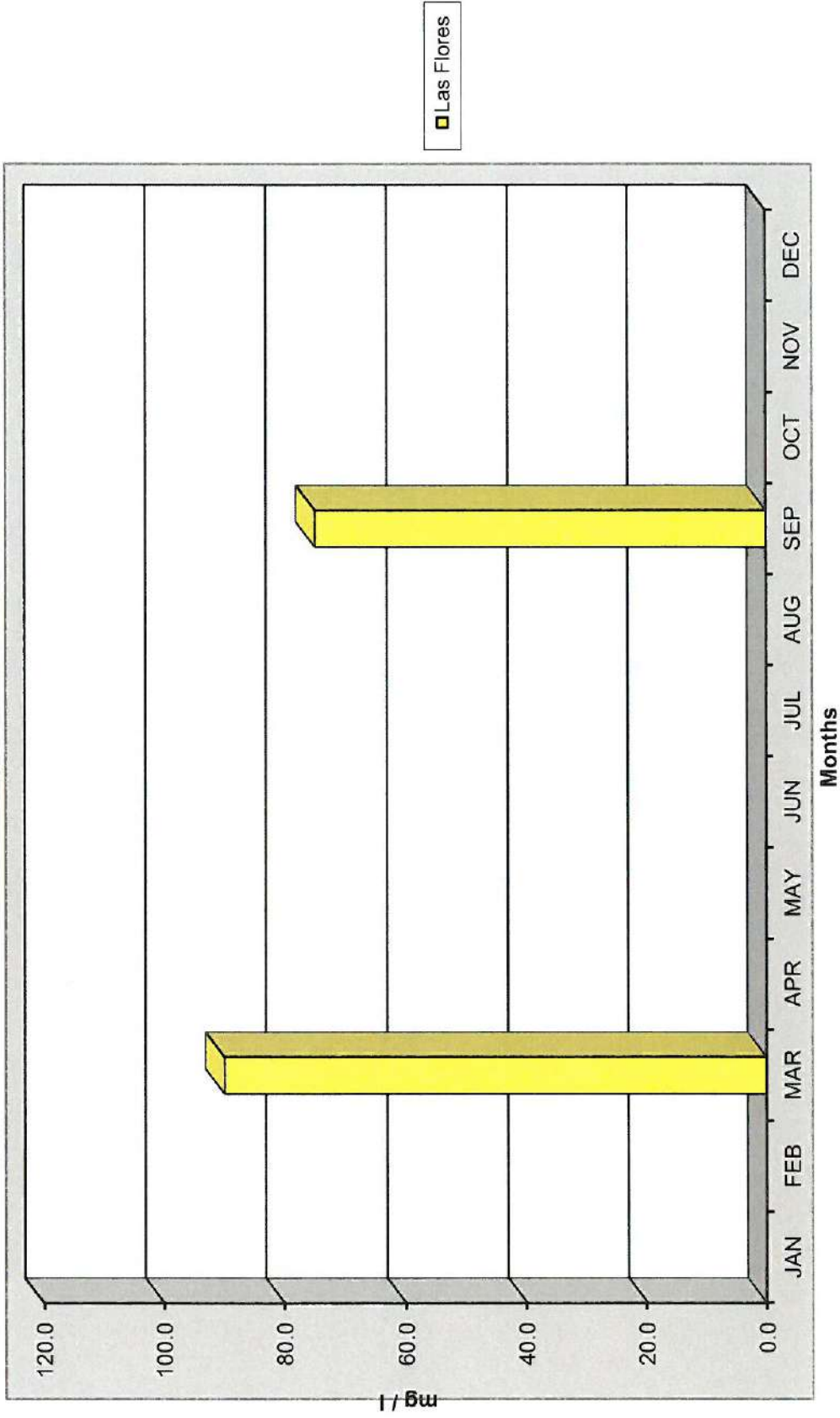


**CRESTLINE SANITATION DISTRICT**  
District Final Effluent - Semi & Annual Testing - Sodium - 2017



# CRESTLINE SANITATION DISTRICT

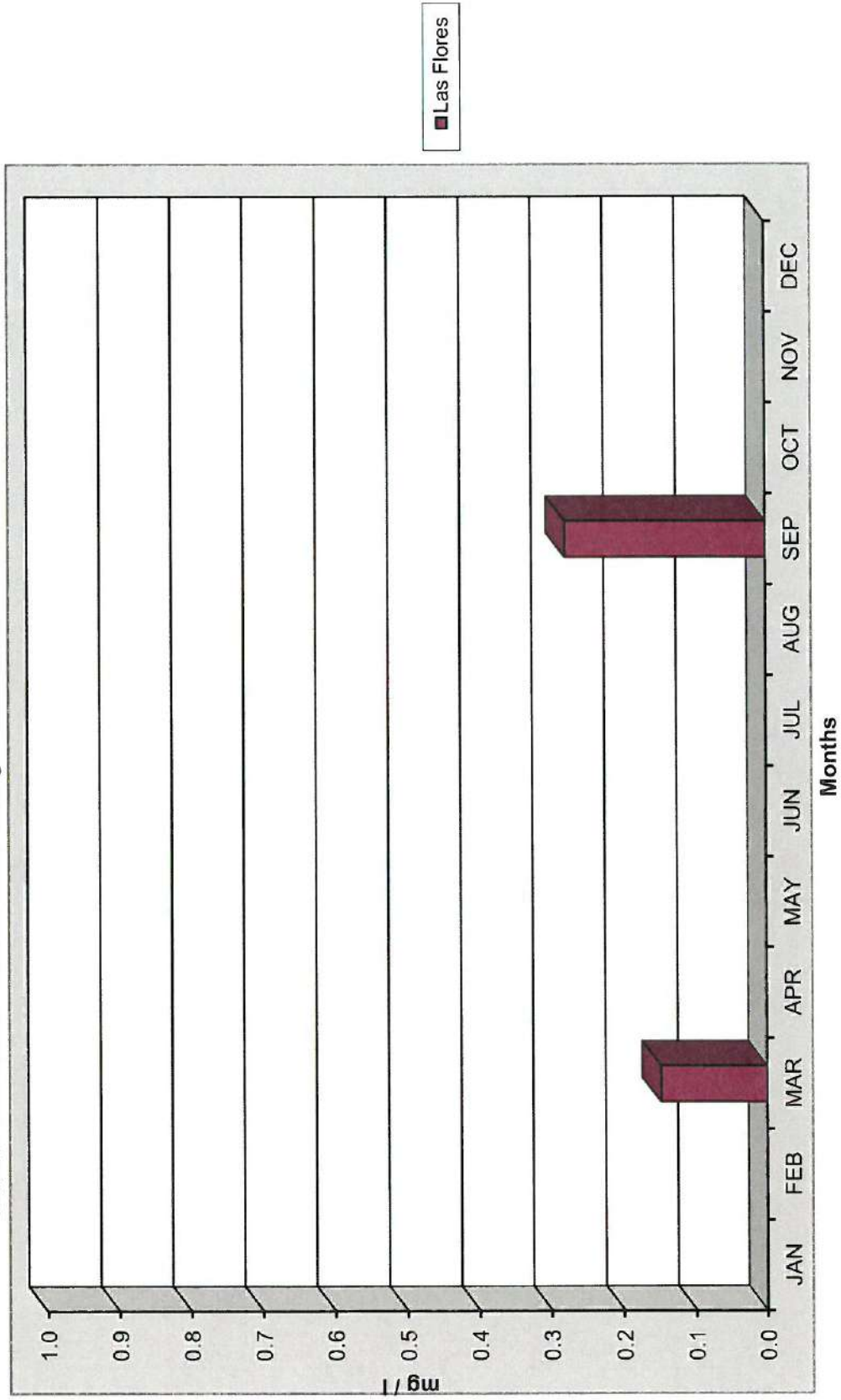
District Final Effluent - Semi & Annual Testing - Sulfate - 2017





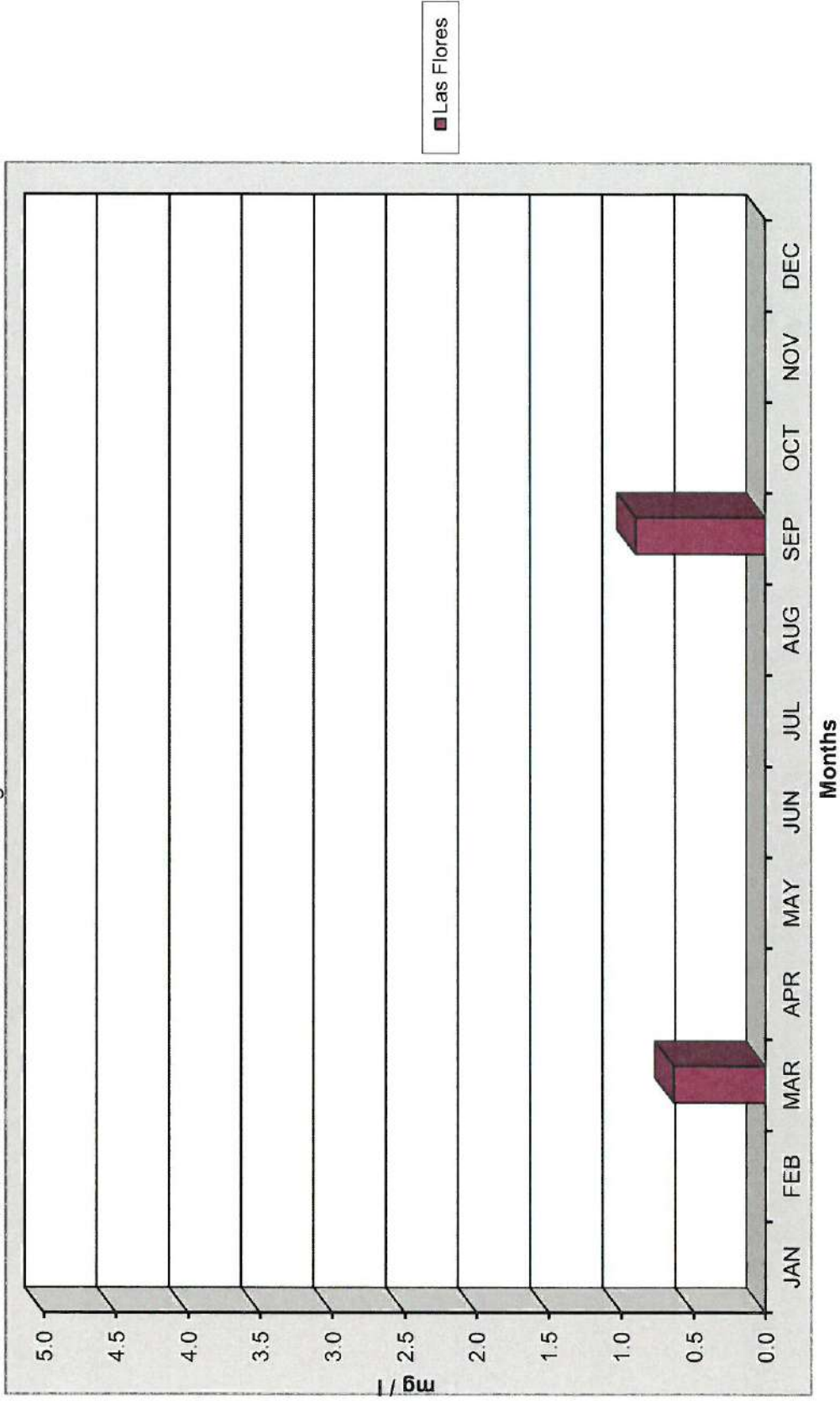
# CRESTLINE SANITATION DISTRICT

District Final Effluent - Semi & Annual Testing - Boron - 2017



# CRESTLINE SANITATION DISTRICT

District Final Effluent - Semi & Annual Testing - Flouride - 2017



**CRESTLINE SANITATION DISTRICT  
ANNUAL REPORT**

**Sludge Monitoring**

Year: 2017

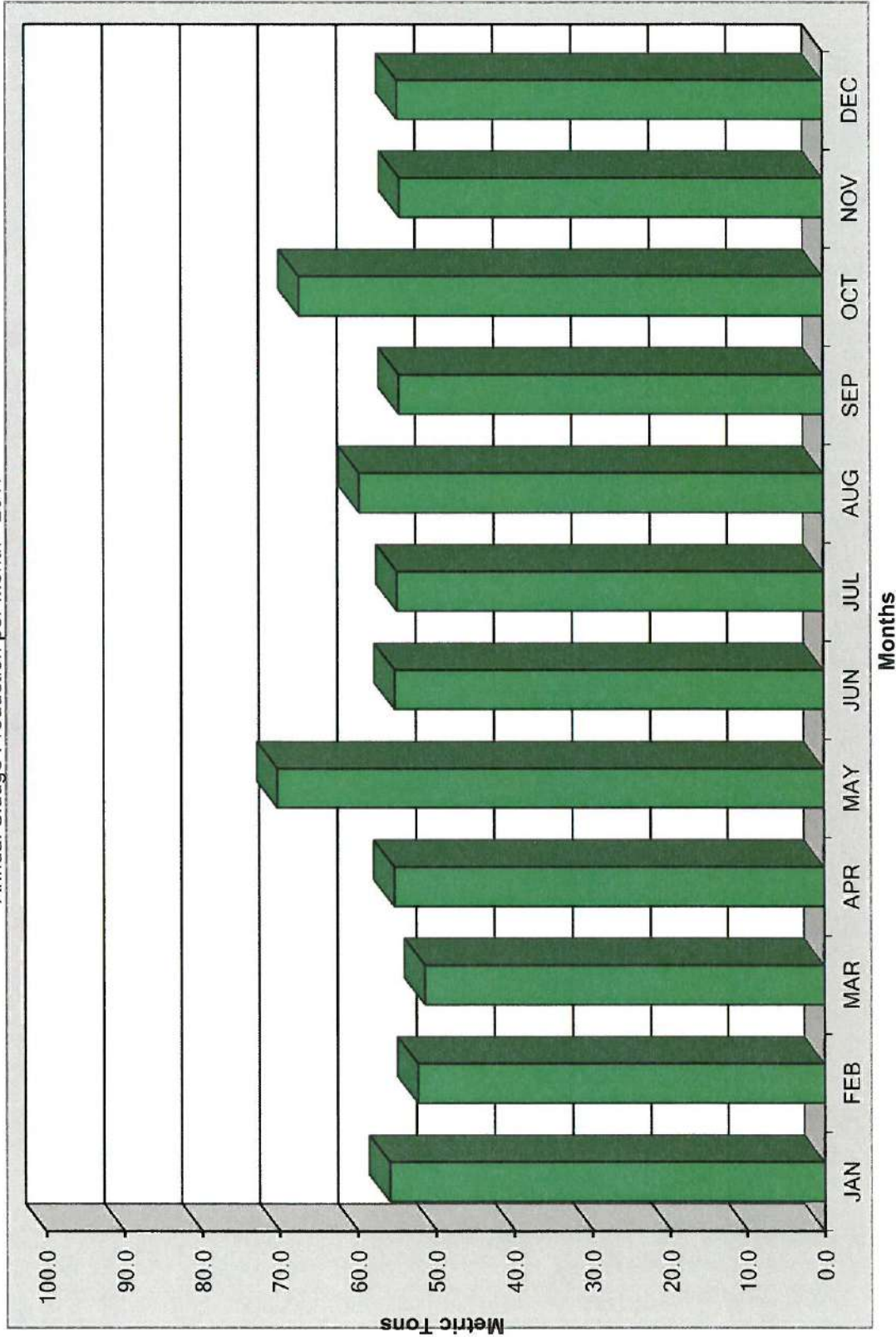
	<b>Sludge Generated</b>	<b>Sludge Removed from Site</b>	<b>Sludge Disposal Method</b>	<b>Sludge Stockpiled on Site</b>
<b>Month</b>				
January	56.0 tons	56.0 Tons	(a)	0.0 Tons
February	52.4 tons	52.4 Tons	(a)	0.0 Tons
March	51.5 tons	51.5 Tons	(a)	0.0 Tons
April	55.4 tons	55.4 Tons	(a)	0.0 Tons
May	70.3 tons	70.3 Tons	(a)	0.0 Tons
June	55.3 tons	55.3 Tons	(a)	0.0 Tons
July	55.0 tons	55.0 Tons	(a)	0.0 Tons
August	59.8 tons	59.8 Tons	(a)	0.0 Tons
September	54.7 tons	54.7 Tons	(a)	0.0 Tons
October	67.5 tons	67.5 Tons	(a)	0.0 Tons
November	54.6 tons	54.6 Tons	(a)	0.0 Tons
December	54.9 tons	54.9 Tons	(a)	0.0 Tons
<b>TOTAL</b>	<b>687.4 tons</b>	<b>687.4 Tons</b>	<b>(a)</b>	<b>0.0 Tons</b>

