# MONTECITO SANITARY DISTRICT

# 2016 ANNUAL SUMMARY REPORT

**NPDES No. CA0047899**

**Order No. R3-2012-0016**

# Montecito Sanitary District

1042 Monte Cristo Lane
Santa Barbara, CA 93108
**General Manager: Diane M. Gabriel, P.E.**

*A Public Service Agency*

PHONE: (805) 969-4200
FAX: (805) 969-9049
E-MAIL: dgabriel@montsan.org


January 26, 2016

California Regional Water Quality Control Board
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

SUBJECT: NPDES Permit No. CA 0047899
Order No. R3-2012-0016
Annual Summary Report 2016

Staff of the Regional Board:

In accordance with the requirements of the general provisions of the District's NPDES Permit No. CA0047899, we are transmitting the District's Annual Report for 2016. The monitoring data compiled throughout the year is presented in both tabular and graphic form.

The report includes the names and job titles of District personnel, the Governing Board of Directors and an organizational chart.

Throughout the 2016 calendar year the following certified operators were employed by the District:

- Daniel Jacquez, Chief Plant Operator, III-28608, exp. date 06/30/18
- Chad Steinlicht, Operator, III-10297, exp. date 12/31/17
- Marco Felix, Operator, IV-41171, exp. 8/24/18 *(Passed Grade V on 10/10/15, requires more qualifying experience prior to grade V certification).*
- Marc Ciarlo, Operator, IV-41067, exp. date 12/10/17 *(Passed Grade V on 4/10/15, requires more qualifying experience prior to grade V certification).*

District staff continues to perform the majority of required analytical tests on-site in the District Laboratory. The laboratory manager maintains a Grade 4 Laboratory Analyst certification through CWEA and all treatment plant operators have Grade 1 certifications.

Required plant annual samples were collected on June 6 – 10, 2016. Analyses were performed by Fruit Growers Laboratory, Inc. and their subcontractors. All results were within acceptable limits.

On December 7, 2016 Harbor Offshore, Inc. completed the inspection of the District's ocean outfall pipeline. The exterior of the outfall pipeline was inspected and videotaped. The full inspection report is being submitted to the Water Board via CIWQS with the Annual Summary Report. The outfall pipeline was found to be in good condition.

The District has completed updates to the Wastewater Treatment Plant Operations and Maintenance Manual and is submitted with this report.

Comments regarding the District's Collection System Maintenance and Renovation Program, as required by the NPDES permit, are included in this report on pages 23 through 25. Also included on pages 26 through 28 is a brief summary of the history of the District, our accomplishments in recent years and goals for the future. Please feel free to contact me if you have any questions or desire additional information.

Sincerely,

Diane Gabriel, P.E.
General Manager/District Engineer

**Montecito Sanitary District**

**2016 Annual Report**

# TABLE OF CONTENTS


| *MONITORING DATA* | *PAGE NUMBER* |
|---|---|
| Board of Directors and Staff | 1 |
| Organizational Chart | 2 |
| Influent Daily Flow Data | 3 |
| Effluent Daily Flow Data | 4 |
| Total Monthly Influent & Effluent Flows | 5 |
| Historic Total and Average Daily Effluent Flows | 6 |
| Avg. Monthly Effluent Temperatures / Monthly Rainfall Totals | 7 |
| Influent Suspended Solids and $CBOD_5$ (mg/L) | 8 |
| Effluent Suspended Solids and $CBOD_5$ (mg/L) | 9 |
| Effluent Suspended Solids and $CBOD_5$ (lbs/Day) | 10 |
| Effluent Suspended Solids and $CBOD_5$ Percent Removal | 11 |
| Effluent Settleable Solids | 12 |
| Effluent pH Data | 13 |
| Effluent Grease & Oil | 14 |
| Effluent Turbidity | 15 |
| Final Effluent Chlorine Residual (Grab) | 16 |
| Final Effluent Chlorine Residual (Meter) | 17 |
| Effluent Total Chlorine Used | 18 |
| Effluent Total Coliform | 19 |
| Effluent Total Fecal Coliform | 20 |
| Effluent Ammonia / $NH_3$ - N | 21 |
| Tabular Data for Annual Report | 22 and 22A |
| Collection System Maintenance and Renovation Program | 23 - 25 |
| Mission, History and Future Goals | 26 - 28 |

