

Crestline Sanitation District  
2018  
Annual Report



Smoke Testing 2018

# CRESTLINE SANITATION DISTRICT ANNUAL REPORT

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

**WDID Number: 6B360106001**

## **ANNUAL REPORT**

**Year: 2018**

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

**Report Prepared by:**

  
RONALD SCRIVEN, OPERATIONS MANAGER  
CRESTLINE SANITATION DISTRICT

**Report Submitted by:**

  
RICK DEVER, DISTRICT MANAGER  
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

|  | <b>Page</b> |
|--|-------------|
| <b>Treatment Plant Effluent Monitoring</b>                               |             |
| 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          |
| <br>   |             |
| <b>Effluent Monitoring - Final Discharge</b>                             |             |
| 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          |
| <br>   |             |
| <b>Sludge Monitoring</b>   |             |
| Sludge Generation and Disposal Data                                      | 34          |
| Graph - Sludge Generation per month                                      | 35          |
| <br>   |             |
| <b>Discharge Site - Ground Water Monitoring Wells</b>                    |             |
| 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          |

|   |              |
|---|--------------|
| <b>Discharge Site - Ground Water Monitoring Wells (con's)</b>   |              |
| 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 Water Level)     | 50           |
| <b>Supply Water Monitoring</b>                                  |              |
| Report - Supply Water Samples - March                           | 51           |
| Graph - Supply Water Samples - March                            | 52           |
| Report - Supply Water Samples - September                       | 53           |
| Graph - Supply Water Samples - September                        | 54           |
| <b>Violations</b>   |              |
| 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           |
| <b>TKN, NO3-N, NH3-N</b>  |              |
| 3 Year Comparison Chart   | 60           |
| 3 Year Comparison Graph   | 61           |
| <b>Appendix</b>   |              |
| Final Discharge Monitoring (Annual Samples)                     | Appendix “A” |
| Discharge Site - Ground Water Monitoring Wells (Annual Samples) | Appendix “B” |

**Crestline Sanitation District  
Annual Report  
Summation  
2018**

Crestline Sanitation District collected, treated and discharged 187.32 million gallons of wastewater in 2018. We had only two violations in 2018 which was attributed to large amounts of rain in the month of March. Rainfall recorded at Huston Creek Treatment plant for the calendar year of 2018 was 32.98 inches in which 12.35 inches occurred in the month of March.

Throughout 2018 the Districts' Maintenance Crew systematically televised 2.5 miles of pipe. During 2018 the District Hydroed 20.1 miles of pipeline exceeding the Sanitary Sewer Management Plan (SSMP) mark of 15.2 miles for the year. The District also raised 93 manholes to grade.

In 2018, Dudek Engineering & Environmental was contracted to start plans for the Seeley Creek emergency storage pond lining project. Jericho was also contracted to do the environmental work to enable this project to move forward.

CSD staff smoke tested near major creeks during 2018 to help cut down on infiltration and inflow. During the smoke testing two spots were observed and found to be in need of repair. Repairs were made and re-smoke tested to ensure a proper fix was made. CSD also purchased two additional Smart Covers that will help in monitoring areas for excess flow during rain events as well as help in prevention of any SSO's in the areas they are being utilized.

An Annual Audit of the District was performed in 2018 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.

CSD also obtained the District Transparency Certificate of Excellence issued by Special Districts Leadership Foundation on February 12<sup>th</sup> of 2018.

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

**CRESTLINE SANITATION DISTRICT**  
**ANNUAL REPORT**  
**Treatment Facility Total Volume Flows**

YEAR: **2018**

| 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>                                   | 9.77               | 4.64               | 0.325              | 15.28                      | 0.00                  | empty         |
| <b>FEBRUARY</b>                                  | 7.79               | 3.74               | 0.109              | 13.48                      | 0.00                  | empty         |
| <b>MARCH</b>                                     | 15.56              | 8.05               | 0.593              | 24.49                      | 0.00                  | empty         |
| <b>APRIL</b>                                     | 10.67              | 5.41               | 0.469              | 16.84                      | 0.00                  | empty         |
| <b>MAY</b>                                       | 11.25              | 4.59               | 0.558              | 15.75                      | 0.00                  | empty         |
| <b>JUNE</b>                                      | 10.27              | 3.94               | 0.829              | 14.52                      | 0.00                  | empty         |
| <b>JULY</b>                                      | 10.57              | 3.59               | 0.923              | 15.31                      | 0.00                  | empty         |
| <b>AUGUST</b>                                    | 10.29              | 3.50               | 0.632              | 13.83                      | 0.00                  | empty         |
| <b>SEPTEMBER</b>                                 | 10.03              | 3.30               | 0.563              | 13.43                      | 0.00                  | empty         |
| <b>OCTOBER</b>                                   | 11.09              | 3.59               | 0.200              | 13.83                      | 0.00                  | empty         |
| <b>NOVEMBER</b>                                  | 11.59              | 3.81               | 0.189              | 13.99                      | 0.00                  | empty         |
| <b>DECEMBER</b>                                  | 13.19              | 5.06               | 0.126              | 16.57                      | 0.00                  | empty         |
| <b>2018 Treatment Facility Total Volume Flow</b> |                    |                    |                    |                            |                       |               |
| <b>Totals</b>                                    | <b>132.07</b>      | <b>53.21</b>       | <b>5.52</b>        | <b>187.32</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: **2018**

| Site   | Huston Creek           | Seeley Creek           | Cleghorn               | Las Flores             | Las Flores             |
|--|------------------------|------------------------|------------------------|------------------------|------------------------|
| Reading  | daily                  | daily                  | daily                  | daily                  | daily                  |
| Violations   |                        |                        |                        |                        |                        |
| Design limits  | 2.5 mg<br>maximum      | 1.0 mg<br>maximum      | 0.4 mg<br>maximum      |                        |                        |
|  | max flow rate<br>month | max flow rate<br>month | max flow rate<br>month | max flow rate<br>month | max flow rate<br>month |
| All flow rates in million gallons                              |                        |                        |                        |                        |                        |
|  | Huston                 | Seeley                 | Cleghorn               | District Effluent      | Flow to ponds          |
| <b>JANUARY</b>   | 1.651                  | 0.410                  | 0.270                  | 2.201                  | empty                  |
| <b>FEBRUARY</b>  | 0.670                  | 0.340                  | 0.135                  | 0.990                  | empty                  |
| <b>MARCH</b>   | 1.125                  | 0.595                  | 0.230                  | 1.760                  | empty                  |
| <b>APRIL</b>   | 0.660                  | 0.400                  | 0.250                  | 1.100                  | empty                  |
| <b>MAY</b>   | 0.670                  | 0.305                  | 0.270                  | 1.140                  | empty                  |
| <b>JUNE</b>  | 0.655                  | 0.340                  | 0.350                  | 0.905                  | empty                  |
| <b>JULY</b>  | 0.760                  | 0.550                  | 0.295                  | 1.090                  | empty                  |
| <b>AUGUST</b>  | 0.640                  | 0.275                  | 0.200                  | 0.930                  | empty                  |
| <b>SEPTEMBER</b>   | 0.680                  | 0.290                  | 0.315                  | 0.980                  | empty                  |
| <b>OCTOBER</b>   | 0.710                  | 0.300                  | 0.125                  | 0.890                  | empty                  |
| <b>NOVEMBER</b>  | 1.110                  | 0.390                  | 0.240                  | 1.220                  | empty                  |
| <b>DECEMBER</b>  | 1.060                  | 0.400                  | 0.250                  | 1.260                  | empty                  |
| <b>2018 Treatment Facility Maximum Instantaneous Flow Rate</b> |                        |                        |                        |                        |                        |
|  |                        |                        |                        |                        |                        |
|  |                        |                        |                        |                        |                        |
| <b>Maximum</b>   | <b>1.651</b>           | <b>0.595</b>           | <b>0.350</b>           | <b>2.201</b>           |                        |

# CRESTLINE SANITATION DISTRICT

## ANNUAL REPORT

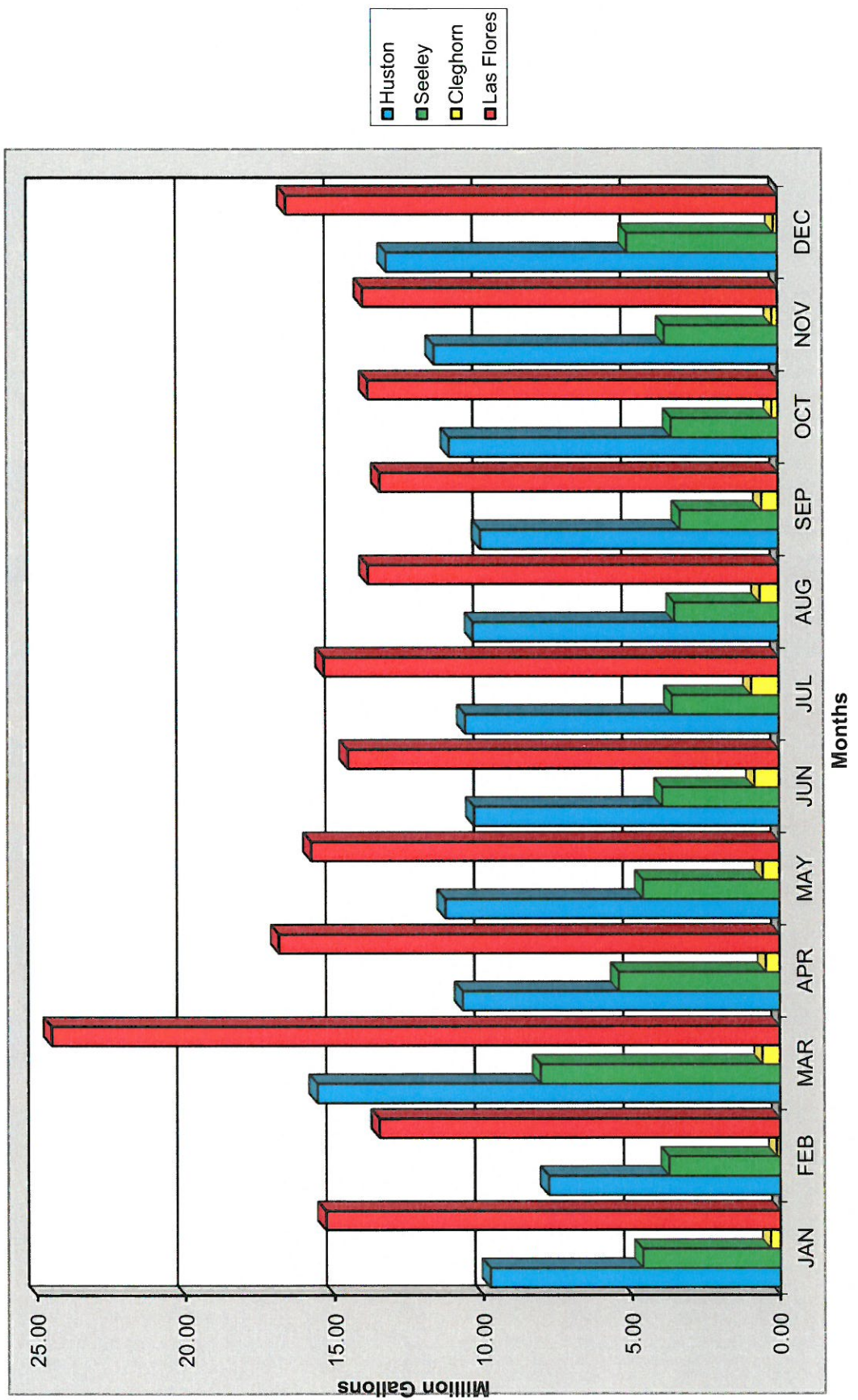
### Treatment Facility Average Flow Rates

Year: **2018**

| Site   | Huston Creek          | Seeley Creek          | Cleghorn              | Las Flores            | Las Flores            |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Readings   | daily                 | daily                 | daily                 | daily                 | daily                 |
| Violations                                       |                       |                       |                       |                       |                       |
| Design limits                                    | 0.7 mg/d<br>average   | 0.5 mg/d<br>average   | 0.2 mg/d<br>average   |                       |                       |
|  | average flow<br>month | average flow<br>month | average flow<br>month | average flow<br>month | average flow<br>month |
| All flows in million gallons per day             |                       |                       |                       |                       |                       |
|  | Huston                | Seeley                | Cleghorn              | District Effluent     | Flow to ponds         |
| <b>JANUARY</b>                                   | 0.315                 | 0.150                 | 0.013                 | 0.493                 | empty                 |
| <b>FEBRUARY</b>                                  | 0.344                 | 0.134                 | 0.008                 | 0.481                 | empty                 |
| <b>MARCH</b>                                     | 0.502                 | 0.260                 | 0.019                 | 0.790                 | empty                 |
| <b>APRIL</b>                                     | 0.356                 | 0.180                 | 0.016                 | 0.561                 | empty                 |
| <b>MAY</b>                                       | 0.363                 | 0.148                 | 0.018                 | 0.508                 | empty                 |
| <b>JUNE</b>                                      | 0.342                 | 0.131                 | 0.028                 | 0.484                 | empty                 |
| <b>JULY</b>                                      | 0.341                 | 0.116                 | 0.030                 | 0.494                 | empty                 |
| <b>AUGUST</b>                                    | 0.332                 | 0.113                 | 0.020                 | 0.446                 | empty                 |
| <b>SEPTEMBER</b>                                 | 0.334                 | 0.110                 | 0.019                 | 0.448                 | empty                 |
| <b>OCTOBER</b>                                   | 0.358                 | 0.116                 | 0.006                 | 0.446                 | empty                 |
| <b>NOVEMBER</b>                                  | 0.386                 | 0.127                 | 0.006                 | 0.466                 | empty                 |
| <b>DECEMBER</b>                                  | 0.426                 | 0.163                 | 0.004                 | 0.534                 | empty                 |
| <b>2018 Treatment Facility Average Flow Rate</b> |                       |                       |                       |                       |                       |
| <b>Average</b>                                   | <b>0.367</b>          | <b>0.146</b>          | <b>0.016</b>          | <b>0.513</b>          |                       |
|  |                       |                       |                       |                       |                       |
|  |                       |                       |                       |                       |                       |

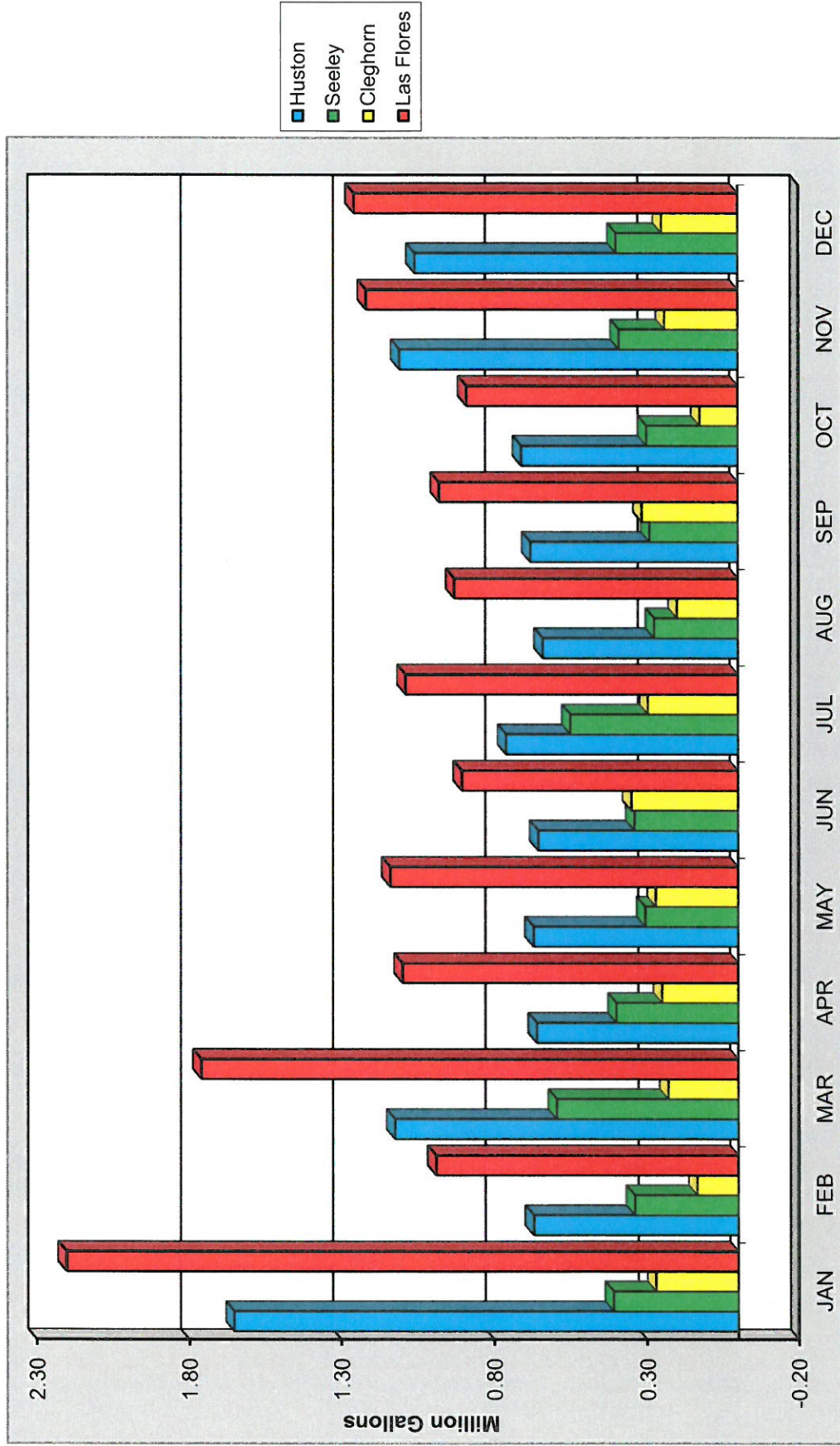


**CRESTLINE SANITATION DISTRICT**  
 Treatment Facility Total Volume Flows - 2018



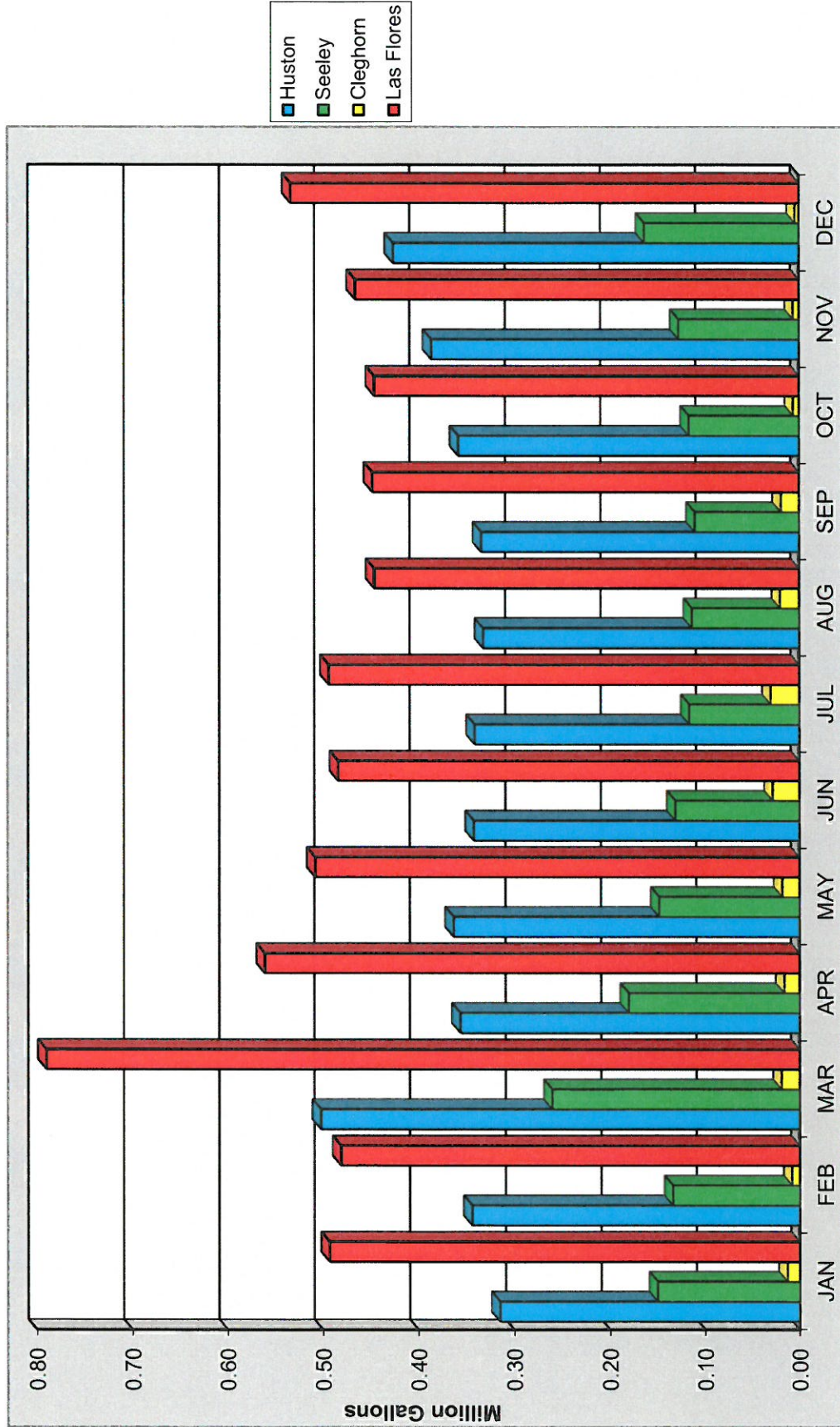
# CRESTLINE SANITATION DISTRICT

Treatment Facility Maximum Instantaneous Flow Rate - 2018



# CRESTLINE SANITATION DISTRICT

## Treatment Facility Average Flow Rates - 2018



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

Year: **2018**

| Site             | Huston Creek               |          |                   | Seeley Creek               |          |                   | Cleghorn                   |          |                   |
|------------------|----------------------------|----------|-------------------|----------------------------|----------|-------------------|----------------------------|----------|-------------------|
|                  | Disinfected Final Effluent | 2 / week | daily             | Disinfected Final Effluent | 2 / week | daily             | Disinfected Final Effluent | 2 / week | daily             |
| Sample Frequency | 23 / 100 ml *              | 2        | M                 | 23 / 100 ml *              | 2        | M                 | 23 / 100 ml *              | 2        | M                 |
| Requirement      | D                          |          |                   | D                          |          |                   | D                          |          |                   |
| Purpose          |                            |          |                   |                            |          |                   |                            |          |                   |
| Violations       |                            |          |                   |                            |          |                   |                            |          |                   |
| Test             | Total Coliform             | MPN      | Chlorine Residual | Total Coliform             | MPN      | Chlorine Residual | Total Coliform             | MPN      | Chlorine Residual |
|                  | mg/l                       | mg/l     | mg/l              | mg/l                       | mg/l     | mg/l              | mg/l                       | mg/l     | mg/l              |
| JANUARY          | 2                          | 18.3     | 6.0               | 2                          | 6.0      | 6.0               | 2                          | 5.9      | 5.9               |
| FEBRUARY         | 2                          | 19.8     | 9.0               | 2                          | 9.0      | 9.0               | 2                          | 10.1     | 10.1              |
| MARCH            | 2                          | 12.1     | 9.4               | 2                          | 9.4      | 9.4               | 2                          | 12.1     | 12.1              |
| APRIL            | 2                          | 17.9     | 12.2              | 2                          | 12.2     | 12.2              | 2                          | 8.2      | 8.2               |
| MAY              | 2                          | 19.6     | 6.9               | 2                          | 6.9      | 6.9               | 2                          | 7.3      | 7.3               |
| JUNE             | 2                          | 16.9     | 6.2               | 2                          | 6.2      | 6.2               | 2                          | 7.0      | 7.0               |
| JULY             | 2                          | 17.3     | 9.1               | 2                          | 9.1      | 9.1               | 2                          | 3.9      | 3.9               |
| AUGUST           | 2                          | 17.6     | 10.4              | 2                          | 10.4     | 10.4              | 2                          | 6.5      | 6.5               |
| SEPTEMBER        | 2                          | 19.8     | 10.8              | 2                          | 10.8     | 10.8              | 2                          | 6.1      | 6.1               |
| OCTOBER          | 2                          | 20.2     | 14.2              | 2                          | 14.2     | 14.2              | 2                          | 11.1     | 11.1              |
| NOVEMBER         | 2                          | 21.5     | 12.9              | 2                          | 12.9     | 12.9              | 2                          | 8.0      | 8.0               |
| DECEMBER         | 2                          | 21.8     | 13.8              | 2                          | 13.8     | 13.8              | 2                          | 8.1      | 8.1               |

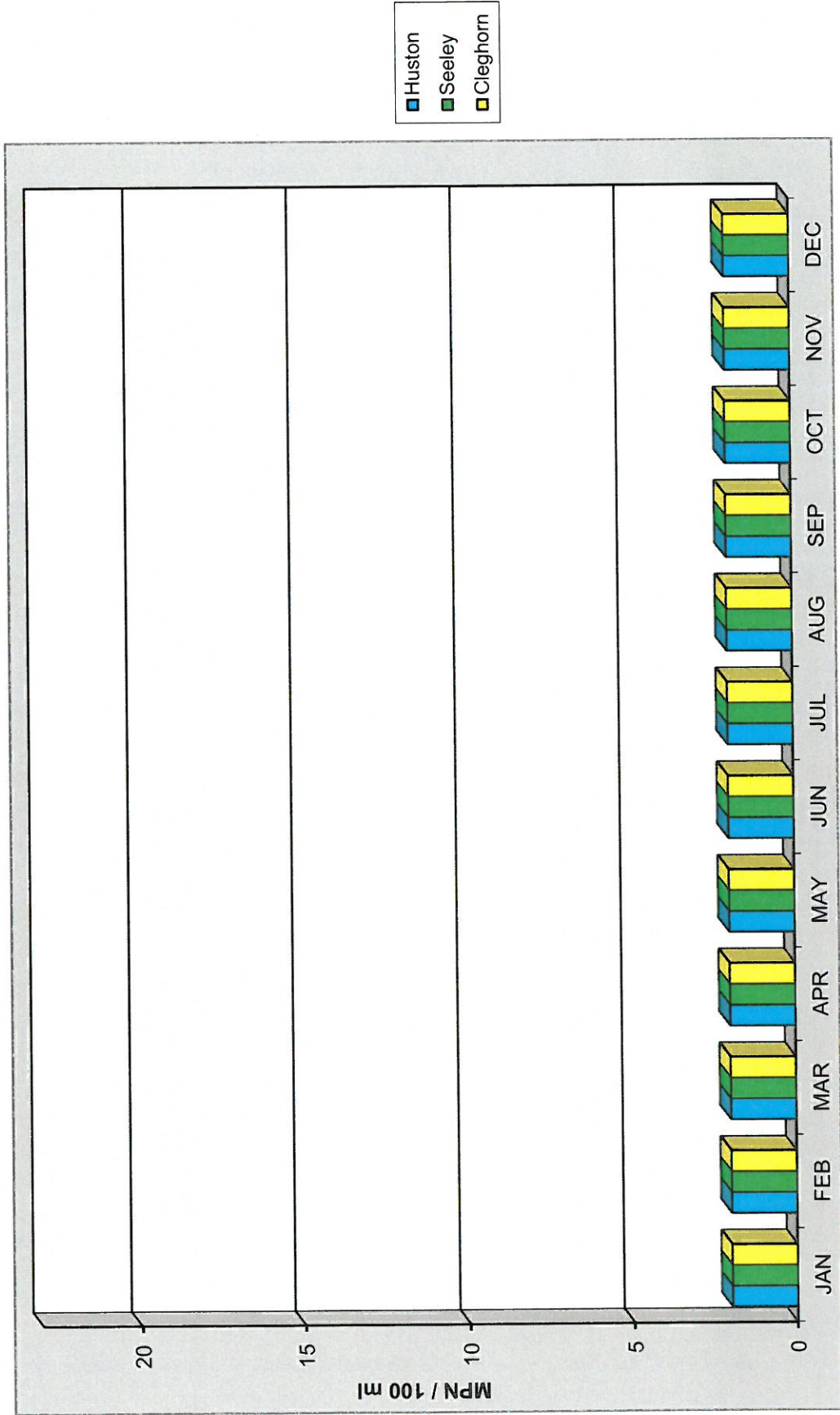
D - Sample has Effluent / Discharge Limitations

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

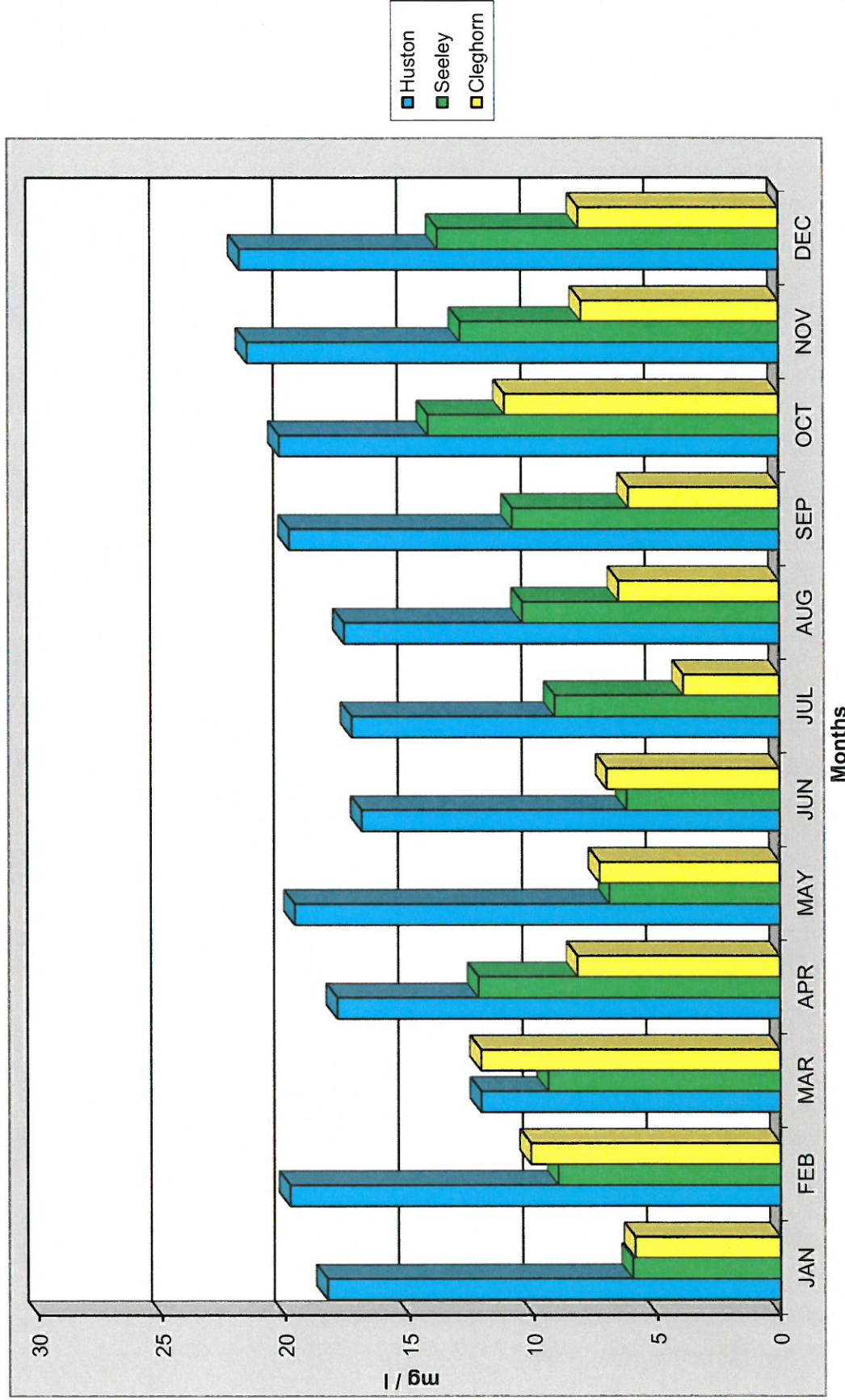
# CRESTLINE SANITATION DISTRICT

Treatment Facilities - Final Effluent Total Coliform - 2018



# CRESTLINE SANITATION DISTRICT

Treatment Facilities - Final Effluent Chlorine Residual - 2018



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

Year: **2018**

| Sample Frequency | 2 / Week       | 2 / Week | Weekly            | Weekly | 2 / Month | 2 / Month | 2 / Month | 2 / Month | 2 / Month    | Monthly | Monthly | Monthly |
|------------------|----------------|----------|-------------------|--------|-----------|-----------|-----------|-----------|--------------|---------|---------|---------|
|                  |                |          |                   |        |           |           |           |           |              |         |         |         |
| Violations       |                |          |                   |        |           |           |           |           |              |         |         |         |
| Sample Type      |                |          | DM                | DM     | DM        | M         | DM        | M         | M            | M       | M       | M       |
| Maximum          |                |          | 0.5 ml/l          | < 9    | 45.0      | 2.0       | 2.0       | A         | A            | A       | A       | A       |
| Mean/Minimum     |                |          |                   | > 1.0  | 30.0      | 1.0       | 1.0       |           |              |         |         |         |
| Median           |                |          |                   |        |           |           |           |           |              |         |         |         |
| 23 / 100 *       |                |          |                   |        |           |           |           |           |              |         |         |         |
| Test             | Total Coliform | CL2 Res  | Settleable Solids | D. O.  | pH        | BOD       | COD       | MBAS      | Oil & Grease | TKN     | NO3-N   | NH3-N   |
|                  |                | mg/l     | ml/l              | mg/l   | units     | mg/l      | mg/l      | mg/l      | mg/l         | mg/l    | mg/l    | mg/l    |
| Units            |                |          |                   |        |           |           |           |           |              |         |         |         |
| Month            |                |          |                   |        |           |           |           |           |              |         |         |         |
| <b>JANUARY</b>   | 2              | 6.2      | <0.10             | 8.6    | 7.2       | 24.0      | 86.5      | ND        | ND           | 15.00   | 7.90    | 14.30   |
| <b>FEBRUARY</b>  | 2              | 8.8      | <0.10             | 9.9    | 7.2       | 21.0      | 66.5      | ND        | ND           | 13.70   | 9.90    | 13.30   |
| <b>MARCH</b>     | 2              | 5.9      | <0.10             | 9.5    | 7.3       | 23.5      | 91.0      | ND        | ND           | 14.60   | 12.40   | 14.30   |
| <b>APRIL</b>     | 2              | 5.9      | <0.10             | 9.2    | 7.4       | 19.8      | 60.5      | ND        | ND           | 17.70   | 7.40    | 17.30   |
| <b>MAY</b>       | 2              | 5.6      | <0.10             | 8.5    | 7.3       | 25.5      | 123.0     | ND        | ND           | 12.00   | 9.80    | 11.80   |
| <b>JUNE</b>      | 2              | 5.4      | <0.10             | 8.2    | 7.3       | 24.5      | 78.0      | ND        | ND           | 13.80   | 10.40   | 13.00   |
| <b>JULY</b>      | 2              | 4.4      | <0.10             | 8.2    | 7.4       | 18.6      | 56.0      | ND        | ND           | 14.60   | 10.40   | 14.30   |
| <b>AUGUST</b>    | 2              | 5.1      | <0.10             | 7.5    | 7.4       | 24.5      | 68.0      | ND        | ND           | 12.50   | 8.90    | 12.00   |
| <b>SEPTEMBER</b> | 2              | 6.0      | <0.10             | 7.5    | 7.4       | 23.5      | 66.0      | ND        | ND           | 14.90   | 8.70    | 14.60   |
| <b>OCTOBER</b>   | 2              | 6.0      | <0.10             | 8.6    | 7.5       | 24.0      | 73.0      | ND        | ND           | 15.80   | 10.40   | 15.50   |
| <b>NOVEMBER</b>  | 2              | 7.9      | <0.10             | 7.1    | 7.3       | 23.3      | 85.0      | ND        | ND           | 12.30   | 9.80    | 11.30   |
| <b>DECEMBER</b>  | 2              | 6.7      | <0.10             | 8.8    | 7.4       | 17.7      | 65.5      | ND        | ND           | 15.00   | 11.80   | 14.70   |
| <b>AVERAGES</b>  |                | 6.2      | < 0.10            | 8.5    | 7.3       | 22.5      | 76.6      | ND        | ND           | 14.33   | 9.82    | 13.87   |