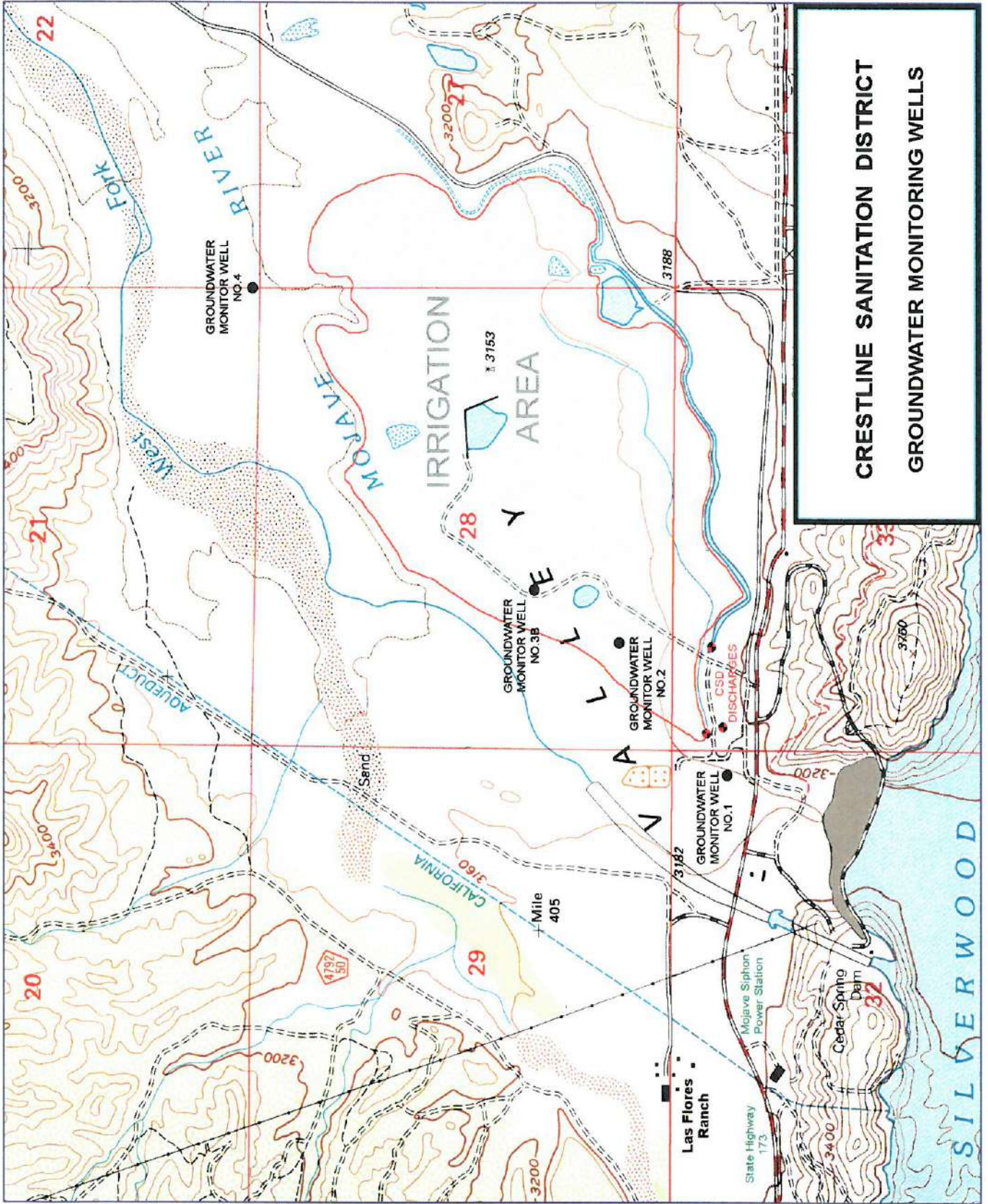
(a) Sludge is collected from Crestline's three treatment plants and Pilot Rock, mixed and pressed at the Huston Creek Treatment Plant. After pressing; the solids are disposed of at One Stop Landscape (13024 San Timoteo Canyon Road, Redlands, CA 92373) for composting and eventual recycling.

*Note: Laboratory Analysis of the sludge is not required at this time in recognition that there are no significant industrial waste inputs 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)*

# CRESTLINE SANITATION DISTRICT

Annual Sludge Production per Month - 2017





**CRESTLINE SANITATION DISTRICT  
GROUNDWATER MONITORING WELLS**

**CRESTLINE SANITATION DISTRICT  
ANNUAL REPORT  
Pasture Monitoring Well Number 1  
Laboratory Monitoring Data**

Year: **2017**

Frequency	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	
Sample Type	A	A	A	A	A	A	A	A	A	
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
<b>JANUARY</b>										
<b>FEBRUARY</b>										
<b>MARCH</b>	97.0	62.0	ND	30.2	255	0.11	0.10	2.20	3156.5	1
<b>APRIL</b>										
<b>MAY</b>										
<b>JUNE</b>	105.0	84.0	ND	34.0	310	0.12	0.10	2.40	3164.7	1
<b>JULY</b>										
<b>AUGUST</b>										
<b>SEPTEMBER</b>	115.0	90.0	ND	21.8	270	ND	ND	1.80	3153.9	1
<b>OCTOBER</b>										
<b>NOVEMBER</b>										
<b>DECEMBER</b>	100.0	75.0	ND	16.4	210	0.17	0.15	1.70	3110.2	1

A - Monitoring Requirement

\* = Depth in feet from surface to groundwater

Lab results of ND (none detected) entered as 0.0 for graphing purpose

**CRESTLINE SANITATION DISTRICT**  
**Pasture Monitoring Well Number 2**  
**Laboratory Monitoring Data**

Year: **2017**

Frequency	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	
Sample Type	A	A	A	A	A	A	A	A	A	
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
<b>JANUARY</b>										
<b>FEBRUARY</b>										
<b>MARCH</b>	114.0	67.0	ND	116.0	450	0.19	0.17	9.40	3159.2	2
<b>APRIL</b>										
<b>MAY</b>										
<b>JUNE</b>	110.0	72.0	ND	112.0	435	0.20	0.19	8.90	3164.7	2
<b>JULY</b>										
<b>AUGUST</b>										
<b>SEPTEMBER</b>	63.0	86.0	ND	132.0	440	0.20	0.18	4.30	3151.2	2
<b>OCTOBER</b>										
<b>NOVEMBER</b>										
<b>DECEMBER</b>	90.0	93.0	ND	138.0	490	0.25	0.24	3.30	3151.2	2

A - Monitoring Requirement

\* = Depth in feet from surface to groundwater

Lab results of ND (none detected) entered as 0.0 for graphing purpose

**CRESTLINE SANITATION DISTRICT  
ANNUAL REPORT  
Pasture Monitoring Well Number 3  
Laboratory Monitoring Data**

Year: **2017**

Frequency	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	
Sample Type	A	A	A	A	A	A	A	A	A	
Sample Units	Sulfate mg/l	Sodium mg/l	MBAS mg/l	Chloride mg/l	TDS mg/l	TKN mg/l	NH3-N mg/l	NO3-N mg/l	Water Depth feet *	Well Number
<b>JANUARY</b>										
<b>FEBRUARY</b>										
<b>MARCH</b>	147.0	84.0	ND	165.0	580	0.17	0.16	7.80	3153.5	3
<b>APRIL</b>										
<b>MAY</b>										
<b>JUNE</b>	150.0	87.0	ND	158.0	570	0.15	0.14	6.90	3162.4	3
<b>JULY</b>										
<b>AUGUST</b>										
<b>SEPTEMBER</b>	86.0	58.0	ND	117.0	480	0.10	ND	3.20	3147.1	3
<b>OCTOBER</b>										
<b>NOVEMBER</b>										
<b>DECEMBER</b>	75.0	76.0	ND	123.0	420	0.25	0.24	3.30	3148.6	3

A - Monitoring Requirement

\* = Depth in feet from surface to groundwater

Lab results of ND (none detected) entered as 0.0 for graphing purpose



**CRESTLINE SANITATION DISTRICT  
ANNUAL REPORT  
Pasture Monitoring Well Number 4  
Laboratory Monitoring Data**

Year: **2017**

Frequency	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	
Sample Type	A	A	A	A	A	A	A	A	A	
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
<b>JANUARY</b>										
<b>FEBRUARY</b>										
<b>MARCH</b>	95.0	46.0	ND	116.0	505	0.12	0.10	4.50	3115.4	4
<b>APRIL</b>										
<b>MAY</b>										
<b>JUNE</b>	92.0	52.0	ND	112.0	480	0.12	0.11	4.70	3120.5	4
<b>JULY</b>										
<b>AUGUST</b>										
<b>SEPTEMBER</b>	96.0	53.0	ND	97.8	480	ND	ND	ND	3106.6	4
<b>OCTOBER</b>										
<b>NOVEMBER</b>										
<b>DECEMBER</b>	80.0	49.0	ND	159.0	470	0.23	0.21	2.60	3110.2	4

A - Monitoring Requirement

\* = Depth in feet from surface to groundwater

Lab results of ND (none detected) entered as 0.0 for graphing purpose

**CRESTLINE SANITATION DISTRICT  
ANNUAL REPORT  
Pasture Monitoring Wells  
Laboratory Monitoring Data**

Annual Samples

2017

Frequency	Annual			
Sample Type	A	A	A	
Sample	Purgable Halocarbons *	Purgable Aromatics	Base/Neutral/Acid Extractable Organics	Well Number
Units	ug/l	ug/l	ug/l	
Month				
September	B	B	B	1
September	B	B	B	2
September	B	B	B	3
September	B	B	B	4

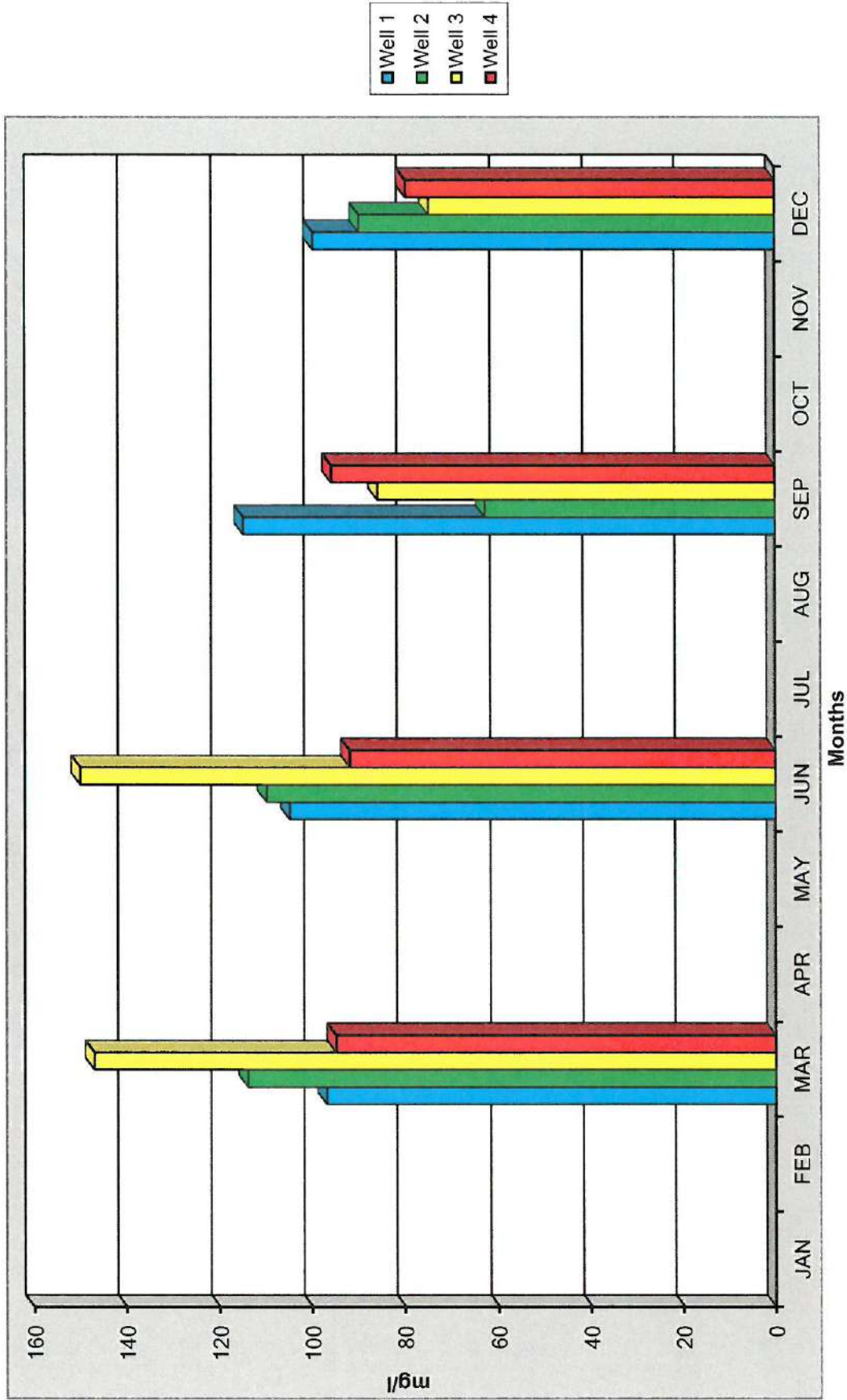
A - Monitoring Requirement

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.