# MONTECITO SANITARY DISTRICT

**January 2016 – December 2016**

***GOVERNING BOARD***

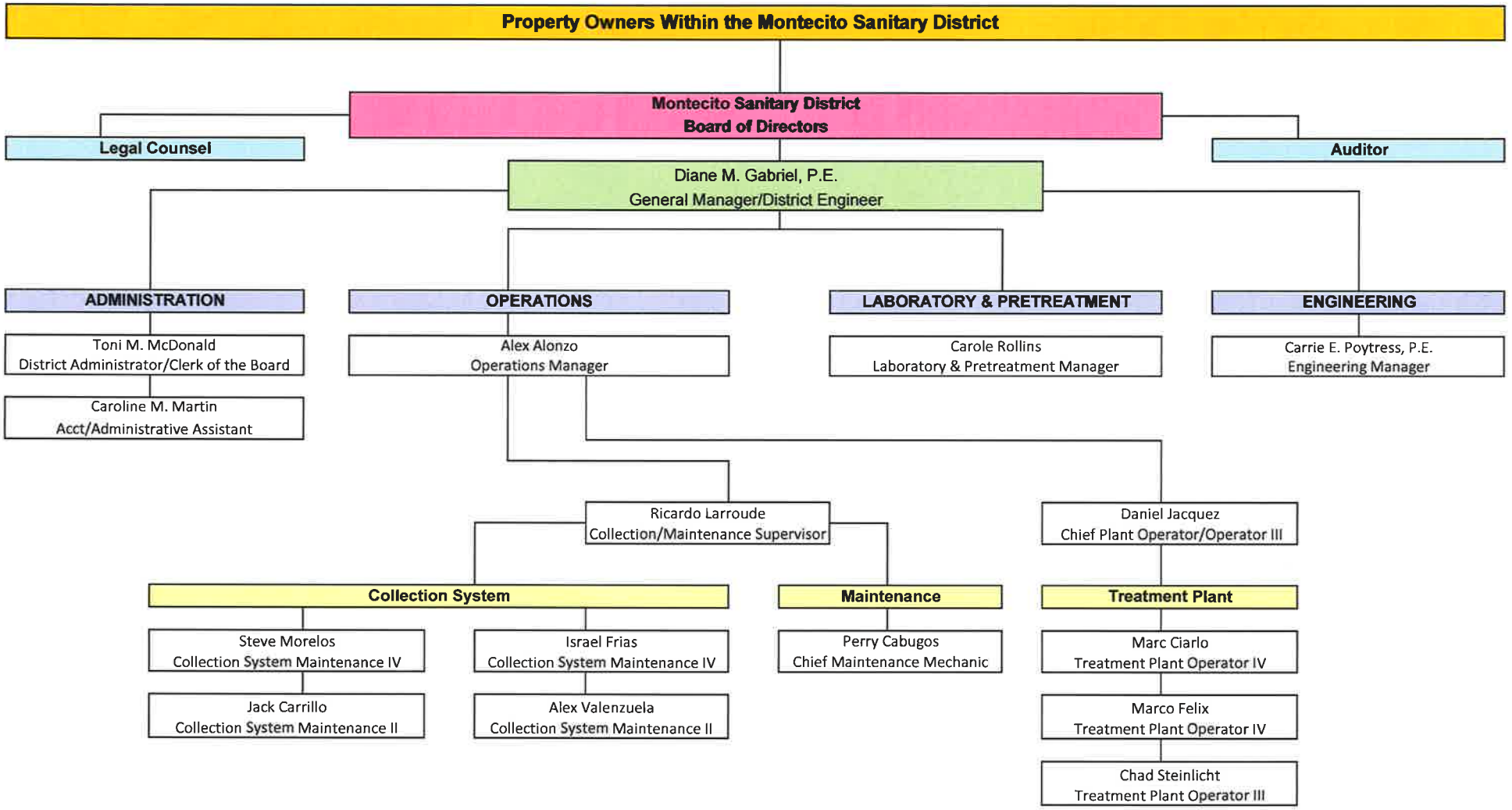
| | |
|---|---|
| Warner Owens | President |
| Judith M. Ishkanian | Vice President |
| Tom Kern | Treasurer |
| Jeff Kerns | Secretary |
| Bob Williams | Director |