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

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

Year: **2018**

| Sample Frequency | Semiannual Testing |          |        |         |       |          | Annual Testing |               |  |              |                              |   |
|------------------|--------------------|----------|--------|---------|-------|----------|----------------|---------------|--|--------------|------------------------------|---|
|                  | M                  | M        | M      | M       | M     | M        | M              | M             | M                                      | M            | M                            | M |
| Violations       | A                  | A        | A      | A       | A     | A        | A              | A             | A                                      | A            | A                            | A |
| Sample Type      |                    |          |        |         |       |          |                |               |  |              |                              |   |
| Mean/Minimum     |                    |          |        |         |       |          |                |               |  |              |                              |   |
| Median           |                    |          |        |         |       |          |                |               |  |              |                              |   |
| Test             | TDS                | Chloride | Sodium | Sulfate | Boron | Flouride | Total Cyanides | Total Phenols | Base/Neutral/Acid Extractable Organics | Heavy Metals | Total Petroleum Hydrocarbons |   |
| Units            | mg/l               | mg/l     | ml/l   | mg/l    | mg/l  | mg/l     | mg/l           | mg/l          | ug/l                                   | ug/l         | ug/l                         |   |
| Month            |                    |          |        |         |       |          |                |               |  |              |                              |   |
| JANUARY          |                    |          |        |         |       |          |                |               |  |              |                              |   |
| FEBRUARY         |                    |          |        |         |       |          |                |               |  |              |                              |   |
| MARCH            | 540.0              | 130.0    | 92.0   | 120.0   | 0.19  | 0.29     |                |               |  |              |                              |   |
| APRIL            |                    |          |        |         |       |          |                |               |  |              |                              |   |
| MAY              |                    |          |        |         |       |          |                |               |  |              |                              |   |
| JUNE             |                    |          |        |         |       |          |                |               |  |              |                              |   |
| JULY             |                    |          |        |         |       |          |                |               |  |              |                              |   |
| AUGUST           |                    |          |        |         |       |          |                |               |  |              |                              |   |
| SEPTEMBER        | 664                | 161.0    | 130.0  | 160.0   | 0.34  | 1.22     | A              | A             | A                                      | A            | A                            |   |
| OCTOBER          |                    |          |        |         |       |          |                |               |  |              |                              |   |
| NOVEMBER         |                    |          |        |         |       |          |                |               |  |              |                              |   |
| DECEMBER         |                    |          |        |         |       |          |                |               |  |              |                              |   |

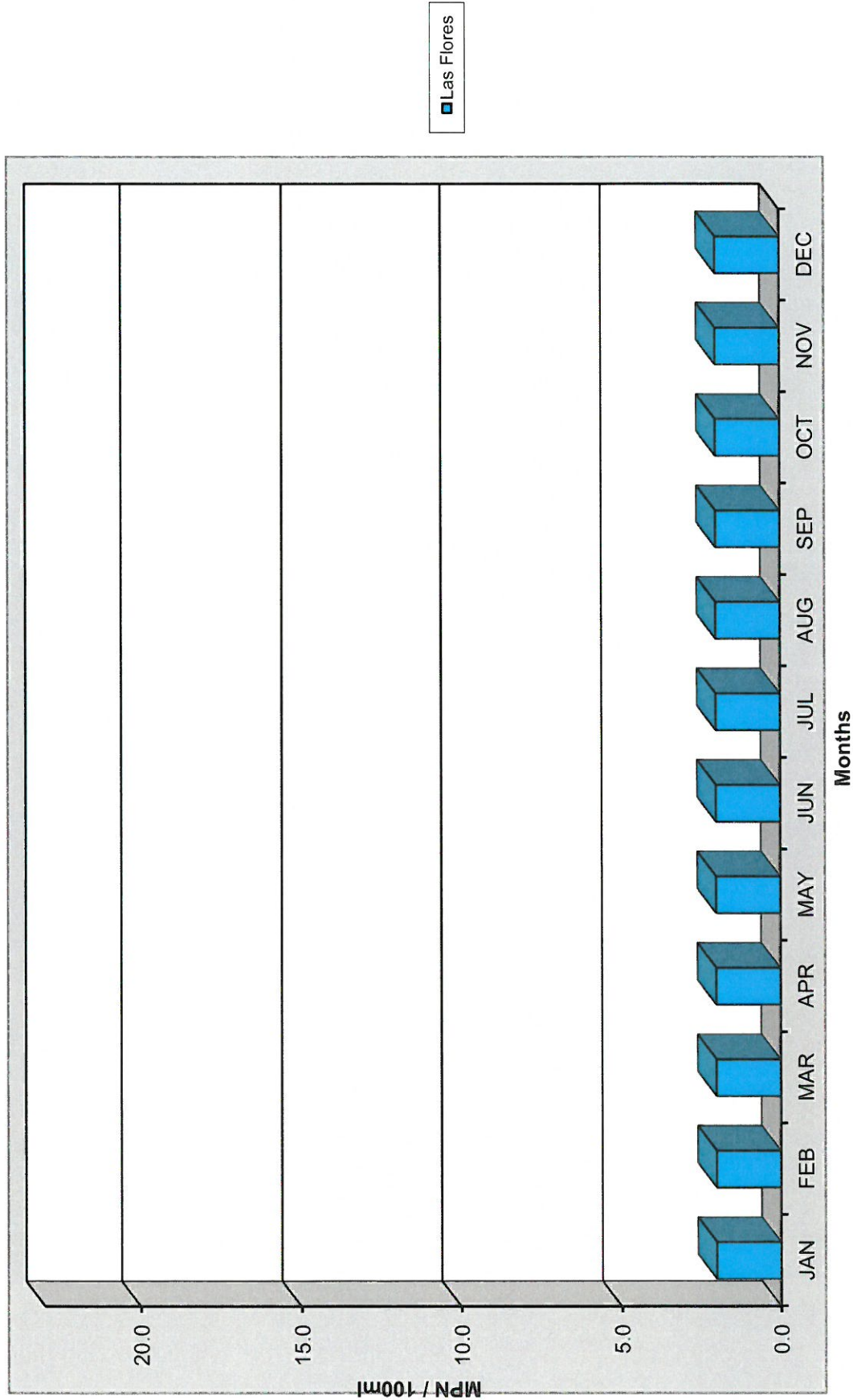
D - Sample has Effluent / Discharge Limitations      M - Sample has Effluent Monitoring Requirements

A - For Sample Results see Appendix " A "



# CRESTLINE SANITATION DISTRICT

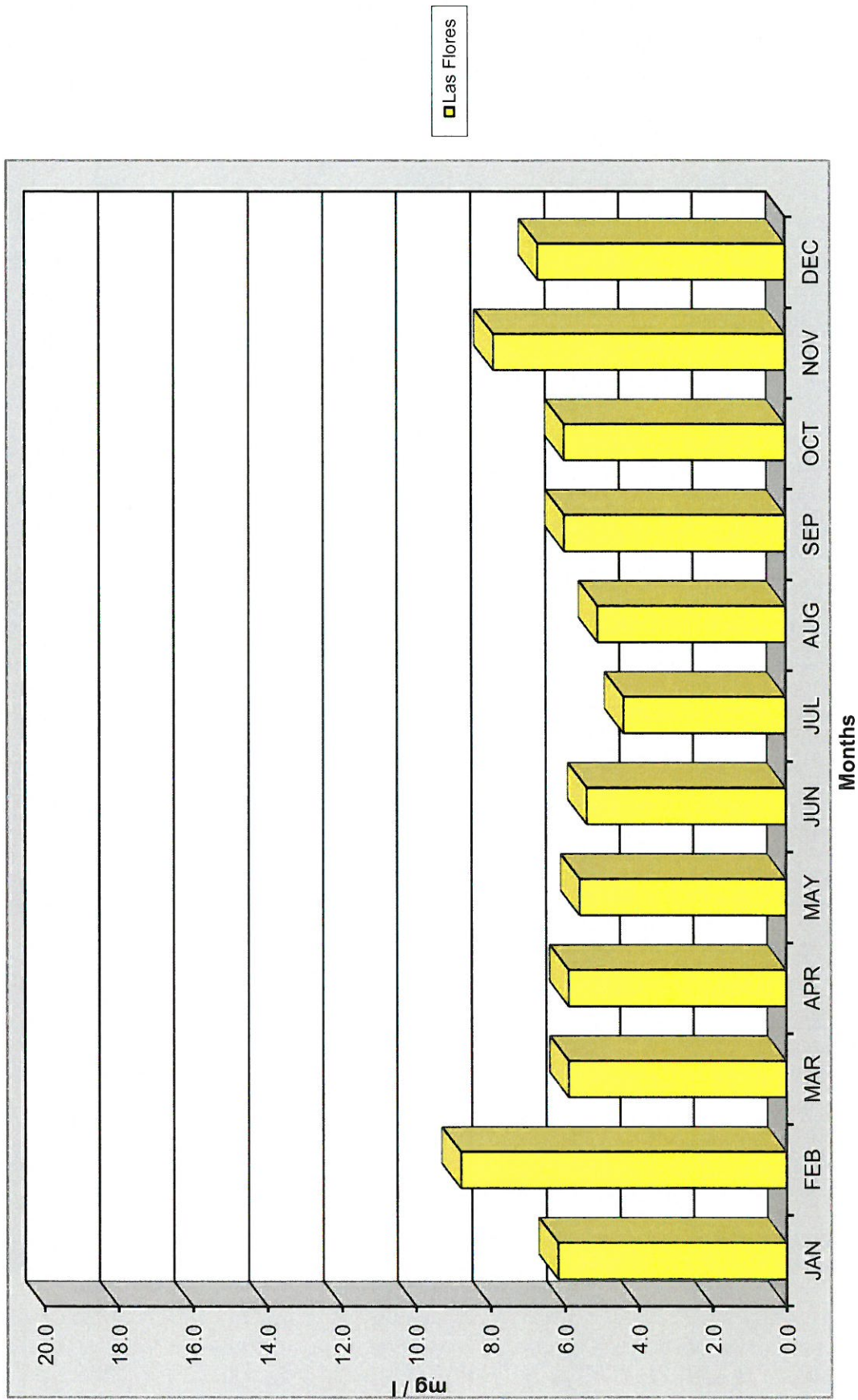
District Final Effluent - Median Total Coliform - 2018



Las Flores

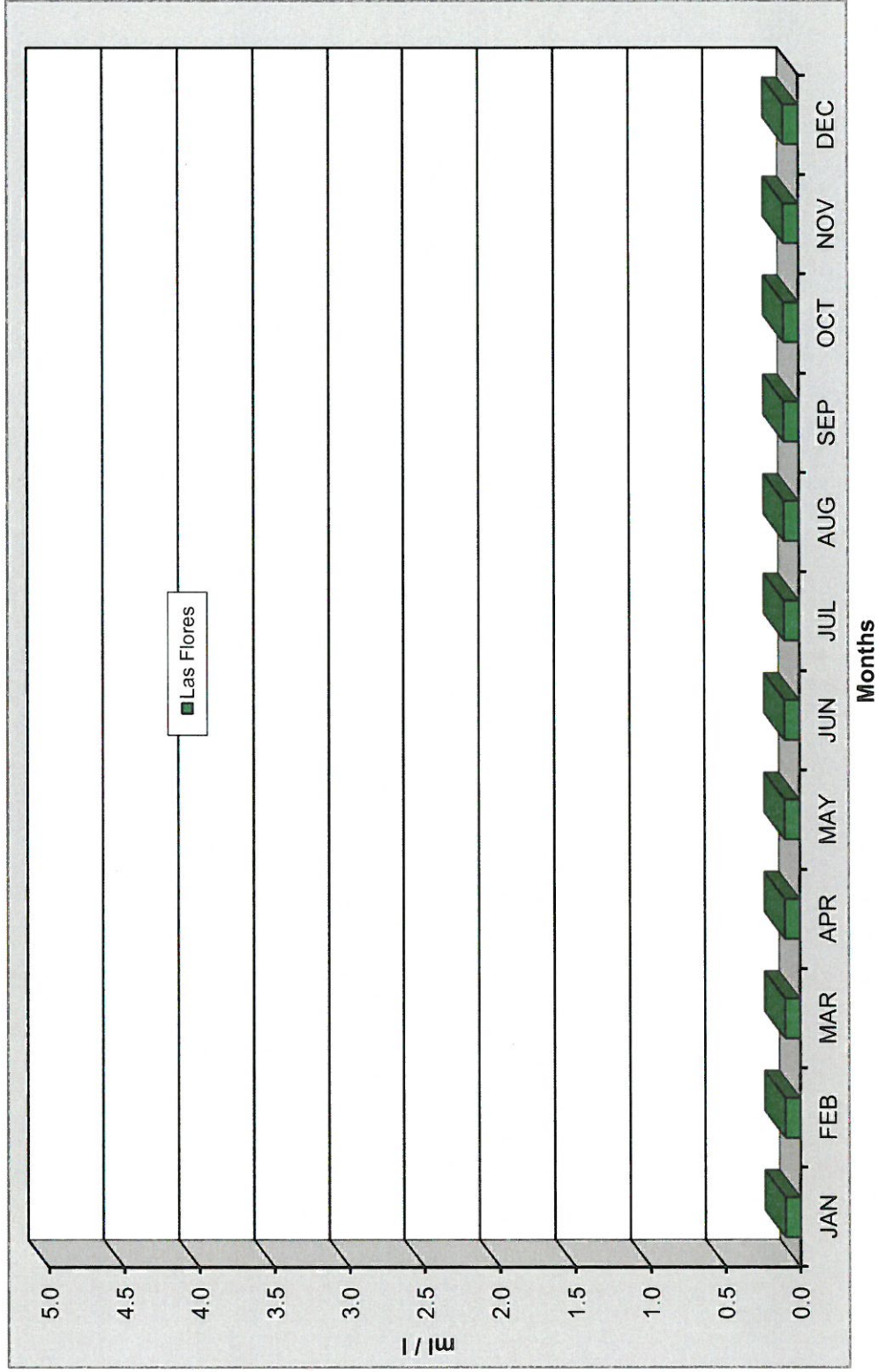
# CRESTLINE SANITATION DISTRICT

District Final Effluent - Average Chlorine Residual - 2018

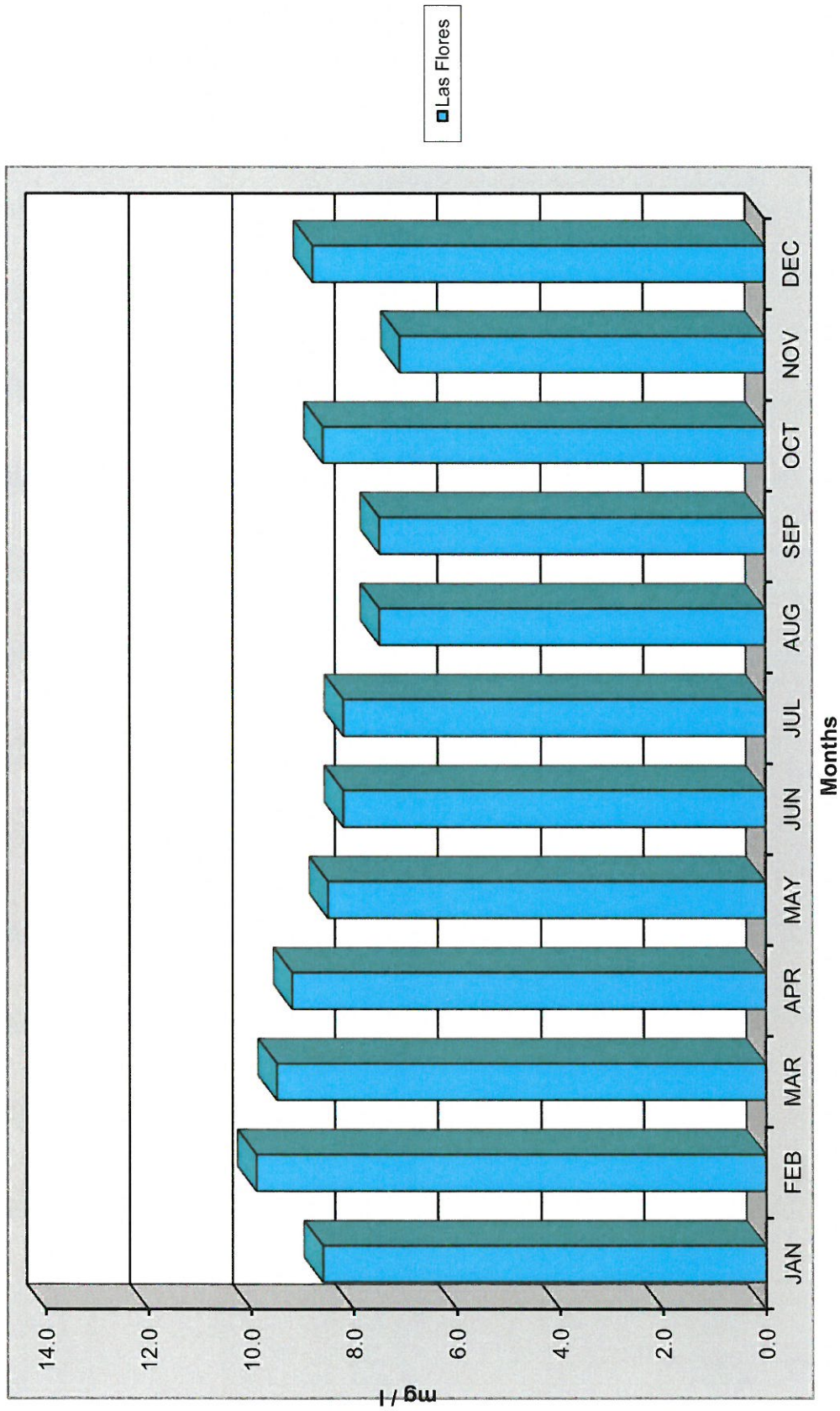


# CRESTLINE SANITATION DISTRICT

District Final Effluent - Average Settleable Solids - 2018

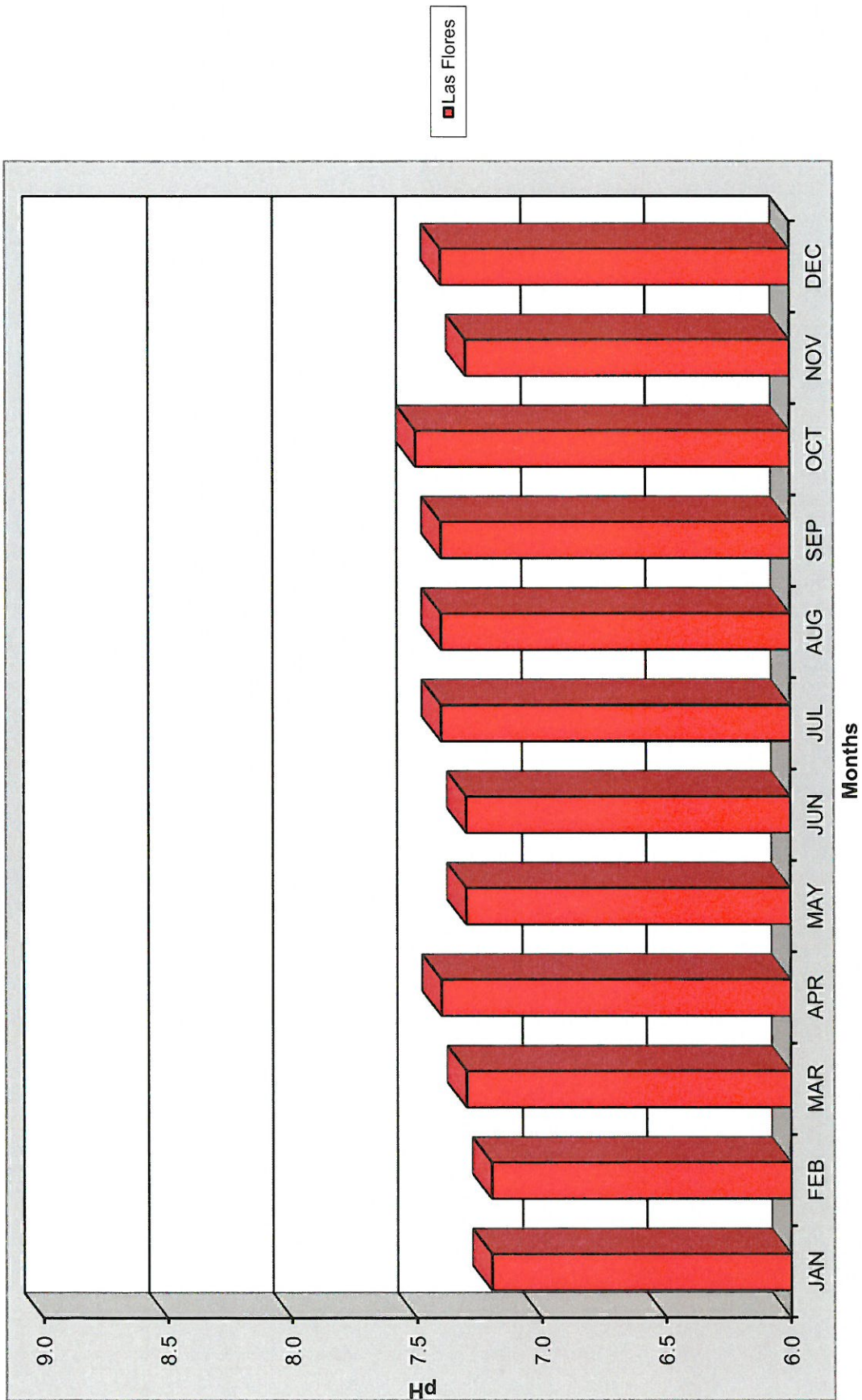


**CRESTLINE SANITATION DISTRICT**  
 District Final Effluent - Average Dissolved Oxygen - 2018

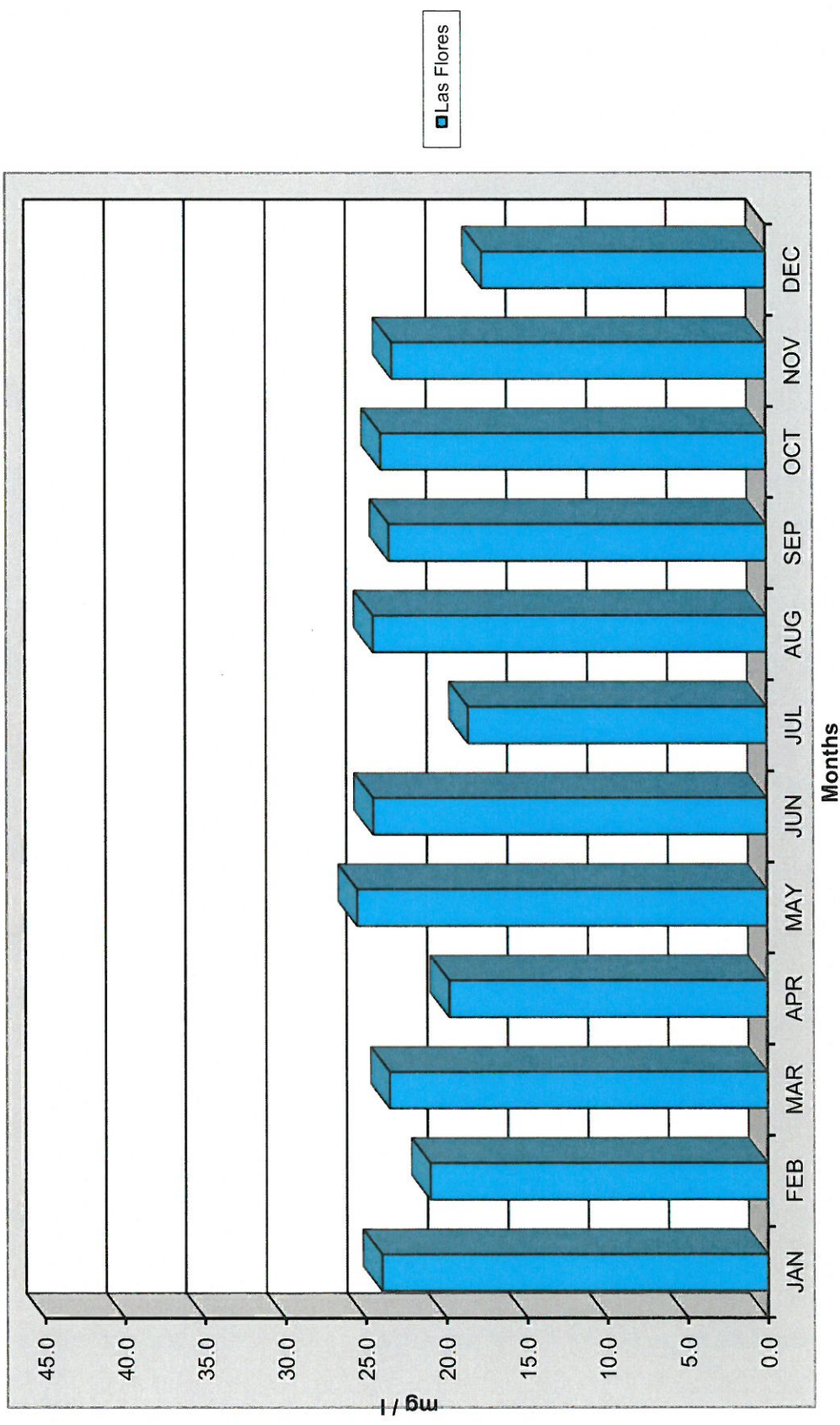


# CRESTLINE SANITATION DISTRICT

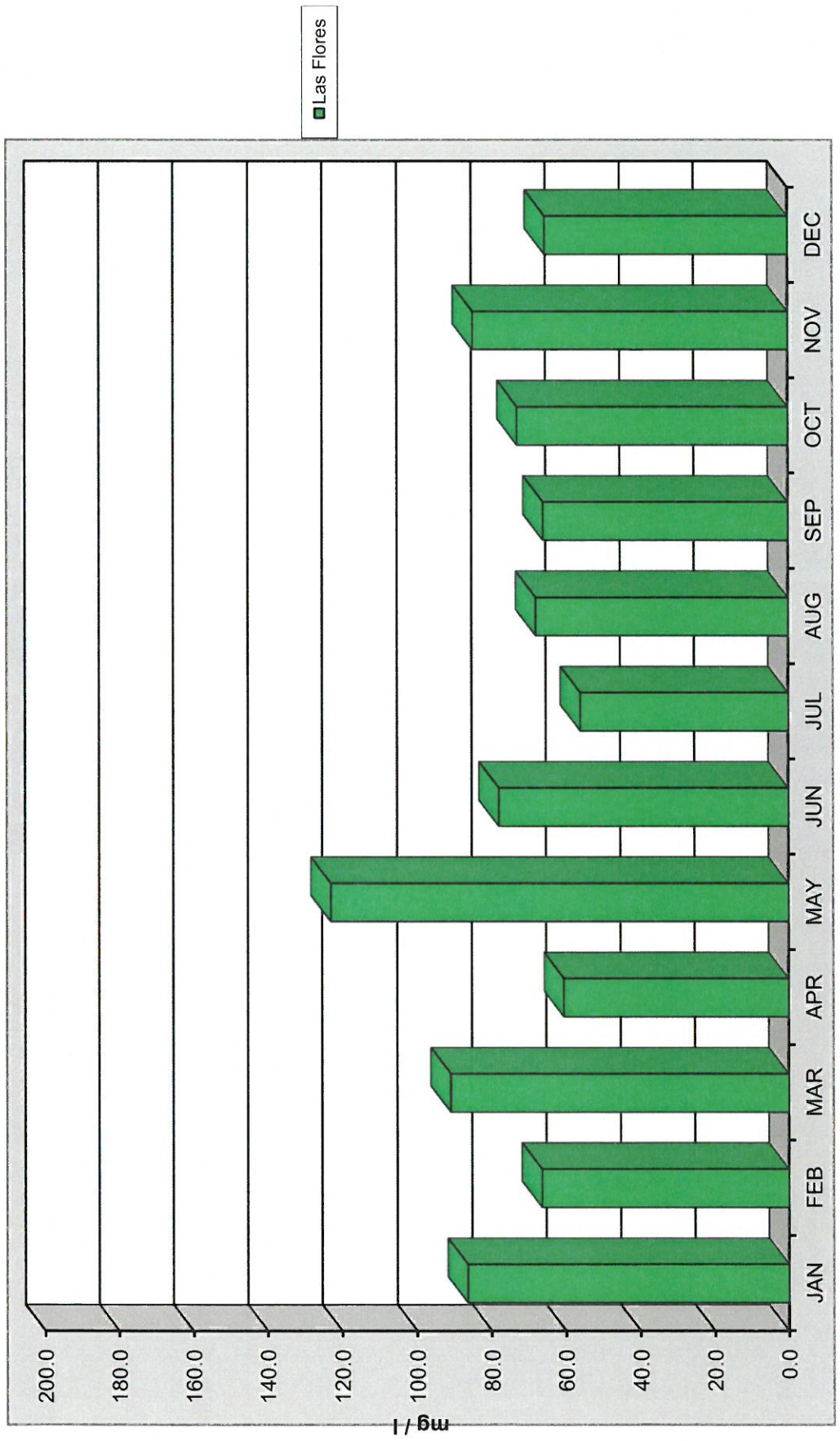
District Final Effluent - pH - 2018



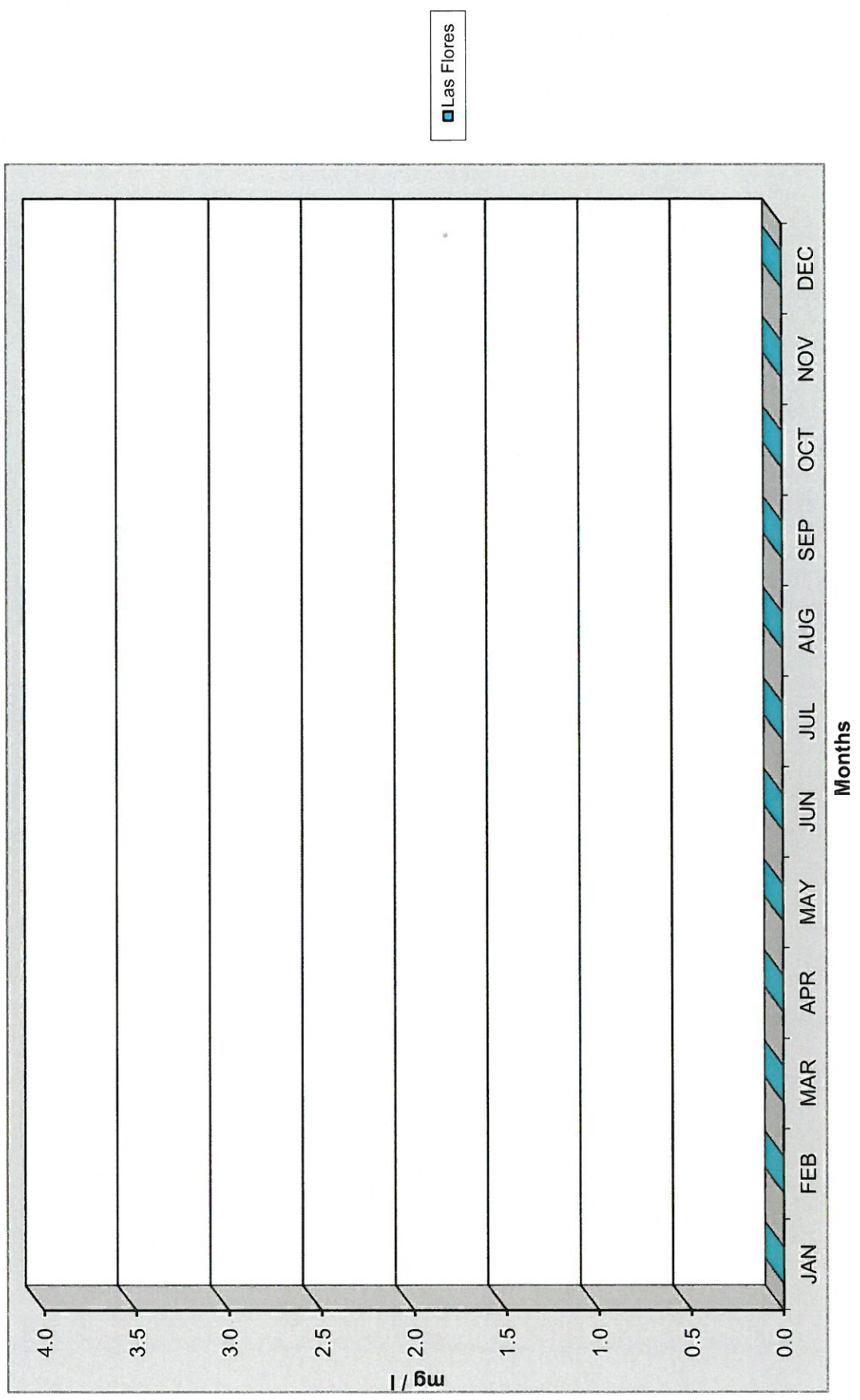
**CRESTLINE SANITATION DISTRICT**  
 District Final Effluent - Average BOD - 2018