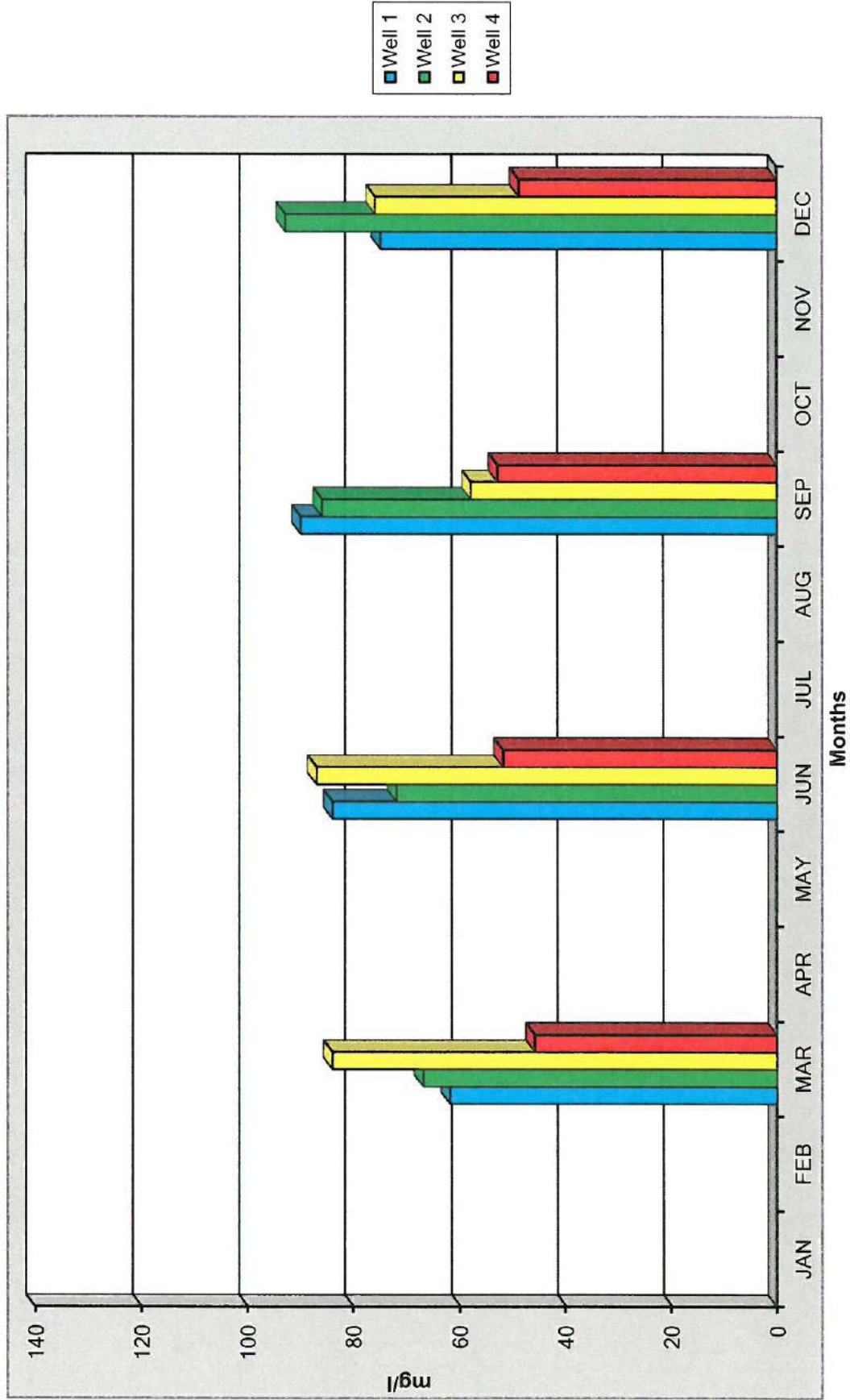
# CRESTLINE SANITATION DISTRICT

Pasture Monitoring Well Testing - Sulfate - 2017



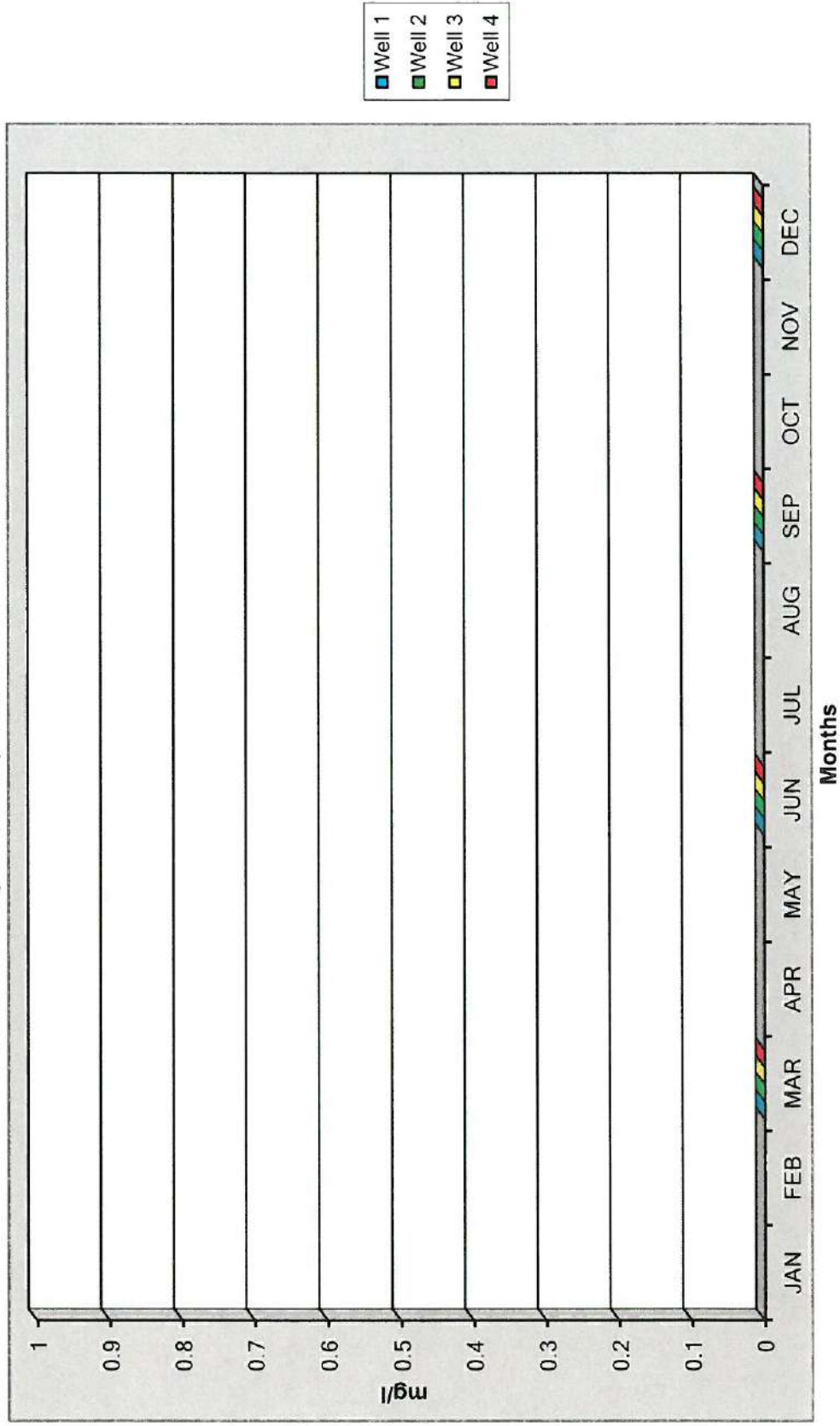
# CRESTLINE SANITATION DISTRICT

Pasture Monitoring Well Testing - Sodium - 2017



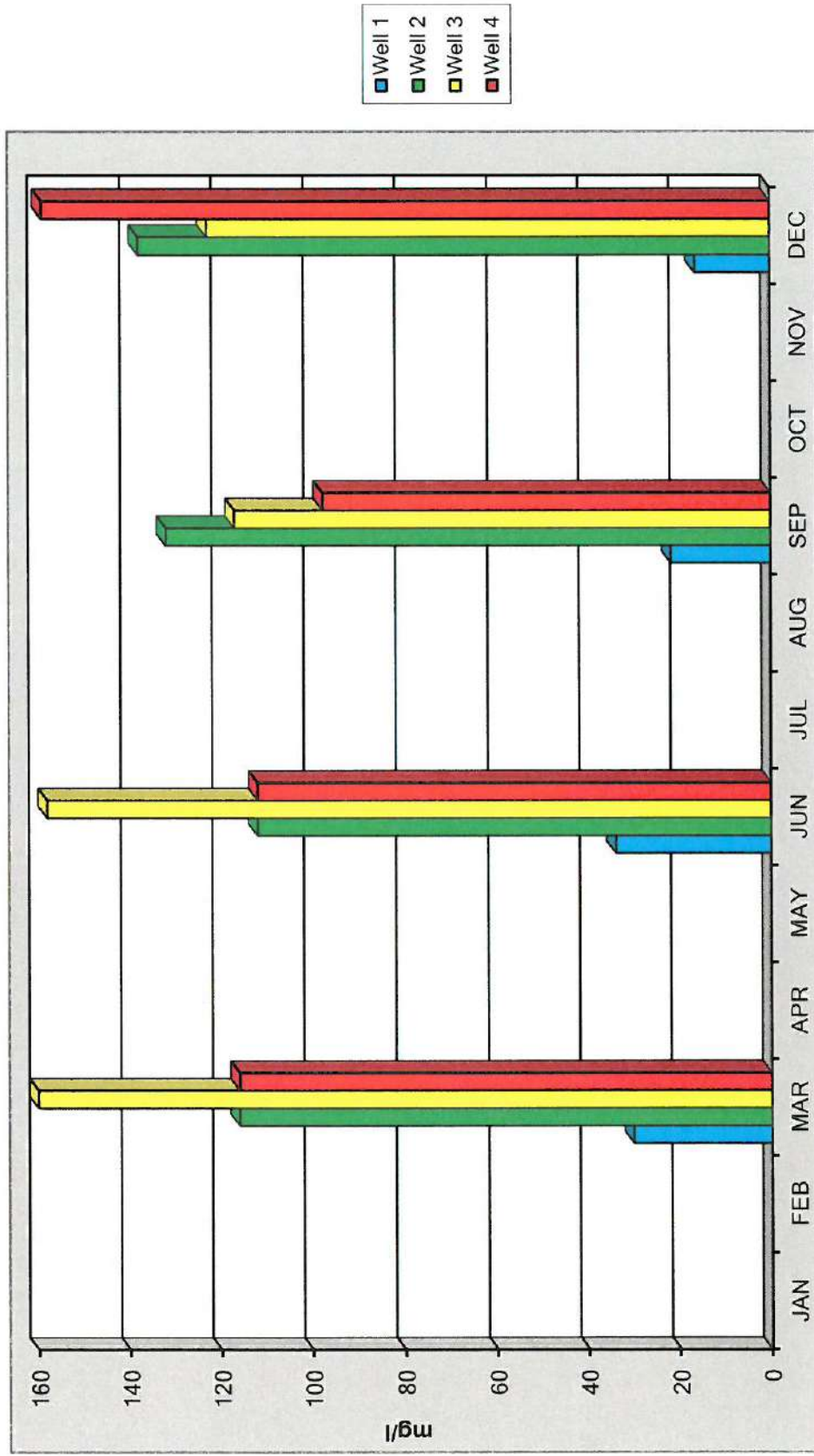
# CRESTLINE SANITATION DISTRICT

Pasture Monitoring Well Testing - MBAS - 2017



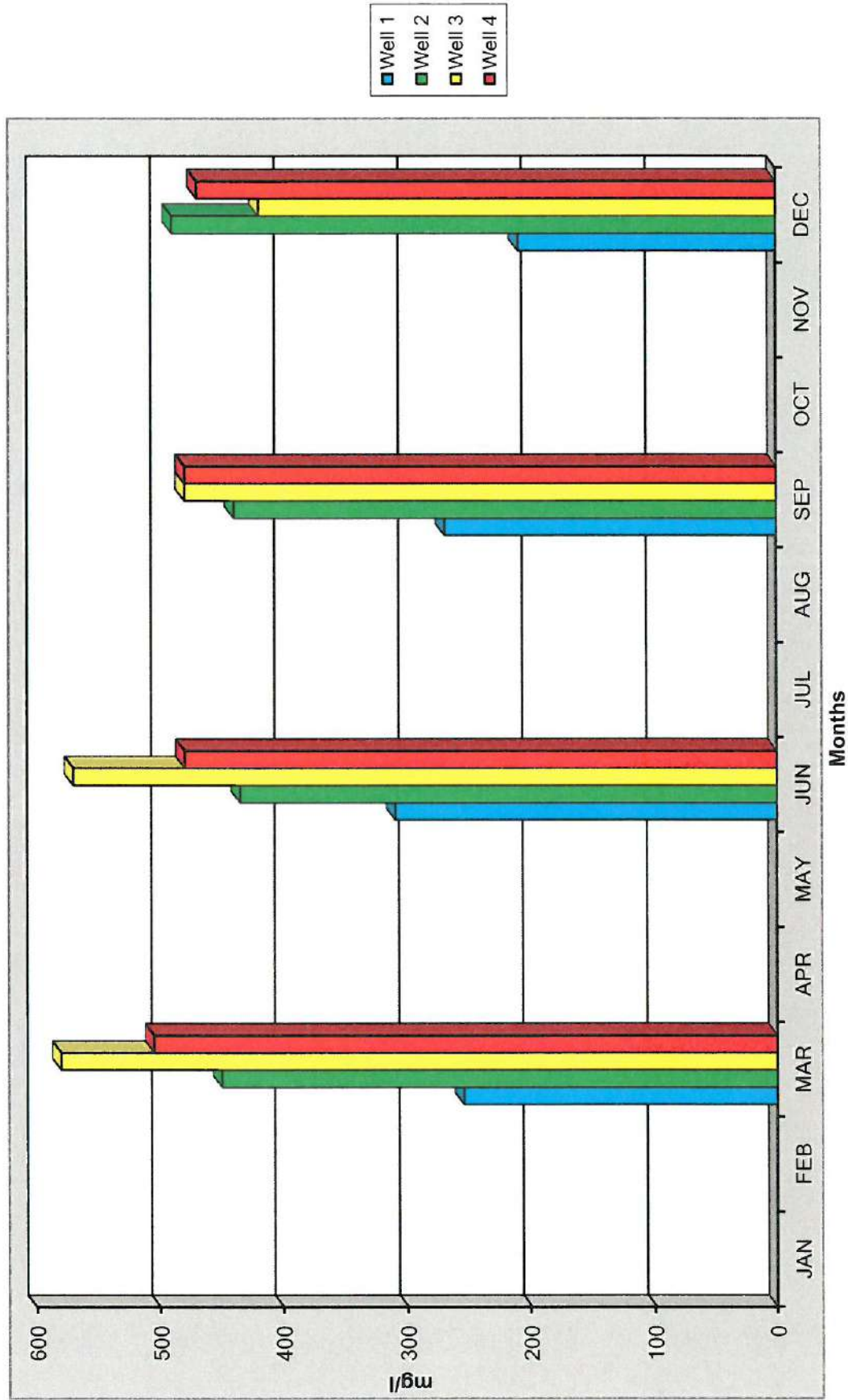
# CRESTLINE SANITATION DISTRICT

Pasture Monitoring Well Testing - Chloride - 2017



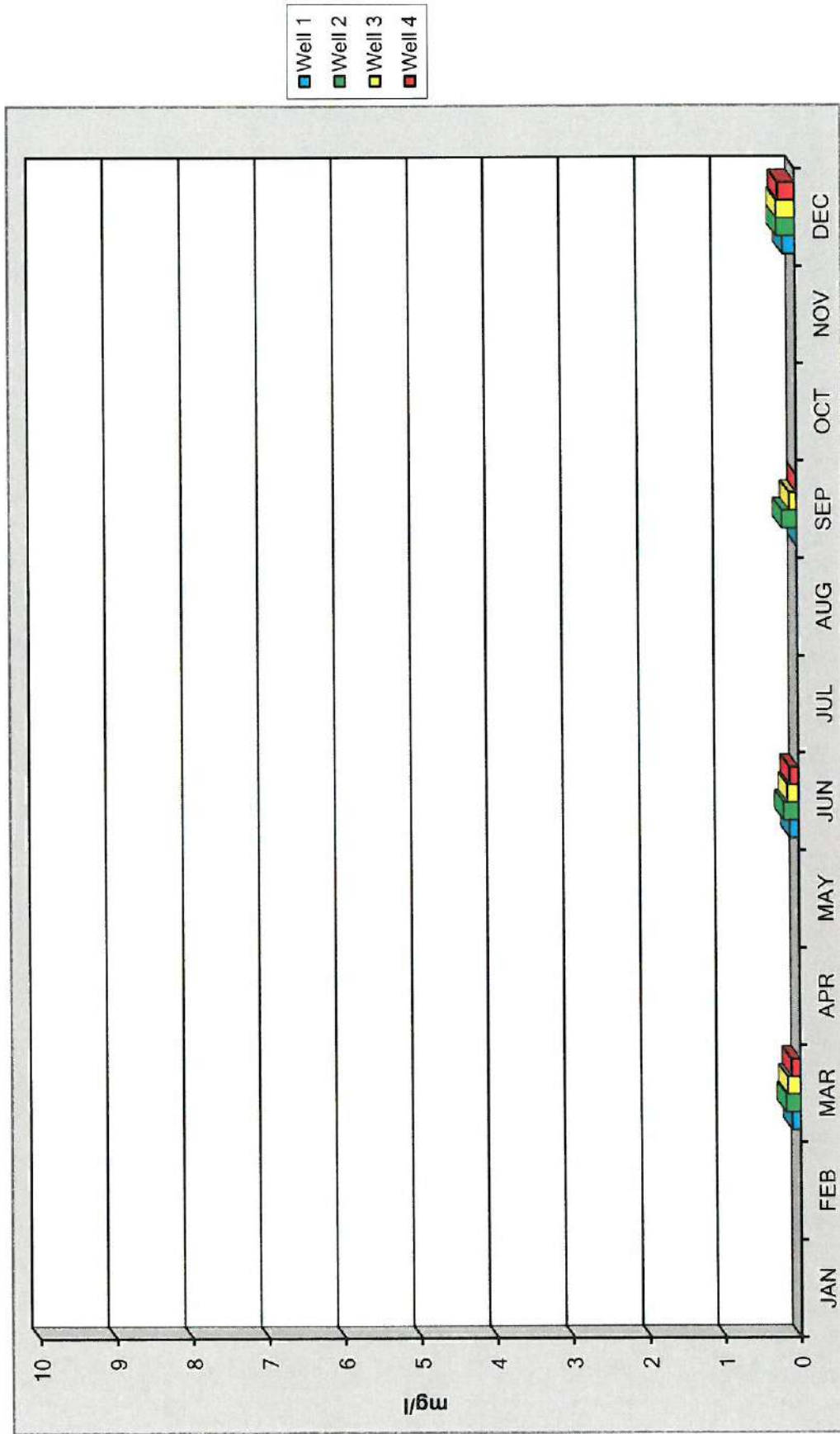
# CRESTLINE SANITATION DISTRICT

Pasture Monitoring Well Testing - TDS - 2017



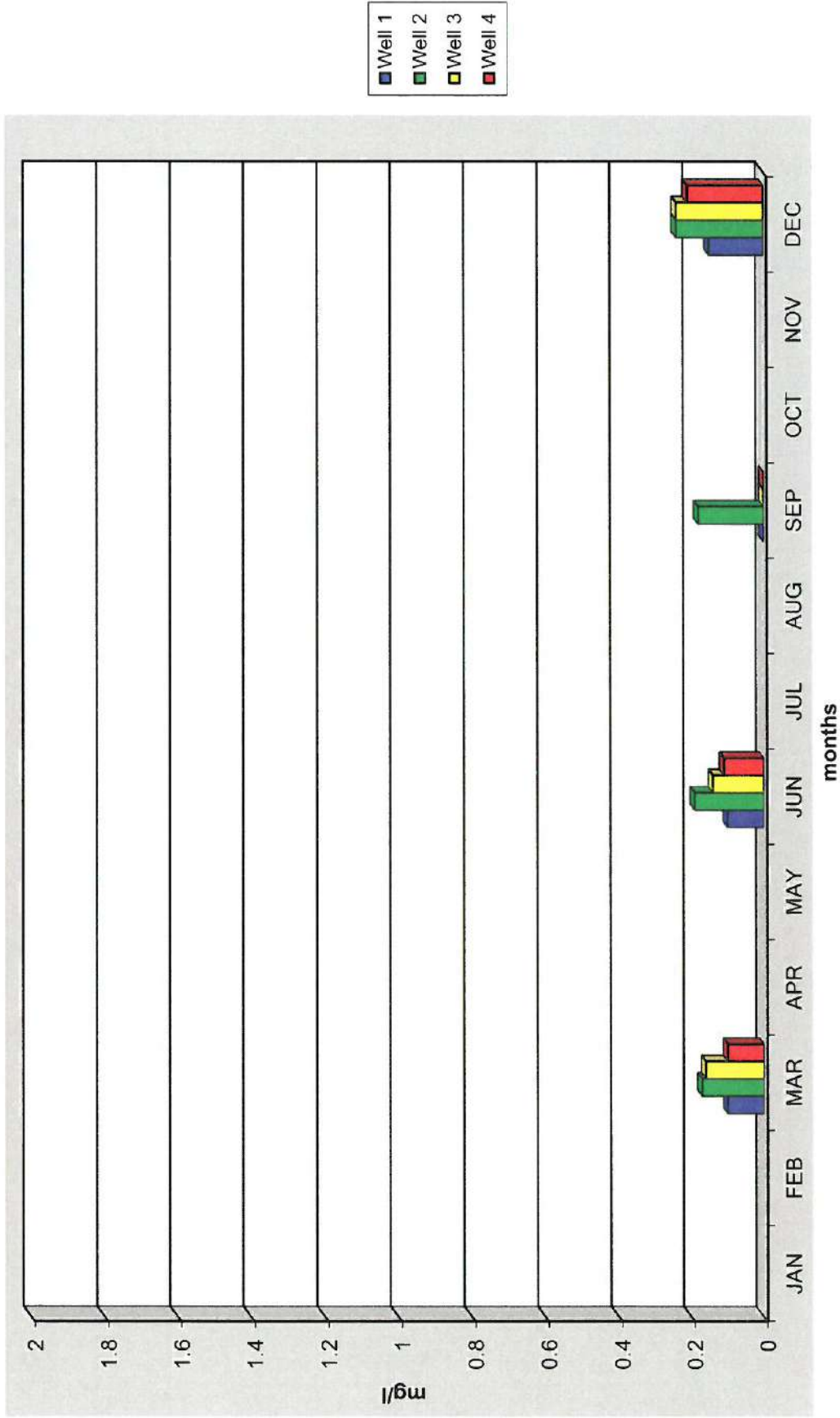
# CRESTLINE SANITATION DISTRICT

Pasture Monitoring Well Testing - TKN - 2017



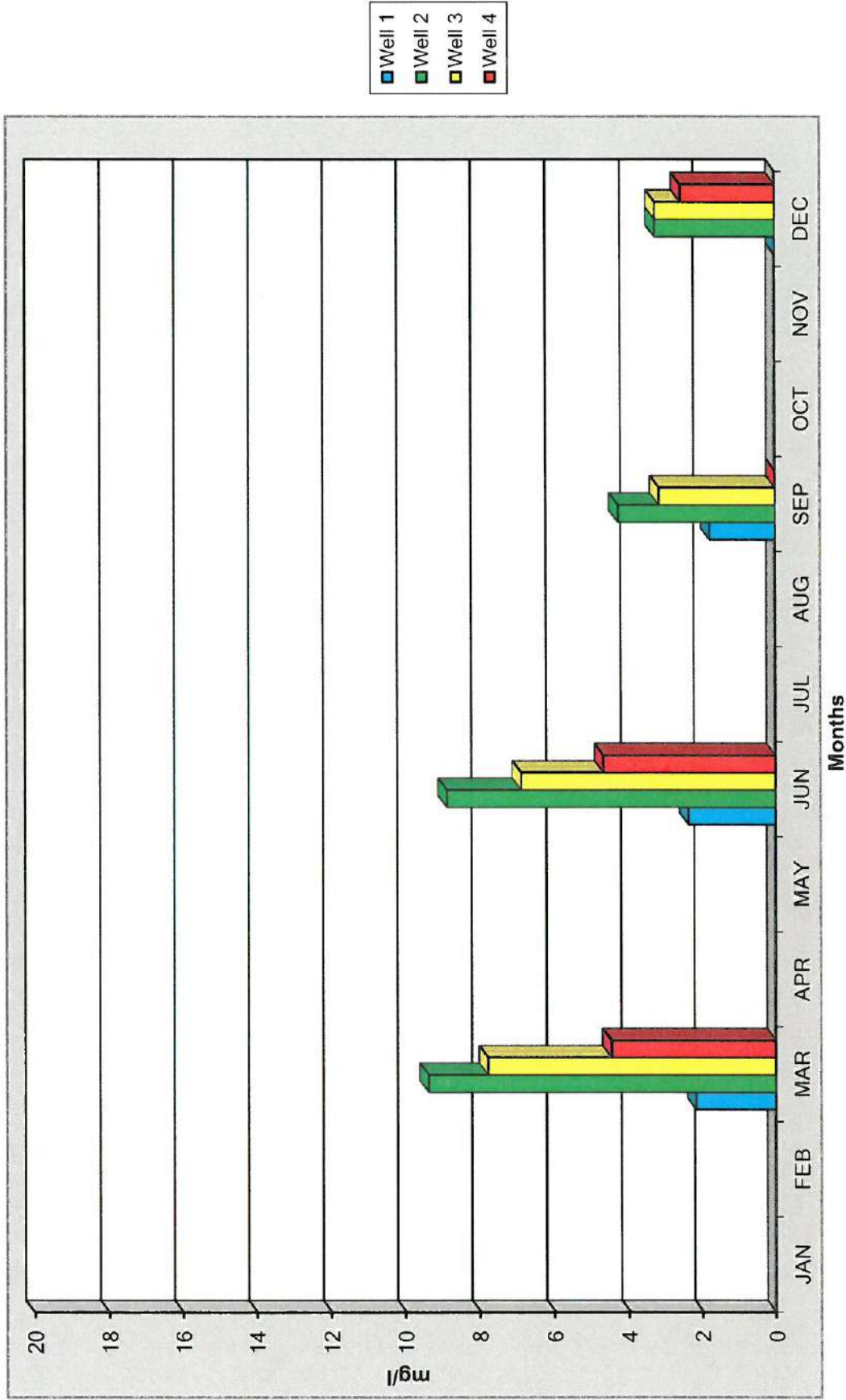


**CRESTLINE SANITATION DISTRICT**  
 Pasture Monitoring Well Testing - NH3-N - 2017



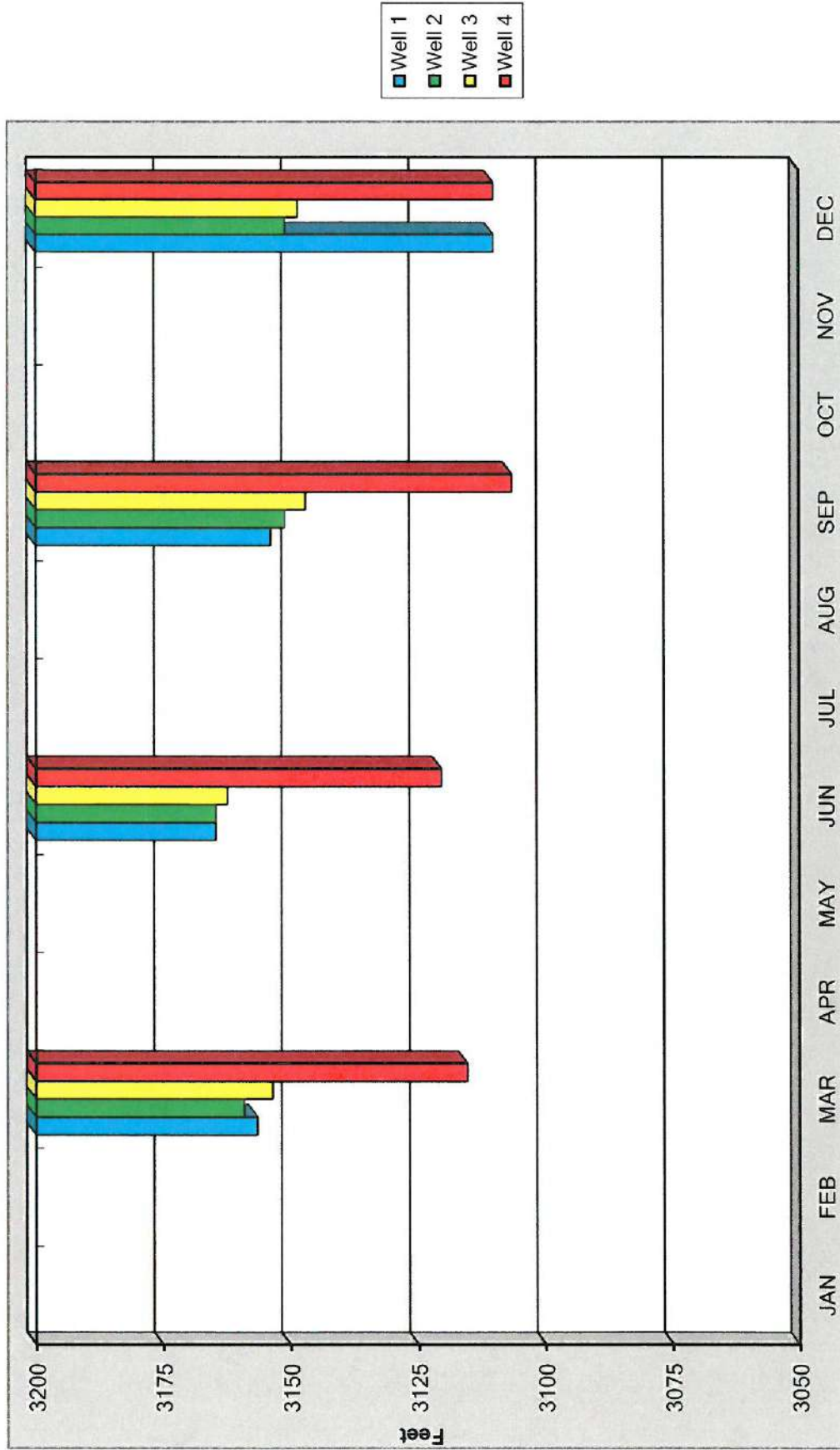
# CRESTLINE SANITATION DISTRICT

Pasture Monitoring Well Testing - NO3-N - 2017



# CRESTLINE SANITATION DISTRICT

Pasture Monitoring Well Testing - Elevation of Water Depth - 2017



**CRESTLINE SANITATION DISTRICT**  
**Semi Annual Supply Water Monitoring Data**

Year: 2017

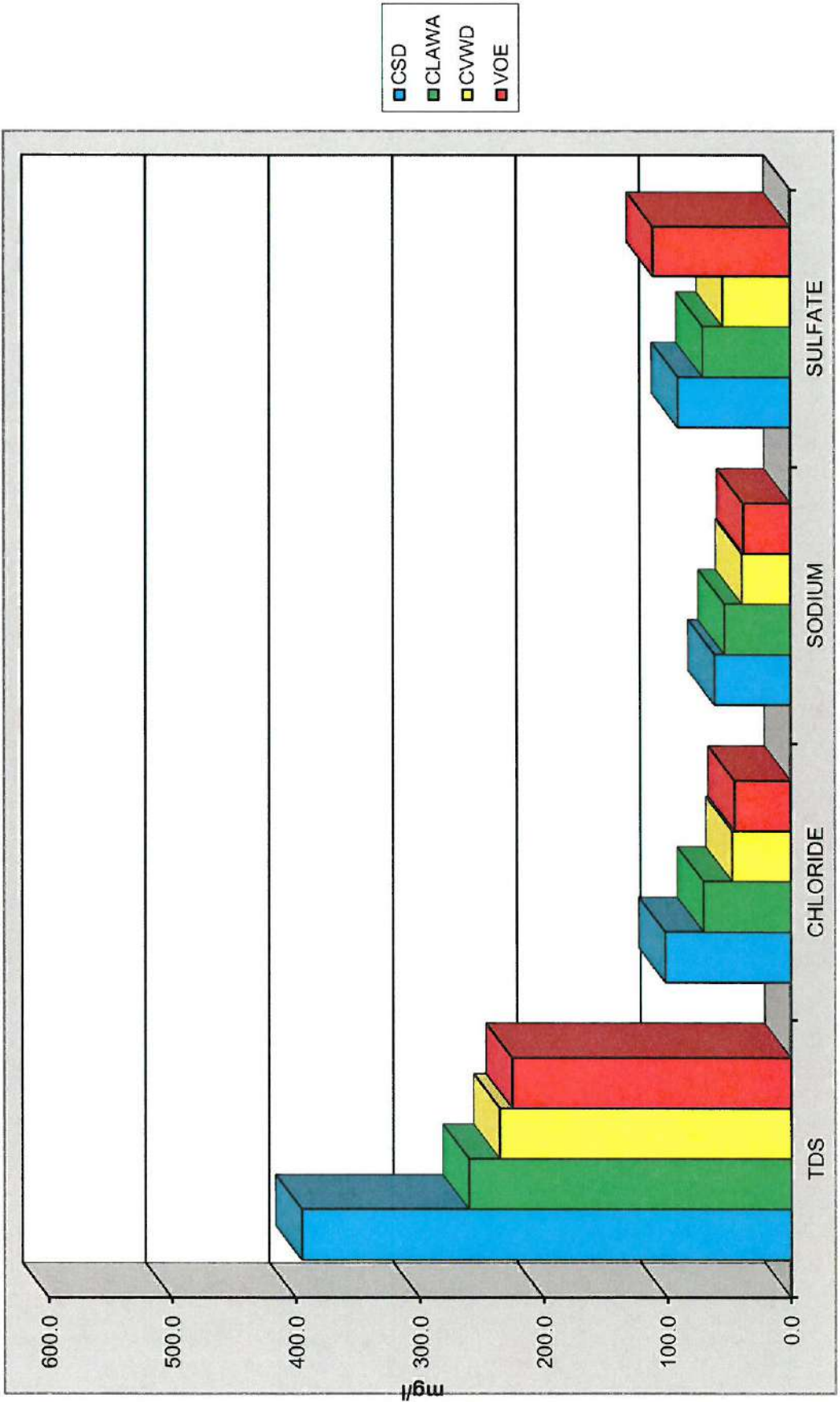
	Sample Dates	Frequency	Semi-Annual	Semi-Annual	Semi-Annual	Semi-Annual	Semi-Annual	Semi-Annual	Total Flow in MG	Local Water	Purchased Water
<b>Crestline Sanitation District (Final Effluent)</b>	3/9/2017	MG/L	395.0	101.0	61.0	90.0	144.07				
		POUNDS	474,610	121,356	73,294	108,139					
<b>Crestline Lake Arrowhead Water Agency (Silverwood)</b>	3/8/2017	MG/L	260	70.0	53.0	70.0	5.56				