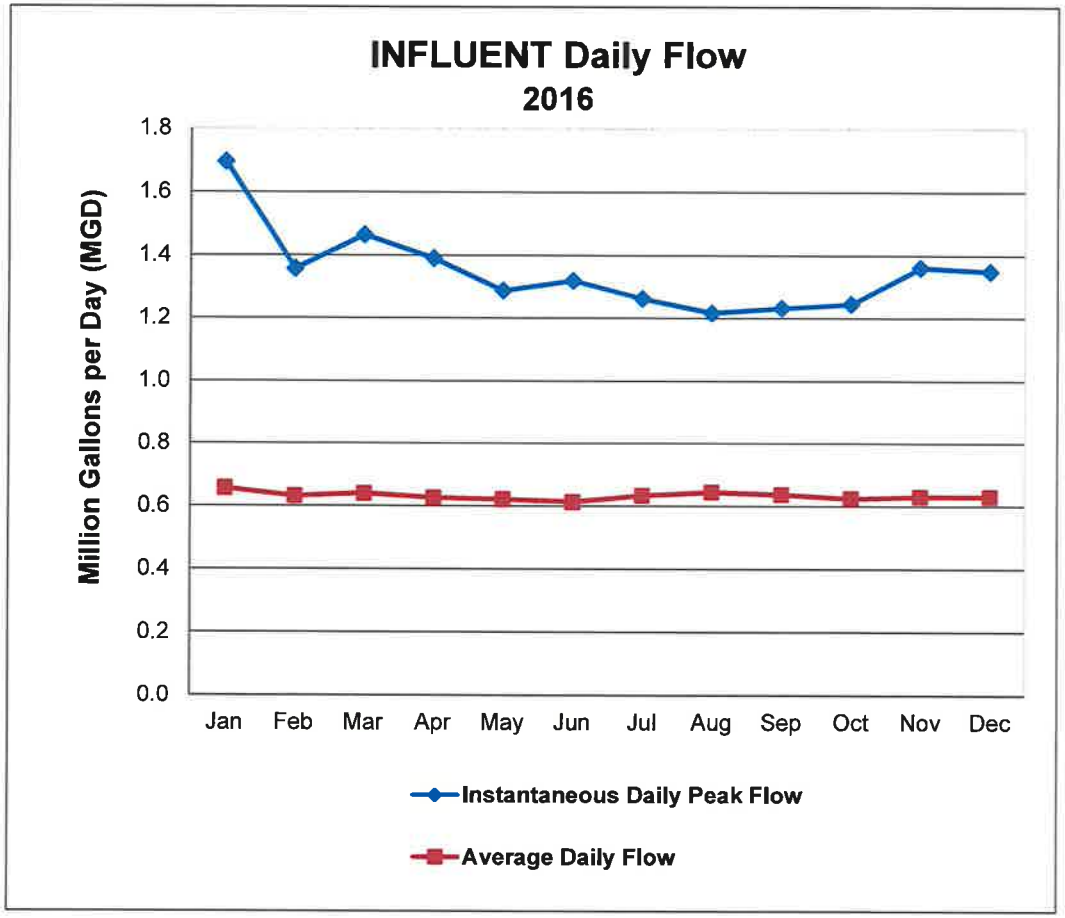
***

**January 2016 – December 2016**

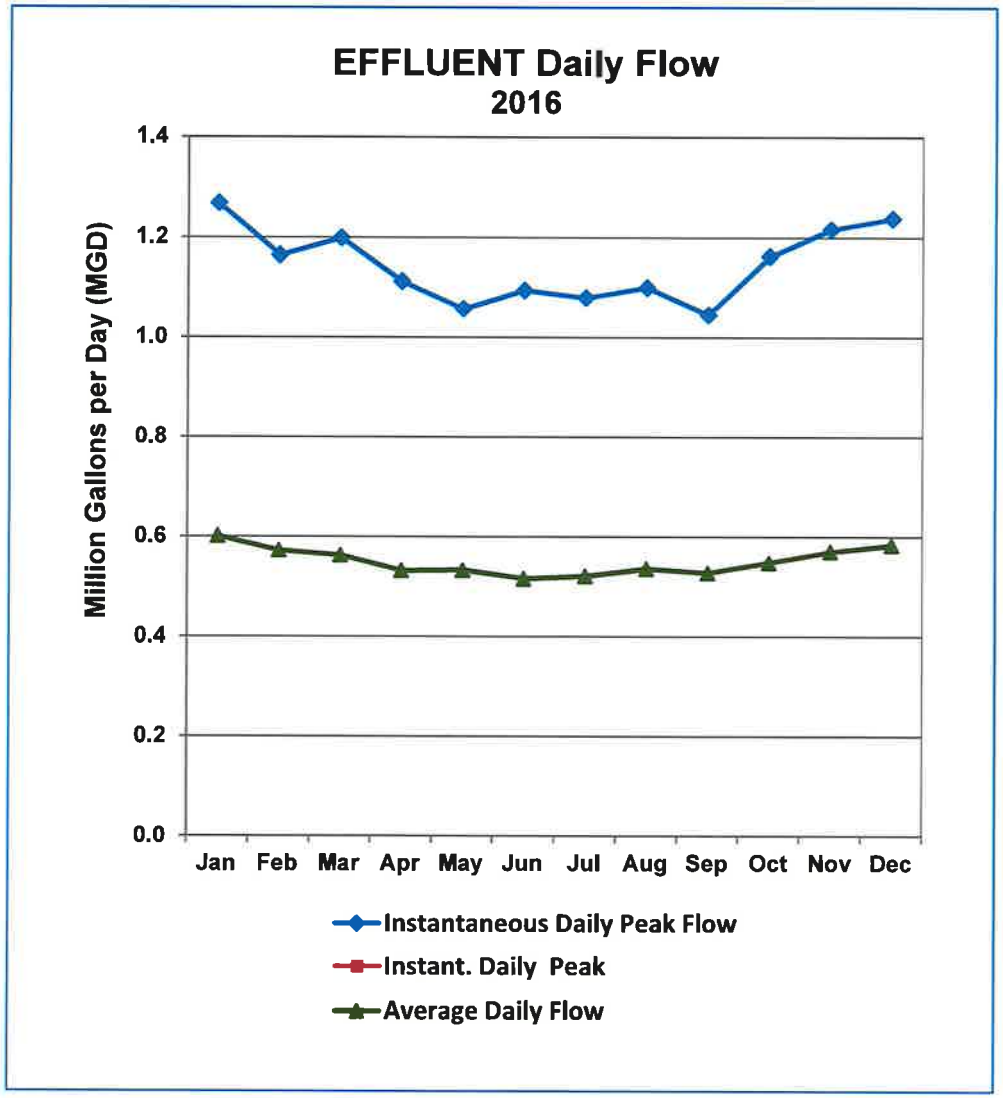
***STAFF***

| | |
|---|---|
| Diane M. Gabriel, P.E. | General Manager/District Engineer |
| Carrie Poytress | Engineering Manager |
| Toni McDonald | District Administrator |
| Caroline M. Martin | Accounting/Administrative Assistant |
| | |
| Alex Alonzo | Operations Manager |
| Daniel Jacquez | Chief Plant Operator - III |
| Chad Steinlicht | Treatment Plant Operator III |
| Marco Felix | Treatment Plant Operator IV |
| Marc Ciarlo | Treatment Plant Operator IV |
| | |
| Carole Rollins | Pretreatment & Laboratory Manager |
| | |
| Ricardo Larroude | Collection/Maintenance Supervisor |
| Perry Cabugos | Chief Maintenance Mechanic |
| Steve Morelos | Collection System Maintenance IV |
| Israel Frias | Collection System Maintenance IV |
| Jack Carrillo | Collections System Maintenance II |
| Alex Valenzuela | Collection System Maintenance II |


Property Owners Within the Montecito Sanitary District
Montecito Sanitary District
Board of Directors
Legal Counsel
Auditor
Diane M. Gabriel, P.E.
General Manager/District Engineer
ADMINISTRATION
OPERATIONS
LABORATORY & PRETREATMENT
ENGINEERING
Toni M. McDonald
District Administrator/Clerk of the Board
Caroline M. Martin
Acct/Administrative Assistant
Alex Alonzo
Operations Manager
Carole Rollins
Laboratory & Pretreatment Manager
Carrie E. Poytress, P.E.
Engineering Manager
Ricardo Larroude
Collection/Maintenance Supervisor
Daniel Jacquez
Chief Plant Operator/Operator III
Collection System
Maintenance
Treatment Plant
Steve Morelos
Collection System Maintenance IV
Jack Carrillo
Collection System Maintenance II
Israel Frias
Collection System Maintenance IV
Alex Valenzuela
Collection System Maintenance II
Perry Cabugos
Chief Maintenance Mechanic
Marc Ciarlo
Treatment Plant Operator IV
Marco Felix
Treatment Plant Operator IV
Chad Steinlicht
Treatment Plant Operator III