**CRESTLINE SANITATION DISTRICT**  
 District Final Effluent - Average COD - 2018

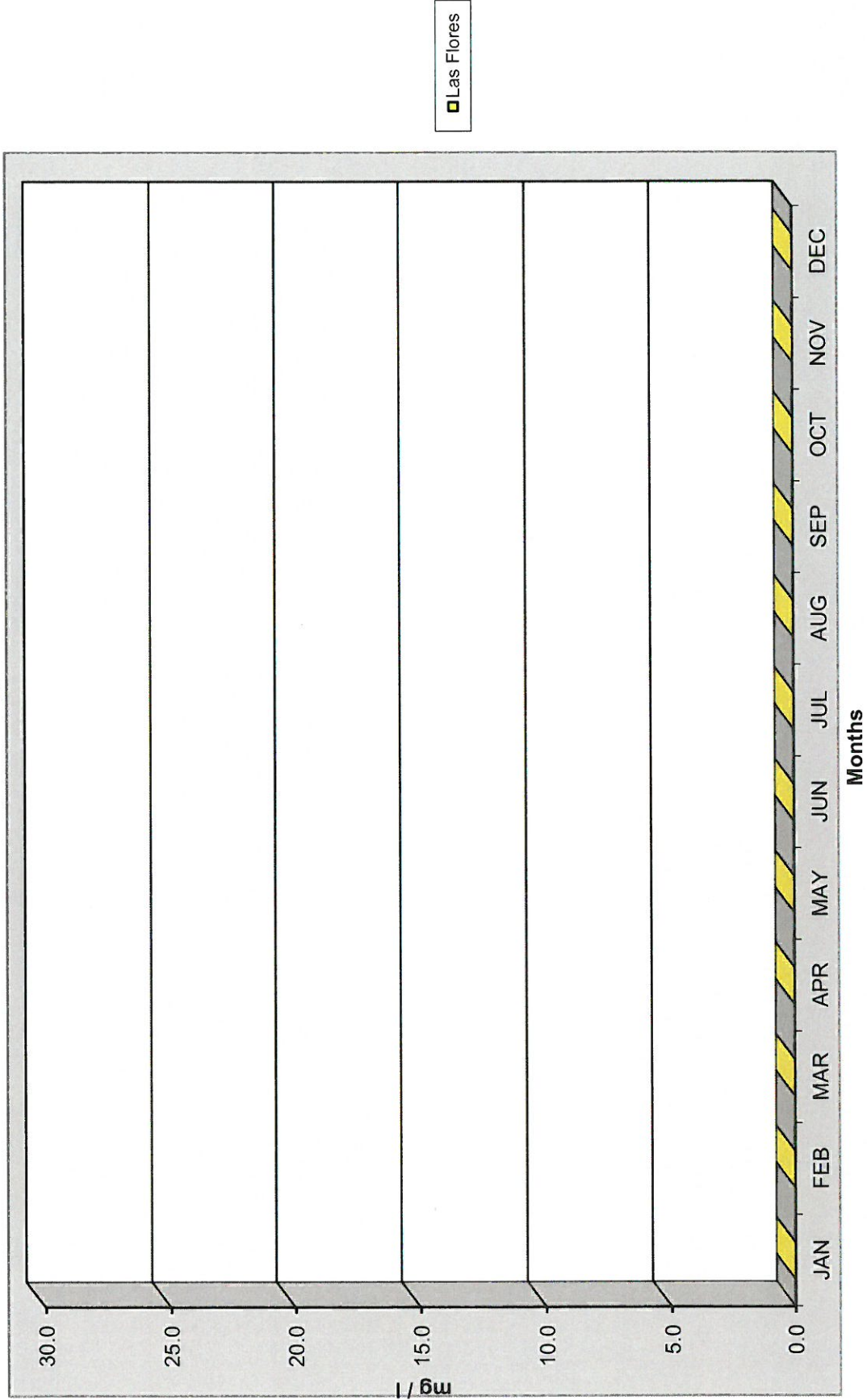


**CRESTLINE SANITATION DISTRICT**  
 District Final Effluent - Average MBAS - 2018

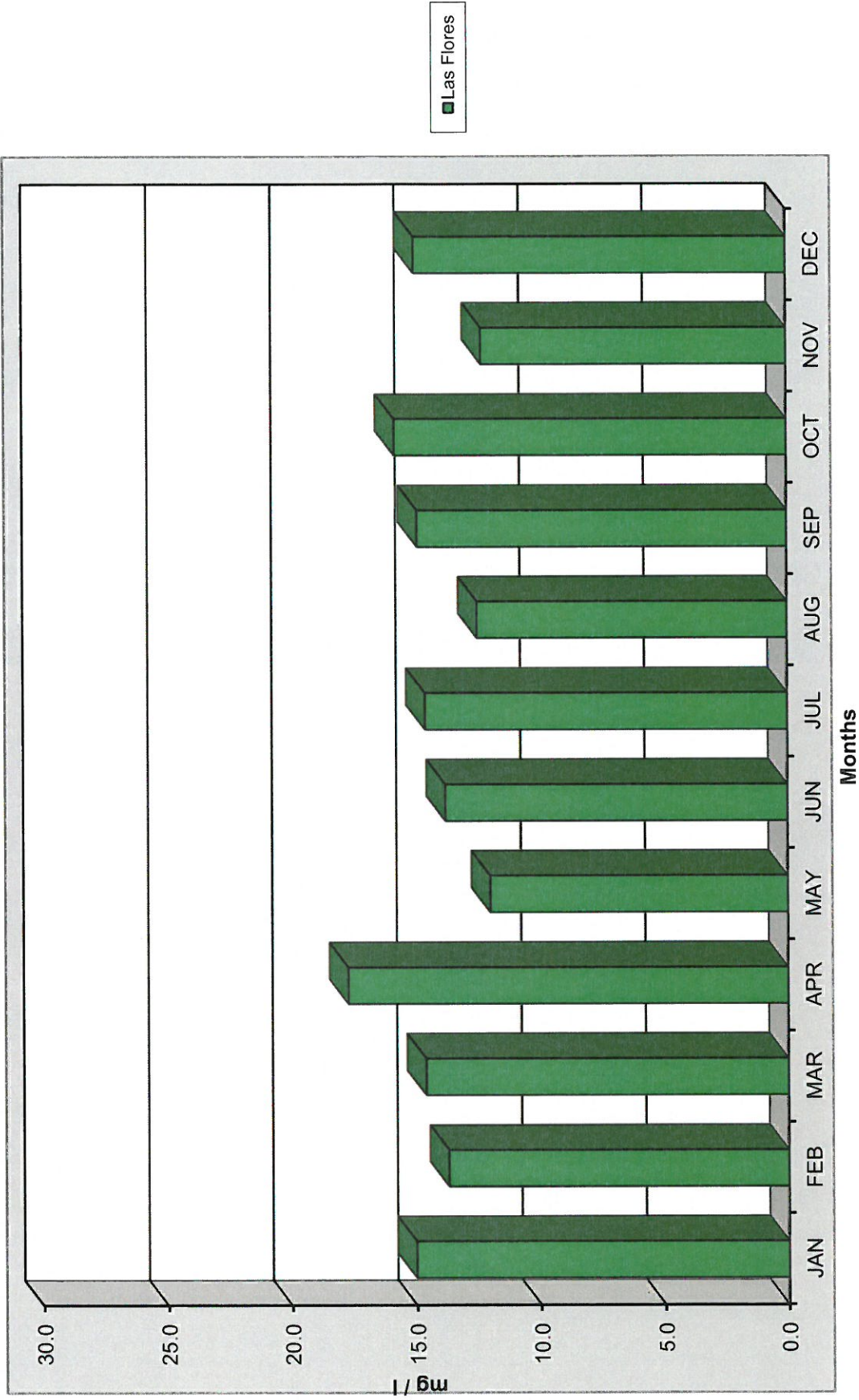




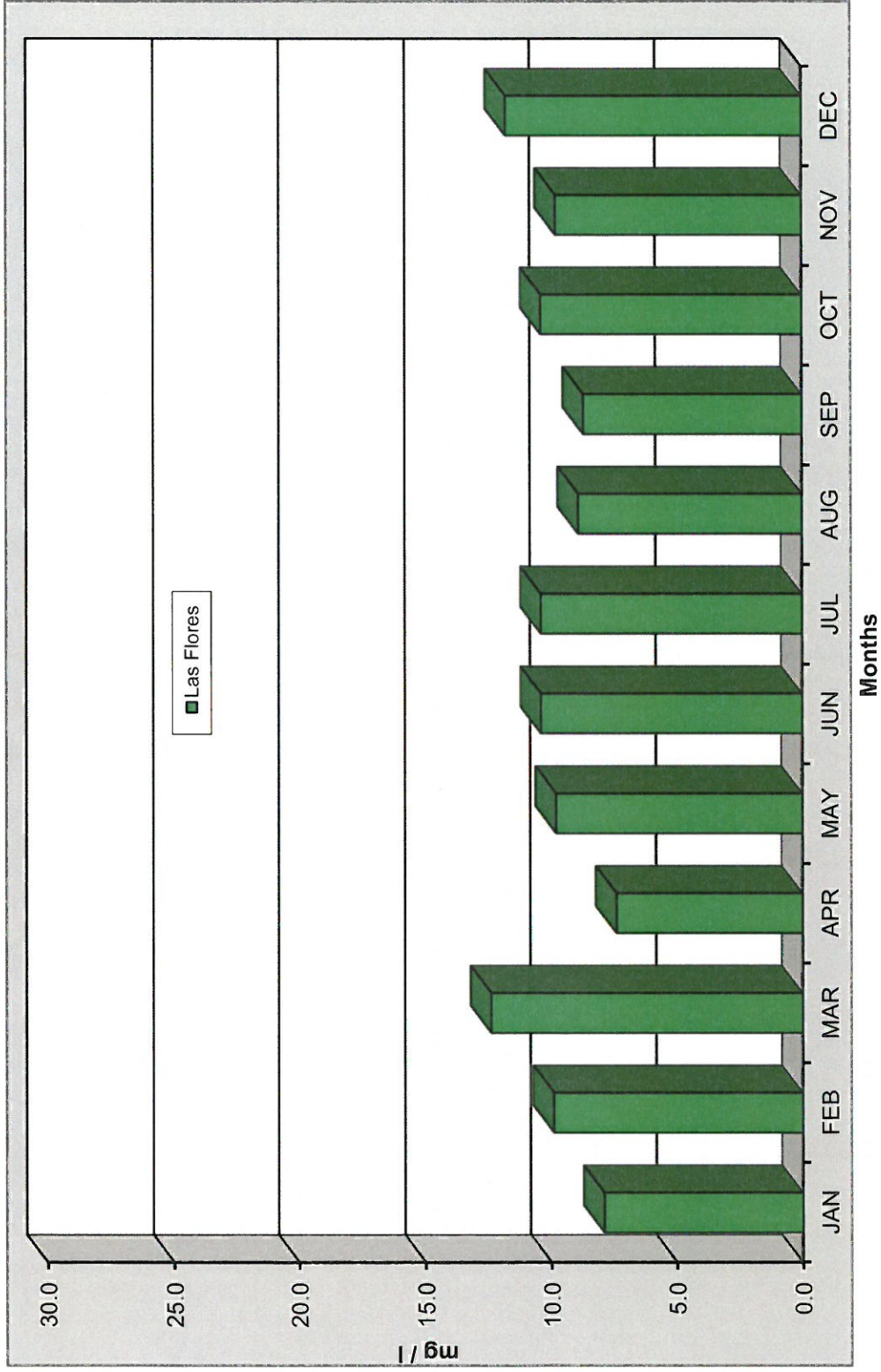
**CRESTLINE SANITATION DISTRICT**  
 District Final Effluent - Average Oil & Grease - 2018



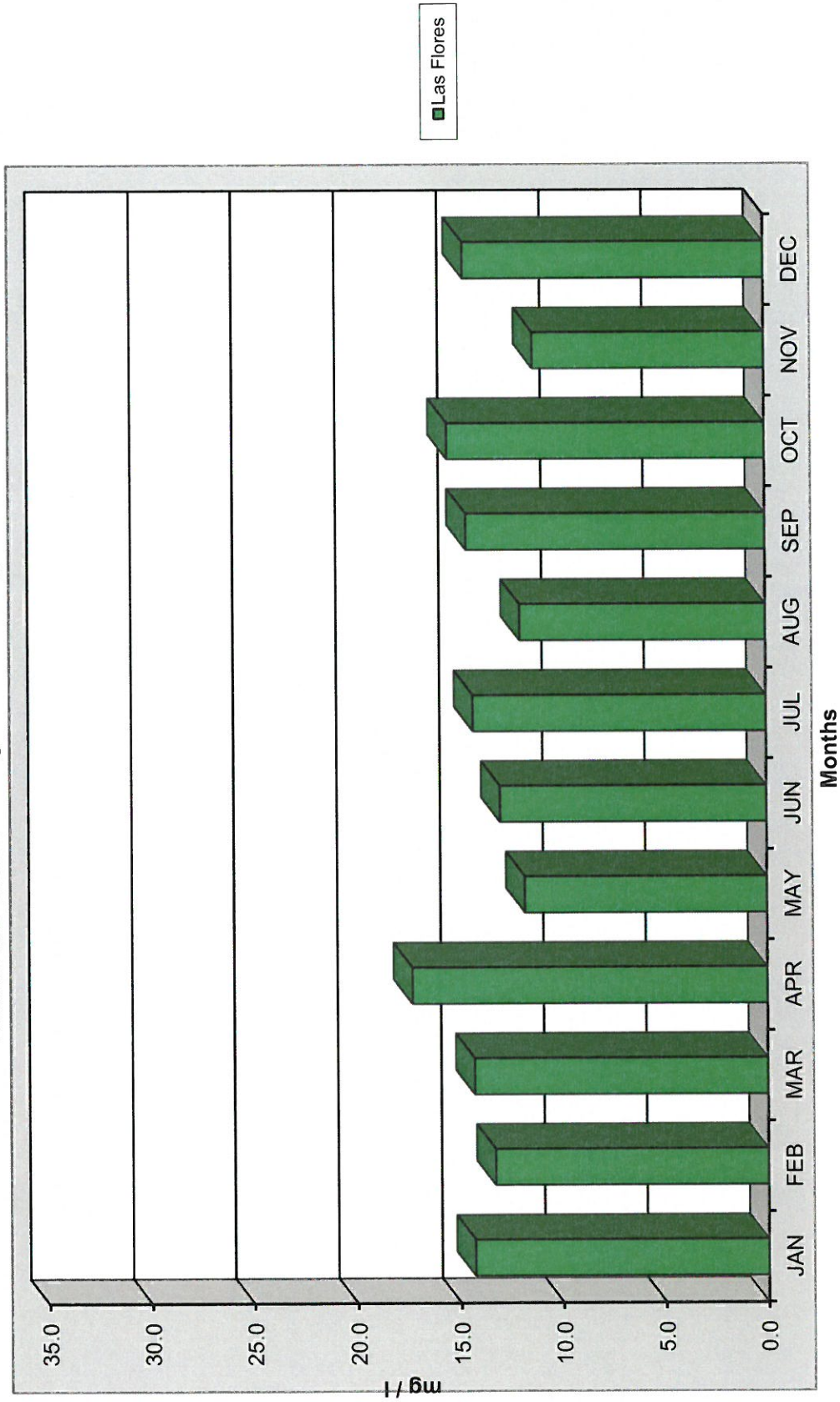
**CRESTLINE SANITATION DISTRICT**  
 District Final Effluent - Average Kjeldahl Nitrogen - 2018



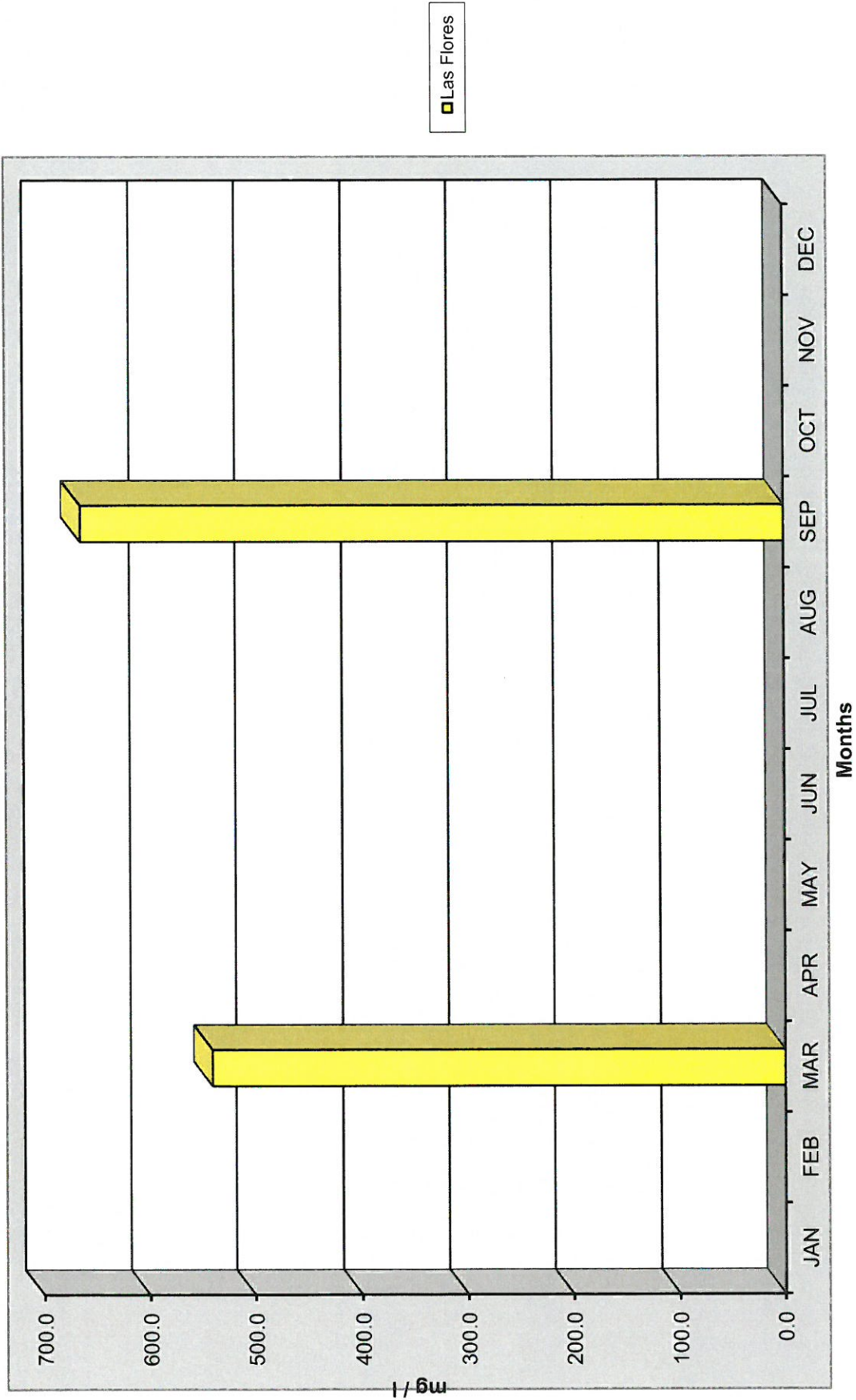
**CRESTLINE SANITATION DISTRICT**  
District Final Effluent - Average Nitrate Nitrogen -2018



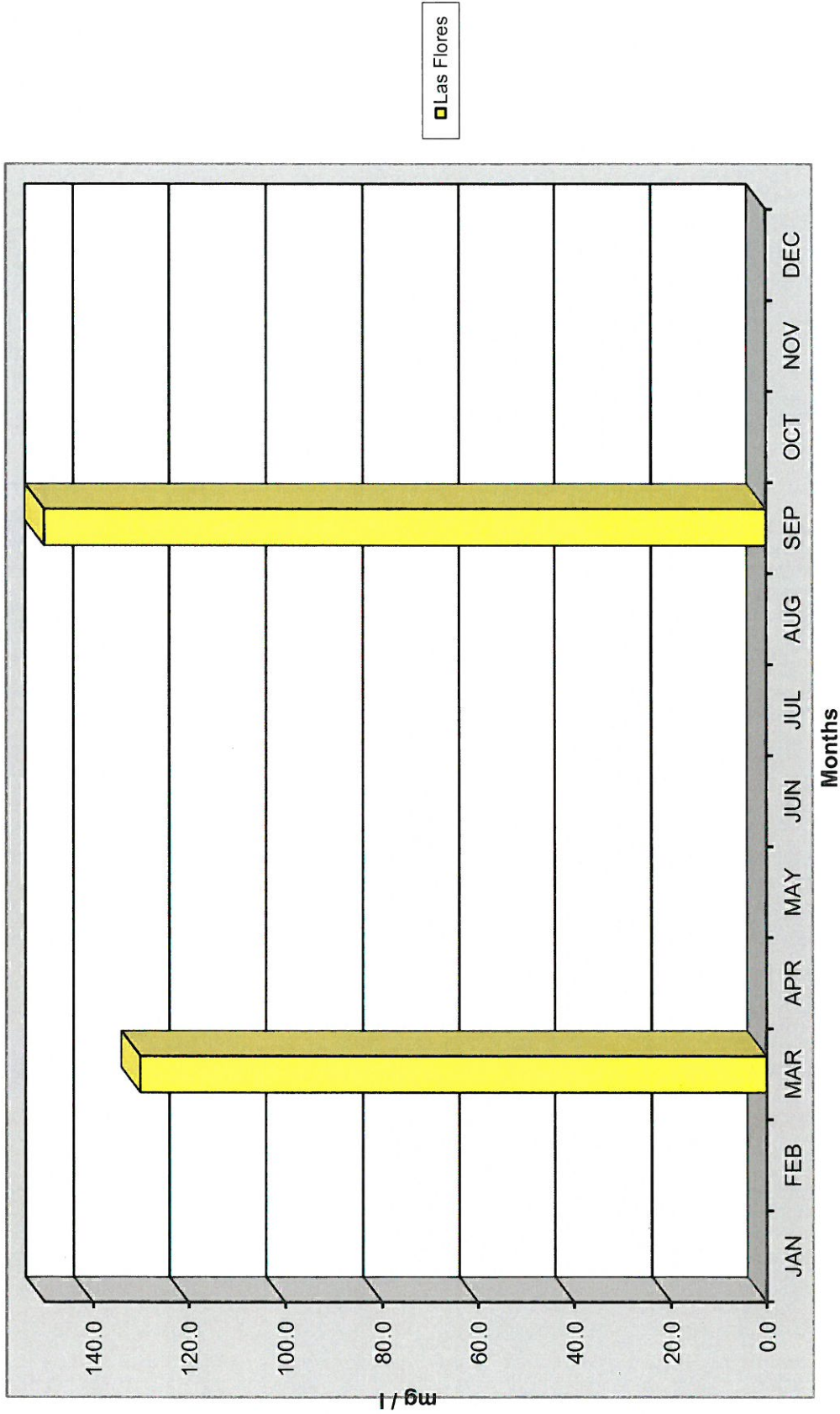
**CRESTLINE SANITATION DISTRICT**  
 District Final Effluent - Average Ammonia Nitrogen - 2018



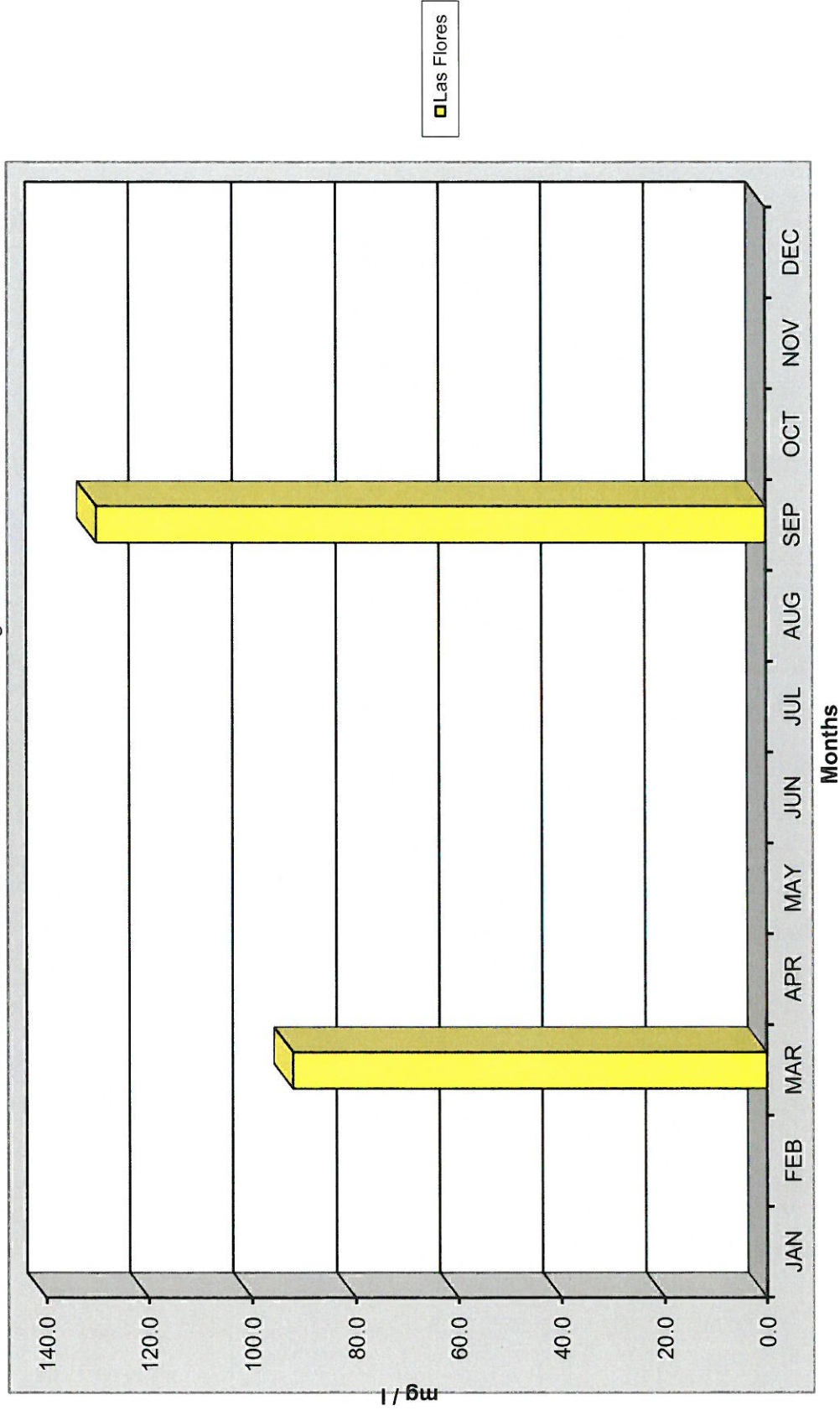
**CRESTLINE SANITATION DISTRICT**  
 District Final Effluent - Semi & Annual Testing - TDS - 2018



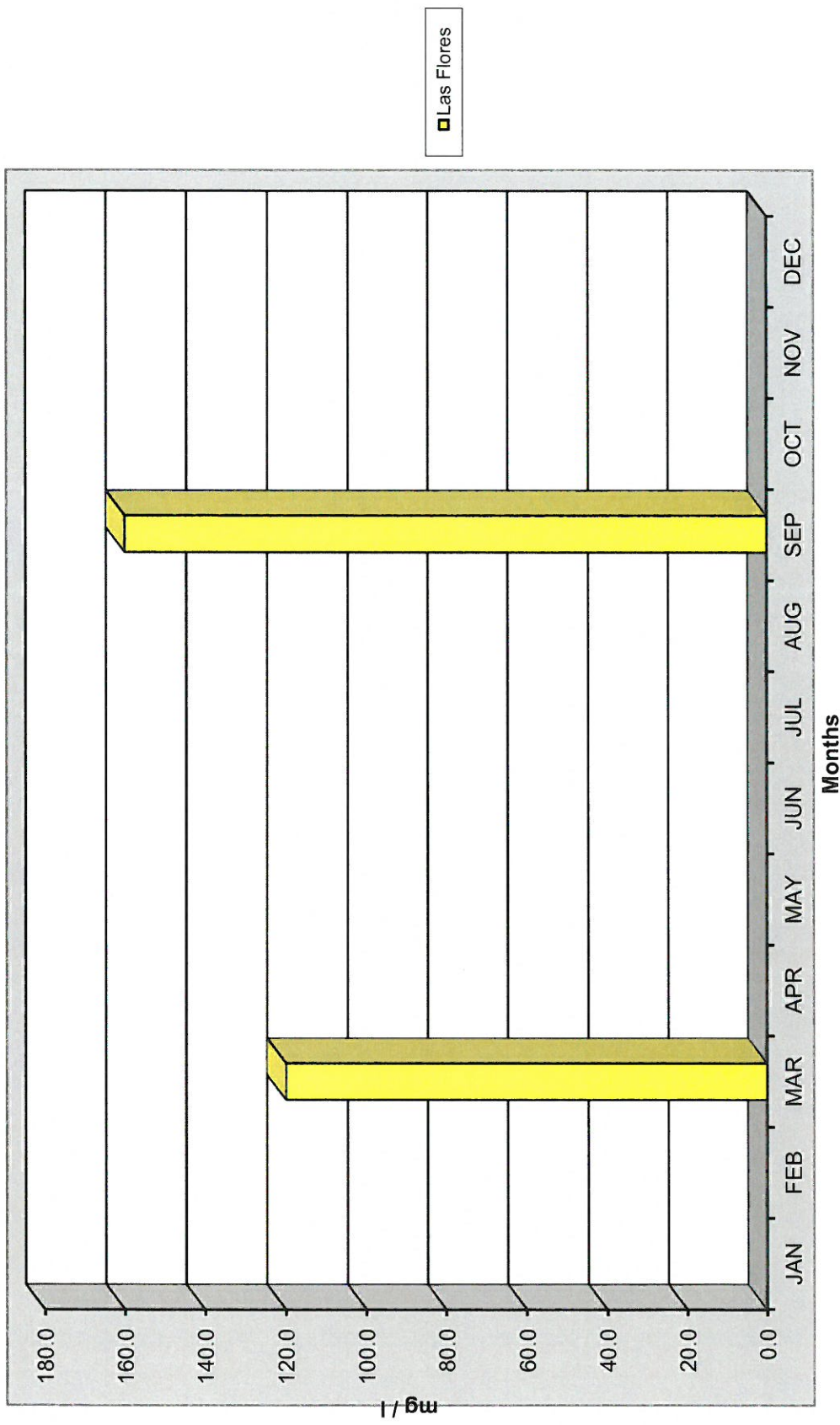
**CRESTLINE SANITATION DISTRICT**  
 District Final Effluent - Semi & Annual Testing - Chloride - 2018