		POUNDS	12,056	3,246	2,458	3,246					
<b>Crestline Village Water District</b>	3/15/2017	MG/L	235	47.0	39.0	54.0	92.96		33.00	59.96	
		POUNDS	182,192	36,438	30,236	41,865					
<b>Valley of Enchantment Mutual Water Company</b>	3/14/2017	MG/L	225	45.2	38.0	110.0	23.13		8.92	14.21	
		POUNDS	43,403	8,719	7,330	21,219					
<b>Calculated Constituent Concentrations</b>		MG/L	234.2	47.7	39.4	65.4	121.7				
		POUNDS	237,652	48,404	40,024	66,331					

"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, 2016 thru March 31, 2017

**CRESTLINE SANITATION DISTRICT**  
 Supply Water Testing - March, 2017



**CRESTLINE SANITATION DISTRICT**  
**Semi Annual Supply Water Monitoring Data**

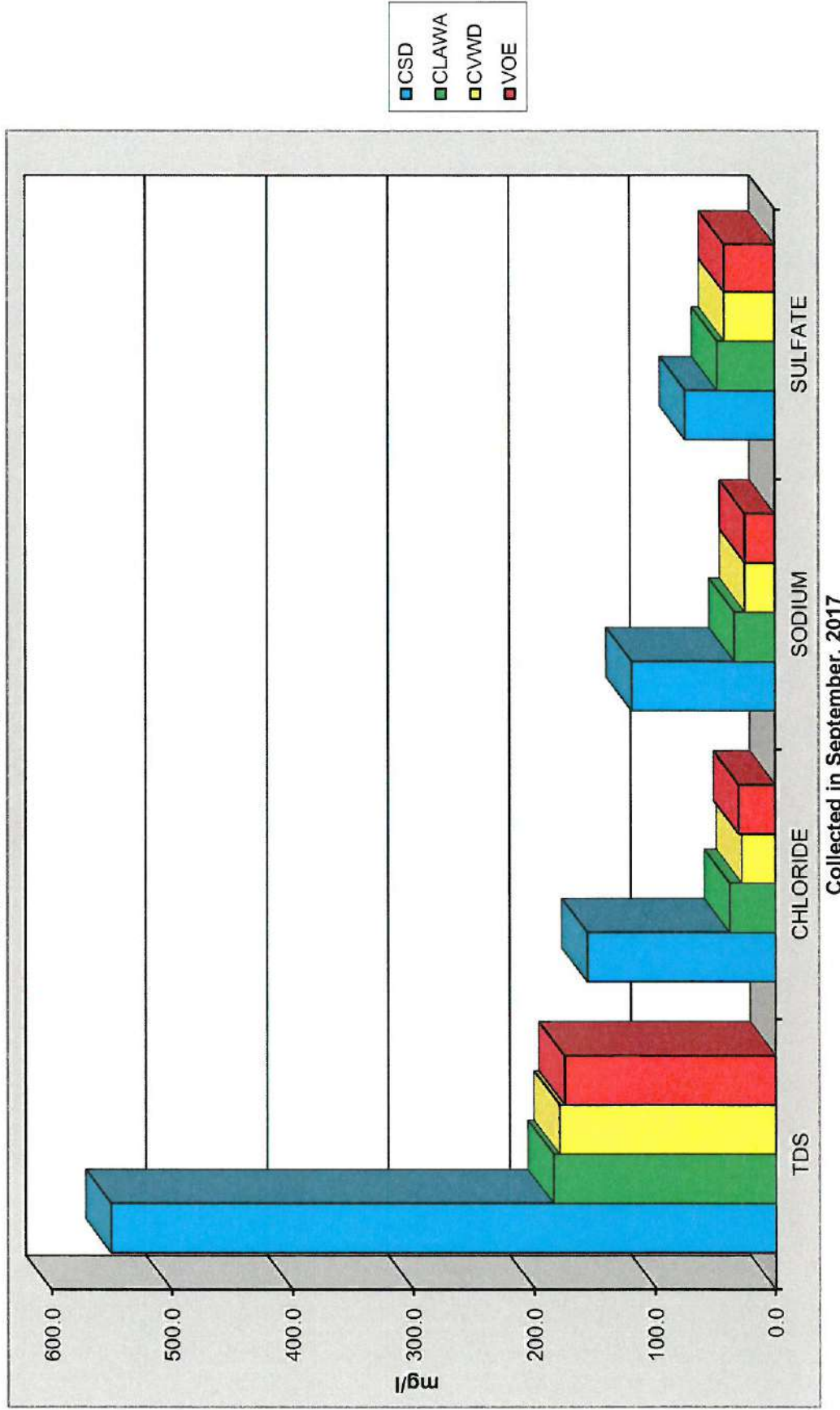
Year: **2017**

	Sample Dates	Frequency	Semi-Annual	Semi-Annual	Semi-Annual	Semi-Annual	Total Flow in MG	Local Water	Purchased Water
			Violations	Monitor	Monitor	Monitor			
			Sample type	Monitor	Monitor	Monitor			
			Maximum						
Crestline Sanitation District (Final Effluent)	09/14/17	MG/L	550.0	157.0	120.0	75.0	97.40		
		POUNDS	446,774	127,534	97,478	60,924			
Crestline Lake Arrowhead Water Agency (Silverwood)	09/15/17	MG/L	185.0	38.4	34.0	48.0	18.68		
		POUNDS	28,821	5,982	5,297	7,478			
Crestline Village Water District	09/12/17	MG/L	180.0	28.0	25.0	42.0	14.91	59.86	55.05
		POUNDS	22,383	3,482	3,109	5,223			
Valley of Enchantment Mutual Water Company	09/19/17	MG/L	176.0	30.6	25.0	42.0	27.65	9.37	18.28
		POUNDS	40,586	7,056	5,765	9,685			
Calculated Constituent Concentrations		MG/L	179.9	29.7	26.0	42.7	161.2		
		POUNDS	241,859	39,929	34,955	57,406			

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

**Samples collected in SEPTEMBER**      Flow Dates : April 1, 2017 thru September 30, 2017

**CRESTLINE SANITATION DISTRICT**  
 Supply Water Testing - September, 2017



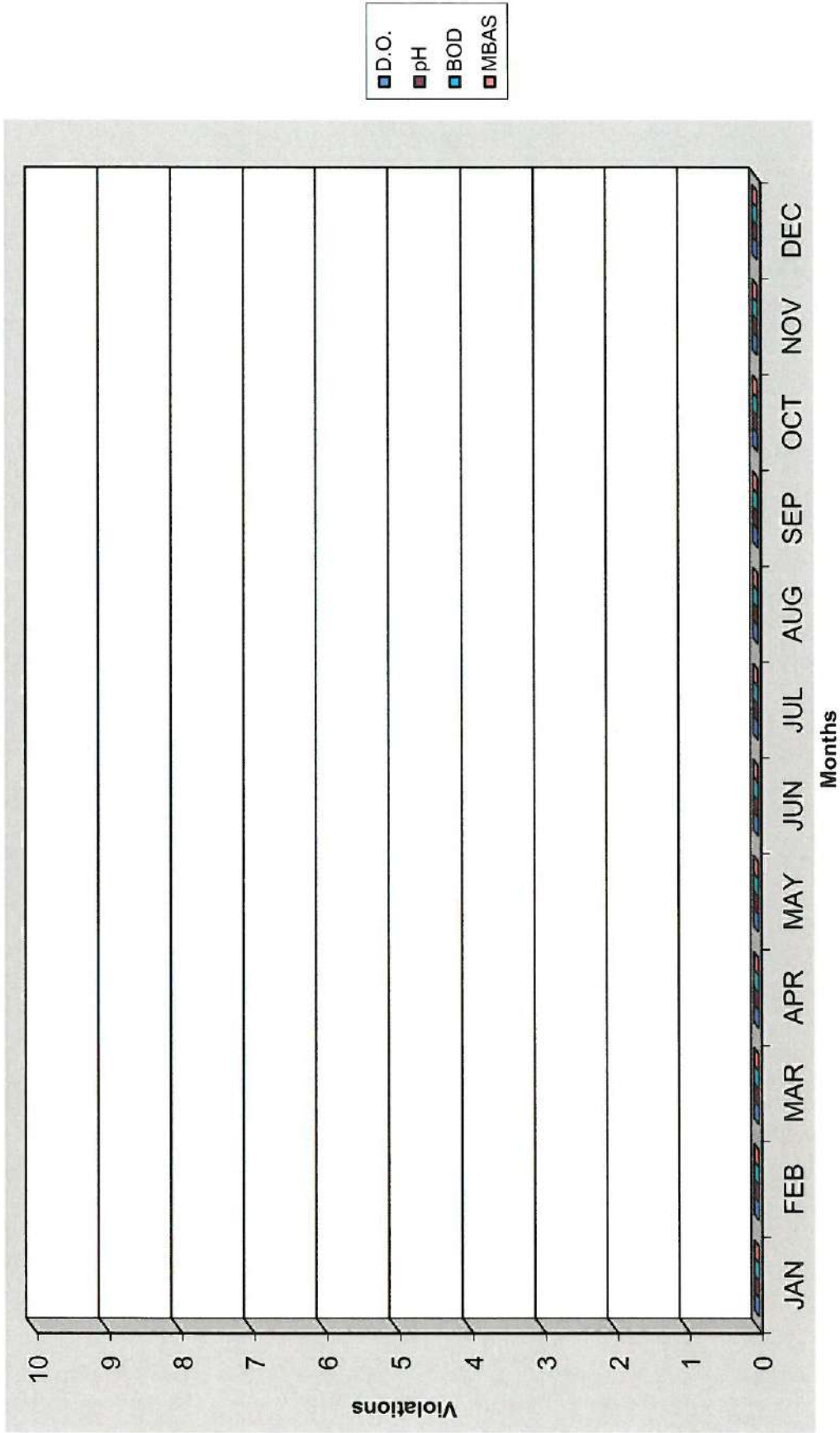
CRESTLINE SANITATION DISTRICT												
ANNUAL REPORT												
Final Effluent Disposal Site (Las Flores) Constituent Violations												
											Year: 2017	
Frequency	2 week	weekly	weekly	2 month	2 month	2 month	2 month	2 month	2 month	2 month	monthly	monthly
Violations												
Sample Type	D/M	D/M	D/M	D/M	M	D/M	M	D/M	M	M	M	M
Maximum		0.5 ml/l		< 9	45.0			2.0				
Mean/Min.*		23.0 *		> 1	30.0			1.0				
	Total Coliform	Settleable Solids	D.O.	pH	BOD	COD	MBAS	Oil & Grease	TKN	NO3-N	NH3-N	
	MPN	ml/l	mg/l		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
January	-	-	-	-	-	-	-	-	-	-	-	-
February	-	-	-	-	-	-	-	-	-	-	-	-
March	-	-	-	-	-	-	-	-	-	-	-	-
April	-	-	-	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-	-	-	-
June	-	-	-	-	-	-	-	-	-	-	-	-
July	-	-	-	-	-	-	-	-	-	-	-	-
August	-	-	-	-	-	-	-	-	-	-	-	-
September	-	-	-	-	-	-	-	-	-	-	-	-
October	-	-	-	-	-	-	-	-	-	-	-	-
November	-	-	-	-	-	-	-	-	-	-	-	-
December	-	-	-	-	-	-	-	-	-	-	-	-
<b>Year Total</b>	0	0	0	0	0	0	0	0	0	0	0	0

D - Has Effluent / Discharge Limitations      M - Has Effluent Monitoring Requirements



# CRESTLINE SANITATION DISTRICT

Final Effluent Constituent Violations - 2017



# CRESTLINE SANITATION DISTRICT

## ANNUAL REPORT

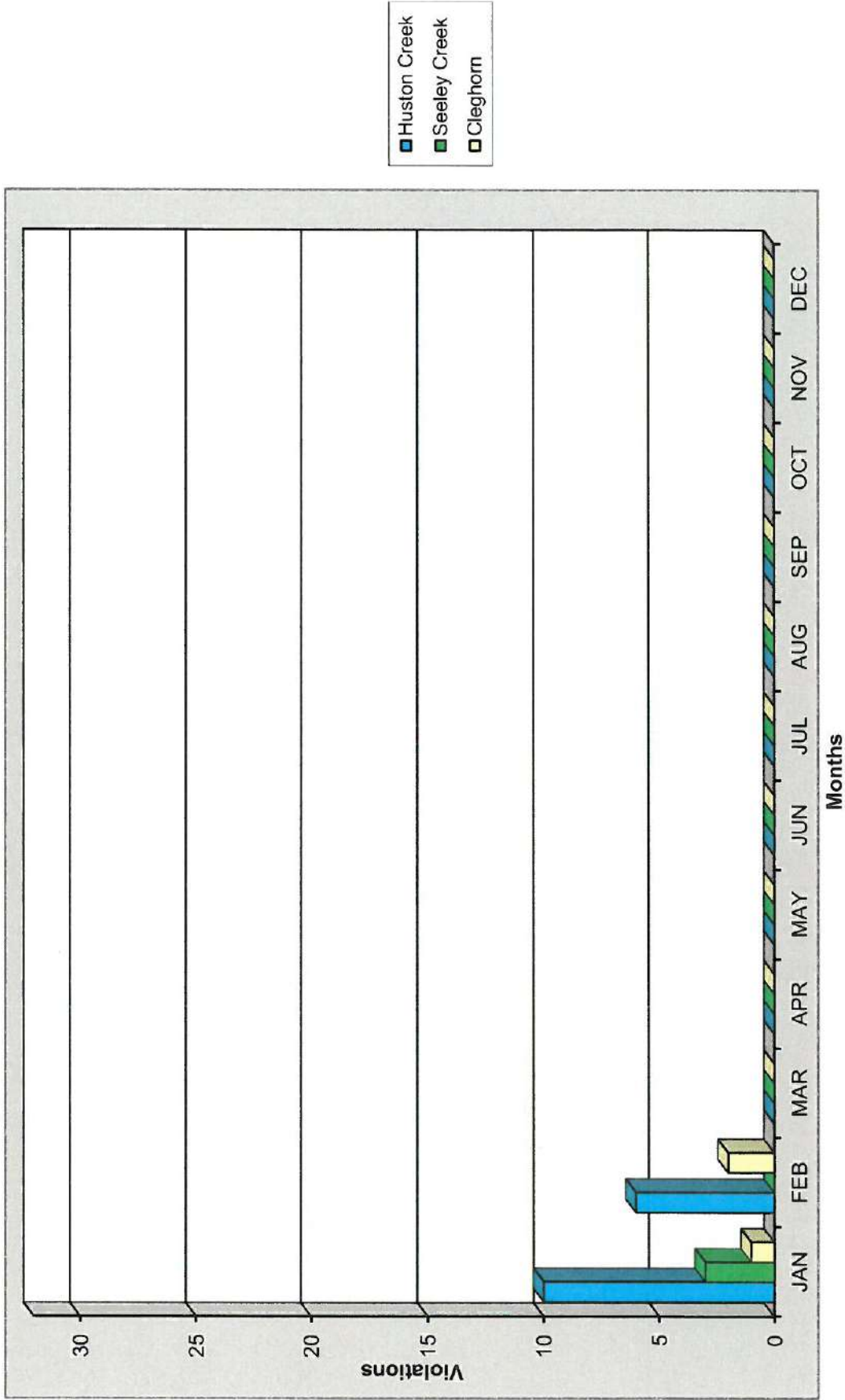
### Treatment Facilities Flow Violations

**Year: 2017**

Facility name	<b>Huston Plant</b>		<b>Seeley Plant</b>		<b>Cleghorn Plant</b>	
Reading	daily	daily	daily	daily	daily	
Average	monthly		monthly		monthly	
Design limits	design 0.7 mg/d	maximum 2.50 mg	design 0.5 mg/d	maximum 1.00 mg	design 0.2 mg/d	maximum 0.4 mg
	design capacity	instantaneous peak	design capacity	instantaneous peak	design capacity	instantaneous peak
Months	<b>Huston</b> violations	<b>HC peak</b> violations	<b>Seeley</b> violations	<b>SC peak</b> violations	<b>Cleghorn</b> violations	<b>CH peak</b> violations
January	10		3	-	1	-
February	6	-	-	-	2	-
March	-	-	-	-	-	-
April	-	-	-	-	-	-
May	-	-	-	-	-	-
June	-	-	-	-	-	-
July	-	-	-	-	-	-
August	-	-	-	-	-	-
September	-	-	-	-	-	-
October	-	-	-	-	-	-
November	-	-	-	-	-	-
December	-	-	-	-	-	-
<b>Year Total</b>	<b>16</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>0</b>

# CRESTLINE SANITATION DISTRICT

Treatment Facility Design Capacity Flow Violations - 2017



# CRESTLINE SANITATION DISTRICT

Treatment Facility Instantaneous Flow Violations - 2017



# **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



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

Project: NA  
Project Number: Las Flores Outfall Annual  
Project Manager: Rick Dever

Reported:  
09/14/17 14:34

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>L.F.A.-9-7 (1709080-01) Liquid    Sampled: 09/07/17 10:25    Received: 09/07/17 13:12</b>									
Cyanide (total)	ND	0.0200	mg/L	1	B711150	09/11/17	09/11/17 18:46	EPA 335.2	
Phenolics	ND	0.300	"	6	"	"	"	EPA 420.1	

*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.*



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

Project: NA  
Project Number: Las Flores Outfall Annual  
Project Manager: Rick Dever

Reported:  
09/14/17 14:34

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>L.F.A.-9-7 (1709080-01) Liquid    Sampled: 09/07/17 10:25    Received: 09/07/17 13:12</b>									
Silver	ND	0.010	mg/L	1	B710714	09/07/17	09/08/17 12:18	EPA 200.7	
Cadmium	ND	0.0070	"	"	"	"	"	"	
Chromium	ND	0.0060	"	"	"	"	"	"	
Copper	ND	0.010	"	"	"	"	"	"	
Nickel	ND	0.0070	"	"	"	"	"	"	
Lead	ND	0.025	"	"	"	"	"	"	
Zinc	ND	0.040	"	"	"	"	"	"	

*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.*



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

Project: NA  
 Project Number: Las Flores Outfall Annual  
 Project Manager: Rick Dever

Reported:  
 09/14/17 14:34

**Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID**  
**Sierra Analytical Labs, Inc.**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>L.F.A.-9-7 (1709080-01) Liquid    Sampled: 09/07/17 10:25    Received: 09/07/17 13:12</b>									
HC < C8	ND	0.010	mg/L	1	B711327	09/08/17	09/08/17 16:25	EPA 8015B	
C8 <= HC < C9	ND	0.010	"	"	"	"	"	"	"
C9 <= HC < C10	<b>0.012</b>	0.010	"	"	"	"	"	"	"
C10 <= HC < C11	<b>0.010</b>	0.010	"	"	"	"	"	"	"
C11 <= HC < C12	<b>0.027</b>	0.010	"	"	"	"	"	"	"
C12 <= HC < C14	<b>0.023</b>	0.010	"	"	"	"	"	"	"
C14 <= HC < C16	<b>0.028</b>	0.010	"	"	"	"	"	"	"
C16 <= HC < C18	<b>0.068</b>	0.010	"	"	"	"	"	"	"
C18 <= HC < C20	<b>0.035</b>	0.010	"	"	"	"	"	"	"
C20 <= HC < C24	<b>0.073</b>	0.010	"	"	"	"	"	"	"
C24 <= HC < C28	<b>0.043</b>	0.010	"	"	"	"	"	"	"
C28 <= HC < C32	<b>0.083</b>	0.010	"	"	"	"	"	"	"
HC >= C32	<b>0.063</b>	0.010	"	"	"	"	"	"	"
<b>Total Petroleum Hydrocarbons (C7-C36)</b>	<b>0.46</b>	0.050	"	"	"	"	"	"	"
<i>Surrogate: o-Terphenyl</i>		<i>143 %</i>	<i>60-175</i>		"	"	"	"	"

*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.*





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

Project: NA  
Project Number: Las Flores Outfall Annual  
Project Manager: Rick Dever

Reported:  
09/14/17 14:34

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>L.F.A.-9-7 (1709080-01) Liquid Sampled: 09/07/17 10:25 Received: 09/07/17 13:12</b>									
Acrolein	ND	5.0	µg/L	1	B711245	09/11/17	09/12/17 09:38	EPA 624	
Acrylonitrile	ND	2.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
<b>Bromodichloromethane</b>	<b>6.0</b>	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
<b>Carbon tetrachloride</b>	<b>1.1</b>	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	1.0	"	"	"	"	"	"	
<b>Chloroform</b>	<b>74</b>	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
<b>Toluene</b>	<b>5.8</b>	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		110 %	86-118		"	"	"	"	
Surrogate: Toluene-d8		106 %	88-110		"	"	"	"	

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

Project: NA  
Project Number: Las Flores Outfall Annual  
Project Manager: Rick Dever

Reported:  
09/14/17 14:34

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>L.F.A.-9-7 (1709080-01) Liquid    Sampled: 09/07/17 10:25    Received: 09/07/17 13:12</b>									
<i>Surrogate: 4-Bromofluorobenzene</i>		106 %	86-115		B711245	09/11/17	09/12/17 09:38	EPA 624	

*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.*



WECK LABORATORIES, INC.

Sierra Analytical Labs, Inc.  
26052 Merit Circle, Suite 104  
Laguna Hills, CA 92653

# Certificate of Analysis

FINAL REPORT

Project Number: 1709080

Reported:

09/25/2017 12:52

Project Manager: Rick Forsyth

## Quality Control Results

(Continued)

Acid and Base/Neutral Extractables by GC/MS (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W710656 - EPA 625 (Continued)										
LCS Dup (W710656-BSD1)										
				Prepared: 09/13/17 Analyzed: 09/20/17						
Acenaphthylene	20.2	1.0	ug/l	25.0		81	33-145	10	30	
Anthracene	20.7	1.0	ug/l	25.0		83	27-133	4	30	
Benzo (a) anthracene	14.7	1.0	ug/l	25.0		59	33-143	13	30	
Benzo (a) pyrene	9.89	1.0	ug/l	25.0		40	17-163	30	30	
Benzo (b) fluoranthene	11.4	1.0	ug/l	25.0		46	24-159	30	30	
Benzo (g,h,i) perylene	10.1	2.0	ug/l	25.0		40	0.1-219	17	30	
Benzo (k) fluoranthene	14.1	1.0	ug/l	25.0		56	11-162	18	30	
Bis(2-chloroethoxy)methane	16.9	1.0	ug/l	25.0		68	33-184	9	30	
Bis(2-chloroethyl)ether	17.2	1.0	ug/l	25.0		69	12-158	8	30	
Bis(2-chloroisopropyl)ether	16.5	1.0	ug/l	25.0		66	36-166	9	30	
Bis(2-ethylhexyl)phthalate	18.5	5.0	ug/l	25.0		74	8-158	10	30	
Butyl benzyl phthalate	18.5	1.0	ug/l	25.0		74	0.1-152	8	30	
Chrysene	22.0	1.0	ug/l	25.0		88	17-168	6	30	
Dibenzo (a,h) anthracene	11.2	2.0	ug/l	25.0		45	0.1-227	21	30	
Diethyl phthalate	19.2	1.0	ug/l	25.0		77	0.1-114	6	30	
Dimethyl phthalate	19.5	1.0	ug/l	25.0		78	0.1-112	8	30	
Di-n-butyl phthalate	20.6	1.0	ug/l	25.0		82	1-118	4	30	
Di-n-octyl phthalate	19.7	1.0	ug/l	25.0		79	4-146	5	30	
Fluoranthene	20.9	1.0	ug/l	25.0		84	26-137	4	30	
Fluorene	20.3	1.0	ug/l	25.0		81	59-121	9	30	
Hexachlorobenzene	22.0	1.0	ug/l	25.0		88	0.1-152	5	30	
Hexachlorobutadiene	21.3	1.0	ug/l	25.0		85	24-116	7	30	
Hexachlorocyclopentadiene	5.93	5.0	ug/l	25.0		24	0.1-81	9	30	
Hexachloroethane	18.5	1.0	ug/l	25.0		74	40-113	7	30	
Indeno (1,2,3-cd) pyrene	11.3	2.0	ug/l	25.0		45	0.1-171	17	30	
Isophorone	15.9	1.0	ug/l	25.0		64	21-196	8	30	
Naphthalene	19.0	1.0	ug/l	25.0		76	21-133	5	30	
Nitrobenzene	17.3	1.0	ug/l	25.0		69	35-180	10	30	
N-Nitrosodimethylamine	11.7	1.0	ug/l	25.0		47	20-83	3	30	
N-Nitrosodi-n-propylamine	18.1	1.0	ug/l	25.0		72	0.1-230	10	30	
N-Nitrosodiphenylamine	17.2	1.0	ug/l	25.0		69	42-90	6	30	
Pentachlorophenol	22.2	1.0	ug/l	25.0		89	14-178	8	30	
Phenanthrene	21.1	1.0	ug/l	25.0		84	54-120	3	30	
Phenol	7.51	1.0	ug/l	25.0		30	5-112	13	30	
Pyrene	20.3	1.0	ug/l	25.0		81	52-115	4	30	
2,4,6-Tribromophenol		45.0	ug/l	50.0		90	25-102			



WECK LABORATORIES, INC.