**CRESTLINE SANITATION DISTRICT**  
District Final Effluent - Semi & Annual Testing - Sodium - 2018

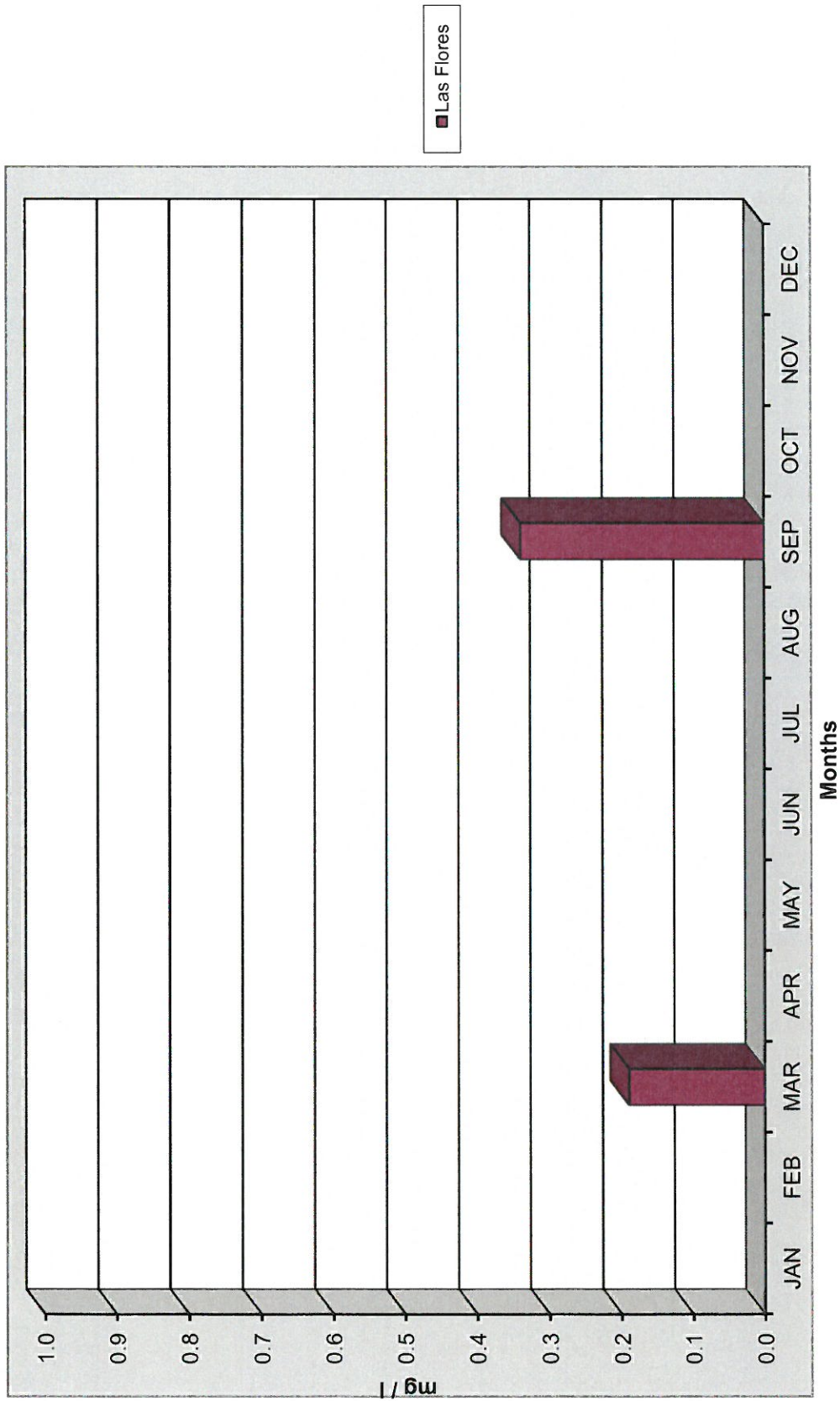


**CRESTLINE SANITATION DISTRICT**  
 District Final Effluent - Semi & Annual Testing - Sulfate - 2018



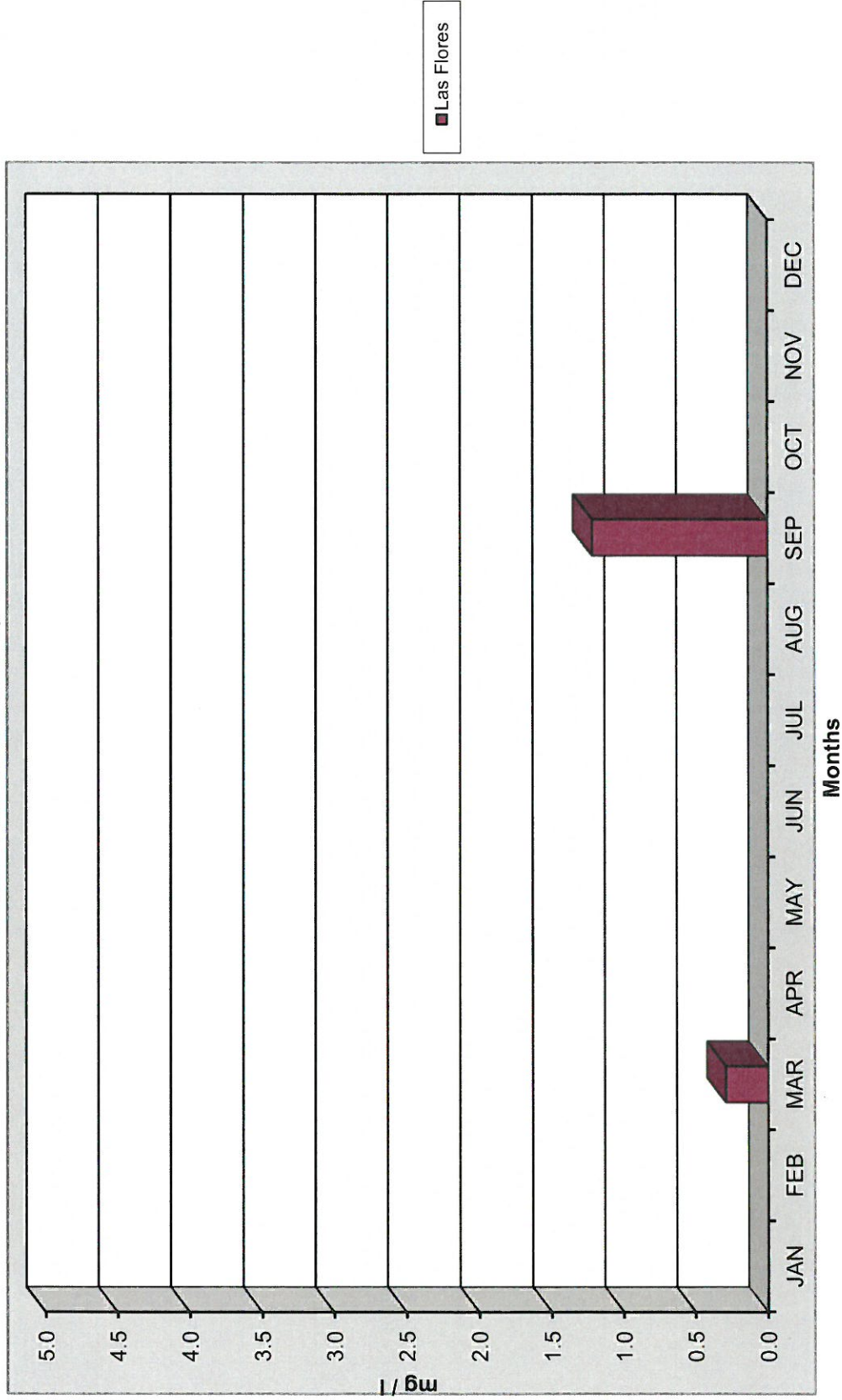


**CRESTLINE SANITATION DISTRICT**  
District Final Effluent - Semi & Annual Testing - Boron - 2018



# CRESTLINE SANITATION DISTRICT

District Final Effluent - Semi & Annual Testing - Flouride - 2018



**CRESTLINE SANITATION DISTRICT  
ANNUAL REPORT**

**Sludge Monitoring**

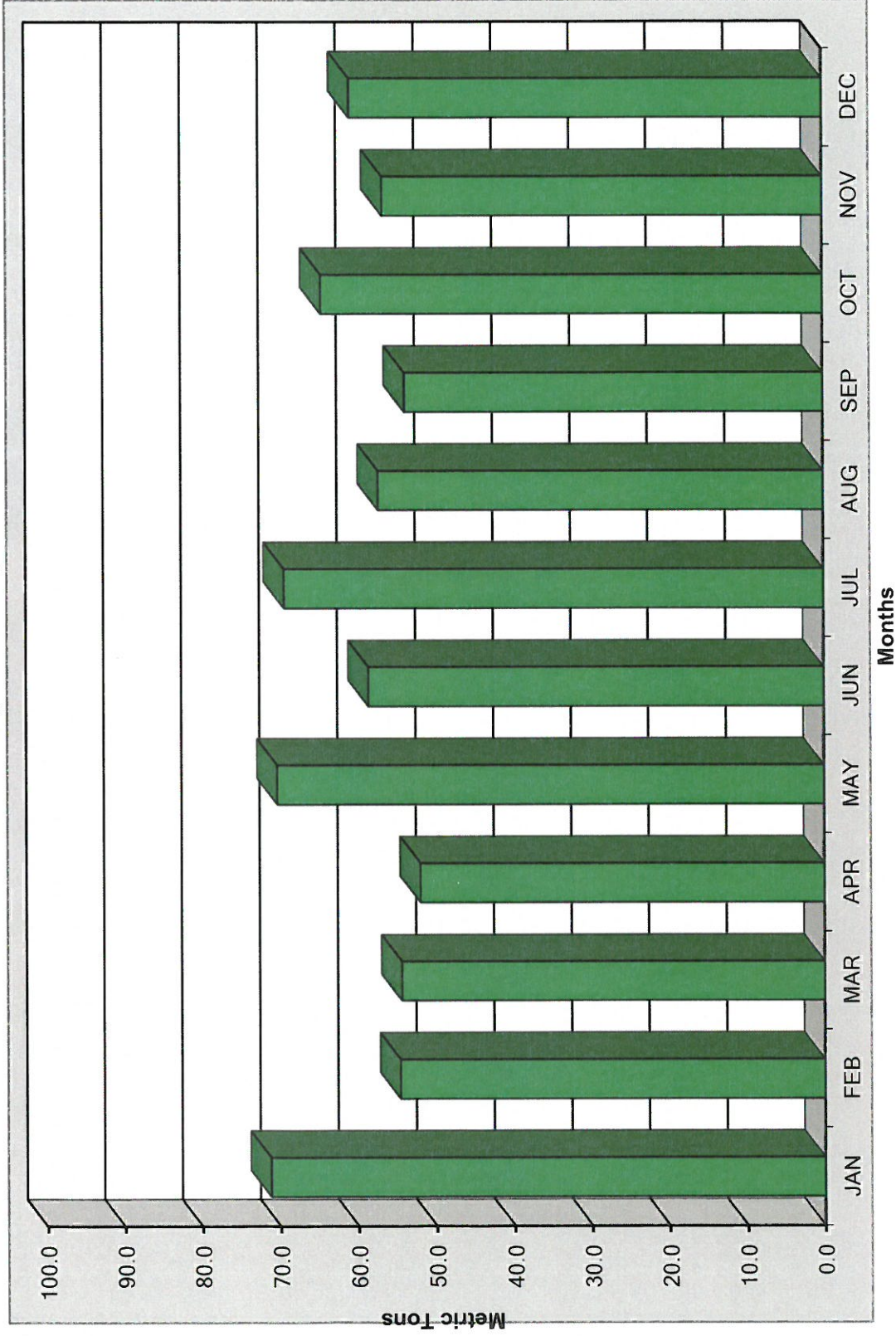
Year: 2018

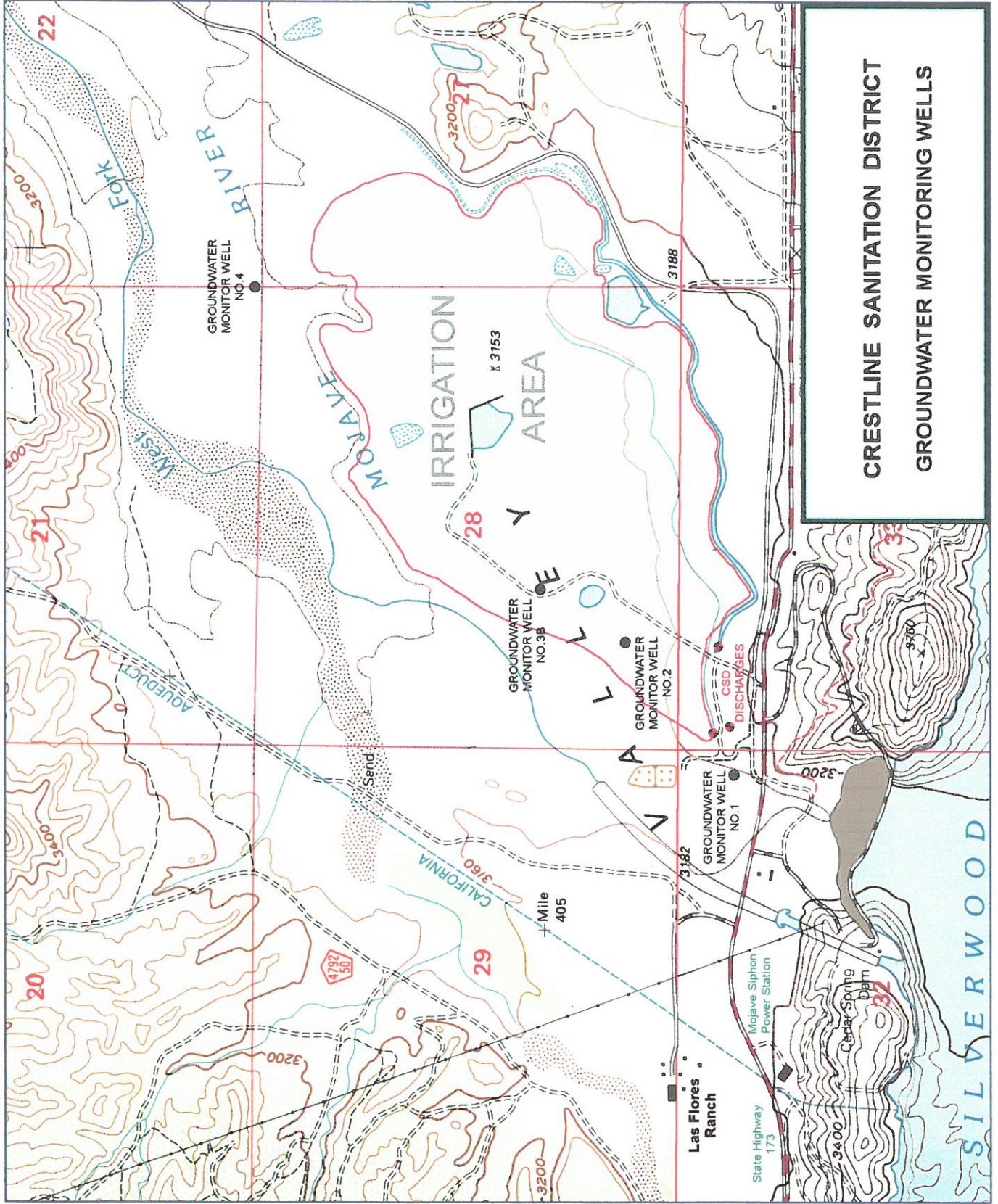
|              | <b>Sludge<br/>Generated</b> | <b>Sludge<br/>Removed<br/>from Site</b> | <b>Sludge<br/>Disposal<br/>Method</b> | <b>Sludge<br/>Stockpiled<br/>on Site</b> |
|--------------|-----------------------------|---|---------------------------------------|--|
| <b>Month</b> |                             |   |                                       |  |
| January      | 71.2 tons                   | 71.2 Tons                               | (a)                                   | 0.0 Tons                                 |
| February     | 54.6 tons                   | 54.6 Tons                               | (a)                                   | 0.0 Tons                                 |
| March        | 54.4 tons                   | 54.4 Tons                               | (a)                                   | 0.0 Tons                                 |
| April        | 52.0 tons                   | 52.0 Tons                               | (a)                                   | 0.0 Tons                                 |
| May          | 70.3 tons                   | 70.3 Tons                               | (a)                                   | 0.0 Tons                                 |
| June         | 58.6 tons                   | 58.6 Tons                               | (a)                                   | 0.0 Tons                                 |
| July         | 69.4 tons                   | 69.4 Tons                               | (a)                                   | 0.0 Tons                                 |
| August       | 57.3 tons                   | 57.3 Tons                               | (a)                                   | 0.0 Tons                                 |
| September    | 53.9 tons                   | 53.9 Tons                               | (a)                                   | 0.0 Tons                                 |
| October      | 64.6 tons                   | 64.6 Tons                               | (a)                                   | 0.0 Tons                                 |
| November     | 56.7 tons                   | 56.7 Tons                               | (a)                                   | 0.0 Tons                                 |
| December     | 60.9 tons                   | 60.9 Tons                               | (a)                                   | 0.0 Tons                                 |
| <b>TOTAL</b> | <b>723.9 tons</b>           | <b>723.9 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 - 2018





**CRESTLINE SANITATION DISTRICT  
GROUNDWATER MONITORING WELLS**

**CRESTLINE SANITATION DISTRICT  
ANNUAL REPORT**

**Pasture Monitoring Well Number 1  
Laboratory Monitoring Data**

Year: 2018

| Frequency    | Quarterly       | Quarterly      | Quarterly    | Quarterly        | Quarterly   | Quarterly   | Quarterly     | Quarterly     | Quarterly             |                |
|--------------|-----------------|----------------|--------------|------------------|-------------|-------------|---------------|---------------|-----------------------|----------------|
| Sample Type  | A               | A              | A            | A                | A           | A           | A             | A             | A                     |                |
| Sample Units | Sulfate<br>mg/l | Sodium<br>mg/l | MBAS<br>mg/l | Chloride<br>mg/l | TDS<br>mg/l | TKN<br>mg/l | NH3-N<br>mg/l | NO3-N<br>mg/l | Water Depth<br>feet * | Well<br>Number |
| JANUARY      |                 |                |              |                  |             |             |               |               |                       |                |
| FEBRUARY     |                 |                |              |                  |             |             |               |               |                       |                |
| MARCH        | 130.0           | 82.0           | ND           | 16.0             | 250         | 0.17        | 0.16          | 1.30          | 3149.7                | 1              |
| APRIL        |                 |                |              |                  |             |             |               |               |                       |                |
| MAY          |                 |                |              |                  |             |             |               |               |                       |                |
| JUNE         | 135.0           | 84.0           | ND           | 18.0             | 270         | 0.19        | 0.18          | 1.50          | 3148.4                | 1              |
| JULY         |                 |                |              |                  |             |             |               |               |                       |                |
| AUGUST       |                 |                |              |                  |             |             |               |               |                       |                |
| SEPTEMBER    | 146.0           | 87.0           | ND           | 18.6             | 285         | 0.16        | 0.15          | 1.70          | 3147.0                | 1              |
| OCTOBER      |                 |                |              |                  |             |             |               |               |                       |                |
| NOVEMBER     |                 |                |              |                  |             |             |               |               |                       |                |
| DECEMBER     | 138.0           | 81.0           | ND           | 18.0             | 290         | 0.20        | 0.19          | 1.50          | 3153.9                | 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: **2018**

| Frequency    | Quarterly       | Quarterly      | Quarterly    | Quarterly        | Quarterly   | Quarterly   | Quarterly     | Quarterly     | Quarterly             |                |
|--------------|-----------------|----------------|--------------|------------------|-------------|-------------|---------------|---------------|-----------------------|----------------|
| Sample Type  | A               | A              | A            | A                | A           | A           | A             | A             | A                     |                |
| Sample Units | Sulfate<br>mg/l | Sodium<br>mg/l | MBAS<br>mg/l | Chloride<br>mg/l | TDS<br>mg/l | TKN<br>mg/l | NH3-N<br>mg/l | NO3-N<br>mg/l | Water Depth<br>feet * | Well<br>Number |
| JANUARY      |                 |                |              |                  |             |             |               |               |                       |                |
| FEBRUARY     |                 |                |              |                  |             |             |               |               |                       |                |
| MARCH        | 128.0           | 86.0           | ND           | 131.0            | 520         | 0.25        | 0.23          | 8.30          | 3150.7                | 2              |
| APRIL        |                 |                |              |                  |             |             |               |               |                       |                |
| MAY          |                 |                |              |                  |             |             |               |               |                       |                |
| JUNE         | 120.0           | 88.0           | ND           | 127.0            | 500         | 0.26        | 0.26          | 7.90          | 3150.4                | 2              |
| JULY         |                 |                |              |                  |             |             |               |               |                       |                |
| AUGUST       |                 |                |              |                  |             |             |               |               |                       |                |
| SEPTEMBER    | 141.0           | 97.0           | ND           | 141.0            | 550         | 0.23        | 0.22          | 7.30          | 3150.1                | 2              |
| OCTOBER      |                 |                |              |                  |             |             |               |               |                       |                |
| NOVEMBER     |                 |                |              |                  |             |             |               |               |                       |                |
| DECEMBER     | 140.0           | 110.0          | ND           | 142.0            | 630         | 0.27        | 0.25          | 7.90          | 3155.7                | 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: 2018

| 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 |
| JANUARY     |           |           |           |           |           |           |           |           |             |        |
| FEBRUARY    |           |           |           |           |           |           |           |           |             |        |
| MARCH       | 110.0     | 83.0      | ND        | 115.0     | 470       | 0.23      | 0.22      | 6.40      | 3147.7      | 3      |
| APRIL       |           |           |           |           |           |           |           |           |             |        |
| MAY         |           |           |           |           |           |           |           |           |             |        |
| JUNE        | 124.0     | 82.0      | ND        | 122.0     | 490       | 0.25      | 0.24      | 6.70      | 3146.4      | 3      |
| JULY        |           |           |           |           |           |           |           |           |             |        |
| AUGUST      |           |           |           |           |           |           |           |           |             |        |
| SEPTEMBER   | 129.0     | 79.0      | ND        | 125.0     | 535       | 0.22      | 0.20      | 6.60      | 3145.1      | 3      |
| OCTOBER     |           |           |           |           |           |           |           |           |             |        |
| NOVEMBER    |           |           |           |           |           |           |           |           |             |        |
| DECEMBER    | 123.0     | 110.0     | ND        | 130.0     | 520       | 0.21      | 0.20      | 6.70      | 3146.9      | 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: **2018**

| 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 |
| JANUARY     |           |           |           |           |           |           |           |           |             |        |
| FEBRUARY    |           |           |           |           |           |           |           |           |             |        |
| MARCH       | 120.0     | 56.0      | ND        | 160.0     | 570       | 0.33      | 0.30      | 4.50      | 3019.9      | 4      |
| APRIL       |           |           |           |           |           |           |           |           |             |        |
| MAY         |           |           |           |           |           |           |           |           |             |        |
| JUNE        | 162.0     | 55.0      | ND        | 126.0     | 580       | 0.37      | 0.35      | 5.10      | 3109.6      | 4      |
| JULY        |           |           |           |           |           |           |           |           |             |        |
| AUGUST      |           |           |           |           |           |           |           |           |             |        |
| SEPTEMBER   | 166.0     | 59.0      | ND        | 127.0     | 590       | 0.35      | 0.30      | 5.40      | 3108.7      | 4      |
| OCTOBER     |           |           |           |           |           |           |           |           |             |        |
| NOVEMBER    |           |           |           |           |           |           |           |           |             |        |
| DECEMBER    | 128.0     | 57.0      | ND        | 168.0     | 580       | 0.39      | 0.36      | 4.80      | 3109.5      | 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

2018

| 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           |
|             |                        |                    |  |             |

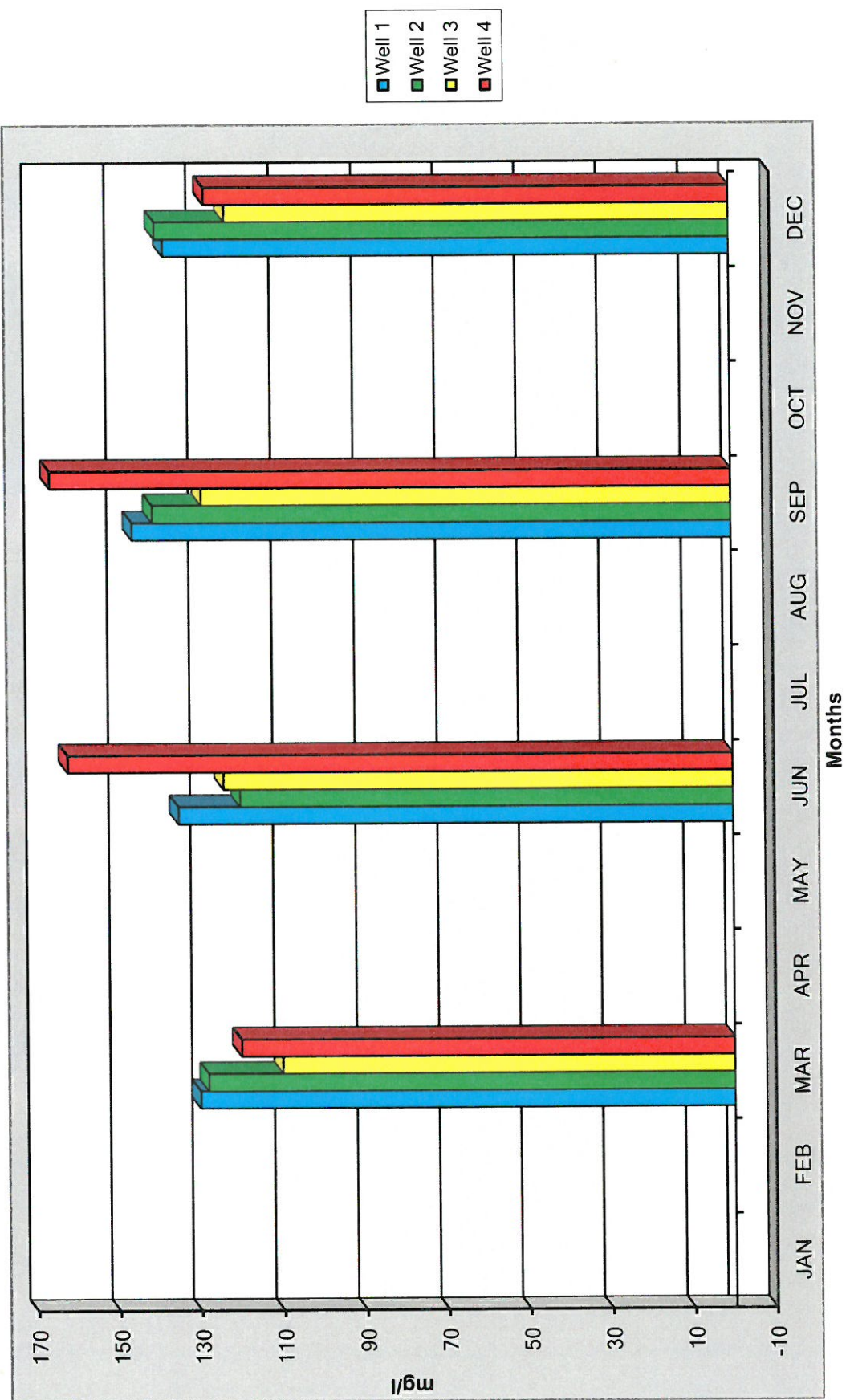
A - Monitoring Requirement

B - For Sample Results see Appendix "B"

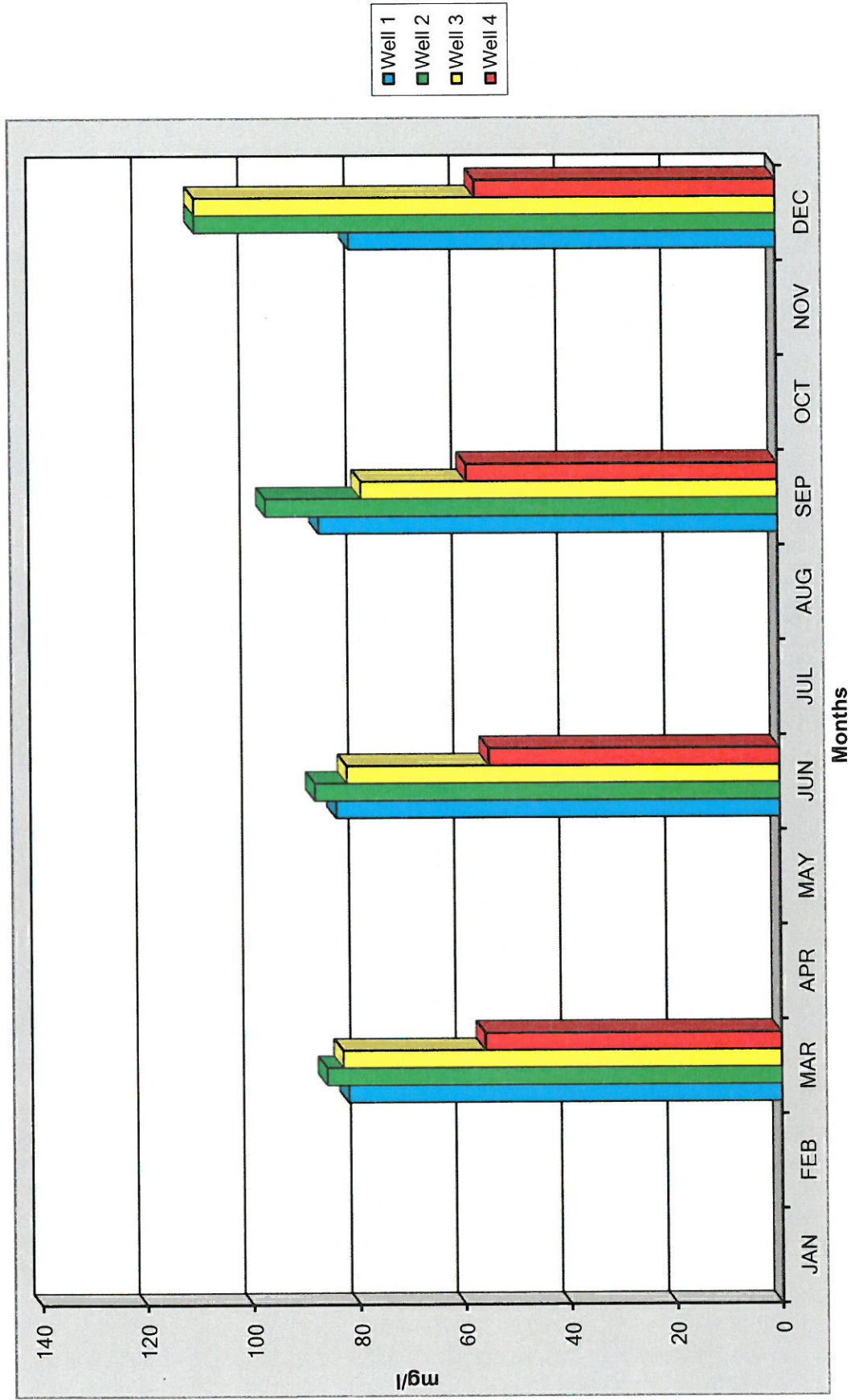
\* Analysis shall be conducted for those substances included on the EPA list of priority pollutants and all other toxic substances known to be discharged to the Discharger's system using EPA test methods 603, 608, 624, 625 and other appropriate tests for heavy metals.