Sierra Analytical Labs, Inc.  
26052 Merit Circle, Suite 104  
Laguna Hills, CA 92653

Project Number: 1709080

Project Manager: Rick Forsyth

# Certificate of Analysis

FINAL REPORT

Reported:  
09/25/2017 12:52

## Quality Control Results

(Continued)

Acid and Base/Neutral Extractables by GC/MS (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
Batch: W710656 - EPA 625 (Continued)										
LCS Dup (W710656-BSD1)										
Prepared: 09/13/17 Analyzed: 09/20/17										
2-Fluorobiphenyl		17.9	ug/l	25.0		72	22-107			
2-Fluorophenol		24.9	ug/l	50.0		50	3-74			
Nitrobenzene-d5		17.7	ug/l	25.0		71	27-111			
Phenol-d5		14.9	ug/l	50.0		30	0.1-53			
Terphenyl-d14		19.3	ug/l	25.0		77	28-113			

# **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 Sanitation District  
 P.O. Box 3395  
 Crestline CA, 92325-3395

Project: NA  
 Project Number: Las Flores Monitor Well #1  
 Project Manager: Rick Dever

Reported:  
 09/21/17 14:04

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW1-9-14 (1709179-01) Liquid    Sampled: 09/14/17 10:25    Received: 09/14/17 14:15</b>									
Ammonia as N	ND	0.100	mg/L	1	B711933	09/14/17	09/14/17 19:11	ISM 4500-NH3	
Chloride	21.8	0.500	"	"	"	"	"	SM 4500-Cl- B	
Methylene Blue Active Substances	ND	0.100	"	"	"	"	"	MBAS-SM 5540-C	
Nitrate as N	1.80	0.0200	"	"	"	"	"	EPA 353.3	
Sulfate as SO <sub>4</sub>	115	0.500	"	"	"	"	"	EPA 375.4	
Total Dissolved Solids	270	1.00	"	"	"	"	"	SM 2540 C	
Total Kjeldahl Nitrogen	ND	0.10	"	"	"	"	"	EPA 351.3	

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

Project: NA  
Project Number: Las Flores Monitor Well #1  
Project Manager: Rick Dever

Reported:  
09/21/17 14:04

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW1-9-14 (1709179-01) Liquid    Sampled: 09/14/17 10:25    Received: 09/14/17 14:15</b>									
<b>Sodium</b>	<b>90</b>	0.71	mg/L	1	B711506	09/15/17	09/16/17 15:29	EPA 200.7	

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

Project: NA  
 Project Number: Las Flores Monitor Well #1  
 Project Manager: Rick Dever

Reported:  
 09/21/17 14:04

**Trihalomethanes by EPA Method 524.2**  
**Sierra Analytical Labs, Inc.**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW1-9-14 (1709179-01) Liquid    Sampled: 09/14/17 10:25    Received: 09/14/17 14:15</b>									
Bromodichloromethane	ND	0.500	µg/L	1	B711502	09/15/17	09/15/17 10:47	EPA 524.2	
Bromoform	ND	0.500	"	"	"	"	"	"	
Chloroform	ND	0.500	"	"	"	"	"	"	
Dibromochloromethane	ND	0.500	"	"	"	"	"	"	
Total Trihalomethanes	ND	0.500	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		117 %	86-118	"	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		104 %	88-110	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		100 %	86-115	"	"	"	"	"	

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

Project: NA  
 Project Number: Las Flores Monitor Well #1  
 Project Manager: Rick Dever

Reported:  
 09/21/17 14:04

**Haloacetic Acids (GC/ECD) by EPA Method 552.2**

**Sierra Analytical Labs, Inc.**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW1-9-14 (1709179-01) Liquid    Sampled: 09/14/17 10:25    Received: 09/14/17 14:15</b>									
Monochloroacetic Acid	ND	2.00	µg/L	1	B711834	09/18/17	09/19/17 08:29	EPA 552.2	
Dichloroacetic Acid	ND	1.00	"	"	"	"	"	"	
Trichloroacetic Acid	ND	1.00	"	"	"	"	"	"	
Monobromoacetic Acid	ND	1.00	"	"	"	"	"	"	
Dibromoacetic Acid	ND	1.00	"	"	"	"	"	"	
Total Haloacetic Acids	ND	1.00	"	"	"	"	"	"	
<i>Surrogate: 2,3-Dibromopropionic Acid</i>		85.4 %		60-150	"	"	"	"	

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

Project: NA  
Project Number: Las Flores Monitor Well #1  
Project Manager: Rick Dever

Reported:  
10/16/17 10:53

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

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>MW1-9-22 (1709307-01) Liquid Sampled: 09/22/17 10:15 Received: 09/25/17 15:00</b>									
Acrolein	ND	5.0	µg/L	1	B712724	09/27/17	09/28/17 07:57	EPA 624	
Acrylonitrile	ND	2.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		110 %	86-118	"	"	"	"	"	
Surrogate: Toluene-d8		103 %	88-110	"	"	"	"	"	

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.



Crestline Sanitation District	Project: NA	Reported:
P.O. Box 3395	Project Number: Las Flores Monitor Well #1	10/16/17 10:53
Crestline CA, 92325-3395	Project Manager: Rick Dever	

**Volatile Organics by EPA Method 624**

**Sierra Analytical Labs, Inc.**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**MW1-9-22 (1709307-01) Liquid**    **Sampled: 09/22/17 10:15**    **Received: 09/25/17 15:00**

*Surrogate: 4-Bromofluorobenzene*                      98.8 %                      86-115                      B712724                      09/27/17                      09/28/17 07:57                      EPA 624

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WECK LABORATORIES, INC.

Sierra Analytical Labs, Inc.  
26052 Merit Circle, Suite 104  
Laguna Hills, CA 92653

# Certificate of Analysis

FINAL REPORT

Project Number: 1709307

Reported:

10/09/2017 14:41

Project Manager: Rick Forsyth

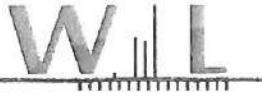
## Sample Results

Sample: MW1-9-22 (1709307-01)

Sampled: 09/22/17 10:15 by CLIENT

7127066-01 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
<b>Acid and Base/Neutral Extractables by GC/MS</b>						
Method: EPA 625	Batch ID: W711615	Prepared: 09/28/17 08:46				Analyst: etn
1,2,4-Trichlorobenzene	ND	1.0	ug/l	1	10/05/17 05:24	
1,2-Dichlorobenzene	ND	1.0	ug/l	1	10/05/17 05:24	
1,2-Diphenylhydrazine/Azobenzene	ND	1.0	ug/l	1	10/05/17 05:24	
1,3-Dichlorobenzene	ND	1.0	ug/l	1	10/05/17 05:24	
1,4-Dichlorobenzene	ND	1.0	ug/l	1	10/05/17 05:24	
2,4,6-Trichlorophenol	ND	1.0	ug/l	1	10/05/17 05:24	
2,4-Dichlorophenol	ND	1.0	ug/l	1	10/05/17 05:24	
2,4-Dimethylphenol	ND	1.0	ug/l	1	10/05/17 05:24	
2,4-Dinitrophenol	ND	10	ug/l	1	10/05/17 05:24	
2,4-Dinitrotoluene	ND	1.0	ug/l	1	10/05/17 05:24	
2,6-Dinitrotoluene	ND	1.0	ug/l	1	10/05/17 05:24	
2-Chloronaphthalene	ND	1.0	ug/l	1	10/05/17 05:24	
2-Chlorophenol	ND	1.0	ug/l	1	10/05/17 05:24	
2-Methyl-4,6-dinitrophenol	ND	5.0	ug/l	1	10/05/17 05:24	
2-Nitrophenol	ND	1.0	ug/l	1	10/05/17 05:24	
3,3'-Dichlorobenzidine	ND	5.0	ug/l	1	10/05/17 05:24	
4-Bromophenyl phenyl ether	ND	1.0	ug/l	1	10/05/17 05:24	
4-Chloro-3-methylphenol	ND	1.0	ug/l	1	10/05/17 05:24	
4-Chlorophenyl phenyl ether	ND	1.0	ug/l	1	10/05/17 05:24	
4-Nitrophenol	ND	5.0	ug/l	1	10/05/17 05:24	
Acenaphthene	ND	1.0	ug/l	1	10/05/17 05:24	
Acenaphthylene	ND	1.0	ug/l	1	10/05/17 05:24	
Anthracene	ND	1.0	ug/l	1	10/05/17 05:24	
Benzidine	ND	10	ug/l	1	10/05/17 05:24	
Benzo (a) anthracene	ND	1.0	ug/l	1	10/05/17 05:24	
Benzo (a) pyrene	ND	1.0	ug/l	1	10/05/17 05:24	
Benzo (b) fluoranthene	ND	1.0	ug/l	1	10/05/17 05:24	
Benzo (g,h,i) perylene	ND	2.0	ug/l	1	10/05/17 05:24	
Benzo (k) fluoranthene	ND	1.0	ug/l	1	10/05/17 05:24	
Bis(2-chloroethoxy)methane	ND	1.0	ug/l	1	10/05/17 05:24	
Bis(2-chloroethyl)ether	ND	1.0	ug/l	1	10/05/17 05:24	
Bis(2-chloroisopropyl)ether	ND	1.0	ug/l	1	10/05/17 05:24	
Bis(2-ethylhexyl)phthalate	ND	5.0	ug/l	1	10/05/17 05:24	
Butyl benzyl phthalate	ND	1.0	ug/l	1	10/05/17 05:24	
Chrysene	ND	1.0	ug/l	1	10/05/17 05:24	
Dibenzo (a,h) anthracene	ND	2.0	ug/l	1	10/05/17 05:24	



WECK LABORATORIES, INC.

Sierra Analytical Labs, Inc.  
26052 Merit Circle, Suite 104  
Laguna Hills, CA 92653

Project Number: 1709307

Project Manager: Rick Forsyth

# Certificate of Analysis

FINAL REPORT

Reported:  
10/09/2017 14:41

## Sample Results

(Continued)

Sample: MW1-9-22 (1709307-01)  
7127066-01 (Water)

Sampled: 09/22/17 10:15 by CLIENT

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
<b>Acid and Base/Neutral Extractables by GC/MS (Continued)</b>						
Diethyl phthalate	ND	1.0	ug/l	1	10/05/17 05:24	
Dimethyl phthalate	ND	1.0	ug/l	1	10/05/17 05:24	
Di-n-butyl phthalate	ND	1.0	ug/l	1	10/05/17 05:24	
Di-n-octyl phthalate	ND	1.0	ug/l	1	10/05/17 05:24	
Fluoranthene	ND	1.0	ug/l	1	10/05/17 05:24	
Fluorene	ND	1.0	ug/l	1	10/05/17 05:24	
Hexachlorobenzene	ND	1.0	ug/l	1	10/05/17 05:24	
Hexachlorobutadiene	ND	1.0	ug/l	1	10/05/17 05:24	
Hexachlorocyclopentadiene	ND	5.0	ug/l	1	10/05/17 05:24	
Hexachloroethane	ND	1.0	ug/l	1	10/05/17 05:24	
Indeno (1,2,3-cd) pyrene	ND	2.0	ug/l	1	10/05/17 05:24	
Isophorone	ND	1.0	ug/l	1	10/05/17 05:24	
Naphthalene	ND	1.0	ug/l	1	10/05/17 05:24	
Nitrobenzene	ND	1.0	ug/l	1	10/05/17 05:24	
N-Nitrosodimethylamine	ND	1.0	ug/l	1	10/05/17 05:24	
N-Nitrosodi-n-propylamine	ND	1.0	ug/l	1	10/05/17 05:24	
N-Nitrosodiphenylamine	ND	1.0	ug/l	1	10/05/17 05:24	
Pentachlorophenol	ND	1.0	ug/l	1	10/05/17 05:24	
Phenanthrene	ND	1.0	ug/l	1	10/05/17 05:24	
Phenol	ND	1.0	ug/l	1	10/05/17 05:24	
Pyrene	ND	1.0	ug/l	1	10/05/17 05:24	
<b>Summary</b>						
2,4,6-Tribromophenol	93%	Conc: 46.4	25-102		10/05/17 05:24	
2-Fluorobiphenyl	74%	Conc: 18.6	22-107		10/05/17 05:24	
2-Fluorophenol	46%	Conc: 23.0	3-74		10/05/17 05:24	
Nitrobenzene-d5	66%	Conc: 16.5	27-111		10/05/17 05:24	
Phenol-d5	27%	Conc: 13.7	0.1-53		10/05/17 05:24	
Terphenyl-d14	101%	Conc: 25.3	28-113		10/05/17 05:24	



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

Project: NA  
 Project Number: Las Flores Monitor Well #2  
 Project Manager: Rick Dever

Reported:  
 09/21/17 14:05

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW2-9-14 (1709180-01) Liquid    Sampled: 09/14/17 10:50    Received: 09/14/17 14:15</b>									
<b>Ammonia as N</b>	<b>0.180</b>	0.100	mg/L	1	B711933	09/14/17	09/14/17 19:11	SM 4500-NH3	
<b>Chloride</b>	<b>132</b>	0.500	"	"	"	"	"	SM 4500-Cl- B	
Methylene Blue Active Substances	ND	0.100	"	"	"	"	"	MBAS-SM 5540-C	
<b>Nitrate as N</b>	<b>4.30</b>	0.0200	"	"	"	"	"	EPA 353.3	
<b>Sulfate as SO4</b>	<b>63.0</b>	0.500	"	"	"	"	"	EPA 375.4	
<b>Total Dissolved Solids</b>	<b>440</b>	1.00	"	"	"	"	"	SM 2540 C	
<b>Total Kjeldahl Nitrogen</b>	<b>0.20</b>	0.10	"	"	"	"	"	EPA 351.3	

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

Project: NA  
Project Number: Las Flores Monitor Well #2  
Project Manager: Rick Dever

Reported:  
09/21/17 14:05

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW2-9-14 (1709180-01) Liquid    Sampled: 09/14/17 10:50    Received: 09/14/17 14:15</b>									
<b>Sodium</b>	<b>86</b>	0.71	mg/L	1	B711506	09/15/17	09/16/17 15:29	EPA 200.7	

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

Project: NA  
 Project Number: Las Flores Monitor Well #2  
 Project Manager: Rick Dever

Reported:  
 09/21/17 14:05

**Trihalomethanes by EPA Method 524.2**  
**Sierra Analytical Labs, Inc.**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>MW2-9-14 (1709180-01) Liquid    Sampled: 09/14/17 10:50    Received: 09/14/17 14:15</b>									
Bromodichloromethane	ND	0.500	µg/L	1	B711502	09/15/17	09/15/17 10:47	EPA 524.2	
Bromoform	ND	0.500	"	"	"	"	"	"	
<b>Chloroform</b>	<b>2.34</b>	<b>0.500</b>	"	"	"	"	"	"	
Dibromochloromethane	ND	0.500	"	"	"	"	"	"	
<b>Total Trihalomethanes</b>	<b>2.34</b>	<b>0.500</b>	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		<i>112 %</i>	<i>86-118</i>		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		<i>91.0 %</i>	<i>88-110</i>		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>109 %</i>	<i>86-115</i>		"	"	"	"	

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

Project: NA  
 Project Number: Las Flores Monitor Well #2  
 Project Manager: Rick Dever

Reported:  
 09/21/17 14:05

**Haloacetic Acids (GC/ECD) by EPA Method 552.2**  
**Sierra Analytical Labs, Inc.**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW2-9-14 (1709180-01) Liquid    Sampled: 09/14/17 10:50    Received: 09/14/17 14:15</b>									
Monochloroacetic Acid	ND	2.00	µg/L	1	B711834	09/18/17	09/19/17 08:29	EPA 552.2	
Dichloroacetic Acid	ND	1.00	"	"	"	"	"	"	
Trichloroacetic Acid	ND	1.00	"	"	"	"	"	"	
Monobromoacetic Acid	ND	1.00	"	"	"	"	"	"	
Dibromoacetic Acid	ND	1.00	"	"	"	"	"	"	
Total Haloacetic Acids	ND	1.00	"	"	"	"	"	"	
<i>Surrogate: 2,3-Dibromopropionic Acid</i>		<i>81.4 %</i>		<i>60-150</i>	"	"	"	"	

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

Project: NA  
Project Number: Las Flores Monitor Well #2  
Project Manager: Rick Dever

Reported:  
10/16/17 10:53

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

Analyte	Result	Reporting			Batch	Prepared	Analyzed	Method	Notes
		Limit	Units	Dilution					
<b>MW2-9-22 (1709308-01) Liquid Sampled: 09/22/17 10:40 Received: 09/25/17 15:00</b>									
Acrolein	ND	5.0	µg/L	1	B7I2724	09/27/17	09/28/17 07:57	EPA 624	
Acrylonitrile	ND	2.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	1.0	"	"	"	"	"	"	
<b>Chloroform</b>	<b>4.8</b>	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		112 %		86-118	"	"	"	"	
Surrogate: Toluene-d8		110 %		88-110	"	"	"	"	

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

Project: NA  
Project Number: Las Flores Monitor Well #2  
Project Manager: Rick Dever

Reported:  
10/16/17 10:53

**Volatile Organics by EPA Method 624**

**Sierra Analytical Labs, Inc.**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>MW2-9-22 (1709308-01) Liquid    Sampled: 09/22/17 10:40    Received: 09/25/17 15:00</b>									
Surrogate: 4-Bromofluorobenzene		106 %	86-115		B712724	09/27/17	09/28/17 07:57	EPA 624	

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26052 MERIT CIRCLE SUITE 105, LAGUNA HILLS, CALIFORNIA 92653  
TELEPHONE: (949) 348-9389 FAX: (949) 348-9115  
E-MAIL: SIERRALABS @ SIERRALABS.NET



WECK LABORATORIES, INC.

Sierra Analytical Labs, Inc.  
26052 Merit Circle, Suite 104  
Laguna Hills, CA 92653

# Certificate of Analysis

FINAL REPORT

Project Number: 1709308

Reported:

10/09/2017 14:39

Project Manager: Rick Forsyth

## Sample Results

Sample: MW2-9-22 (1709308-01)  
7127067-01 (Water)

Sampled 09/22/17 10:40 by CLIENT

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
<b>Acid and Base/Neutral Extractables by GC/MS</b>						
Method: EPA 625	Batch ID: W711615	Prepared: 09/28/17 08:46				Analyst: etn
1,2,4-Trichlorobenzene	ND	1.0	ug/l	1	10/05/17 05:55	
1,2-Dichlorobenzene	ND	1.0	ug/l	1	10/05/17 05:55	
1,2-Diphenylhydrazine/Azobenzene	ND	1.0	ug/l	1	10/05/17 05:55	
1,3-Dichlorobenzene	ND	1.0	ug/l	1	10/05/17 05:55	
1,4-Dichlorobenzene	ND	1.0	ug/l	1	10/05/17 05:55	
2,4,6-Trichlorophenol	ND	1.0	ug/l	1	10/05/17 05:55	
2,4-Dichlorophenol	ND	1.0	ug/l	1	10/05/17 05:55	
2,4-Dimethylphenol	ND	1.0	ug/l	1	10/05/17 05:55	
2,4-Dinitrophenol	ND	10	ug/l	1	10/05/17 05:55	
2,4-Dinitrotoluene	ND	1.0	ug/l	1	10/05/17 05:55	
2,6-Dinitrotoluene	ND	1.0	ug/l	1	10/05/17 05:55	
2-Chloronaphthalene	ND	1.0	ug/l	1	10/05/17 05:55	
2-Chlorophenol	ND	1.0	ug/l	1	10/05/17 05:55	
2-Methyl-4,6-dinitrophenol	ND	5.0	ug/l	1	10/05/17 05:55	
2-Nitrophenol	ND	1.0	ug/l	1	10/05/17 05:55	
3,3'-Dichlorobenzidine	ND	5.0	ug/l	1	10/05/17 05:55	
4-Bromophenyl phenyl ether	ND	1.0	ug/l	1	10/05/17 05:55	
4-Chloro-3-methylphenol	ND	1.0	ug/l	1	10/05/17 05:55	
4-Chlorophenyl phenyl ether	ND	1.0	ug/l	1	10/05/17 05:55	
4-Nitrophenol	ND	5.0	ug/l	1	10/05/17 05:55	
Acenaphthene	ND	1.0	ug/l	1	10/05/17 05:55	
Acenaphthylene	ND	1.0	ug/l	1	10/05/17 05:55	
Anthracene	ND	1.0	ug/l	1	10/05/17 05:55	
Benzidine	ND	10	ug/l	1	10/05/17 05:55	
Benzo (a) anthracene	ND	1.0	ug/l	1	10/05/17 05:55	
Benzo (a) pyrene	ND	1.0	ug/l	1	10/05/17 05:55	
Benzo (b) fluoranthene	ND	1.0	ug/l	1	10/05/17 05:55	
Benzo (g,h,i) perylene	ND	2.0	ug/l	1	10/05/17 05:55	
Benzo (k) fluoranthene	ND	1.0	ug/l	1	10/05/17 05:55	
Bis(2-chloroethoxy)methane	ND	1.0	ug/l	1	10/05/17 05:55	
Bis(2-chloroethyl)ether	ND	1.0	ug/l	1	10/05/17 05:55	
Bis(2-chloroisopropyl)ether	ND	1.0	ug/l	1	10/05/17 05:55	
Bis(2-ethylhexyl)phthalate	ND	5.0	ug/l	1	10/05/17 05:55	
Butyl benzyl phthalate	ND	1.0	ug/l	1	10/05/17 05:55	
Chrysene	ND	1.0	ug/l	1	10/05/17 05:55	
Dibenzo (a,h) anthracene	ND	2.0	ug/l	1	10/05/17 05:55	





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

Project: NA  
 Project Number: Las Flores Monitor Well #3  
 Project Manager: Rick Dever

Reported:  
 09/21/17 14:05

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW3-9-14 (1709181-01) Liquid    Sampled: 09/14/17 11:05    Received: 09/14/17 14:15</b>									
Ammonia as N	ND	0.100	mg/L	1	B711933	09/14/17	09/14/17 19:11	ISM 4500-NH3	
Chloride	117	0.500	"	"	"	"	"	SM 4500-Cl- B	
Methylene Blue Active Substances	ND	0.100	"	"	"	"	"	MBAS-SM 5540-C	
Nitrate as N	3.20	0.0200	"	"	"	"	"	EPA 353.3	
Sulfate as SO4	86.0	0.500	"	"	"	"	"	EPA 375.4	
Total Dissolved Solids	480	1.00	"	"	"	"	"	SM 2540 C	
Total Kjeldahl Nitrogen	0.10	0.10	"	"	"	"	"	EPA 351.3	

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

Project: NA  
Project Number: Las Flores Monitor Well #3  
Project Manager: Rick Dever

Reported:  
09/21/17 14:05

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW3-9-14 (1709181-01) Liquid    Sampled: 09/14/17 11:05    Received: 09/14/17 14:15</b>									
<b>Sodium</b>	<b>58</b>	0.71	mg/L	1	B711506	09/15/17	09/16/17 15:29	EPA 200.7	

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

Project: NA  
Project Number: Las Flores Monitor Well #3  
Project Manager: Rick Dever

Reported:  
09/21/17 14:05

**Trihalomethanes by EPA Method 524.2**  
**Sierra Analytical Labs, Inc.**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>MW3-9-14 (1709181-01) Liquid    Sampled: 09/14/17 11:05    Received: 09/14/17 14:15</b>									
Bromodichloromethane	ND	0.500	µg/L	1	B711502	09/15/17	09/15/17 10:47	EPA 524.2	
Bromoform	ND	0.500	"	"	"	"	"	"	
Chloroform	ND	0.500	"	"	"	"	"	"	
Dibromochloromethane	ND	0.500	"	"	"	"	"	"	
Total Trihalomethanes	ND	0.500	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		97.6 %	86-118		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97.8 %	88-110		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		103 %	86-115		"	"	"	"	

*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.*





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

Project: NA  
Project Number: Las Flores Monitor Well #3  
Project Manager: Rick Dever

Reported:  
09/21/17 14:05

**Haloacetic Acids (GC/ECD) by EPA Method 552.2**  
**Sierra Analytical Labs, Inc.**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>MW3-9-14 (1709181-01) Liquid    Sampled: 09/14/17 11:05    Received: 09/14/17 14:15</b>									
Monochloroacetic Acid	ND	2.00	µg/L	1	B711834	09/18/17	09/19/17 08:29	EPA 552.2	
Dichloroacetic Acid	ND	1.00	"	"	"	"	"	"	
Trichloroacetic Acid	ND	1.00	"	"	"	"	"	"	
Monobromoacetic Acid	ND	1.00	"	"	"	"	"	"	
Dibromoacetic Acid	ND	1.00	"	"	"	"	"	"	
Total Haloacetic Acids	ND	1.00	"	"	"	"	"	"	
<i>Surrogate: 2,3-Dibromopropionic Acid</i>		<i>105 %</i>	<i>60-150</i>		"	"	"	"	

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

Project: NA  
Project Number: Las Flores Monitor Well #3  
Project Manager: Rick Dever

Reported:  
10/16/17 10:52

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

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>MW3-9-22 (1709309-01) Liquid Sampled: 09/22/17 11:15 Received: 09/25/17 15:00</b>									
Acrolein	ND	5.0	µg/L	1	B712724	09/27/17	09/28/17 07:57	EPA 624	
Acrylonitrile	ND	2.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		100 %	86-118	"	"	"	"	"	
Surrogate: Toluene-d8		90.6 %	88-110	"	"	"	"	"	

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.



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

Project: NA  
 Project Number: Las Flores Monitor Well #3  
 Project Manager: Rick Dever

Reported:  
 10/16/17 10:52

**Volatile Organics by EPA Method 624**

**Sierra Analytical Labs, Inc.**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**MW3-9-22 (1709309-01) Liquid Sampled: 09/22/17 11:15 Received: 09/25/17 15:00**

<i>Surrogate: 4-Bromofluorobenzene</i>		115 %	86-115		B712724	09/27/17	09/28/17 07:57	EPA 624	
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26052 MERIT CIRCLE SUITE 105, LAGUNA HILLS, CALIFORNIA 92653  
 TELEPHONE: (949) 348-9389 FAX: (949) 348-9115  
 E-MAIL: SIERRALABS@SIERRALABS.NET



WECK LABORATORIES, INC.

Sierra Analytical Labs, Inc.  
26052 Merit Circle, Suite 104  
Laguna Hills, CA 92653

# Certificate of Analysis

FINAL REPORT

Project Number: 1709309

Reported:

10/09/2017 14:35

Project Manager: Rick Forsyth

## Sample Results

Sample: MW3-9-22 (1709309-01)

Sampled 09/22/17 11:15 by CLIENT

7127068-01 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
<b>Acid and Base/Neutral Extractables by GC/MS</b>						
Method: EPA 625	Batch ID: W711615	Prepared: 09/28/17 08:46	Analyst: etn			
1,2,4-Trichlorobenzene	ND	1.0	ug/l	1	10/05/17 06:26	
1,2-Dichlorobenzene	ND	1.0	ug/l	1	10/05/17 06:26	
1,2-Diphenylhydrazine/Azobenzene	ND	1.0	ug/l	1	10/05/17 06:26	
1,3-Dichlorobenzene	ND	1.0	ug/l	1	10/05/17 06:26	
1,4-Dichlorobenzene	ND	1.0	ug/l	1	10/05/17 06:26	
2,4,6-Trichlorophenol	ND	1.0	ug/l	1	10/05/17 06:26	
2,4-Dichlorophenol	ND	1.0	ug/l	1	10/05/17 06:26	
2,4-Dimethylphenol	ND	1.0	ug/l	1	10/05/17 06:26	
2,4-Dinitrophenol	ND	10	ug/l	1	10/05/17 06:26	
2,4-Dinitrotoluene	ND	1.0	ug/l	1	10/05/17 06:26	
2,6-Dinitrotoluene	ND	1.0	ug/l	1	10/05/17 06:26	
2-Chloronaphthalene	ND	1.0	ug/l	1	10/05/17 06:26	
2-Chlorophenol	ND	1.0	ug/l	1	10/05/17 06:26	
2-Methyl-4,6-dinitrophenol	ND	5.0	ug/l	1	10/05/17 06:26	
2-Nitrophenol	ND	1.0	ug/l	1	10/05/17 06:26	
3,3'-Dichlorobenzidine	ND	5.0	ug/l	1	10/05/17 06:26	
4-Bromophenyl phenyl ether	ND	1.0	ug/l	1	10/05/17 06:26	
4-Chloro-3-methylphenol	ND	1.0	ug/l	1	10/05/17 06:26	
4-Chlorophenyl phenyl ether	ND	1.0	ug/l	1	10/05/17 06:26	
4-Nitrophenol	ND	5.0	ug/l	1	10/05/17 06:26	
Acenaphthene	ND	1.0	ug/l	1	10/05/17 06:26	
Acenaphthylene	ND	1.0	ug/l	1	10/05/17 06:26	
Anthracene	ND	1.0	ug/l	1	10/05/17 06:26	
Benzidine	ND	10	ug/l	1	10/05/17 06:26	
Benzo (a) anthracene	ND	1.0	ug/l	1	10/05/17 06:26	
Benzo (a) pyrene	ND	1.0	ug/l	1	10/05/17 06:26	
Benzo (b) fluoranthene	ND	1.0	ug/l	1	10/05/17 06:26	
Benzo (g,h,i) perylene	ND	2.0	ug/l	1	10/05/17 06:26	
Benzo (k) fluoranthene	ND	1.0	ug/l	1	10/05/17 06:26	
Bis(2-chloroethoxy)methane	ND	1.0	ug/l	1	10/05/17 06:26	
Bis(2-chloroethyl)ether	ND	1.0	ug/l	1	10/05/17 06:26	
Bis(2-chloroisopropyl)ether	ND	1.0	ug/l	1	10/05/17 06:26	
Bis(2-ethylhexyl)phthalate	ND	5.0	ug/l	1	10/05/17 06:26	
Butyl benzyl phthalate	ND	1.0	ug/l	1	10/05/17 06:26	
Chrysene	ND	1.0	ug/l	1	10/05/17 06:26	
Dibenzo (a,h) anthracene	ND	2.0	ug/l	1	10/05/17 06:26	



WECK LABORATORIES, INC.

Sierra Analytical Labs, Inc.  
26052 Merit Circle, Suite 104  
Laguna Hills, CA 92653

Project Number: 1709309

Project Manager: Rick Forsyth

# Certificate of Analysis

FINAL REPORT

Reported:  
10/09/2017 14:35

## Sample Results

(Continued)

Sample: MW3-9-22 (1709309-01)

Sampled 09/22/17 11:15 by CLIENT

7127068-01 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
<b>Acid and Base/Neutral Extractables by GC/MS (Continued)</b>						
Diethyl phthalate	ND	1.0	ug/l	1	10/05/17 06:26	
Dimethyl phthalate	ND	1.0	ug/l	1	10/05/17 06:26	
Di-n-butyl phthalate	ND	1.0	ug/l	1	10/05/17 06:26	
Di-n-octyl phthalate	ND	1.0	ug/l	1	10/05/17 06:26	
Fluoranthene	ND	1.0	ug/l	1	10/05/17 06:26	
Fluorene	ND	1.0	ug/l	1	10/05/17 06:26	
Hexachlorobenzene	ND	1.0	ug/l	1	10/05/17 06:26	
Hexachlorobutadiene	ND	1.0	ug/l	1	10/05/17 06:26	
Hexachlorocyclopentadiene	ND	5.0	ug/l	1	10/05/17 06:26	
Hexachloroethane	ND	1.0	ug/l	1	10/05/17 06:26	
Indeno (1,2,3-cd) pyrene	ND	2.0	ug/l	1	10/05/17 06:26	
Isophorone	ND	1.0	ug/l	1	10/05/17 06:26	
Naphthalene	ND	1.0	ug/l	1	10/05/17 06:26	
Nitrobenzene	ND	1.0	ug/l	1	10/05/17 06:26	
N-Nitrosodimethylamine	ND	1.0	ug/l	1	10/05/17 06:26	
N-Nitrosodi-n-propylamine	ND	1.0	ug/l	1	10/05/17 06:26	
N-Nitrosodiphenylamine	ND	1.0	ug/l	1	10/05/17 06:26	
Pentachlorophenol	ND	1.0	ug/l	1	10/05/17 06:26	
Phenanthrene	ND	1.0	ug/l	1	10/05/17 06:26	
Phenol	ND	1.0	ug/l	1	10/05/17 06:26	
Pyrene	ND	1.0	ug/l	1	10/05/17 06:26	
<b>Surrogates</b>						
2,4,6-Tribromophenol	80% Conc: 39.8	25-102			10/05/17 06:26	
2-Fluorobiphenyl	66% Conc: 16.6	22-107			10/05/17 06:26	
2-Fluorophenol	45% Conc: 22.4	3-74			10/05/17 06:26	
Nitrobenzene-d5	59% Conc: 14.8	27-111			10/05/17 06:26	
Phenol-d5	27% Conc: 13.4	0.1-53			10/05/17 06:26	
Terphenyl-d14	98% Conc: 24.4	28-113			10/05/17 06:26	



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

Project: NA  
Project Number: Las Flores Monitor Well #4  
Project Manager: Rick Dever

Reported:  
09/21/17 14:06

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW4-9-14 (1709182-01) Liquid    Sampled: 09/14/17 11:30    Received: 09/14/17 14:15</b>									
Ammonia as N	ND	0.100	mg/L	1	B711933	09/14/17	09/14/17 19:11	SM 4500-NH3	
Chloride	97.8	0.500	"	"	"	"	"	SM 4500-Cl- B	
Methylene Blue Active Substances	ND	0.100	"	"	"	"	"	MBAS-SM 5540-C	
Nitrate as N	3.50	0.0200	"	"	"	"	"	EPA 353.3	
Sulfate as SO4	96.0	0.500	"	"	"	"	"	EPA 375.4	
Total Dissolved Solids	480	1.00	"	"	"	"	"	SM 2540 C	
Total Kjeldahl Nitrogen	ND	0.10	"	"	"	"	"	EPA 351.3	

*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.*



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

Project: NA  
Project Number: Las Flores Monitor Well #4  
Project Manager: Rick Dever

Reported:  
09/21/17 14:06

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

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>MW4-9-14 (1709182-01) Liquid    Sampled: 09/14/17 11:30    Received: 09/14/17 14:15</b>									
<b>Sodium</b>	<b>53</b>	0.71	mg/L	1	B711506	09/15/17	09/16/17 15:29	EPA 200.7	

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

Project: NA  
Project Number: Las Flores Monitor Well #4  
Project Manager: Rick Dever

Reported:  
09/21/17 14:06

**Trihalomethanes by EPA Method 524.2**  
**Sierra Analytical Labs, Inc.**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW4-9-14 (1709182-01) Liquid    Sampled: 09/14/17 11:30    Received: 09/14/17 14:15</b>									
Bromodichloromethane	ND	0.500	µg/L	1	B711502	09/15/17	09/15/17 10:47	EPA 524.2	
Bromoform	ND	0.500	"	"	"	"	"	"	
Chloroform	ND	0.500	"	"	"	"	"	"	
Dibromochloromethane	ND	0.500	"	"	"	"	"	"	
Total Trihalomethanes	ND	0.500	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		115 %	86-118	"	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		103 %	88-110	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		106 %	86-115	"	"	"	"	"	

*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.*





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

Project: NA  
 Project Number: Las Flores Monitor Well #4  
 Project Manager: Rick Dever

Reported:  
 09/21/17 14:06

**Haloacetic Acids (GC/ECD) by EPA Method 552.2**  
**Sierra Analytical Labs, Inc.**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>MW4-9-14 (1709182-01) Liquid    Sampled: 09/14/17 11:30    Received: 09/14/17 14:15</b>										
Monochloroacetic Acid	ND	2.00		µg/L	1	B711834	09/18/17	09/19/17 08:29	EPA 552.2	
Dichloroacetic Acid	ND	1.00		"	"	"	"	"	"	
Trichloroacetic Acid	ND	1.00		"	"	"	"	"	"	
Monobromoacetic Acid	ND	1.00		"	"	"	"	"	"	
Dibromoacetic Acid	ND	1.00		"	"	"	"	"	"	
Total Haloacetic Acids	ND	1.00		"	"	"	"	"	"	
<i>Surrogate: 2,3-Dibromopropionic Acid</i>		64.6 %		60-150		"	"	"	"	

*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.*



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

Project: NA  
 Project Number: Las Flores Monitor Well #4  
 Project Manager: Rick Dever

Reported:  
 10/16/17 10:51

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

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>MW4-9-22 (1709310-01) Liquid Sampled: 09/22/17 11:40 Received: 09/25/17 15:00</b>									
Acrolein	ND	5.0	µg/L	1	B712724	09/27/17	09/28/17 07:57	EPA 624	
Acrylonitrile	ND	2.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		103 %	86-118	"	"	"	"	"	
Surrogate: Toluene-d8		107 %	88-110	"	"	"	"	"	

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.