# CRESTLINE SANITATION DISTRICT

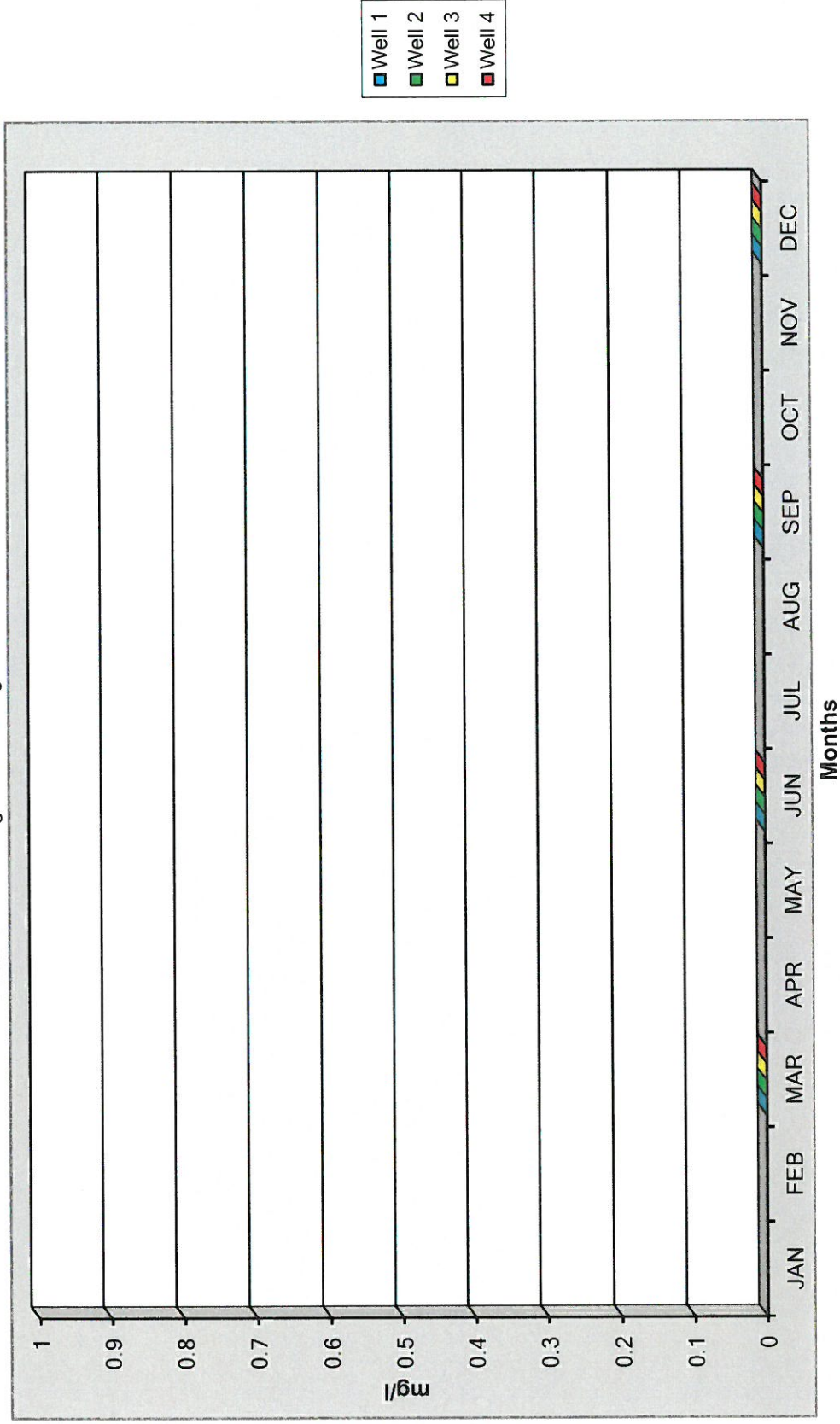
Pasture Monitoring Well Testing - Sulfate - 2018



**CRESTLINE SANITATION DISTRICT**  
 Pasture Monitoring Well Testing - Sodium - 2018

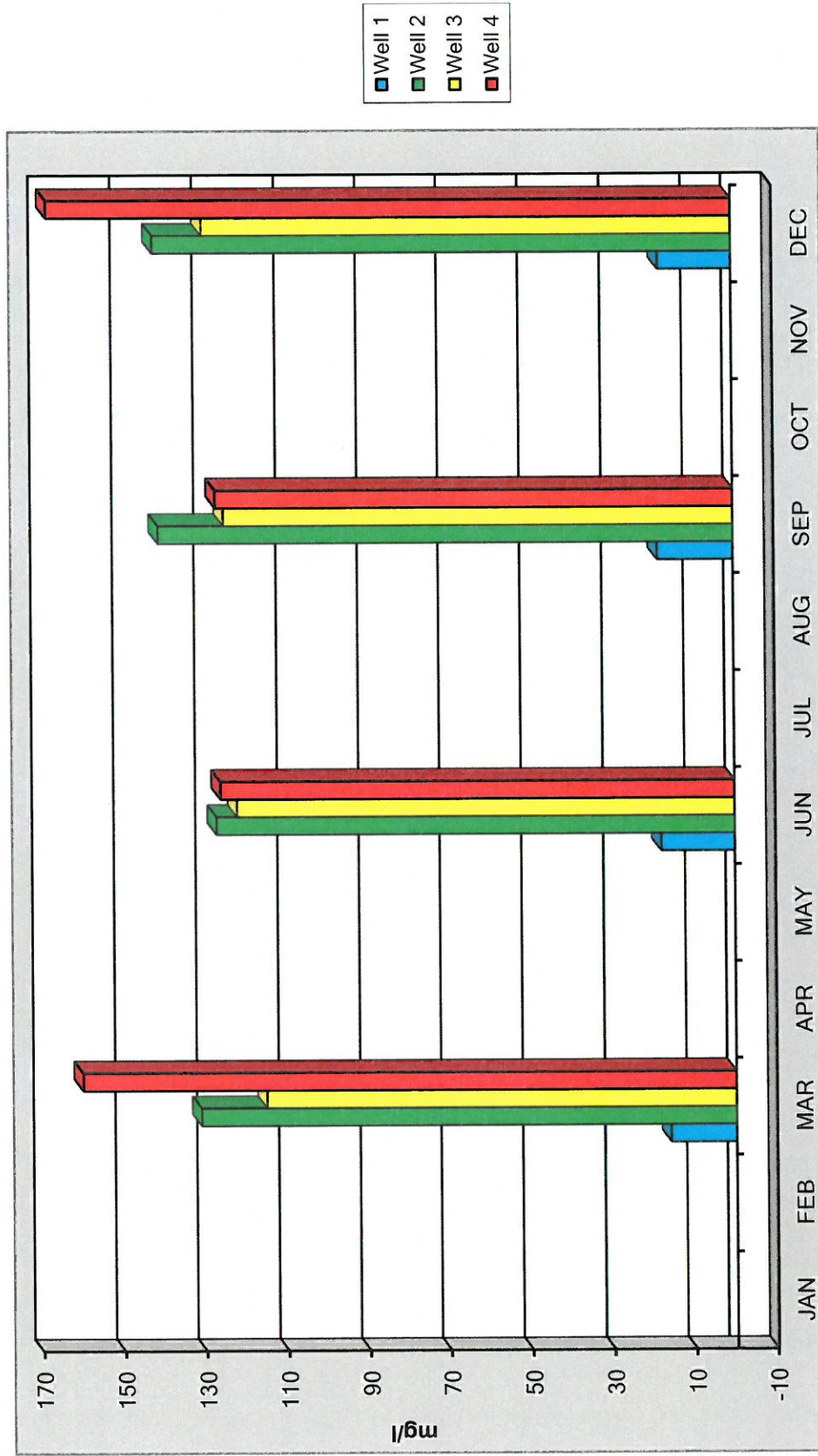


**CRESTLINE SANITATION DISTRICT**  
Pasture Monitoring Well Testing - MBAS - 2018



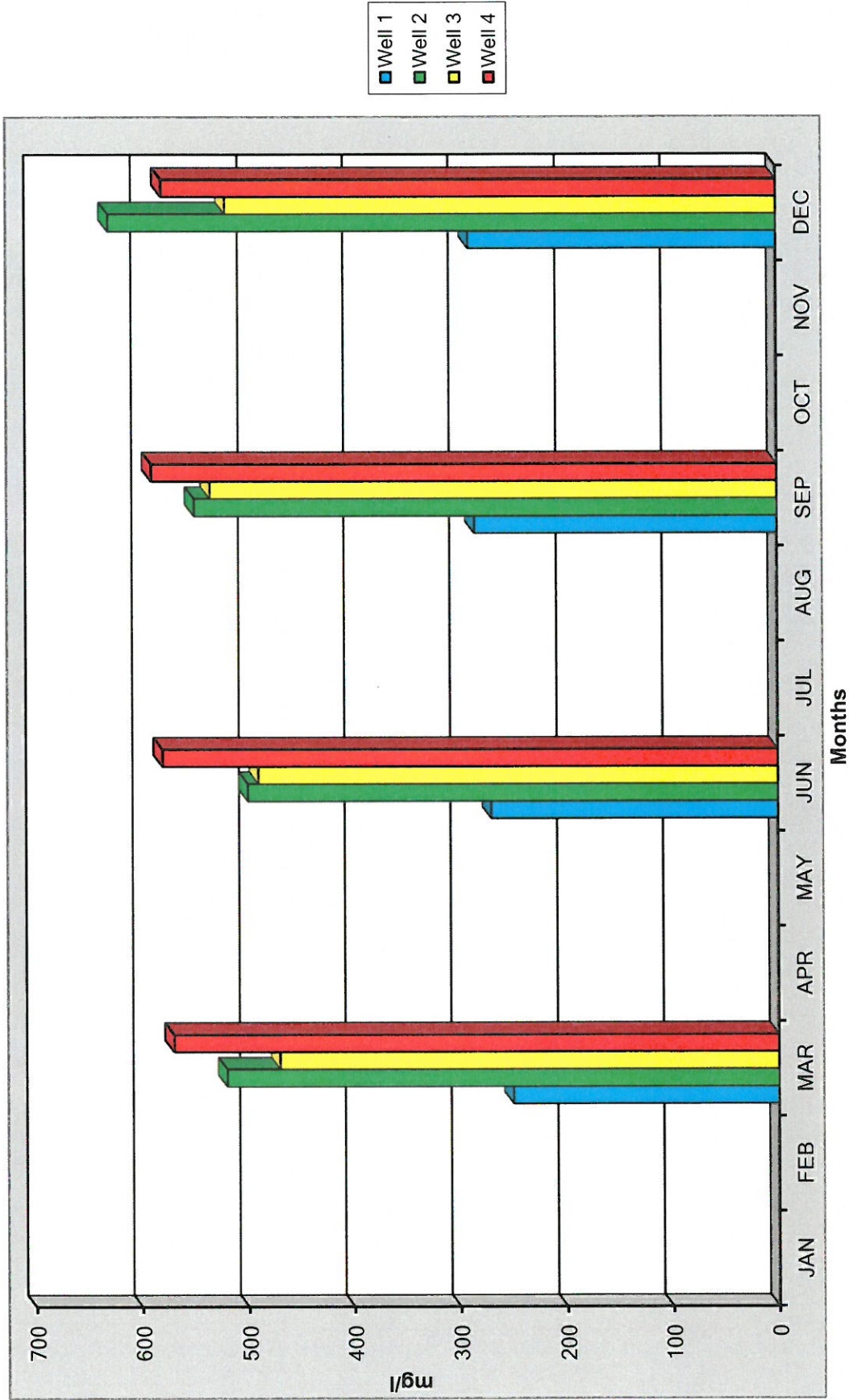
# CRESTLINE SANITATION DISTRICT

Pasture Monitoring Well Testing - Chloride - 2018



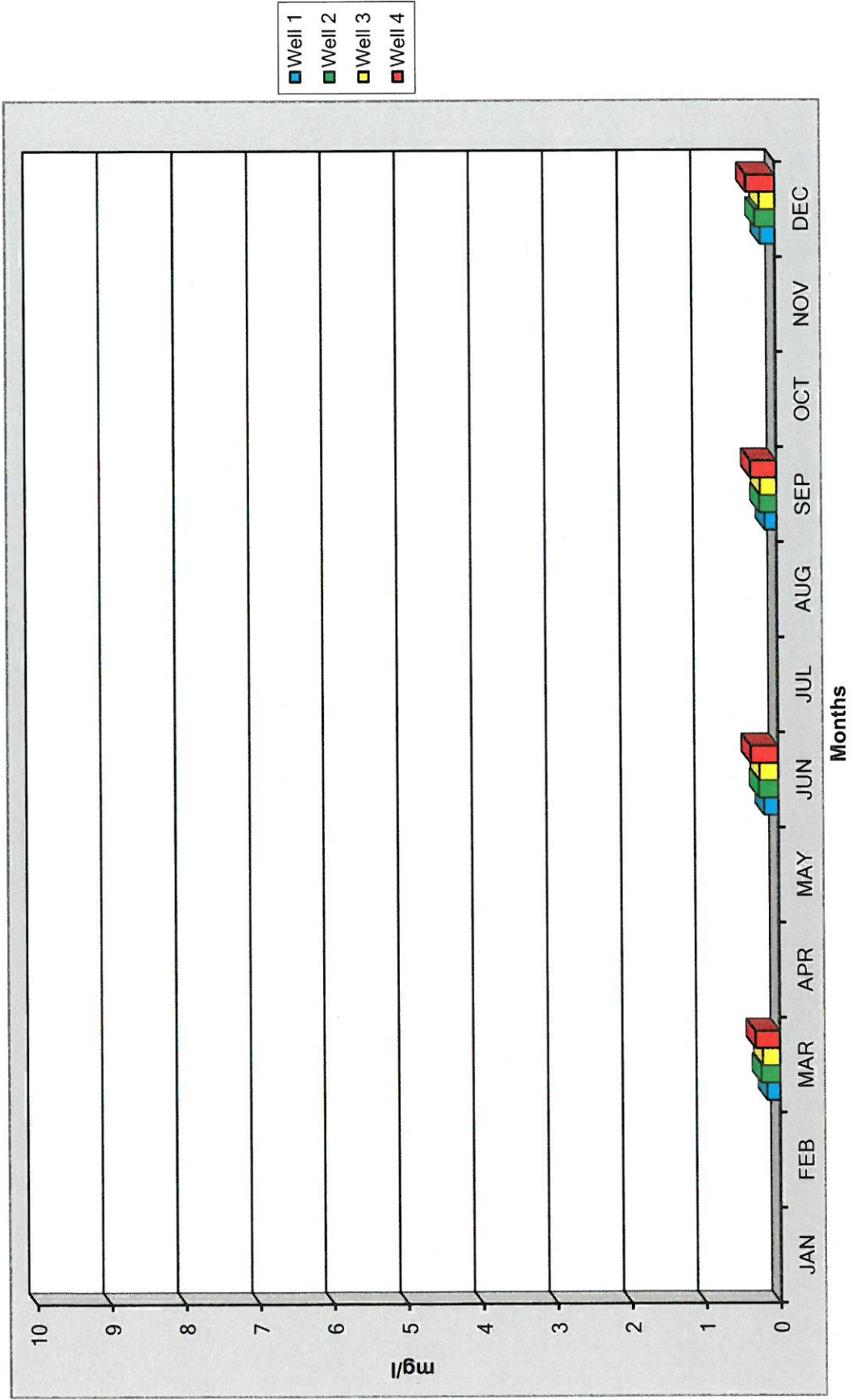
# CRESTLINE SANITATION DISTRICT

Pasture Monitoring Well Testing - TDS - 2018



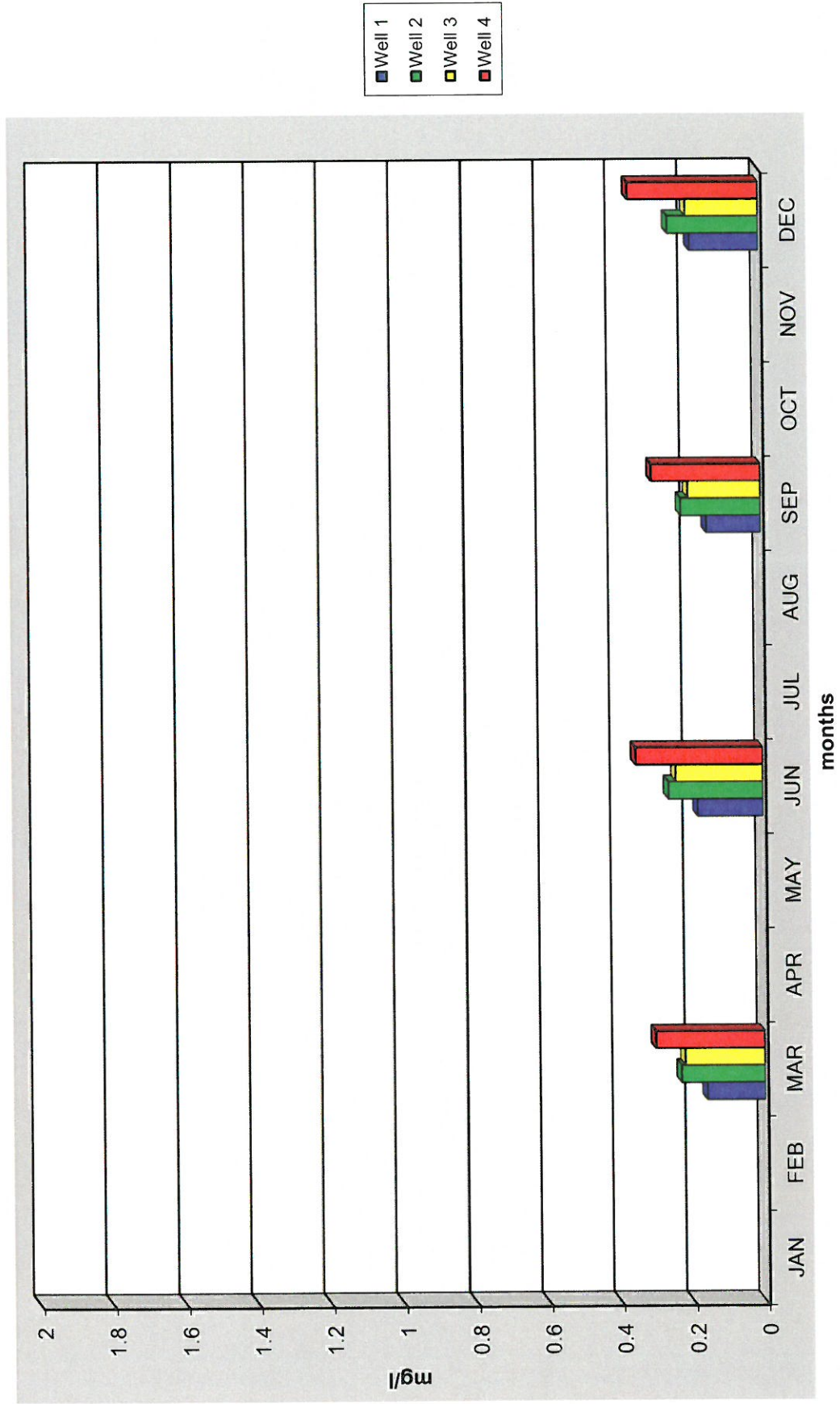
# CRESTLINE SANITATION DISTRICT

Pasture Monitoring Well Testing - TKN - 2018

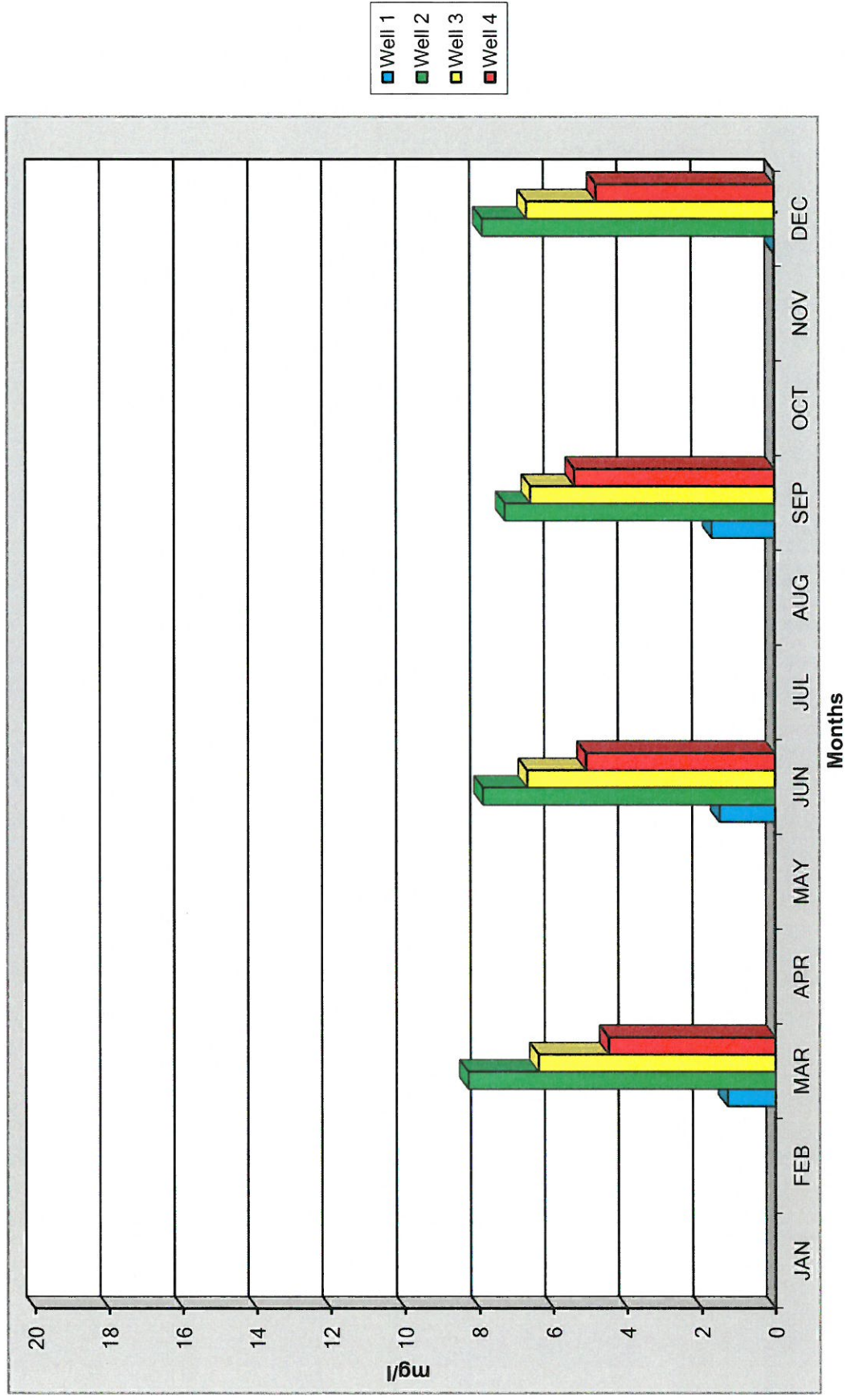




**CRESTLINE SANITATION DISTRICT**  
Pasture Monitoring Well Testing - NH3-N - 2018

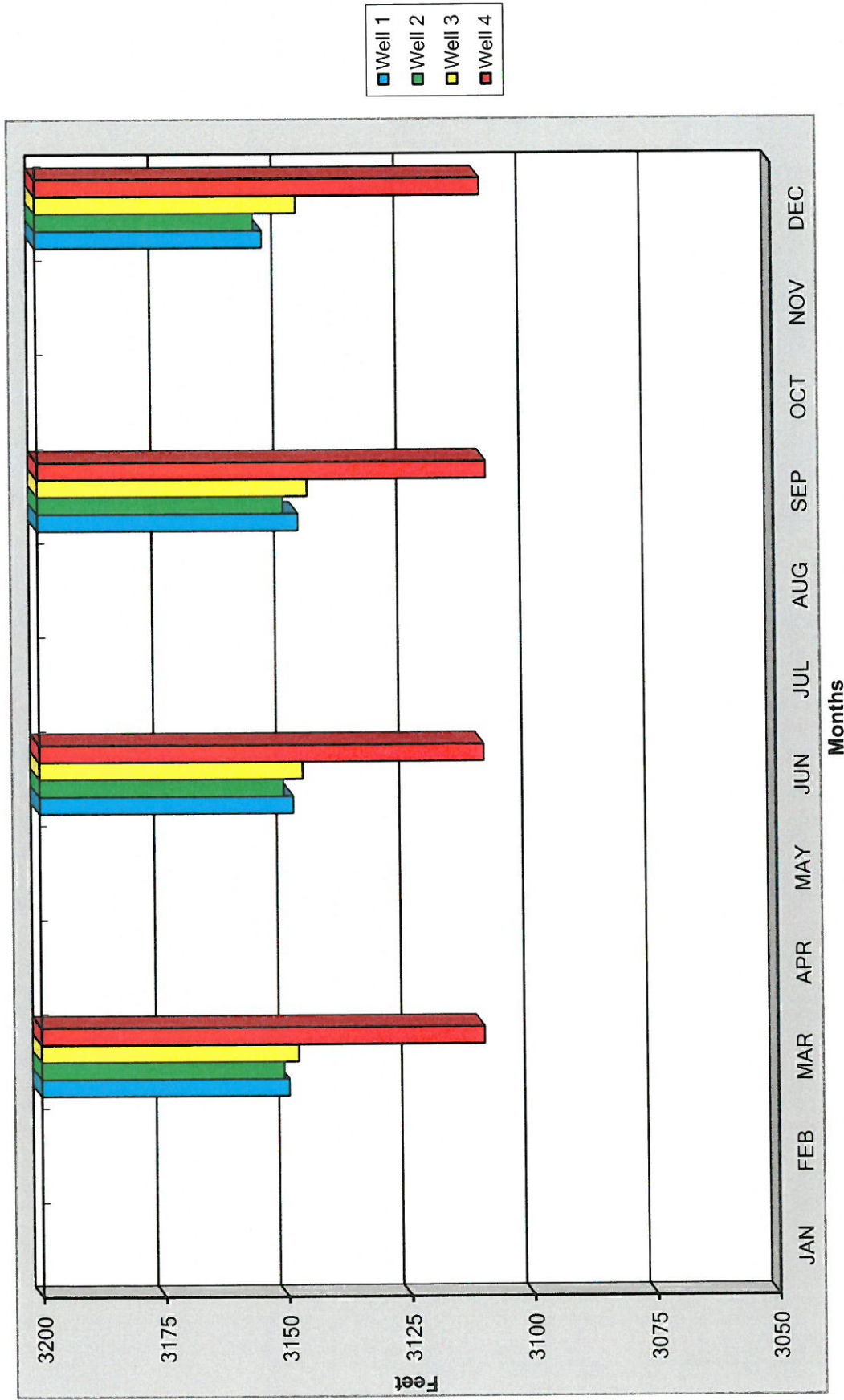


**CRESTLINE SANITATION DISTRICT**  
 Pasture Monitoring Well Testing - NO3-N - 2018



# CRESTLINE SANITATION DISTRICT

Pasture Monitoring Well Testing - Elevation of Water Depth - 2018



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

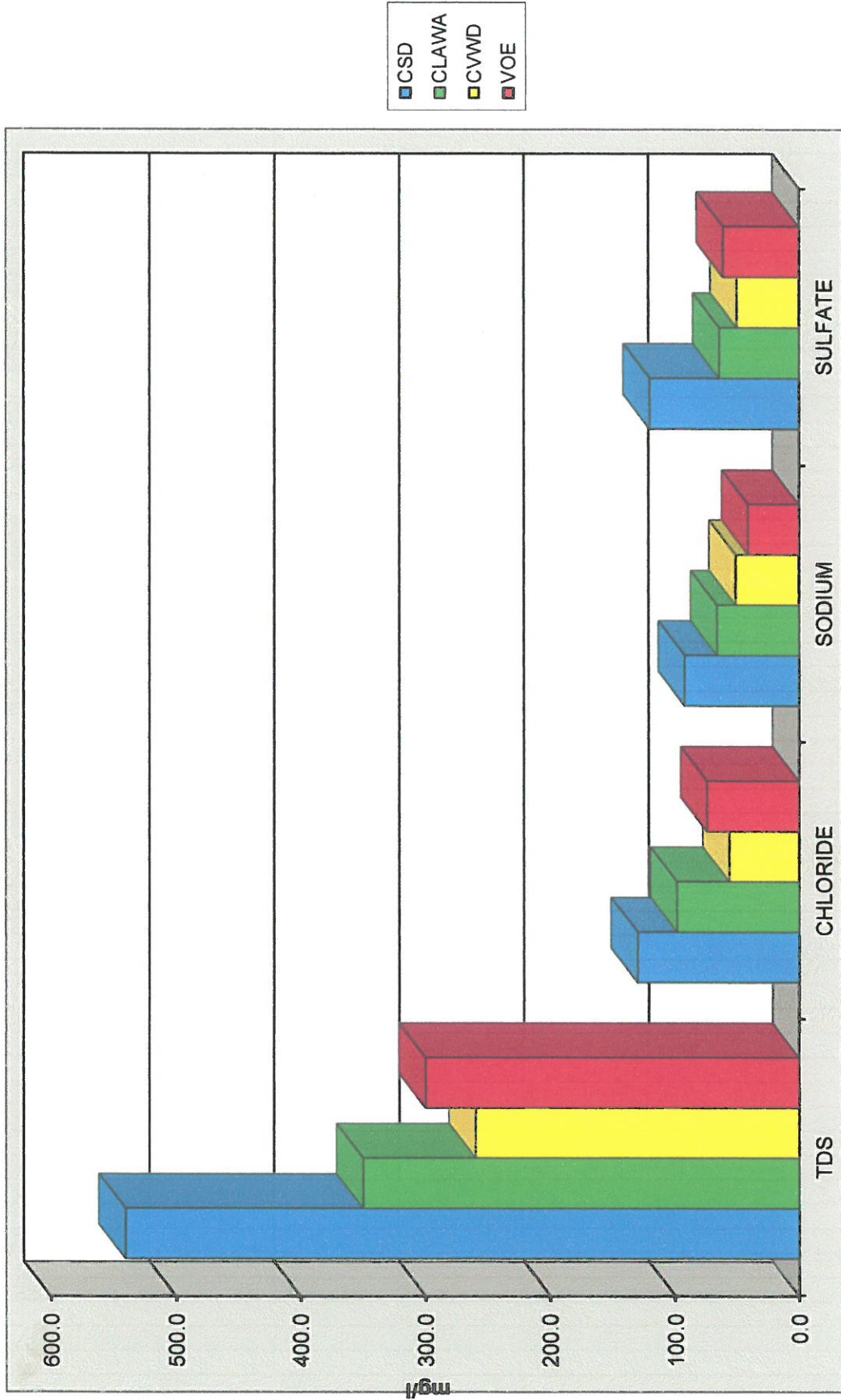
Year: **2018**

| Sample Dates                                       | Frequency | Semi-Annual |         |         | Total Flow In MG | Local Water | Purchased Water |
|--|-----------|-------------|---------|---------|------------------|-------------|-----------------|
|  |           | Violations  | Monitor | Monitor |                  |             |                 |
| Crestline Sanitation District (Final Effluent)     | MG/L      | 540.0       | 130.0   | 92.0    | 120.0            | 94.75       |                 |
|  | POUNDS    | 426,716     | 102,728 | 72,700  | 94,826           |             |                 |
|  |           |             |         |         |                  |             |                 |
|  |           |             |         |         |                  |             |                 |
| Crestline Lake Arrowhead Water Agency (Silverwood) | MG/L      | 350         | 98.4    | 66.0    | 64.0             | 8.72        |                 |
|  | POUNDS    | 25,454      | 7,156   | 4,800   | 4,654            |             |                 |
| Crestline Village Water District                   | MG/L      | 260         | 56.2    | 51.0    | 50.0             | 97.85       | 46.26           |
|  | POUNDS    | 212,178     | 45,863  | 41,620  | 40,803           |             |                 |
| Valley of Enchantment Mutual Water Company         | MG/L      | 300         | 74.0    | 41.0    | 61.0             | 27.88       | 20.60           |
|  | POUNDS    | 69,756      | 17,206  | 9,533   | 14,184           |             |                 |
| Calculated Constituent Concentrations              | MG/L      | 274.1       | 62.6    | 49.9    | 53.2             | 134.5       |                 |
|  | POUNDS    | 307,387     | 70,226  | 55,953  | 59,642           |             |                 |

"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, 2017 thru March 31, 2018

**CRESTLINE SANITATION DISTRICT**  
 Supply Water Testing - March, 2018



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

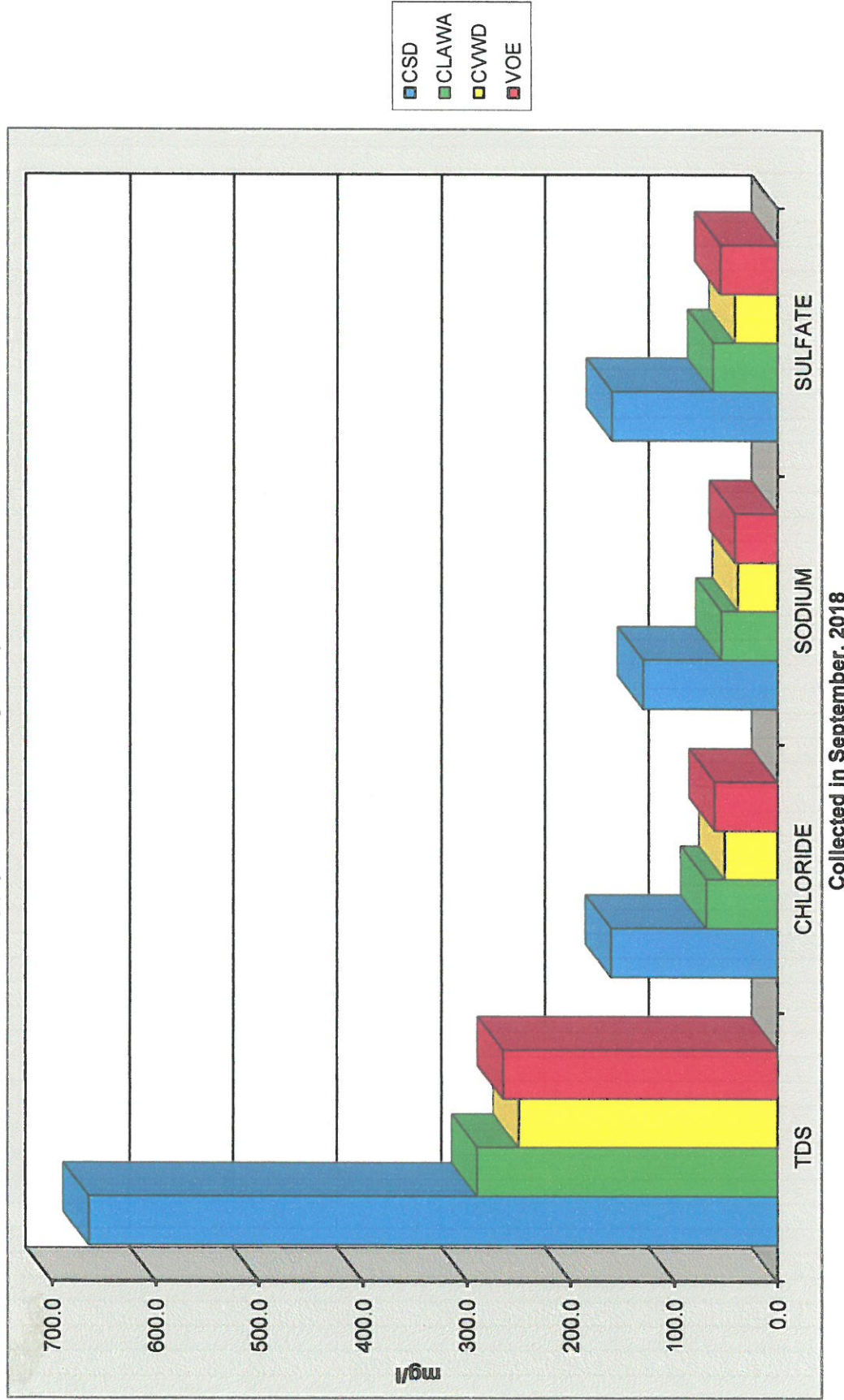
Year: **2018**

| Sample Dates  | Frequency | Semi-Annual | Semi-Annual | Semi-Annual | Semi-Annual | Semi-Annual | Semi-Annual | Total Flow In MG | Local Water | Purchased Water |
|---|-----------|-------------|-------------|-------------|-------------|-------------|-------------|------------------|-------------|-----------------|
|   |           |             |             |             |             |             |             |                  |             |                 |
| Sample type   | Maximum   | Mean/Min.   | Median      | TDS         | Chloride    | Sodium      | Sulfate     |                  |             |                 |
| Crestline Sanitation District<br>(Final Effluent)     | MG/L      | 664.0       | 161.0       | 130.0       | 160.0       | 89.69       |             |                  |             |                 |
|   | POUNDS    | 496,682     | 120,430     | 97,242      | 119,682     |             |             |                  |             |                 |
| Crestline Lake Arrowhead<br>Water Agency (Silverwood) | MG/L      | 290.0       | 68.8        | 54.0        | 62.0        | 13.43       |             |                  |             |                 |
|   | POUNDS    | 32,482      | 7,706       | 6,048       | 6,944       |             |             |                  |             |                 |
| Crestline Village<br>Water District                   | MG/L      | 250.0       | 51.0        | 38.0        | 41.0        | 113.76      |             | 47.07            | 66.69       |                 |
|   | POUNDS    | 237,190     | 48,387      | 36,053      | 38,899      |             |             |                  |             |                 |
| Valley of Enchantment<br>Mutual Water Company         | MG/L      | 265.0       | 60.6        | 41.0        | 55.0        | 30.63       |             | 6.85             | 23.78       |                 |
|   | POUNDS    | 67,695      | 15,481      | 10,474      | 14,050      |             |             |                  |             |                 |
| Calculated Constituent<br>Concentrations              | MG/L      | 256.3       | 54.4        | 39.9        | 45.5        | 157.8       |             |                  |             |                 |
|   | POUNDS    | 337,304     | 71,593      | 52,510      | 59,880      |             |             |                  |             |                 |

"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, 2018 thru September 30, 2018

**CRESTLINE SANITATION DISTRICT**  
 Supply Water Testing - September, 2018



**CRESTLINE SANITATION DISTRICT**

**ANNUAL REPORT**

**Final Effluent Disposal Site (Las Flores) Constituent Violations**

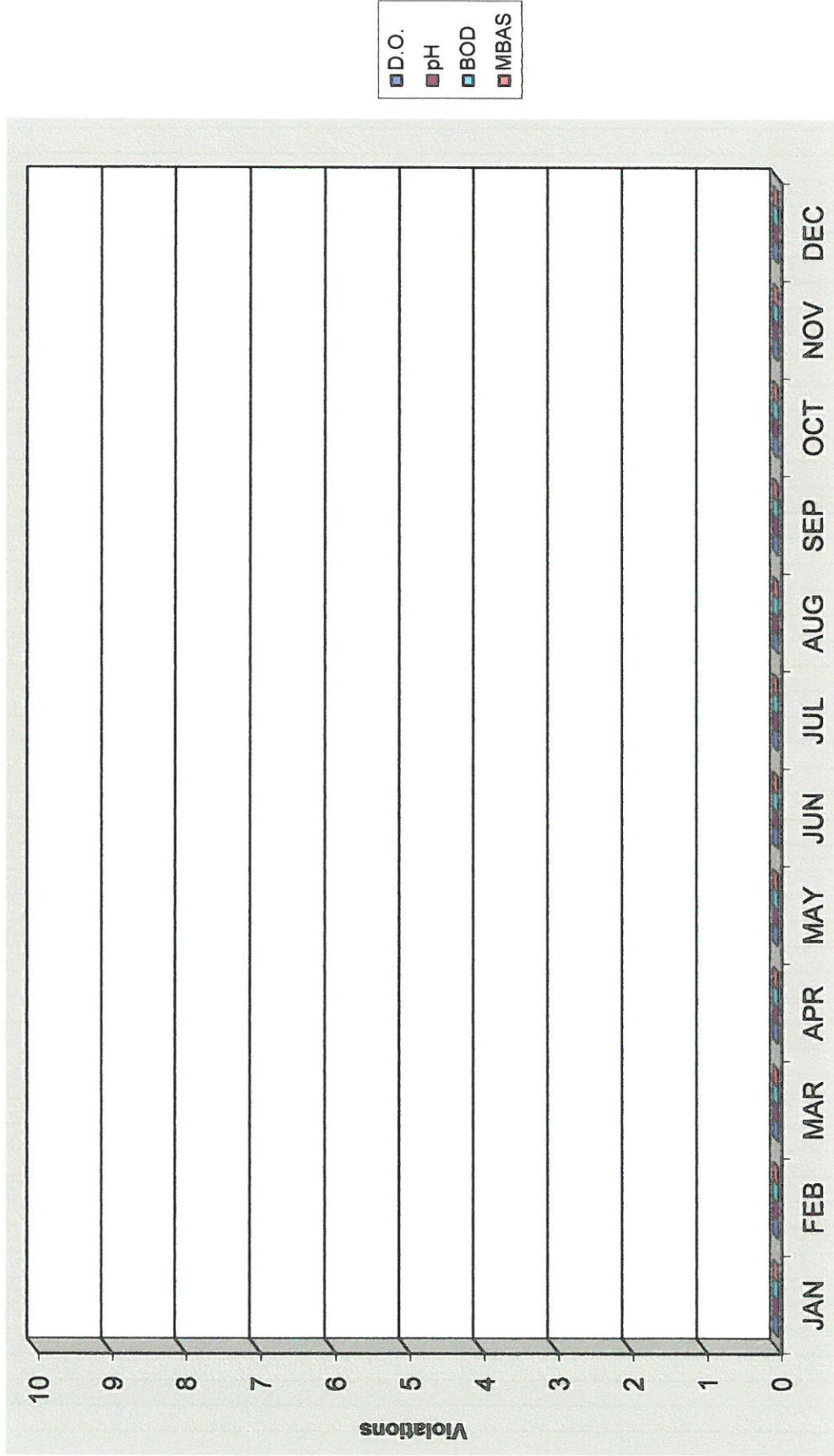
Year: **2018**

| Frequency         | 2 week   | weekly     | weekly   | 2 month  | 2 month  | 2 month  | 2 month  | 2 month  | monthly  | monthly  | monthly  |
|-------------------|----------|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Violations        |          |            |          |          |          |          |          |          |          |          |          |
| Sample Type       | D/M      | D/M        | D/M      | D/M      | M        | D/M      | M        | M        | M        | M        | M        |
| Maximum           |          | 0.5 ml/l   |          | < 9      | 45.0     | 2.0      |          |          |          |          |          |
| Mean/Min.*        | 23.0 *   |            | > 1      | > 6      | 30.0     | 1.0      |          |          |          |          |          |
| Total             |          | Settleable |          |          |          |          | Oil &    |          |          |          |          |
| Coliform          |          | Solids     | D.O.     | pH       | BOD      | MBAS     | Grease   | TKN      | NO3-N    | NH3-N    |          |
| MPN               |          | ml/l       | mg/l     | pH       | 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> | <b>0</b> | <b>0</b>   | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> |

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



**CRESTLINE SANITATION DISTRICT**  
 Final Effluent Constituent Violations - 2018



# CRESTLINE SANITATION DISTRICT

## ANNUAL REPORT

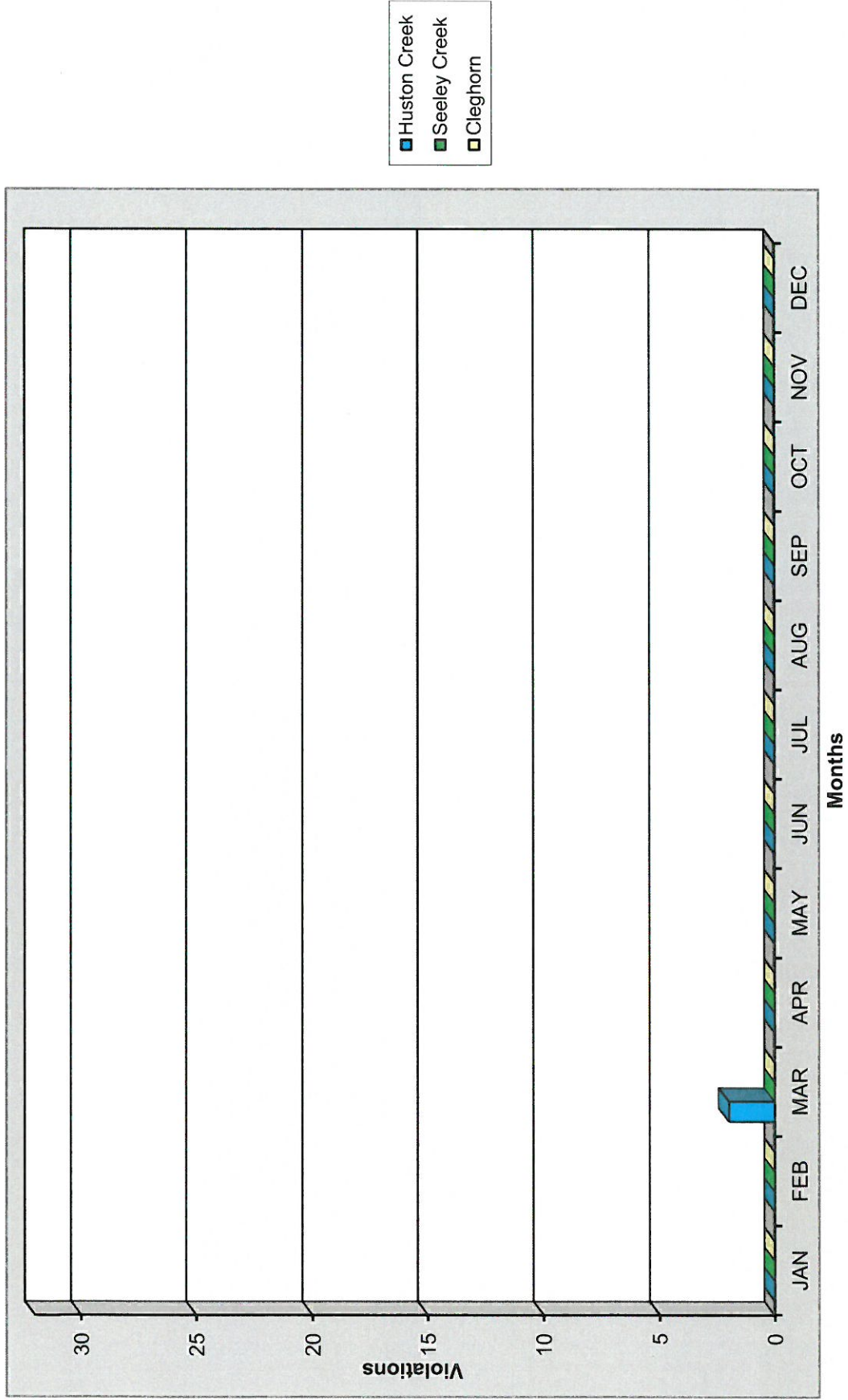
### Treatment Facilities Flow Violations

Year: 2018

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

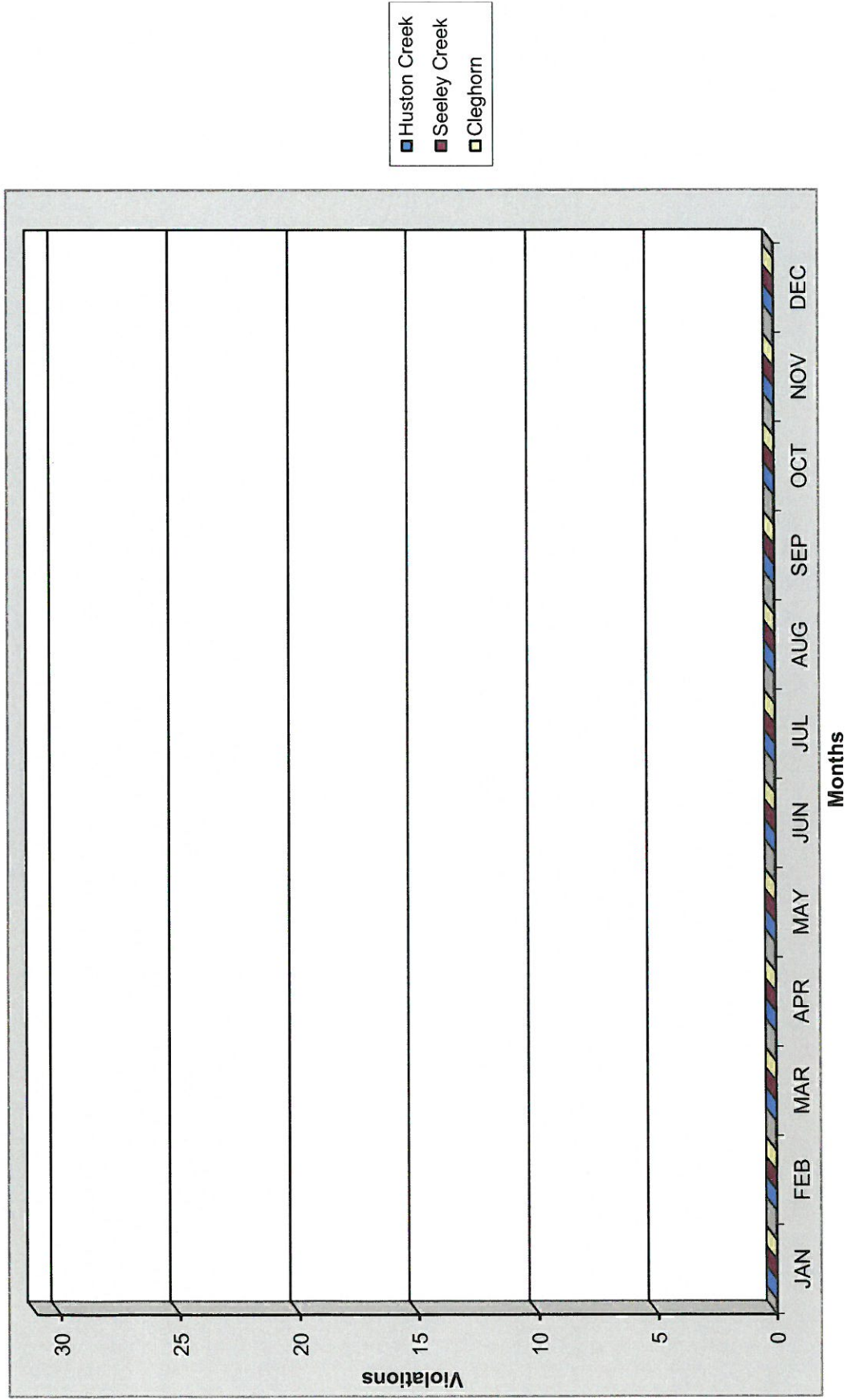
# CRESTLINE SANITATION DISTRICT

Treatment Facility Design Capacity Flow Violations - 2018



# CRESTLINE SANITATION DISTRICT

Treatment Facility Instantaneous Flow Violations - 2018

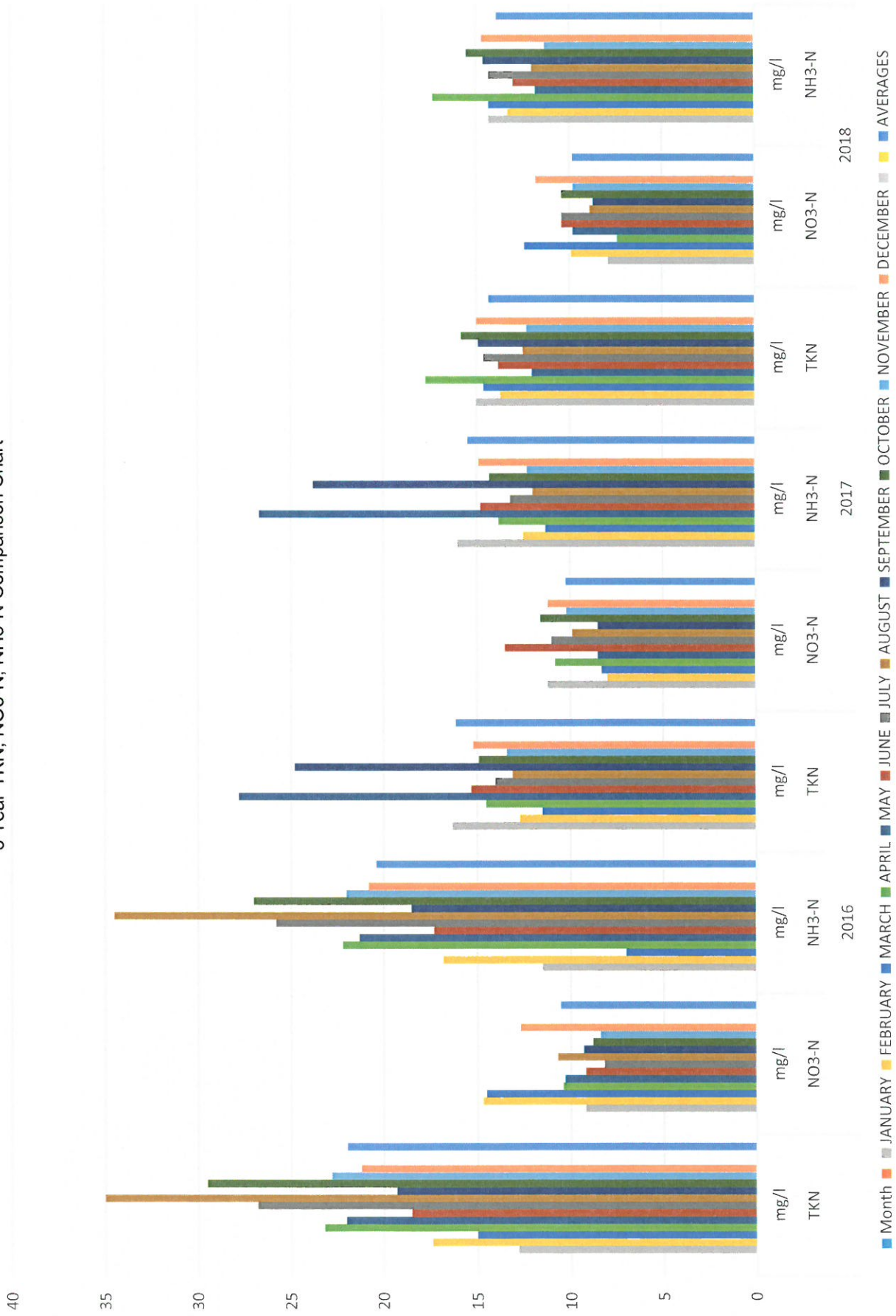


### Crestline Sanitation District

#### 3 Year TKN, NO3-N, NH3-N Comparison

| Year             | 2016  |       |       | 2017  |       |       | 2018  |       |       |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                  | TKN   | NO3-N | NH3-N | TKN   | NO3-N | NH3-N | TKN   | NO3-N | NH3-N |
| Test             |       |       |       |       |       |       |       |       |       |
| Units            | mg/l  | mg/l  | mg/l  | mg/l  | mg/l  | mg/l  | mg/l  | mg/l  | mg/l  |
| Month            |       |       |       |       |       |       |       |       |       |
| <b>JANUARY</b>   | 12.80 | 9.20  | 11.50 | 16.30 | 11.20 | 16.00 | 15.00 | 7.90  | 14.30 |
| <b>FEBRUARY</b>  | 17.40 | 14.70 | 16.80 | 12.70 | 8.00  | 12.50 | 13.70 | 9.90  | 13.30 |
| <b>MARCH</b>     | 15.00 | 14.50 | 7.00  | 11.50 | 8.30  | 11.30 | 14.60 | 12.40 | 14.30 |
| <b>APRIL</b>     | 23.20 | 10.40 | 22.20 | 14.50 | 10.80 | 13.80 | 17.70 | 7.40  | 17.30 |
| <b>MAY</b>       | 22.00 | 10.30 | 21.30 | 27.80 | 8.50  | 26.70 | 12.00 | 9.80  | 11.80 |
| <b>JUNE</b>      | 18.50 | 9.20  | 17.30 | 15.30 | 13.50 | 14.80 | 13.80 | 10.40 | 13.00 |
| <b>JULY</b>      | 26.80 | 8.20  | 25.80 | 14.00 | 11.00 | 13.20 | 14.60 | 10.40 | 14.30 |
| <b>AUGUST</b>    | 35.00 | 10.70 | 34.50 | 13.10 | 9.90  | 12.00 | 12.50 | 8.90  | 12.00 |
| <b>SEPTEMBER</b> | 19.30 | 9.30  | 18.50 | 24.80 | 8.50  | 23.80 | 14.90 | 8.70  | 14.60 |
| <b>OCTOBER</b>   | 29.50 | 8.80  | 27.00 | 14.90 | 11.60 | 14.30 | 15.80 | 10.40 | 15.50 |
| <b>NOVEMBER</b>  | 22.80 | 8.40  | 22.00 | 13.40 | 10.20 | 12.30 | 12.30 | 9.80  | 11.30 |
| <b>DECEMBER</b>  | 21.20 | 12.70 | 20.80 | 15.20 | 11.20 | 14.90 | 15.00 | 11.80 | 14.70 |
| <b>AVERAGES</b>  | 21.96 | 10.53 | 20.39 | 16.13 | 10.23 | 15.47 | 14.33 | 9.82  | 13.87 |

**Crestline Sanitatin District**  
 3 Year TKN, NO3-N, NH3-N Comparison Chart



# **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:  
10/01/18 15:30

ANALYTICAL REPORT FOR SAMPLES

| Sample ID            | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|----------------------|---------------|--------|----------------|----------------|
| S.P.A,B,C,D,E,F,-9-6 | 1809065-01    | Liquid | 09/06/18 11:30 | 09/06/18 13:05 |

*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:  
10/01/18 15:30

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

| Analyte  | Result | MDL    | Reporting<br>Limit | Units | Dilution | Batch   | Prepared | Analyzed       | Method    | Notes |
|--|--------|--------|--------------------|-------|----------|---------|----------|----------------|-----------|-------|
| <b>S.P.A,B,C,D,E,F,-9-6 (1809065-01) Liquid Sampled: 09/06/18 11:30 Received: 09/06/18 13:05</b> |        |        |                    |       |          |         |          |                |           |       |
| Phenolics  | ND     | 0.0500 | 0.0500             | mg/L  | 1        | B811414 | 09/06/18 | 09/06/18 19:59 | 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:  
 10/01/18 15:30

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

| Analyte | Result | MDL | Reporting |  | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|-----|-----------|--|-------|----------|-------|----------|----------|--------|-------|
|         |        |     | Limit     |  |       |          |       |          |          |        |       |

**S.P.A,B,C,D,E,F.-9-6 (1809065-01) Liquid**    **Sampled: 09/06/18 11:30**    **Received: 09/06/18 13:05**

|               |               |        |        |      |   |         |          |                |           |  |   |
|---------------|---------------|--------|--------|------|---|---------|----------|----------------|-----------|--|---|
| Silver        | ND            | 0.0020 | 0.010  | mg/L | 1 | B810602 | 09/06/18 | 09/07/18 13:29 | EPA 200.7 |  |   |
| Cadmium       | ND            | 0.0014 | 0.0070 | "    | " | "       | "        | "              | "         |  |   |
| Chromium      | ND            | 0.0017 | 0.0090 | "    | " | "       | "        | "              | "         |  |   |
| <b>Copper</b> | <b>0.015</b>  | 0.0010 | 0.010  | "    | " | "       | "        | "              | "         |  |   |
| <b>Nickel</b> | <b>0.0021</b> | 0.0021 | 0.010  | "    | " | "       | "        | "              | "         |  | J |
| <b>Lead</b>   | <b>0.0032</b> | 0.0014 | 0.0070 | "    | " | "       | "        | "              | "         |  | J |
| <b>Zinc</b>   | <b>0.037</b>  | 0.0040 | 0.020  | "    | " | "       | "        | "              | "         |  |   |

*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:  
 10/01/18 15:30

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

| Analyte  | Result     | MDL   | Reporting |       | Dilution | Batch   | Prepared | Analyzed       | Method  | Notes |
|--|------------|-------|-----------|-------|----------|---------|----------|----------------|---------|-------|
|  |            |       | Limit     | Units |          |         |          |                |         |       |
| <b>S.P.A,B,C,D,E,F.-9-6 (1809065-01) Liquid    Sampled: 09/06/18 11:30    Received: 09/06/18 13:05</b> |            |       |           |       |          |         |          |                |         |       |
| Acrolein   | ND         | 2.6   | 5.0       | µg/L  | 1        | B811306 | 09/13/18 | 09/13/18 12:53 | EPA 624 |       |
| Acrylonitrile  | ND         | 1.5   | 2.0       | "     | "        | "       | "        | "              | "       |       |
| Benzene  | ND         | 0.47  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Bromobenzene   | ND         | 0.42  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| <b>Bromodichloromethane</b>  | <b>7.8</b> | 0.31  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Bromoform  | ND         | 0.51  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Bromomethane   | ND         | 0.67  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Carbon tetrachloride   | ND         | 0.38  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Chlorobenzene  | ND         | 0.31  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Chloroethane   | ND         | 0.55  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 2-Chloroethylvinyl ether   | ND         | 0.28  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| <b>Chloroform</b>  | <b>53</b>  | 0.36  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Chloromethane  | ND         | 0.47  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| <b>Dibromochloromethane</b>  | <b>1.0</b> | 0.36  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,2-Dichlorobenzene  | ND         | 0.36  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,3-Dichlorobenzene  | ND         | 0.20  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,4-Dichlorobenzene  | ND         | 0.36  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,1-Dichloroethane   | ND         | 0.29  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,2-Dichloroethane   | ND         | 0.25  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,1-Dichloroethene   | ND         | 0.070 | 1.0       | "     | "        | "       | "        | "              | "       |       |
| cis-1,2-Dichloroethene   | ND         | 0.49  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| trans-1,2-Dichloroethene   | ND         | 0.37  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,2-Dichloropropane  | ND         | 0.15  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,1-Dichloropropene  | ND         | 0.33  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| cis-1,3-Dichloropropene  | ND         | 0.31  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| trans-1,3-Dichloropropene  | ND         | 0.32  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Ethylbenzene   | ND         | 0.38  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Methylene chloride   | ND         | 0.43  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,1,2,2-Tetrachloroethane  | ND         | 0.42  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Tetrachloroethene  | ND         | 0.49  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| <b>Toluene</b>   | <b>2.2</b> | 0.48  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,1,1-Trichloroethane  | ND         | 0.23  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,1,2-Trichloroethane  | ND         | 0.34  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Trichloroethene  | ND         | 0.31  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Trichlorofluoromethane   | ND         | 0.19  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Vinyl chloride   | ND         | 0.47  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| m,p-Xylene   | ND         | 0.62  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| o-Xylene   | ND         | 0.30  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Methyl tert-butyl ether  | ND         | 0.42  | 1.0       | "     | "        | "       | "        | "              | "       |       |

*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:  
10/01/18 15:30

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

| Analyte | Result | MDL | Reporting |       | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|-----|-----------|-------|----------|-------|----------|----------|--------|-------|
|         |        |     | Limit     | Units |          |       |          |          |        |       |

**S.P.A,B,C,D,E,F.-9-6 (1809065-01) Liquid**    **Sampled: 09/06/18 11:30**    **Received: 09/06/18 13:05**

|                                 |        |  |        |  |  |         |          |                |         |  |
|---------------------------------|--------|--|--------|--|--|---------|----------|----------------|---------|--|
| Surrogate: Dibromofluoromethane | 94.6 % |  | 86-118 |  |  | B811306 | 09/13/18 | 09/13/18 12:53 | EPA 624 |  |
| Surrogate: Toluene-d8           | 102 %  |  | 88-110 |  |  | "       | "        | "              | "       |  |
| Surrogate: 4-Bromofluorobenzene | 96.4 % |  | 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.*

|  |  |                                    |
|--|--|------------------------------------|
| Sierra Analytical<br>26052 Merit Cir. Ste. 105<br>Laguna Hills CA, 92653 | Project: 1809065<br>Project Number: 1809065<br>Project Manager: Rick Forsyth | <b>Reported:</b><br>09/14/18 10:55 |
|--|--|------------------------------------|

**S.P.A,B,C,D,E,F,-9-6 (1809065-01)**  
**T182788-01 (Water)**

| Analyte | Result | Reporting<br>Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

**SunStar Laboratories, Inc.**

**Cyanide by SM4500-CN B,C, or E or EPA 9014**

|                 |    |       |      |   |         |          |          |                   |  |
|-----------------|----|-------|------|---|---------|----------|----------|-------------------|--|
| Cyanide (total) | ND | 0.005 | mg/l | 1 | 8091008 | 09/10/18 | 09/10/18 | SM 4500-CN<br>C/E |  |
|-----------------|----|-------|------|---|---------|----------|----------|-------------------|--|

SunStar Laboratories, Inc.



Mike Jaroudi, Project Manager

*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.*

Sierra Analytical  
26052 Merit Cir. Ste. 105  
Laguna Hills CA, 92653

Project: 1809065  
Project Number: 1809065  
Project Manager: Rick Forsyth

**Reported:**  
09/14/18 10:55

**S.P.A,B,C,D,E,F,-9-6 (1809065-01)**  
**T182788-01 (Water)**

| Analyte | Result | Reporting<br>Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

**SunStar Laboratories, Inc.**

**Acid and Base/Neutral Extractables by EPA Method 625**

| Analyte                     | Result | Reporting<br>Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method  |
|-----------------------------|--------|--------------------|-------|----------|---------|----------|----------|---------|
| Acenaphthene                | ND     | 10                 | ug/l  | 1        | 8091004 | 09/10/18 | 09/10/18 | EPA 625 |
| Acenaphthylene              | ND     | 10                 | "     | "        | "       | "        | "        | "       |
| Anthracene                  | ND     | 10                 | "     | "        | "       | "        | "        | "       |
| Benzo (a) anthracene        | ND     | 10                 | "     | "        | "       | "        | "        | "       |
| Benzo (b) fluoranthene      | ND     | 10                 | "     | "        | "       | "        | "        | "       |
| Benzo (k) fluoranthene      | ND     | 10                 | "     | "        | "       | "        | "        | "       |
| Benzo (a) pyrene            | ND     | 10                 | "     | "        | "       | "        | "        | "       |
| Benzo (g,h,i) perylene      | ND     | 20                 | "     | "        | "       | "        | "        | "       |
| Butyl benzyl phthalate      | ND     | 10                 | "     | "        | "       | "        | "        | "       |
| Bis(2-chloroethyl)ether     | ND     | 5.0                | "     | "        | "       | "        | "        | "       |
| Bis(2-chloroethoxy)methane  | ND     | 10                 | "     | "        | "       | "        | "        | "       |
| Bis(2-ethylhexyl)phthalate  | ND     | 10                 | "     | "        | "       | "        | "        | "       |
| Bis(2-chloroisopropyl)ether | ND     | 20                 | "     | "        | "       | "        | "        | "       |
| 4-Bromophenyl phenyl ether  | ND     | 5.0                | "     | "        | "       | "        | "        | "       |
| 2-Chloronaphthalene         | ND     | 10                 | "     | "        | "       | "        | "        | "       |
| 4-Chlorophenyl phenyl ether | ND     | 20                 | "     | "        | "       | "        | "        | "       |
| Chrysene                    | ND     | 10                 | "     | "        | "       | "        | "        | "       |
| Dibenz (a,h) anthracene     | ND     | 10                 | "     | "        | "       | "        | "        | "       |
| Di-n-butyl phthalate        | ND     | 5.0                | "     | "        | "       | "        | "        | "       |
| 1,2-Dichlorobenzene         | ND     | 5.0                | "     | "        | "       | "        | "        | "       |
| 1,3-Dichlorobenzene         | ND     | 5.0                | "     | "        | "       | "        | "        | "       |
| 1,4-Dichlorobenzene         | ND     | 10                 | "     | "        | "       | "        | "        | "       |
| 3,3'-Dichlorobenzidine      | ND     | 10                 | "     | "        | "       | "        | "        | "       |
| Diethyl phthalate           | ND     | 10                 | "     | "        | "       | "        | "        | "       |
| Dimethyl phthalate          | ND     | 10                 | "     | "        | "       | "        | "        | "       |
| 2,4-Dinitrotoluene          | ND     | 10                 | "     | "        | "       | "        | "        | "       |
| 2,6-Dinitrotoluene          | ND     | 20                 | "     | "        | "       | "        | "        | "       |
| Di-n-octyl phthalate        | ND     | 10                 | "     | "        | "       | "        | "        | "       |
| Fluoranthene                | ND     | 5.0                | "     | "        | "       | "        | "        | "       |
| Fluorene                    | ND     | 10                 | "     | "        | "       | "        | "        | "       |
| Hexachlorobenzene           | ND     | 20                 | "     | "        | "       | "        | "        | "       |
| Hexachlorobutadiene         | ND     | 10                 | "     | "        | "       | "        | "        | "       |

SunStar Laboratories, Inc.