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

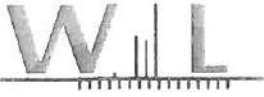
Project: NA  
 Project Number: Las Flores Monitor Well #4  
 Project Manager: Rick Dever

Reported:  
 10/16/17 10:51

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW4-9-22 (1709310-01) Liquid    Sampled: 09/22/17 11:40    Received: 09/25/17 15:00</b>									
<i>Surrogate: 4-Bromofluorobenzene</i>		104 %	86-115		B712724	09/27/17	09/28/17 07:57	EPA 624	

*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.*



WECK LABORATORIES, INC.

Sierra Analytical Labs, Inc.  
26052 Merit Circle, Suite 104  
Laguna Hills, CA 92653

# Certificate of Analysis

FINAL REPORT

Project Number: 1709310

Reported:

10/09/2017 12:32

Project Manager: Rick Forsyth

## Sample Results

Sample: MW4-9-22 (1709310-01)  
7127069-01 (Water)

Sampled: 09/22/17 11:40 by CLIENT

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
<b>Acid and Base/Neutral Extractables by GC/MS</b>						
Method: EPA 625	Batch ID: W711615	Prepared: 09/28/17 08:46				Analyst: etn
1,2,4-Trichlorobenzene	ND	1.0	ug/l	1	10/05/17 06:57	
1,2-Dichlorobenzene	ND	1.0	ug/l	1	10/05/17 06:57	
1,2-Diphenylhydrazine/Azobenzene	ND	1.0	ug/l	1	10/05/17 06:57	
1,3-Dichlorobenzene	ND	1.0	ug/l	1	10/05/17 06:57	
1,4-Dichlorobenzene	ND	1.0	ug/l	1	10/05/17 06:57	
2,4,6-Trichlorophenol	ND	1.0	ug/l	1	10/05/17 06:57	
2,4-Dichlorophenol	ND	1.0	ug/l	1	10/05/17 06:57	
2,4-Dimethylphenol	ND	1.0	ug/l	1	10/05/17 06:57	
2,4-Dinitrophenol	ND	10	ug/l	1	10/05/17 06:57	
2,4-Dinitrotoluene	ND	1.0	ug/l	1	10/05/17 06:57	
2,6-Dinitrotoluene	ND	1.0	ug/l	1	10/05/17 06:57	
2-Chloronaphthalene	ND	1.0	ug/l	1	10/05/17 06:57	
2-Chlorophenol	ND	1.0	ug/l	1	10/05/17 06:57	
2-Methyl-4,6-dinitrophenol	ND	5.0	ug/l	1	10/05/17 06:57	
2-Nitrophenol	ND	1.0	ug/l	1	10/05/17 06:57	
3,3'-Dichlorobenzidine	ND	5.0	ug/l	1	10/05/17 06:57	
4-Bromophenyl phenyl ether	ND	1.0	ug/l	1	10/05/17 06:57	
4-Chloro-3-methylphenol	ND	1.0	ug/l	1	10/05/17 06:57	
4-Chlorophenyl phenyl ether	ND	1.0	ug/l	1	10/05/17 06:57	
4-Nitrophenol	ND	5.0	ug/l	1	10/05/17 06:57	
Acenaphthene	ND	1.0	ug/l	1	10/05/17 06:57	
Acenaphthylene	ND	1.0	ug/l	1	10/05/17 06:57	
Anthracene	ND	1.0	ug/l	1	10/05/17 06:57	
Benzidine	ND	10	ug/l	1	10/05/17 06:57	
Benzo (a) anthracene	ND	1.0	ug/l	1	10/05/17 06:57	
Benzo (a) pyrene	ND	1.0	ug/l	1	10/05/17 06:57	
Benzo (b) fluoranthene	ND	1.0	ug/l	1	10/05/17 06:57	
Benzo (g,h,i) perylene	ND	2.0	ug/l	1	10/05/17 06:57	
Benzo (k) fluoranthene	ND	1.0	ug/l	1	10/05/17 06:57	
Bis(2-chloroethoxy)methane	ND	1.0	ug/l	1	10/05/17 06:57	
Bis(2-chloroethyl)ether	ND	1.0	ug/l	1	10/05/17 06:57	
Bis(2-chloroisopropyl)ether	ND	1.0	ug/l	1	10/05/17 06:57	
Bis(2-ethylhexyl)phthalate	ND	5.0	ug/l	1	10/05/17 06:57	
Butyl benzyl phthalate	ND	1.0	ug/l	1	10/05/17 06:57	
Chrysene	ND	1.0	ug/l	1	10/05/17 06:57	
Dibenzo (a,h) anthracene	ND	2.0	ug/l	1	10/05/17 06:57	



WECK LABORATORIES, INC.

Sierra Analytical Labs, Inc.  
26052 Merit Circle, Suite 104  
Laguna Hills, CA 92653

# Certificate of Analysis

FINAL REPORT

Project Number: 1709310

Reported:

10/09/2017 12:32

Project Manager: Rick Forsyth

## Sample Results

(Continued)

Sample: MW4-9-22 (1709310-01)  
7127069-01 (Water)

Sampled: 09/22/17 11:40 by CLIENT

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
<b>Acid and Base/Neutral Extractables by GC/MS (Continued)</b>						
Diethyl phthalate	ND	1.0	ug/l	1	10/05/17 06:57	
Dimethyl phthalate	ND	1.0	ug/l	1	10/05/17 06:57	
Di-n-butyl phthalate	ND	1.0	ug/l	1	10/05/17 06:57	
Di-n-octyl phthalate	ND	1.0	ug/l	1	10/05/17 06:57	
Fluoranthene	ND	1.0	ug/l	1	10/05/17 06:57	
Fluorene	ND	1.0	ug/l	1	10/05/17 06:57	
Hexachlorobenzene	ND	1.0	ug/l	1	10/05/17 06:57	
Hexachlorobutadiene	ND	1.0	ug/l	1	10/05/17 06:57	
Hexachlorocyclopentadiene	ND	5.0	ug/l	1	10/05/17 06:57	
Hexachloroethane	ND	1.0	ug/l	1	10/05/17 06:57	
Indeno (1,2,3-cd) pyrene	ND	2.0	ug/l	1	10/05/17 06:57	
Isophorone	ND	1.0	ug/l	1	10/05/17 06:57	
Naphthalene	ND	1.0	ug/l	1	10/05/17 06:57	
Nitrobenzene	ND	1.0	ug/l	1	10/05/17 06:57	
N-Nitrosodimethylamine	ND	1.0	ug/l	1	10/05/17 06:57	
N-Nitrosodi-n-propylamine	ND	1.0	ug/l	1	10/05/17 06:57	
N-Nitrosodiphenylamine	ND	1.0	ug/l	1	10/05/17 06:57	
Pentachlorophenol	ND	1.0	ug/l	1	10/05/17 06:57	
Phenanthrene	ND	1.0	ug/l	1	10/05/17 06:57	
Phenol	ND	1.0	ug/l	1	10/05/17 06:57	
Pyrene	ND	1.0	ug/l	1	10/05/17 06:57	
2,4,6-Tribromophenol	83% Conc: 41.4	25-102			10/05/17 06:57	
2-Fluorobiphenyl	68% Conc: 17.0	22-107			10/05/17 06:57	
2-Fluorophenol	43% Conc: 21.6	3-74			10/05/17 06:57	
Nitrobenzene-d5	59% Conc: 14.8	27-111			10/05/17 06:57	
Phenol-d5	26% Conc: 13.0	0.1-53			10/05/17 06:57	
Terphenyl-d14	98% Conc: 24.5	28-113			10/05/17 06:57	



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

Project: NA  
 Project Number: Las Flores Monitor Well #1  
 Project Manager: Rick Dever

Reported:  
 03/17/17 09:23

**Trihalomethanes by EPA Method 524.2**  
**Sierra Analytical Labs, Inc.**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW1-3-9 (1703130-01) Liquid    Sampled: 03/09/17 10:00    Received: 03/09/17 13:10</b>									
Bromodichloromethane	ND	0.500	µg/L	1	B7C1412	03/14/17	03/14/17 14:33	EPA 524.2	
Bromoform	ND	0.500	"	"	"	"	"	"	
Chloroform	ND	0.500	"	"	"	"	"	"	
Dibromochloromethane	ND	0.500	"	"	"	"	"	"	
Total Trihalomethanes	ND	0.500	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		105 %	86-118	"	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		103 %	88-110	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		89.6 %	86-115	"	"	"	"	"	

*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.*



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

Project: NA  
 Project Number: Las Flores Monitor Well #1  
 Project Manager: Rick Dever

Reported:  
 03/17/17 09:23

**Haloacetic Acids (GC/ECD) by EPA Method 552.2**  
**Sierra Analytical Labs, Inc.**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>MW1-3-9 (1703130-01) Liquid    Sampled: 03/09/17 10:00    Received: 03/09/17 13:10</b>									
Monochloroacetic Acid	ND	2.00	µg/L	1	B7C1542	03/15/17	03/15/17 15:17	EPA 552.2	
Dichloroacetic Acid	ND	1.00	"	"	"	"	"	"	
Trichloroacetic Acid	ND	1.00	"	"	"	"	"	"	
Monobromoacetic Acid	ND	1.00	"	"	"	"	"	"	
Dibromoacetic Acid	ND	1.00	"	"	"	"	"	"	
Total Haloacetic Acids	ND	1.00	"	"	"	"	"	"	
<i>Surrogate: 2,3-Dibromopropionic Acid</i>		140 %		60-150	"	"	"	"	

*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.*



Crestline Sanitation District P.O. Box 3395 Crestline CA, 92325-3395	Project: NA Project Number: Las Flores Monitor Well #2 Project Manager: Rick Dever	Reported: 03/17/17 09:24
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**Trihalomethanes by EPA Method 524.2**  
**Sierra Analytical Labs, Inc.**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW2-3-9 (1703131-01) Liquid    Sampled: 03/09/17 10:15    Received: 03/09/17 13:10</b>									
Bromodichloromethane	ND	0.500	µg/L	1	B7C1412	03/14/17	03/14/17 15:49	EPA 524.2	
Bromoform	ND	0.500	"	"	"	"	"	"	
<b>Chloroform</b>	<b>2.06</b>	0.500	"	"	"	"	"	"	
Dibromochloromethane	ND	0.500	"	"	"	"	"	"	
<b>Total Trihalomethanes</b>	<b>2.06</b>	0.500	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		86.4 %	86-118	"	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		108 %	88-110	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		105 %	86-115	"	"	"	"	"	

*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.*





Crestline Sanitation District P.O. Box 3395 Crestline CA, 92325-3395	Project: NA Project Number: Las Flores Monitor Well #2 Project Manager: Rick Dever	Reported: 03/17/17 09:24
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**Haloacetic Acids (GC/ECD) by EPA Method 552.2**  
**Sierra Analytical Labs, Inc.**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes	
		Limit	Units							
<b>MW2-3-9 (1703131-01) Liquid    Sampled: 03/09/17 10:15    Received: 03/09/17 13:10</b>										
Monochloroacetic Acid	ND	2.00	µg/L	1	B7C1542	03/15/17	03/15/17 15:17	EPA 552.2		
Dichloroacetic Acid	ND	1.00	"	"	"	"	"	"		
Trichloroacetic Acid	ND	1.00	"	"	"	"	"	"		
Monobromoacetic Acid	ND	1.00	"	"	"	"	"	"		
Dibromoacetic Acid	ND	1.00	"	"	"	"	"	"		
Total Haloacetic Acids	ND	1.00	"	"	"	"	"	"		
<i>Surrogate: 2,3-Dibromopropionic Acid</i>			126 %	60-150	"	"	"	"		

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

Project: NA  
Project Number: Las Flores Monitor Well #3  
Project Manager: Rick Dever

Reported:  
03/17/17 09:25

**Trihalomethanes by EPA Method 524.2**  
**Sierra Analytical Labs, Inc.**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>MW3-3-9 (1703132-01) Liquid    Sampled: 03/09/17 10:30    Received: 03/09/17 13:10</b>									
Bromodichloromethane	ND	0.500	µg/L	1	B7C1412	03/14/17	03/14/17 16:27	EPA 524.2	
Bromoform	ND	0.500	"	"	"	"	"	"	
Chloroform	ND	0.500	"	"	"	"	"	"	
Dibromochloromethane	ND	0.500	"	"	"	"	"	"	
Total Trihalomethanes	ND	0.500	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		104 %	86-118		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		110 %	88-110		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		96.0 %	86-115		"	"	"	"	

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

Project: NA  
Project Number: Las Flores Monitor Well #3  
Project Manager: Rick Dever

Reported:  
03/17/17 09:25

**Haloacetic Acids (GC/ECD) by EPA Method 552.2**  
**Sierra Analytical Labs, Inc.**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>MW3-3-9 (1703132-01) Liquid    Sampled: 03/09/17 10:30    Received: 03/09/17 13:10</b>									
Monochloroacetic Acid	ND	2.00	µg/L	1	B7C1542	03/15/17	03/15/17 15:17	EPA 552.2	
Dichloroacetic Acid	ND	1.00	"	"	"	"	"	"	
Trichloroacetic Acid	ND	1.00	"	"	"	"	"	"	
Monobromoacetic Acid	ND	1.00	"	"	"	"	"	"	
Dibromoacetic Acid	ND	1.00	"	"	"	"	"	"	
Total Haloacetic Acids	ND	1.00	"	"	"	"	"	"	
<i>Surrogate: 2,3-Dibromopropionic Acid</i>		79.8 %	60-150		"	"	"	"	

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Crestline Sanitation District P.O. Box 3395 Crestline CA, 92325-3395	Project: NA Project Number: Las Flores Monitor Well #4 Project Manager: Rick Dever	Reported: 03/17/17 09:26
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**Trihalomethanes by EPA Method 524.2**  
**Sierra Analytical Labs, Inc.**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW4-3-9 (1703133-01) Liquid    Sampled: 03/09/17 10:40    Received: 03/09/17 13:10</b>									
Bromodichloromethane	ND	0.500	µg/L	1	B7C1412	03/14/17	03/14/17 17:04	EPA 524.2	
Bromoform	ND	0.500	"	"	"	"	"	"	
Chloroform	ND	0.500	"	"	"	"	"	"	
Dibromochloromethane	ND	0.500	"	"	"	"	"	"	
Total Trihalomethanes	ND	0.500	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		107 %	86-118	"	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		103 %	88-110	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		110 %	86-115	"	"	"	"	"	

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

Project: NA  
Project Number: Las Flores Monitor Well #4  
Project Manager: Rick Dever

Reported:  
03/17/17 09:26

**Haloacetic Acids (GC/ECD) by EPA Method 552.2**  
**Sierra Analytical Labs, Inc.**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW4-3-9 (1703133-01) Liquid    Sampled: 03/09/17 10:40    Received: 03/09/17 13:10</b>									
Monochloroacetic Acid	ND	2.00	µg/L	1	B7C1542	03/15/17	03/15/17 15:17	EPA 552.2	
Dichloroacetic Acid	ND	1.00	"	"	"	"	"	"	
Trichloroacetic Acid	ND	1.00	"	"	"	"	"	"	
Monobromoacetic Acid	ND	1.00	"	"	"	"	"	"	
Dibromoacetic Acid	ND	1.00	"	"	"	"	"	"	
Total Haloacetic Acids	ND	1.00	"	"	"	"	"	"	
<i>Surrogate: 2,3-Dibromopropionic Acid</i>		113 %	60-150		"	"	"	"	

*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.*