*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.*



Mike Jaroudi, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Sierra Analytical  
 26052 Merit Cir. Ste. 105  
 Laguna Hills CA, 92653

Project: 1809065  
 Project Number: 1809065  
 Project Manager: Rick Forsyth

Reported:  
 09/14/18 10:55

**S.P.A,B,C,D,E,F,-9-6 (1809065-01)**  
**T182788-01 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|-----------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|-----------------|-------|----------|-------|----------|----------|--------|-------|

**SunStar Laboratories, Inc.**

**Acid and Base/Neutral Extractables by EPA Method 625**

|                                 |    |        |        |   |         |          |          |         |  |
|---------------------------------|----|--------|--------|---|---------|----------|----------|---------|--|
| Hexachloroethane                | ND | 5.0    | ug/l   | 1 | 8091004 | 09/10/18 | 09/10/18 | EPA 625 |  |
| Indeno (1,2,3-cd) pyrene        | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Isophorone                      | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Naphthalene                     | ND | 5.0    | "      | " | "       | "        | "        | "       |  |
| Nitrobenzene                    | ND | 20     | "      | " | "       | "        | "        | "       |  |
| N-Nitrosodi-n-propylamine       | ND | 5.0    | "      | " | "       | "        | "        | "       |  |
| Phenanthrene                    | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Pyrene                          | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 1,2,4-Trichlorobenzene          | ND | 5.0    | "      | " | "       | "        | "        | "       |  |
| 4-Chloro-3-methylphenol         | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 2-Chlorophenol                  | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 2,4-Dichlorophenol              | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 2,4-Dimethylphenol              | ND | 5.0    | "      | " | "       | "        | "        | "       |  |
| 2,4-Dinitrophenol               | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 4,6-Dinitro-2-methylphenol      | ND | 5.0    | "      | " | "       | "        | "        | "       |  |
| 2-Nitrophenol                   | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 4-Nitrophenol                   | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Pentachlorophenol               | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Phenol                          | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 2,4,6-Trichlorophenol           | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 2-Methyl-4,6-dinitrophenol      | ND | 20     | "      | " | "       | "        | "        | "       |  |
| 1,2-Diphenylhydrazine           | ND | 20     | "      | " | "       | "        | "        | "       |  |
| Benzidine                       | ND | 20     | "      | " | "       | "        | "        | "       |  |
| Hexachlorocyclopentadiene       | ND | 20     | "      | " | "       | "        | "        | "       |  |
| N-Nitrosodimethylamine          | ND | 25     | "      | " | "       | "        | "        | "       |  |
| N-Nitrosodiphenylamine          | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Surrogate: 2-Fluorophenol       |    | 28.8 % | 21-100 |   | "       | "        | "        | "       |  |
| Surrogate: Phenol-d6            |    | 22.7 % | 10-94  |   | "       | "        | "        | "       |  |
| Surrogate: Nitrobenzene-d5      |    | 75.9 % | 35-114 |   | "       | "        | "        | "       |  |
| Surrogate: 2-Fluorobiphenyl     |    | 71.2 % | 43-116 |   | "       | "        | "        | "       |  |
| Surrogate: 2,4,6-Tribromophenol |    | 86.7 % | 10-123 |   | "       | "        | "        | "       |  |
| Surrogate: Terphenyl-d14        |    | 56.4 % | 33-141 |   | "       | "        | "        | "       |  |

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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<br>P.O. Box 3395<br>Crestline CA, 92325-3395 | Project: NA<br>Project Number: Las Flores Outfall Annual<br>Project Manager: Rick Dever | Reported:<br>10/01/18 15:30 |
|--|---|-----------------------------|

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

| Analyte  | Result | MDL    | Reporting |  | Units | Dilution | Batch   | Prepared | Analyzed       | Method    | Notes |
|--|--------|--------|-----------|--|-------|----------|---------|----------|----------------|-----------|-------|
|  |        |        | Limit     |  |       |          |         |          |                |           |       |
| <b>S.P.A,B,C,D,E,F,-9-6 (1809065-01) Liquid    Sampled: 09/06/18 11:30    Received: 09/06/18 13:05</b> |        |        |           |  |       |          |         |          |                |           |       |
| HC < C8  | ND     | 0.010  | 0.010     |  | mg/L  | 1        | B8I1403 | 09/07/18 | 09/10/18 17:11 | EPA 8015B |       |
| C8 <= HC < C9  | ND     | 0.010  | 0.010     |  | "     | "        | "       | "        | "              | "         |       |
| C9 <= HC < C10   | ND     | 0.010  | 0.010     |  | "     | "        | "       | "        | "              | "         |       |
| C10 <= HC < C11  | ND     | 0.010  | 0.010     |  | "     | "        | "       | "        | "              | "         |       |
| C11 <= HC < C12  | ND     | 0.010  | 0.010     |  | "     | "        | "       | "        | "              | "         |       |
| C12 <= HC < C14  | ND     | 0.010  | 0.010     |  | "     | "        | "       | "        | "              | "         |       |
| C14 <= HC < C16  | ND     | 0.010  | 0.010     |  | "     | "        | "       | "        | "              | "         |       |
| C16 <= HC < C18  | ND     | 0.010  | 0.010     |  | "     | "        | "       | "        | "              | "         |       |
| C18 <= HC < C20  | ND     | 0.010  | 0.010     |  | "     | "        | "       | "        | "              | "         |       |
| C20 <= HC < C24  | ND     | 0.010  | 0.010     |  | "     | "        | "       | "        | "              | "         |       |
| C24 <= HC < C28  | ND     | 0.010  | 0.010     |  | "     | "        | "       | "        | "              | "         |       |
| C28 <= HC < C32  | ND     | 0.010  | 0.010     |  | "     | "        | "       | "        | "              | "         |       |
| HC >= C32  | ND     | 0.010  | 0.010     |  | "     | "        | "       | "        | "              | "         |       |
| Total Petroleum Hydrocarbons<br>(C7-C36)   | ND     | 0.050  | 0.050     |  | "     | "        | "       | "        | "              | "         |       |
| <i>Surrogate: o-Terphenyl</i>  |        | 88.8 % | 60-175    |  |       |          | "       | "        | "              | "         |       |

*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**

## **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)



25712 Commercentre Drive  
Lake Forest, California 92630  
949.297.5020 Phone  
949.297.5027 Fax

|  |  |                             |
|--|--|-----------------------------|
| Sierra Analytical<br>26052 Merit Cir. Ste. 105<br>Laguna Hills CA, 92653 | Project: 1809156<br>Project Number: 1809156<br>Project Manager: Rick Forsyth | Reported:<br>09/21/18 10:30 |
|--|--|-----------------------------|

**ANALYTICAL REPORT FOR SAMPLES**

| Sample ID             | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|-----------------------|---------------|--------|----------------|----------------|
| MW1-9-13 (1809156-01) | T182850-01    | Water  | 09/13/18 10:20 | 09/14/18 12:15 |
| MW2-9-13 (1809156-02) | T182850-02    | Water  | 09/13/18 10:30 | 09/14/18 12:15 |
| MW3-9-13 (1809156-03) | T182850-03    | Water  | 09/13/18 10:50 | 09/14/18 12:15 |
| MW4-9-13 (1809156-04) | T182850-04    | Water  | 09/13/18 11:10 | 09/14/18 12:15 |

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

*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 Wells 1,2,3,4  
 Project Manager: Rick Dever

Reported:  
 10/01/18 15:32

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

| Analyte  | Result     | MDL   | Reporting |       | Dilution | Batch   | Prepared | Analyzed       | Method  | Notes |
|--|------------|-------|-----------|-------|----------|---------|----------|----------------|---------|-------|
|  |            |       | Limit     | Units |          |         |          |                |         |       |
| <b>MW1-9-13 (1809156-01) Liquid    Sampled: 09/13/18 10:20    Received: 09/13/18 13:10</b> |            |       |           |       |          |         |          |                |         |       |
| Acrolein   | ND         | 2.6   | 5.0       | µg/L  | 1        | B8I1754 | 09/14/18 | 09/14/18 15:36 | EPA 624 |       |
| Acrylonitrile  | ND         | 1.5   | 2.0       | "     | "        | "       | "        | "              | "       |       |
| Benzene  | ND         | 0.47  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Bromobenzene   | ND         | 0.42  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Bromodichloromethane   | ND         | 0.31  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Bromoform  | ND         | 0.51  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Bromomethane   | ND         | 0.67  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Carbon tetrachloride   | ND         | 0.38  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Chlorobenzene  | ND         | 0.31  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Chloroethane   | ND         | 0.55  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 2-Chloroethylvinyl ether   | ND         | 0.28  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| <b>Chloroform</b>  | <b>1.0</b> | 0.36  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Chloromethane  | ND         | 0.47  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Dibromochloromethane   | ND         | 0.36  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,2-Dichlorobenzene  | ND         | 0.36  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,3-Dichlorobenzene  | ND         | 0.20  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,4-Dichlorobenzene  | ND         | 0.36  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,1-Dichloroethane   | ND         | 0.29  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,2-Dichloroethane   | ND         | 0.25  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,1-Dichloroethene   | ND         | 0.070 | 1.0       | "     | "        | "       | "        | "              | "       |       |
| cis-1,2-Dichloroethene   | ND         | 0.49  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| trans-1,2-Dichloroethene   | ND         | 0.37  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,2-Dichloropropane  | ND         | 0.15  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,1-Dichloropropene  | ND         | 0.33  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| cis-1,3-Dichloropropene  | ND         | 0.31  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| trans-1,3-Dichloropropene  | ND         | 0.32  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Ethylbenzene   | ND         | 0.38  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Methylene chloride   | ND         | 0.43  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,1,2,2-Tetrachloroethane  | ND         | 0.42  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Tetrachloroethene  | ND         | 0.49  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Toluene  | ND         | 0.48  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,1,1-Trichloroethane  | ND         | 0.23  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,1,2-Trichloroethane  | ND         | 0.34  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Trichloroethene  | ND         | 0.31  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Trichlorofluoromethane   | ND         | 0.19  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Vinyl chloride   | ND         | 0.47  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| m,p-Xylene   | ND         | 0.62  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| o-Xylene   | ND         | 0.30  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Methyl tert-butyl ether  | ND         | 0.42  | 1.0       | "     | "        | "       | "        | "              | "       |       |

*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 Wells 1,2,3,4  
 Project Manager: Rick Dever

Reported:  
 10/01/18 15:32

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

| Analyte | Result | MDL | Reporting |       | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|-----|-----------|-------|----------|-------|----------|----------|--------|-------|
|         |        |     | Limit     | Units |          |       |          |          |        |       |

**MW1-9-13 (1809156-01) Liquid Sampled: 09/13/18 10:20 Received: 09/13/18 13:10**

|                                 |  |       |        |  |  |         |          |                |         |  |
|---------------------------------|--|-------|--------|--|--|---------|----------|----------------|---------|--|
| Surrogate: Dibromofluoromethane |  | 104 % | 86-118 |  |  | B811754 | 09/14/18 | 09/14/18 15:36 | EPA 624 |  |
| Surrogate: Toluene-d8           |  | 103 % | 88-110 |  |  | "       | "        | "              | "       |  |
| Surrogate: 4-Bromofluorobenzene |  | 104 % | 86-115 |  |  | "       | "        | "              | "       |  |

**MW2-9-13 (1809156-02) Liquid Sampled: 09/13/18 10:30 Received: 09/13/18 13:10**

|                           |    |       |     |      |   |         |          |                |         |  |
|---------------------------|----|-------|-----|------|---|---------|----------|----------------|---------|--|
| Acrolein                  | ND | 2.6   | 5.0 | µg/L | 1 | B811754 | 09/14/18 | 09/14/18 15:36 | EPA 624 |  |
| Acrylonitrile             | ND | 1.5   | 2.0 | "    | " | "       | "        | "              | "       |  |
| Benzene                   | ND | 0.47  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Bromobenzene              | ND | 0.42  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Bromodichloromethane      | ND | 0.31  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Bromoform                 | ND | 0.51  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Bromomethane              | ND | 0.67  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Carbon tetrachloride      | ND | 0.38  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Chlorobenzene             | ND | 0.31  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Chloroethane              | ND | 0.55  | 1.0 | "    | " | "       | "        | "              | "       |  |
| 2-Chloroethylvinyl ether  | ND | 0.28  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Chloroform                | ND | 0.36  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Chloromethane             | ND | 0.47  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Dibromochloromethane      | ND | 0.36  | 1.0 | "    | " | "       | "        | "              | "       |  |
| 1,2-Dichlorobenzene       | ND | 0.36  | 1.0 | "    | " | "       | "        | "              | "       |  |
| 1,3-Dichlorobenzene       | ND | 0.20  | 1.0 | "    | " | "       | "        | "              | "       |  |
| 1,4-Dichlorobenzene       | ND | 0.36  | 1.0 | "    | " | "       | "        | "              | "       |  |
| 1,1-Dichloroethane        | ND | 0.29  | 1.0 | "    | " | "       | "        | "              | "       |  |
| 1,2-Dichloroethane        | ND | 0.25  | 1.0 | "    | " | "       | "        | "              | "       |  |
| 1,1-Dichloroethene        | ND | 0.070 | 1.0 | "    | " | "       | "        | "              | "       |  |
| cis-1,2-Dichloroethene    | ND | 0.49  | 1.0 | "    | " | "       | "        | "              | "       |  |
| trans-1,2-Dichloroethene  | ND | 0.37  | 1.0 | "    | " | "       | "        | "              | "       |  |
| 1,2-Dichloropropane       | ND | 0.15  | 1.0 | "    | " | "       | "        | "              | "       |  |
| 1,1-Dichloropropene       | ND | 0.33  | 1.0 | "    | " | "       | "        | "              | "       |  |
| cis-1,3-Dichloropropene   | ND | 0.31  | 1.0 | "    | " | "       | "        | "              | "       |  |
| trans-1,3-Dichloropropene | ND | 0.32  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Ethylbenzene              | ND | 0.38  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Methylene chloride        | ND | 0.43  | 1.0 | "    | " | "       | "        | "              | "       |  |
| 1,1,2,2-Tetrachloroethane | ND | 0.42  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Tetrachloroethene         | ND | 0.49  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Toluene                   | ND | 0.48  | 1.0 | "    | " | "       | "        | "              | "       |  |
| 1,1,1-Trichloroethane     | ND | 0.23  | 1.0 | "    | " | "       | "        | "              | "       |  |
| 1,1,2-Trichloroethane     | ND | 0.34  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Trichloroethene           | ND | 0.31  | 1.0 | "    | " | "       | "        | "              | "       |  |

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 Wells 1,2,3,4  
 Project Manager: Rick Dever

Reported:  
 10/01/18 15:32

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

| Analyte  | Result | MDL   | Reporting |       | Dilution | Batch   | Prepared | Analyzed       | Method  | Notes |
|--|--------|-------|-----------|-------|----------|---------|----------|----------------|---------|-------|
|  |        |       | Limit     | Units |          |         |          |                |         |       |
| <b>MW2-9-13 (1809156-02) Liquid    Sampled: 09/13/18 10:30    Received: 09/13/18 13:10</b> |        |       |           |       |          |         |          |                |         |       |
| Trichlorofluoromethane   | ND     | 0.19  | 1.0       | µg/L  | 1        | B811754 | 09/14/18 | 09/14/18 15:36 | EPA 624 |       |
| Vinyl chloride   | ND     | 0.47  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| m,p-Xylene   | ND     | 0.62  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| o-Xylene   | ND     | 0.30  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Methyl tert-butyl ether  | ND     | 0.42  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| <i>Surrogate: Dibromofluoromethane</i>   |        | 112 % | 86-118    |       |          | "       | "        | "              | "       |       |
| <i>Surrogate: Toluene-d8</i>   |        | 105 % | 88-110    |       |          | "       | "        | "              | "       |       |
| <i>Surrogate: 4-Bromofluorobenzene</i>   |        | 101 % | 86-115    |       |          | "       | "        | "              | "       |       |
| <b>MW3-9-13 (1809156-03) Liquid    Sampled: 09/13/18 10:50    Received: 09/13/18 13:10</b> |        |       |           |       |          |         |          |                |         |       |
| Acrolein   | ND     | 2.6   | 5.0       | µg/L  | 1        | B811754 | 09/14/18 | 09/14/18 15:36 | EPA 624 |       |
| Acrylonitrile  | ND     | 1.5   | 2.0       | "     | "        | "       | "        | "              | "       |       |
| Benzene  | ND     | 0.47  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Bromobenzene   | ND     | 0.42  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Bromodichloromethane   | ND     | 0.31  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Bromoform  | ND     | 0.51  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Bromomethane   | ND     | 0.67  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Carbon tetrachloride   | ND     | 0.38  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Chlorobenzene  | ND     | 0.31  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Chloroethane   | ND     | 0.55  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 2-Chloroethylvinyl ether   | ND     | 0.28  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Chloroform   | ND     | 0.36  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Chloromethane  | ND     | 0.47  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Dibromochloromethane   | ND     | 0.36  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,2-Dichlorobenzene  | ND     | 0.36  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,3-Dichlorobenzene  | ND     | 0.20  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,4-Dichlorobenzene  | ND     | 0.36  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,1-Dichloroethane   | ND     | 0.29  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,2-Dichloroethane   | ND     | 0.25  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,1-Dichloroethene   | ND     | 0.070 | 1.0       | "     | "        | "       | "        | "              | "       |       |
| cis-1,2-Dichloroethene   | ND     | 0.49  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| trans-1,2-Dichloroethene   | ND     | 0.37  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,2-Dichloropropane  | ND     | 0.15  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,1-Dichloropropene  | ND     | 0.33  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| cis-1,3-Dichloropropene  | ND     | 0.31  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| trans-1,3-Dichloropropene  | ND     | 0.32  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Ethylbenzene   | ND     | 0.38  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Methylene chloride   | ND     | 0.43  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,1,2,2-Tetrachloroethane  | ND     | 0.42  | 1.0       | "     | "        | "       | "        | "              | "       |       |

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 Wells 1,2,3,4  
 Project Manager: Rick Dever

Reported:  
 10/01/18 15:32

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

| Analyte | Result | MDL | Reporting |       | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|-----|-----------|-------|----------|-------|----------|----------|--------|-------|
|         |        |     | Limit     | Units |          |       |          |          |        |       |

**MW3-9-13 (1809156-03) Liquid**    **Sampled: 09/13/18 10:50**    **Received: 09/13/18 13:10**

|  |    |       |        |      |   |         |          |                |         |  |
|--|----|-------|--------|------|---|---------|----------|----------------|---------|--|
| Tetrachloroethene                      | ND | 0.49  | 1.0    | µg/L | 1 | B811754 | 09/14/18 | 09/14/18 15:36 | EPA 624 |  |
| Toluene                                | ND | 0.48  | 1.0    | "    | " | "       | "        | "              | "       |  |
| 1,1,1-Trichloroethane                  | ND | 0.23  | 1.0    | "    | " | "       | "        | "              | "       |  |
| 1,1,2-Trichloroethane                  | ND | 0.34  | 1.0    | "    | " | "       | "        | "              | "       |  |
| Trichloroethene                        | ND | 0.31  | 1.0    | "    | " | "       | "        | "              | "       |  |
| Trichlorofluoromethane                 | ND | 0.19  | 1.0    | "    | " | "       | "        | "              | "       |  |
| Vinyl chloride                         | ND | 0.47  | 1.0    | "    | " | "       | "        | "              | "       |  |
| m,p-Xylene                             | ND | 0.62  | 1.0    | "    | " | "       | "        | "              | "       |  |
| o-Xylene                               | ND | 0.30  | 1.0    | "    | " | "       | "        | "              | "       |  |
| Methyl tert-butyl ether                | ND | 0.42  | 1.0    | "    | " | "       | "        | "              | "       |  |
| <i>Surrogate: Dibromofluoromethane</i> |    | 106 % | 86-118 |      |   | "       | "        | "              | "       |  |
| <i>Surrogate: Toluene-d8</i>           |    | 102 % | 88-110 |      |   | "       | "        | "              | "       |  |
| <i>Surrogate: 4-Bromofluorobenzene</i> |    | 103 % | 86-115 |      |   | "       | "        | "              | "       |  |

**MW4-9-13 (1809156-04) Liquid**    **Sampled: 09/13/18 11:10**    **Received: 09/13/18 13:10**

|                          |    |       |     |      |   |         |          |                |         |  |
|--------------------------|----|-------|-----|------|---|---------|----------|----------------|---------|--|
| Acrolein                 | ND | 2.6   | 5.0 | µg/L | 1 | B811754 | 09/14/18 | 09/14/18 15:36 | EPA 624 |  |
| Acrylonitrile            | ND | 1.5   | 2.0 | "    | " | "       | "        | "              | "       |  |
| Benzene                  | ND | 0.47  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Bromobenzene             | ND | 0.42  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Bromodichloromethane     | ND | 0.31  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Bromoform                | ND | 0.51  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Bromomethane             | ND | 0.67  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Carbon tetrachloride     | ND | 0.38  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Chlorobenzene            | ND | 0.31  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Chloroethane             | ND | 0.55  | 1.0 | "    | " | "       | "        | "              | "       |  |
| 2-Chloroethylvinyl ether | ND | 0.28  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Chloroform               | ND | 0.36  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Chloromethane            | ND | 0.47  | 1.0 | "    | " | "       | "        | "              | "       |  |
| Dibromochloromethane     | ND | 0.36  | 1.0 | "    | " | "       | "        | "              | "       |  |
| 1,2-Dichlorobenzene      | ND | 0.36  | 1.0 | "    | " | "       | "        | "              | "       |  |
| 1,3-Dichlorobenzene      | ND | 0.20  | 1.0 | "    | " | "       | "        | "              | "       |  |
| 1,4-Dichlorobenzene      | ND | 0.36  | 1.0 | "    | " | "       | "        | "              | "       |  |
| 1,1-Dichloroethane       | ND | 0.29  | 1.0 | "    | " | "       | "        | "              | "       |  |
| 1,2-Dichloroethane       | ND | 0.25  | 1.0 | "    | " | "       | "        | "              | "       |  |
| 1,1-Dichloroethene       | ND | 0.070 | 1.0 | "    | " | "       | "        | "              | "       |  |
| cis-1,2-Dichloroethene   | ND | 0.49  | 1.0 | "    | " | "       | "        | "              | "       |  |
| trans-1,2-Dichloroethene | ND | 0.37  | 1.0 | "    | " | "       | "        | "              | "       |  |
| 1,2-Dichloropropane      | ND | 0.15  | 1.0 | "    | " | "       | "        | "              | "       |  |
| 1,1-Dichloropropene      | ND | 0.33  | 1.0 | "    | " | "       | "        | "              | "       |  |

*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                                      |                |
| P.O. Box 3395                 | Project Number: Las Flores Monitor Wells 1,2,3,4 | Reported:      |
| Crestline CA, 92325-3395      | Project Manager: Rick Dever                      | 10/01/18 15:32 |

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

| Analyte  | Result | MDL   | Reporting |       | Dilution | Batch   | Prepared | Analyzed       | Method  | Notes |
|--|--------|-------|-----------|-------|----------|---------|----------|----------------|---------|-------|
|  |        |       | Limit     | Units |          |         |          |                |         |       |
| <b>MW4-9-13 (1809156-04) Liquid    Sampled: 09/13/18 11:10    Received: 09/13/18 13:10</b> |        |       |           |       |          |         |          |                |         |       |
| cis-1,3-Dichloropropene  | ND     | 0.31  | 1.0       | µg/L  | 1        | B811754 | 09/14/18 | 09/14/18 15:36 | EPA 624 |       |
| trans-1,3-Dichloropropene  | ND     | 0.32  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Ethylbenzene   | ND     | 0.38  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Methylene chloride   | ND     | 0.43  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,1,2,2-Tetrachloroethane  | ND     | 0.42  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Tetrachloroethene  | ND     | 0.49  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Toluene  | ND     | 0.48  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,1,1-Trichloroethane  | ND     | 0.23  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| 1,1,2-Trichloroethane  | ND     | 0.34  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Trichloroethene  | ND     | 0.31  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Trichlorofluoromethane   | ND     | 0.19  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Vinyl chloride   | ND     | 0.47  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| m,p-Xylene   | ND     | 0.62  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| o-Xylene   | ND     | 0.30  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| Methyl tert-butyl ether  | ND     | 0.42  | 1.0       | "     | "        | "       | "        | "              | "       |       |
| <i>Surrogate: Dibromofluoromethane</i>   |        | 108 % | 86-118    |       |          | "       | "        | "              | "       |       |
| <i>Surrogate: Toluene-d8</i>   |        | 106 % | 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.*

Sierra Analytical  
26052 Merit Cir. Ste. 105  
Laguna Hills CA, 92653

Project: 1809156  
Project Number: 1809156  
Project Manager: Rick Forsyth

Reported:  
09/21/18 10:30

**MW1-9-13 (1809156-01)**

**T182850-01 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|-----------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|-----------------|-------|----------|-------|----------|----------|--------|-------|

**SunStar Laboratories, Inc.**

**Acid and Base/Neutral Extractables by EPA Method 625**

| Analyte                           | Result    | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method  | Notes |
|-----------------------------------|-----------|-----------------|-------|----------|---------|----------|----------|---------|-------|
| Acenaphthene                      | ND        | 10              | ug/l  | 1        | 8091416 | 09/14/18 | 09/18/18 | EPA 625 |       |
| Acenaphthylene                    | ND        | 10              | "     | "        | "       | "        | "        | "       |       |
| Anthracene                        | ND        | 10              | "     | "        | "       | "        | "        | "       |       |
| Benzo (a) anthracene              | ND        | 10              | "     | "        | "       | "        | "        | "       |       |
| Benzo (b) fluoranthene            | ND        | 10              | "     | "        | "       | "        | "        | "       |       |
| Benzo (k) fluoranthene            | ND        | 10              | "     | "        | "       | "        | "        | "       |       |
| Benzo (a) pyrene                  | ND        | 10              | "     | "        | "       | "        | "        | "       |       |
| Benzo (g,h,i) perylene            | ND        | 20              | "     | "        | "       | "        | "        | "       |       |
| Butyl benzyl phthalate            | ND        | 10              | "     | "        | "       | "        | "        | "       |       |
| Bis(2-chloroethyl)ether           | ND        | 5.0             | "     | "        | "       | "        | "        | "       |       |
| Bis(2-chloroethoxy)methane        | ND        | 10              | "     | "        | "       | "        | "        | "       |       |
| <b>Bis(2-ethylhexyl)phthalate</b> | <b>10</b> | 10              | "     | "        | "       | "        | "        | "       |       |
| Bis(2-chloroisopropyl)ether       | ND        | 20              | "     | "        | "       | "        | "        | "       |       |
| 4-Bromophenyl phenyl ether        | ND        | 5.0             | "     | "        | "       | "        | "        | "       |       |
| 2-Chloronaphthalene               | ND        | 10              | "     | "        | "       | "        | "        | "       |       |
| 4-Chlorophenyl phenyl ether       | ND        | 20              | "     | "        | "       | "        | "        | "       |       |
| Chrysene                          | ND        | 10              | "     | "        | "       | "        | "        | "       |       |
| Dibenz (a,h) anthracene           | ND        | 10              | "     | "        | "       | "        | "        | "       |       |
| Di-n-butyl phthalate              | ND        | 5.0             | "     | "        | "       | "        | "        | "       |       |
| 1,2-Dichlorobenzene               | ND        | 5.0             | "     | "        | "       | "        | "        | "       |       |
| 1,3-Dichlorobenzene               | ND        | 5.0             | "     | "        | "       | "        | "        | "       |       |
| 1,4-Dichlorobenzene               | ND        | 10              | "     | "        | "       | "        | "        | "       |       |
| 3,3'-Dichlorobenzidine            | ND        | 10              | "     | "        | "       | "        | "        | "       |       |
| Diethyl phthalate                 | ND        | 10              | "     | "        | "       | "        | "        | "       |       |
| Dimethyl phthalate                | ND        | 10              | "     | "        | "       | "        | "        | "       |       |
| 2,4-Dinitrotoluene                | ND        | 10              | "     | "        | "       | "        | "        | "       |       |
| 2,6-Dinitrotoluene                | ND        | 20              | "     | "        | "       | "        | "        | "       |       |
| <b>Di-n-octyl phthalate</b>       | <b>20</b> | 10              | "     | "        | "       | "        | "        | "       |       |
| Fluoranthene                      | ND        | 5.0             | "     | "        | "       | "        | "        | "       |       |
| Fluorene                          | ND        | 10              | "     | "        | "       | "        | "        | "       |       |
| Hexachlorobenzene                 | ND        | 20              | "     | "        | "       | "        | "        | "       |       |
| Hexachlorobutadiene               | ND        | 10              | "     | "        | "       | "        | "        | "       |       |

SunStar Laboratories, Inc.

*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.*



Mike Jaroudi, Project Manager



|  |  |                             |
|--|--|-----------------------------|
| Sierra Analytical<br>26052 Merit Cir. Ste. 105<br>Laguna Hills CA, 92653 | Project: 1809156<br>Project Number: 1809156<br>Project Manager: Rick Forsyth | Reported:<br>09/21/18 10:30 |
|--|--|-----------------------------|

**MW1-9-13 (1809156-01)**  
**T182850-01 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|-----------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|-----------------|-------|----------|-------|----------|----------|--------|-------|

**SunStar Laboratories, Inc.**

**Acid and Base/Neutral Extractables by EPA Method 625**

|                                 |    |        |        |   |         |          |          |         |  |
|---------------------------------|----|--------|--------|---|---------|----------|----------|---------|--|
| Hexachloroethane                | ND | 5.0    | ug/l   | 1 | 8091416 | 09/14/18 | 09/18/18 | EPA 625 |  |
| Indeno (1,2,3-cd) pyrene        | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Isophorone                      | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Naphthalene                     | ND | 5.0    | "      | " | "       | "        | "        | "       |  |
| Nitrobenzene                    | ND | 20     | "      | " | "       | "        | "        | "       |  |
| N-Nitrosodi-n-propylamine       | ND | 5.0    | "      | " | "       | "        | "        | "       |  |
| Phenanthrene                    | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Pyrene                          | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 1,2,4-Trichlorobenzene          | ND | 5.0    | "      | " | "       | "        | "        | "       |  |
| 4-Chloro-3-methylphenol         | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 2-Chlorophenol                  | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 2,4-Dichlorophenol              | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 2,4-Dimethylphenol              | ND | 5.0    | "      | " | "       | "        | "        | "       |  |
| 2,4-Dinitrophenol               | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 4,6-Dinitro-2-methylphenol      | ND | 5.0    | "      | " | "       | "        | "        | "       |  |
| 2-Nitrophenol                   | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 4-Nitrophenol                   | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Pentachlorophenol               | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Phenol                          | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 2,4,6-Trichlorophenol           | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 2-Methyl-4,6-dinitrophenol      | ND | 20     | "      | " | "       | "        | "        | "       |  |
| 1,2-Diphenylhydrazine           | ND | 20     | "      | " | "       | "        | "        | "       |  |
| Benzidine                       | ND | 20     | "      | " | "       | "        | "        | "       |  |
| Hexachlorocyclopentadiene       | ND | 20     | "      | " | "       | "        | "        | "       |  |
| N-Nitrosodimethylamine          | ND | 25     | "      | " | "       | "        | "        | "       |  |
| N-Nitrosodiphenylamine          | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Surrogate: 2-Fluorophenol       |    | 36.9 % | 21-100 |   | "       | "        | "        | "       |  |
| Surrogate: Phenol-d6            |    | 25.3 % | 10-94  |   | "       | "        | "        | "       |  |
| Surrogate: Nitrobenzene-d5      |    | 73.9 % | 35-114 |   | "       | "        | "        | "       |  |
| Surrogate: 2-Fluorobiphenyl     |    | 74.3 % | 43-116 |   | "       | "        | "        | "       |  |
| Surrogate: 2,4,6-Tribromophenol |    | 88.2 % | 10-123 |   | "       | "        | "        | "       |  |
| Surrogate: Terphenyl-d14        |    | 101 %  | 33-141 |   | "       | "        | "        | "       |  |

SunStar Laboratories, Inc.

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.



Mike Jaroudi, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

|  |  |                             |
|--|--|-----------------------------|
| Sierra Analytical<br>26052 Merit Cir. Ste. 105<br>Laguna Hills CA, 92653 | Project: 1809156<br>Project Number: 1809156<br>Project Manager: Rick Forsyth | Reported:<br>09/21/18 10:30 |
|--|--|-----------------------------|

**MW2-9-13 (1809156-02)**  
**T182850-02 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|-----------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|-----------------|-------|----------|-------|----------|----------|--------|-------|

**SunStar Laboratories, Inc.**

**Acid and Base/Neutral Extractables by EPA Method 625**

|                                   |           |     |      |   |         |          |          |         |  |
|-----------------------------------|-----------|-----|------|---|---------|----------|----------|---------|--|
| Acenaphthene                      | ND        | 10  | ug/l | 1 | 8091416 | 09/14/18 | 09/18/18 | EPA 625 |  |
| Acenaphthylene                    | ND        | 10  | "    | " | "       | "        | "        | "       |  |
| Anthracene                        | ND        | 10  | "    | " | "       | "        | "        | "       |  |
| Benzo (a) anthracene              | ND        | 10  | "    | " | "       | "        | "        | "       |  |
| Benzo (b) fluoranthene            | ND        | 10  | "    | " | "       | "        | "        | "       |  |
| Benzo (k) fluoranthene            | ND        | 10  | "    | " | "       | "        | "        | "       |  |
| Benzo (a) pyrene                  | ND        | 10  | "    | " | "       | "        | "        | "       |  |
| Benzo (g,h,i) perylene            | ND        | 20  | "    | " | "       | "        | "        | "       |  |
| Butyl benzyl phthalate            | ND        | 10  | "    | " | "       | "        | "        | "       |  |
| Bis(2-chloroethyl)ether           | ND        | 5.0 | "    | " | "       | "        | "        | "       |  |
| Bis(2-chloroethoxy)methane        | ND        | 10  | "    | " | "       | "        | "        | "       |  |
| <b>Bis(2-ethylhexyl)phthalate</b> | <b>27</b> | 10  | "    | " | "       | "        | "        | "       |  |
| Bis(2-chloroisopropyl)ether       | ND        | 20  | "    | " | "       | "        | "        | "       |  |
| 4-Bromophenyl phenyl ether        | ND        | 5.0 | "    | " | "       | "        | "        | "       |  |
| 2-Chloronaphthalene               | ND        | 10  | "    | " | "       | "        | "        | "       |  |
| 4-Chlorophenyl phenyl ether       | ND        | 20  | "    | " | "       | "        | "        | "       |  |
| Chrysene                          | ND        | 10  | "    | " | "       | "        | "        | "       |  |
| Dibenz (a,h) anthracene           | ND        | 10  | "    | " | "       | "        | "        | "       |  |
| Di-n-butyl phthalate              | ND        | 5.0 | "    | " | "       | "        | "        | "       |  |
| 1,2-Dichlorobenzene               | ND        | 5.0 | "    | " | "       | "        | "        | "       |  |
| 1,3-Dichlorobenzene               | ND        | 5.0 | "    | " | "       | "        | "        | "       |  |
| 1,4-Dichlorobenzene               | ND        | 10  | "    | " | "       | "        | "        | "       |  |
| 3,3'-Dichlorobenzidine            | ND        | 10  | "    | " | "       | "        | "        | "       |  |
| Diethyl phthalate                 | ND        | 10  | "    | " | "       | "        | "        | "       |  |
| Dimethyl phthalate                | ND        | 10  | "    | " | "       | "        | "        | "       |  |
| 2,4-Dinitrotoluene                | ND        | 10  | "    | " | "       | "        | "        | "       |  |
| 2,6-Dinitrotoluene                | ND        | 20  | "    | " | "       | "        | "        | "       |  |
| Di-n-octyl phthalate              | ND        | 10  | "    | " | "       | "        | "        | "       |  |
| Fluoranthene                      | ND        | 5.0 | "    | " | "       | "        | "        | "       |  |
| Fluorene                          | ND        | 10  | "    | " | "       | "        | "        | "       |  |
| Hexachlorobenzene                 | ND        | 20  | "    | " | "       | "        | "        | "       |  |
| Hexachlorobutadiene               | ND        | 10  | "    | " | "       | "        | "        | "       |  |

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

*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.*



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

|  |  |                             |
|--|--|-----------------------------|
| Sierra Analytical<br>26052 Merit Cir. Ste. 105<br>Laguna Hills CA, 92653 | Project: 1809156<br>Project Number: 1809156<br>Project Manager: Rick Forsyth | Reported:<br>09/21/18 10:30 |
|--|--|-----------------------------|

**MW2-9-13 (1809156-02)**  
**T182850-02 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|-----------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|-----------------|-------|----------|-------|----------|----------|--------|-------|

**SunStar Laboratories, Inc.**

**Acid and Base/Neutral Extractables by EPA Method 625**

|                                 |    |        |      |        |         |          |          |         |  |
|---------------------------------|----|--------|------|--------|---------|----------|----------|---------|--|
| Hexachloroethane                | ND | 5.0    | ug/l | 1      | 8091416 | 09/14/18 | 09/18/18 | EPA 625 |  |
| Indeno (1,2,3-cd) pyrene        | ND | 10     | "    | "      | "       | "        | "        | "       |  |
| Isophorone                      | ND | 10     | "    | "      | "       | "        | "        | "       |  |
| Naphthalene                     | ND | 5.0    | "    | "      | "       | "        | "        | "       |  |
| Nitrobenzene                    | ND | 20     | "    | "      | "       | "        | "        | "       |  |
| N-Nitrosodi-n-propylamine       | ND | 5.0    | "    | "      | "       | "        | "        | "       |  |
| Phenanthrene                    | ND | 10     | "    | "      | "       | "        | "        | "       |  |
| Pyrene                          | ND | 10     | "    | "      | "       | "        | "        | "       |  |
| 1,2,4-Trichlorobenzene          | ND | 5.0    | "    | "      | "       | "        | "        | "       |  |
| 4-Chloro-3-methylphenol         | ND | 10     | "    | "      | "       | "        | "        | "       |  |
| 2-Chlorophenol                  | ND | 10     | "    | "      | "       | "        | "        | "       |  |
| 2,4-Dichlorophenol              | ND | 10     | "    | "      | "       | "        | "        | "       |  |
| 2,4-Dimethylphenol              | ND | 5.0    | "    | "      | "       | "        | "        | "       |  |
| 2,4-Dinitrophenol               | ND | 10     | "    | "      | "       | "        | "        | "       |  |
| 4,6-Dinitro-2-methylphenol      | ND | 5.0    | "    | "      | "       | "        | "        | "       |  |
| 2-Nitrophenol                   | ND | 10     | "    | "      | "       | "        | "        | "       |  |
| 4-Nitrophenol                   | ND | 10     | "    | "      | "       | "        | "        | "       |  |
| Pentachlorophenol               | ND | 10     | "    | "      | "       | "        | "        | "       |  |
| Phenol                          | ND | 10     | "    | "      | "       | "        | "        | "       |  |
| 2,4,6-Trichlorophenol           | ND | 10     | "    | "      | "       | "        | "        | "       |  |
| 2-Methyl-4,6-dinitrophenol      | ND | 20     | "    | "      | "       | "        | "        | "       |  |
| 1,2-Diphenylhydrazine           | ND | 20     | "    | "      | "       | "        | "        | "       |  |
| Benzidine                       | ND | 20     | "    | "      | "       | "        | "        | "       |  |
| Hexachlorocyclopentadiene       | ND | 20     | "    | "      | "       | "        | "        | "       |  |
| N-Nitrosodimethylamine          | ND | 25     | "    | "      | "       | "        | "        | "       |  |
| N-Nitrosodiphenylamine          | ND | 10     | "    | "      | "       | "        | "        | "       |  |
| Surrogate: 2-Fluorophenol       |    | 42.4 % |      | 21-100 | "       | "        | "        | "       |  |
| Surrogate: Phenol-d6            |    | 27.4 % |      | 10-94  | "       | "        | "        | "       |  |
| Surrogate: Nitrobenzene-d5      |    | 83.9 % |      | 35-114 | "       | "        | "        | "       |  |
| Surrogate: 2-Fluorobiphenyl     |    | 83.4 % |      | 43-116 | "       | "        | "        | "       |  |
| Surrogate: 2,4,6-Tribromophenol |    | 96.3 % |      | 10-123 | "       | "        | "        | "       |  |
| Surrogate: Terphenyl-d14        |    | 106 %  |      | 33-141 | "       | "        | "        | "       |  |

SunStar Laboratories, Inc.

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.

Mike Jaroudi, Project Manager

Sierra Analytical  
26052 Merit Cir. Ste. 105  
Laguna Hills CA, 92653

Project: 1809156  
Project Number: 1809156  
Project Manager: Rick Forsyth

Reported:  
09/21/18 10:30

**MW3-9-13 (1809156-03)**

**T182850-03 (Water)**

| Analyte | Result | Reporting<br>Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

**SunStar Laboratories, Inc.**

**Acid and Base/Neutral Extractables by EPA Method 625**

|                             |    |     |      |   |         |          |          |         |  |
|-----------------------------|----|-----|------|---|---------|----------|----------|---------|--|
| Acenaphthene                | ND | 10  | ug/l | 1 | 8091416 | 09/14/18 | 09/18/18 | EPA 625 |  |
| Acenaphthylene              | ND | 10  | "    | " | "       | "        | "        | "       |  |
| Anthracene                  | ND | 10  | "    | " | "       | "        | "        | "       |  |
| Benzo (a) anthracene        | ND | 10  | "    | " | "       | "        | "        | "       |  |
| Benzo (b) fluoranthene      | ND | 10  | "    | " | "       | "        | "        | "       |  |
| Benzo (k) fluoranthene      | ND | 10  | "    | " | "       | "        | "        | "       |  |
| Benzo (a) pyrene            | ND | 10  | "    | " | "       | "        | "        | "       |  |
| Benzo (g,h,i) perylene      | ND | 20  | "    | " | "       | "        | "        | "       |  |
| Butyl benzyl phthalate      | ND | 10  | "    | " | "       | "        | "        | "       |  |
| Bis(2-chloroethyl)ether     | ND | 5.0 | "    | " | "       | "        | "        | "       |  |
| Bis(2-chloroethoxy)methane  | ND | 10  | "    | " | "       | "        | "        | "       |  |
| Bis(2-ethylhexyl)phthalate  | ND | 10  | "    | " | "       | "        | "        | "       |  |
| Bis(2-chloroisopropyl)ether | ND | 20  | "    | " | "       | "        | "        | "       |  |
| 4-Bromophenyl phenyl ether  | ND | 5.0 | "    | " | "       | "        | "        | "       |  |
| 2-Chloronaphthalene         | ND | 10  | "    | " | "       | "        | "        | "       |  |
| 4-Chlorophenyl phenyl ether | ND | 20  | "    | " | "       | "        | "        | "       |  |
| Chrysene                    | ND | 10  | "    | " | "       | "        | "        | "       |  |
| Dibenz (a,h) anthracene     | ND | 10  | "    | " | "       | "        | "        | "       |  |
| Di-n-butyl phthalate        | ND | 5.0 | "    | " | "       | "        | "        | "       |  |
| 1,2-Dichlorobenzene         | ND | 5.0 | "    | " | "       | "        | "        | "       |  |
| 1,3-Dichlorobenzene         | ND | 5.0 | "    | " | "       | "        | "        | "       |  |
| 1,4-Dichlorobenzene         | ND | 10  | "    | " | "       | "        | "        | "       |  |
| 3,3'-Dichlorobenzidine      | ND | 10  | "    | " | "       | "        | "        | "       |  |
| Diethyl phthalate           | ND | 10  | "    | " | "       | "        | "        | "       |  |
| Dimethyl phthalate          | ND | 10  | "    | " | "       | "        | "        | "       |  |
| 2,4-Dinitrotoluene          | ND | 10  | "    | " | "       | "        | "        | "       |  |
| 2,6-Dinitrotoluene          | ND | 20  | "    | " | "       | "        | "        | "       |  |
| Di-n-octyl phthalate        | ND | 10  | "    | " | "       | "        | "        | "       |  |
| Fluoranthene                | ND | 5.0 | "    | " | "       | "        | "        | "       |  |
| Fluorene                    | ND | 10  | "    | " | "       | "        | "        | "       |  |
| Hexachlorobenzene           | ND | 20  | "    | " | "       | "        | "        | "       |  |
| Hexachlorobutadiene         | ND | 10  | "    | " | "       | "        | "        | "       |  |

SunStar Laboratories, Inc.



Mike Jaroudi, Project Manager

*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.*



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Sierra Analytical  
 26052 Merit Cir. Ste. 105  
 Laguna Hills CA, 92653

Project: 1809156  
 Project Number: 1809156  
 Project Manager: Rick Forsyth

Reported:  
 09/21/18 10:30

**MW3-9-13 (1809156-03)**  
**T182850-03 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|-----------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|-----------------|-------|----------|-------|----------|----------|--------|-------|

**SunStar Laboratories, Inc.**

**Acid and Base/Neutral Extractables by EPA Method 625**

|                                 |    |        |        |   |         |          |          |         |  |
|---------------------------------|----|--------|--------|---|---------|----------|----------|---------|--|
| Hexachloroethane                | ND | 5.0    | ug/l   | 1 | 8091416 | 09/14/18 | 09/18/18 | EPA 625 |  |
| Indeno (1,2,3-cd) pyrene        | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Isophorone                      | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Naphthalene                     | ND | 5.0    | "      | " | "       | "        | "        | "       |  |
| Nitrobenzene                    | ND | 20     | "      | " | "       | "        | "        | "       |  |
| N-Nitrosodi-n-propylamine       | ND | 5.0    | "      | " | "       | "        | "        | "       |  |
| Phenanthrene                    | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Pyrene                          | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 1,2,4-Trichlorobenzene          | ND | 5.0    | "      | " | "       | "        | "        | "       |  |
| 4-Chloro-3-methylphenol         | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 2-Chlorophenol                  | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 2,4-Dichlorophenol              | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 2,4-Dimethylphenol              | ND | 5.0    | "      | " | "       | "        | "        | "       |  |
| 2,4-Dinitrophenol               | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 4,6-Dinitro-2-methylphenol      | ND | 5.0    | "      | " | "       | "        | "        | "       |  |
| 2-Nitrophenol                   | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 4-Nitrophenol                   | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Pentachlorophenol               | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Phenol                          | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 2,4,6-Trichlorophenol           | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 2-Methyl-4,6-dinitrophenol      | ND | 20     | "      | " | "       | "        | "        | "       |  |
| 1,2-Diphenylhydrazine           | ND | 20     | "      | " | "       | "        | "        | "       |  |
| Benzidine                       | ND | 20     | "      | " | "       | "        | "        | "       |  |
| Hexachlorocyclopentadiene       | ND | 20     | "      | " | "       | "        | "        | "       |  |
| N-Nitrosodimethylamine          | ND | 25     | "      | " | "       | "        | "        | "       |  |
| N-Nitrosodiphenylamine          | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Surrogate: 2-Fluorophenol       |    | 38.0 % | 21-100 |   | "       | "        | "        | "       |  |
| Surrogate: Phenol-d6            |    | 25.4 % | 10-94  |   | "       | "        | "        | "       |  |
| Surrogate: Nitrobenzene-d5      |    | 76.2 % | 35-114 |   | "       | "        | "        | "       |  |
| Surrogate: 2-Fluorobiphenyl     |    | 75.3 % | 43-116 |   | "       | "        | "        | "       |  |
| Surrogate: 2,4,6-Tribromophenol |    | 89.7 % | 10-123 |   | "       | "        | "        | "       |  |
| Surrogate: Terphenyl-d14        |    | 96.0 % | 33-141 |   | "       | "        | "        | "       |  |

SunStar Laboratories, Inc.

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.

Mike Jaroudi, Project Manager

|  |  |                             |
|--|--|-----------------------------|
| Sierra Analytical<br>26052 Merit Cir. Ste. 105<br>Laguna Hills CA, 92653 | Project: 1809156<br>Project Number: 1809156<br>Project Manager: Rick Forsyth | Reported:<br>09/21/18 10:30 |
|--|--|-----------------------------|

**MW4-9-13 (1809156-04)  
T182850-04 (Water)**

| Analyte | Result | Reporting<br>Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

**SunStar Laboratories, Inc.**

**Acid and Base/Neutral Extractables by EPA Method 625**

| Analyte                     | Result | Reporting<br>Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method  | Notes |
|-----------------------------|--------|--------------------|-------|----------|---------|----------|----------|---------|-------|
| Acenaphthene                | ND     | 10                 | ug/l  | 1        | 8091416 | 09/14/18 | 09/18/18 | EPA 625 |       |
| Acenaphthylene              | ND     | 10                 | "     | "        | "       | "        | "        | "       |       |
| Anthracene                  | ND     | 10                 | "     | "        | "       | "        | "        | "       |       |
| Benzo (a) anthracene        | ND     | 10                 | "     | "        | "       | "        | "        | "       |       |
| Benzo (b) fluoranthene      | ND     | 10                 | "     | "        | "       | "        | "        | "       |       |
| Benzo (k) fluoranthene      | ND     | 10                 | "     | "        | "       | "        | "        | "       |       |
| Benzo (a) pyrene            | ND     | 10                 | "     | "        | "       | "        | "        | "       |       |
| Benzo (g,h,i) perylene      | ND     | 20                 | "     | "        | "       | "        | "        | "       |       |
| Butyl benzyl phthalate      | ND     | 10                 | "     | "        | "       | "        | "        | "       |       |
| Bis(2-chloroethyl)ether     | ND     | 5.0                | "     | "        | "       | "        | "        | "       |       |
| Bis(2-chloroethoxy)methane  | ND     | 10                 | "     | "        | "       | "        | "        | "       |       |
| Bis(2-ethylhexyl)phthalate  | ND     | 10                 | "     | "        | "       | "        | "        | "       |       |
| Bis(2-chloroisopropyl)ether | ND     | 20                 | "     | "        | "       | "        | "        | "       |       |
| 4-Bromophenyl phenyl ether  | ND     | 5.0                | "     | "        | "       | "        | "        | "       |       |
| 2-Chloronaphthalene         | ND     | 10                 | "     | "        | "       | "        | "        | "       |       |
| 4-Chlorophenyl phenyl ether | ND     | 20                 | "     | "        | "       | "        | "        | "       |       |
| Chrysene                    | ND     | 10                 | "     | "        | "       | "        | "        | "       |       |
| Dibenz (a,h) anthracene     | ND     | 10                 | "     | "        | "       | "        | "        | "       |       |
| Di-n-butyl phthalate        | ND     | 5.0                | "     | "        | "       | "        | "        | "       |       |
| 1,2-Dichlorobenzene         | ND     | 5.0                | "     | "        | "       | "        | "        | "       |       |
| 1,3-Dichlorobenzene         | ND     | 5.0                | "     | "        | "       | "        | "        | "       |       |
| 1,4-Dichlorobenzene         | ND     | 10                 | "     | "        | "       | "        | "        | "       |       |
| 3,3'-Dichlorobenzidine      | ND     | 10                 | "     | "        | "       | "        | "        | "       |       |
| Diethyl phthalate           | ND     | 10                 | "     | "        | "       | "        | "        | "       |       |
| Dimethyl phthalate          | ND     | 10                 | "     | "        | "       | "        | "        | "       |       |
| 2,4-Dinitrotoluene          | ND     | 10                 | "     | "        | "       | "        | "        | "       |       |
| 2,6-Dinitrotoluene          | ND     | 20                 | "     | "        | "       | "        | "        | "       |       |
| Di-n-octyl phthalate        | ND     | 10                 | "     | "        | "       | "        | "        | "       |       |
| Fluoranthene                | ND     | 5.0                | "     | "        | "       | "        | "        | "       |       |
| Fluorene                    | ND     | 10                 | "     | "        | "       | "        | "        | "       |       |
| Hexachlorobenzene           | ND     | 20                 | "     | "        | "       | "        | "        | "       |       |
| Hexachlorobutadiene         | ND     | 10                 | "     | "        | "       | "        | "        | "       |       |

SunStar Laboratories, Inc.

*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.*



Mike Jaroudi, Project Manager

Sierra Analytical  
26052 Merit Cir. Ste. 105  
Laguna Hills CA, 92653

Project: 1809156  
Project Number: 1809156  
Project Manager: Rick Forsyth

Reported:  
09/21/18 10:30

**MW4-9-13 (1809156-04)**

**T182850-04 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|-----------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|-----------------|-------|----------|-------|----------|----------|--------|-------|

**SunStar Laboratories, Inc.**

**Acid and Base/Neutral Extractables by EPA Method 625**

|                                 |    |        |        |   |         |          |          |         |  |
|---------------------------------|----|--------|--------|---|---------|----------|----------|---------|--|
| Hexachloroethane                | ND | 5.0    | ug/l   | 1 | 8091416 | 09/14/18 | 09/18/18 | EPA 625 |  |
| Indeno (1,2,3-cd) pyrene        | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Isophorone                      | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Naphthalene                     | ND | 5.0    | "      | " | "       | "        | "        | "       |  |
| Nitrobenzene                    | ND | 20     | "      | " | "       | "        | "        | "       |  |
| N-Nitrosodi-n-propylamine       | ND | 5.0    | "      | " | "       | "        | "        | "       |  |
| Phenanthrene                    | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Pyrene                          | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 1,2,4-Trichlorobenzene          | ND | 5.0    | "      | " | "       | "        | "        | "       |  |
| 4-Chloro-3-methylphenol         | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 2-Chlorophenol                  | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 2,4-Dichlorophenol              | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 2,4-Dimethylphenol              | ND | 5.0    | "      | " | "       | "        | "        | "       |  |
| 2,4-Dinitrophenol               | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 4,6-Dinitro-2-methylphenol      | ND | 5.0    | "      | " | "       | "        | "        | "       |  |
| 2-Nitrophenol                   | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 4-Nitrophenol                   | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Pentachlorophenol               | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Phenol                          | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 2,4,6-Trichlorophenol           | ND | 10     | "      | " | "       | "        | "        | "       |  |
| 2-Methyl-4,6-dinitrophenol      | ND | 20     | "      | " | "       | "        | "        | "       |  |
| 1,2-Diphenylhydrazine           | ND | 20     | "      | " | "       | "        | "        | "       |  |
| Benzidine                       | ND | 20     | "      | " | "       | "        | "        | "       |  |
| Hexachlorocyclopentadiene       | ND | 20     | "      | " | "       | "        | "        | "       |  |
| N-Nitrosodimethylamine          | ND | 25     | "      | " | "       | "        | "        | "       |  |
| N-Nitrosodiphenylamine          | ND | 10     | "      | " | "       | "        | "        | "       |  |
| Surrogate: 2-Fluorophenol       |    | 39.2 % | 21-100 |   | "       | "        | "        | "       |  |
| Surrogate: Phenol-d6            |    | 26.6 % | 10-94  |   | "       | "        | "        | "       |  |
| Surrogate: Nitrobenzene-d5      |    | 80.8 % | 35-114 |   | "       | "        | "        | "       |  |
| Surrogate: 2-Fluorobiphenyl     |    | 78.7 % | 43-116 |   | "       | "        | "        | "       |  |
| Surrogate: 2,4,6-Tribromophenol |    | 92.2 % | 10-123 |   | "       | "        | "        | "       |  |
| Surrogate: Terphenyl-d14        |    | 97.7 % | 33-141 |   | "       | "        | "        | "       |  |

SunStar Laboratories, Inc.



Mike Jaroudi, Project Manager

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 Wells 1,2,3,4  
Project Manager: Rick Dever

Reported:  
10/01/18 15:32

ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|-----------|---------------|--------|----------------|----------------|
| MW1-9-13  | 1809156-01    | Liquid | 09/13/18 10:20 | 09/13/18 13:10 |
| MW2-9-13  | 1809156-02    | Liquid | 09/13/18 10:30 | 09/13/18 13:10 |
| MW3-9-13  | 1809156-03    | Liquid | 09/13/18 10:50 | 09/13/18 13:10 |
| MW4-9-13  | 1809156-04    | Liquid | 09/13/18 11:10 | 09/13/18 13:10 |

*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 Wells 1,2,3,4  
Project Manager: Rick Dever

Reported:  
10/01/18 15:32

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

| Analyte  | Result       | MDL          | Reporting    |       | Dilution | Batch   | Prepared | Analyzed       | Method    | Notes |
|--|--------------|--------------|--------------|-------|----------|---------|----------|----------------|-----------|-------|
|  |              |              | Limit        | Units |          |         |          |                |           |       |
| <b>MW1-9-13 (1809156-01) Liquid    Sampled: 09/13/18 10:20    Received: 09/13/18 13:10</b> |              |              |              |       |          |         |          |                |           |       |
| Bromodichloromethane   | ND           | 0.150        | 0.500        | µg/L  | 1        | B811308 | 09/17/18 | 09/18/18 08:21 | EPA 524.2 |       |
| Bromoform  | ND           | 0.250        | 0.500        | "     | "        | "       | "        | "              | "         |       |
| Chloroform   | ND           | 0.180        | 0.500        | "     | "        | "       | "        | "              | "         |       |
| Dibromochloromethane   | ND           | 0.180        | 0.500        | "     | "        | "       | "        | "              | "         |       |
| <b>Total Trihalomethanes</b>   | ND           | <b>0.500</b> | <b>0.500</b> | "     | "        | "       | "        | "              | "         |       |
| <i>Surrogate: Dibromofluoromethane</i>   |              | 109 %        | 86-118       |       |          | "       | "        | "              | "         |       |
| <i>Surrogate: Toluene-d8</i>   |              | 99.0 %       | 88-110       |       |          | "       | "        | "              | "         |       |
| <i>Surrogate: 4-Bromofluorobenzene</i>   |              | 94.4 %       | 86-115       |       |          | "       | "        | "              | "         |       |
| <b>MW2-9-13 (1809156-02) Liquid    Sampled: 09/13/18 10:30    Received: 09/13/18 13:10</b> |              |              |              |       |          |         |          |                |           |       |
| Bromodichloromethane   | ND           | 0.150        | 0.500        | µg/L  | 1        | B811308 | 09/17/18 | 09/18/18 08:21 | EPA 524.2 |       |
| Bromoform  | ND           | 0.250        | 0.500        | "     | "        | "       | "        | "              | "         |       |
| <b>Chloroform</b>  | <b>2.58</b>  | 0.180        | 0.500        | "     | "        | "       | "        | "              | "         |       |
| Dibromochloromethane   | ND           | 0.180        | 0.500        | "     | "        | "       | "        | "              | "         |       |
| <b>Total Trihalomethanes</b>   | <b>2.58</b>  | <b>0.500</b> | <b>0.500</b> | "     | "        | "       | "        | "              | "         |       |
| <i>Surrogate: Dibromofluoromethane</i>   |              | 110 %        | 86-118       |       |          | "       | "        | "              | "         |       |
| <i>Surrogate: Toluene-d8</i>   |              | 101 %        | 88-110       |       |          | "       | "        | "              | "         |       |
| <i>Surrogate: 4-Bromofluorobenzene</i>   |              | 98.2 %       | 86-115       |       |          | "       | "        | "              | "         |       |
| <b>MW3-9-13 (1809156-03) Liquid    Sampled: 09/13/18 10:50    Received: 09/13/18 13:10</b> |              |              |              |       |          |         |          |                |           |       |
| Bromodichloromethane   | ND           | 0.150        | 0.500        | µg/L  | 1        | B811308 | 09/17/18 | 09/18/18 08:21 | EPA 524.2 |       |
| Bromoform  | ND           | 0.250        | 0.500        | "     | "        | "       | "        | "              | "         |       |
| <b>Chloroform</b>  | <b>0.360</b> | 0.180        | 0.500        | "     | "        | "       | "        | "              | "         | J     |
| Dibromochloromethane   | ND           | 0.180        | 0.500        | "     | "        | "       | "        | "              | "         |       |
| <b>Total Trihalomethanes</b>   | ND           | <b>0.500</b> | <b>0.500</b> | "     | "        | "       | "        | "              | "         |       |
| <i>Surrogate: Dibromofluoromethane</i>   |              | 109 %        | 86-118       |       |          | "       | "        | "              | "         |       |
| <i>Surrogate: Toluene-d8</i>   |              | 97.0 %       | 88-110       |       |          | "       | "        | "              | "         |       |
| <i>Surrogate: 4-Bromofluorobenzene</i>   |              | 97.0 %       | 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 Wells 1,2,3,4  
 Project Manager: Rick Dever

Reported:  
 10/01/18 15:32

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

| Analyte  | Result | MDL    | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed       | Method    | Notes |
|--|--------|--------|-----------------|-------|----------|---------|----------|----------------|-----------|-------|
| <b>MW4-9-13 (1809156-04) Liquid    Sampled: 09/13/18 11:10    Received: 09/13/18 13:10</b> |        |        |                 |       |          |         |          |                |           |       |
| Bromodichloromethane   | ND     | 0.150  | 0.500           | µg/L  | 1        | B811308 | 09/17/18 | 09/18/18 08:21 | EPA 524.2 |       |
| Bromoform  | ND     | 0.250  | 0.500           | "     | "        | "       | "        | "              | "         |       |
| Chloroform   | ND     | 0.180  | 0.500           | "     | "        | "       | "        | "              | "         |       |
| Dibromochloromethane   | ND     | 0.180  | 0.500           | "     | "        | "       | "        | "              | "         |       |
| Total Trihalomethanes  | ND     | 0.500  | 0.500           | "     | "        | "       | "        | "              | "         |       |
| <i>Surrogate: Dibromofluoromethane</i>   |        | 116 %  | 86-118          |       |          | "       | "        | "              | "         |       |
| <i>Surrogate: Toluene-d8</i>   |        | 98.2 % | 88-110          |       |          | "       | "        | "              | "         |       |
| <i>Surrogate: 4-Bromofluorobenzene</i>   |        | 97.0 % | 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 Wells 1,2,3,4  
Project Manager: Rick Dever

Reported:  
10/01/18 15:32

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

| Analyte  | Result | MDL    | Reporting |       | Dilution | Batch   | Prepared | Analyzed       | Method    | Notes |
|--|--------|--------|-----------|-------|----------|---------|----------|----------------|-----------|-------|
|  |        |        | Limit     | Units |          |         |          |                |           |       |
| <b>MW1-9-13 (1809156-01) Liquid    Sampled: 09/13/18 10:20    Received: 09/13/18 13:10</b> |        |        |           |       |          |         |          |                |           |       |
| Monochloroacetic Acid  | ND     | 0.192  | 2.00      | µg/L  | 1        | B811758 | 09/17/18 | 09/18/18 15:18 | EPA 552.2 |       |
| Dichloroacetic Acid  | ND     | 0.188  | 1.00      | "     | "        | "       | "        | "              | "         |       |
| Trichloroacetic Acid   | ND     | 0.0980 | 1.00      | "     | "        | "       | "        | "              | "         |       |
| Monobromoacetic Acid   | ND     | 0.0670 | 1.00      | "     | "        | "       | "        | "              | "         |       |
| Dibromoacetic Acid   | ND     | 0.0580 | 1.00      | "     | "        | "       | "        | "              | "         |       |
| Total Haloacetic Acids   | ND     | 0.200  | 1.00      | "     | "        | "       | "        | "              | "         |       |
| <i>Surrogate: 2,3-Dibromopropionic Acid</i>  |        | 81.6 % | 60-150    |       |          | "       | "        | "              | "         |       |
| <b>MW2-9-13 (1809156-02) Liquid    Sampled: 09/13/18 10:30    Received: 09/13/18 13:10</b> |        |        |           |       |          |         |          |                |           |       |
| Monochloroacetic Acid  | ND     | 0.192  | 2.00      | µg/L  | 1        | B811758 | 09/17/18 | 09/18/18 15:18 | EPA 552.2 |       |
| Dichloroacetic Acid  | ND     | 0.188  | 1.00      | "     | "        | "       | "        | "              | "         |       |
| Trichloroacetic Acid   | ND     | 0.0980 | 1.00      | "     | "        | "       | "        | "              | "         |       |
| Monobromoacetic Acid   | ND     | 0.0670 | 1.00      | "     | "        | "       | "        | "              | "         |       |
| Dibromoacetic Acid   | ND     | 0.0580 | 1.00      | "     | "        | "       | "        | "              | "         |       |
| Total Haloacetic Acids   | ND     | 0.200  | 1.00      | "     | "        | "       | "        | "              | "         |       |
| <i>Surrogate: 2,3-Dibromopropionic Acid</i>  |        | 67.8 % | 60-150    |       |          | "       | "        | "              | "         |       |
| <b>MW3-9-13 (1809156-03) Liquid    Sampled: 09/13/18 10:50    Received: 09/13/18 13:10</b> |        |        |           |       |          |         |          |                |           |       |
| Monochloroacetic Acid  | ND     | 0.192  | 2.00      | µg/L  | 1        | B811758 | 09/17/18 | 09/18/18 15:18 | EPA 552.2 |       |
| Dichloroacetic Acid  | ND     | 0.188  | 1.00      | "     | "        | "       | "        | "              | "         |       |
| Trichloroacetic Acid   | ND     | 0.0980 | 1.00      | "     | "        | "       | "        | "              | "         |       |
| Monobromoacetic Acid   | ND     | 0.0670 | 1.00      | "     | "        | "       | "        | "              | "         |       |
| Dibromoacetic Acid   | ND     | 0.0580 | 1.00      | "     | "        | "       | "        | "              | "         |       |
| Total Haloacetic Acids   | ND     | 0.200  | 1.00      | "     | "        | "       | "        | "              | "         |       |
| <i>Surrogate: 2,3-Dibromopropionic Acid</i>  |        | 138 %  | 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 Wells 1,2,3,4  
 Project Manager: Rick Dever

Reported:  
 10/01/18 15:32

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

| Analyte  | Result | MDL          | Reporting     |       | Dilution | Batch    | Prepared | Analyzed       | Method    | Notes |
|--|--------|--------------|---------------|-------|----------|----------|----------|----------------|-----------|-------|
|  |        |              | Limit         | Units |          |          |          |                |           |       |
| <b>MW4-9-13 (1809156-04) Liquid    Sampled: 09/13/18 11:10    Received: 09/13/18 13:10</b> |        |              |               |       |          |          |          |                |           |       |
| Monochloroacetic Acid  | ND     | 0.192        | 2.00          | µg/L  | 1        | B811758  | 09/17/18 | 09/18/18 15:18 | EPA 552.2 |       |
| Dichloroacetic Acid  | ND     | 0.188        | 1.00          | "     | "        | "        | "        | "              | "         |       |
| Trichloroacetic Acid   | ND     | 0.0980       | 1.00          | "     | "        | "        | "        | "              | "         |       |
| Monobromoacetic Acid   | ND     | 0.0670       | 1.00          | "     | "        | "        | "        | "              | "         |       |
| Dibromoacetic Acid   | ND     | 0.0580       | 1.00          | "     | "        | "        | "        | "              | "         |       |
| Total Haloacetic Acids   | ND     | 0.200        | 1.00          | "     | "        | "        | "        | "              | "         |       |
| <i>Surrogate: 2,3-Dibromopropionic Acid</i>  |        | <i>139 %</i> | <i>60-150</i> |       |          | <i>"</i> | <i>"</i> | <i>"</i>       | <i>"</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.*