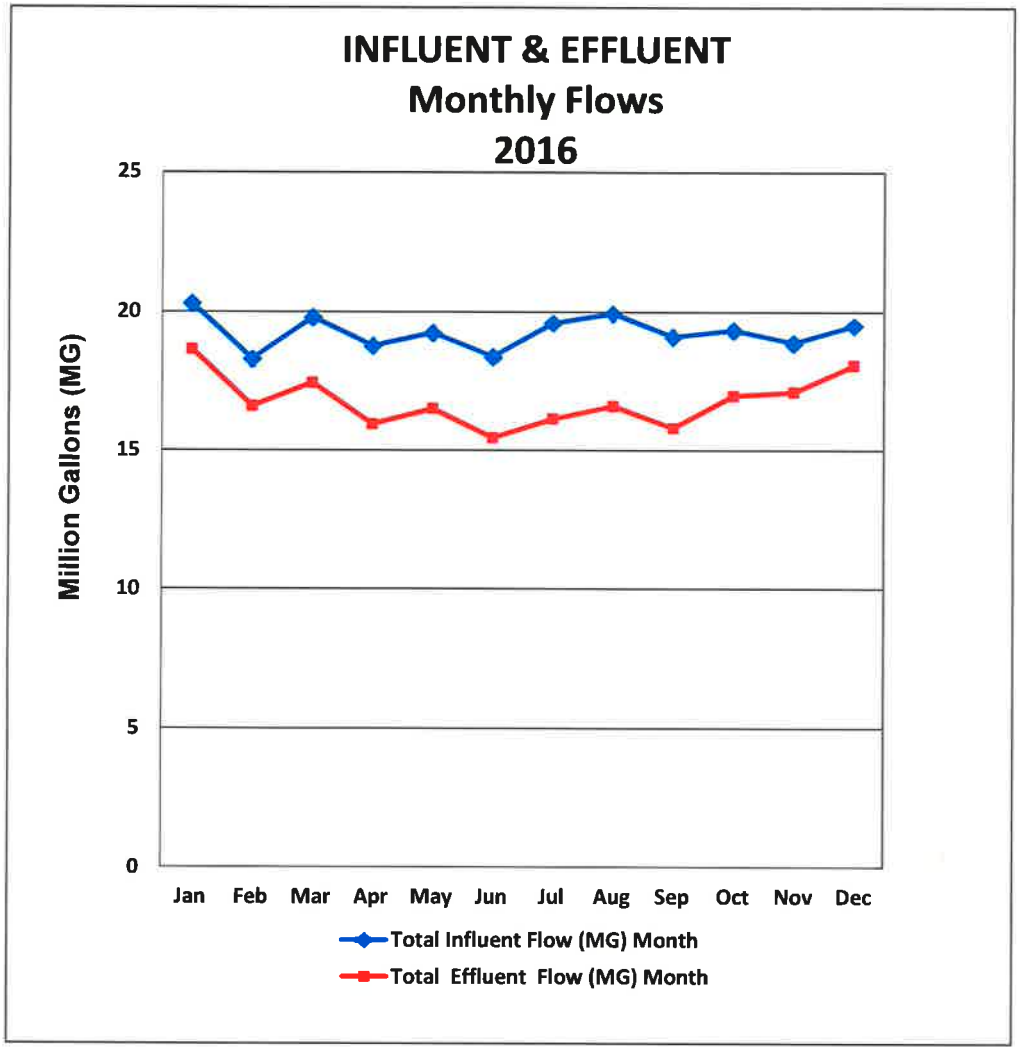



| MILLION GALLONS PER DAY (MGD) | | |
|---|---|---|
| **Month** | **Instant. Daily Peak** | **Average Daily Flow** |
| Jan | 1.70 | 0.655 |
| Feb | 1.36 | 0.631 |
| Mar | 1.46 | 0.639 |
| Apr | 1.39 | 0.626 |
| May | 1.29 | 0.621 |
| Jun | 1.32 | 0.612 |
| Jul | 1.26 | 0.632 |
| Aug | 1.22 | 0.643 |
| Sep | 1.23 | 0.636 |
| Oct | 1.25 | 0.624 |
| Nov | 1.36 | 0.629 |
| Dec | 1.35 | 0.629 |
| **Avg** | **1.35** | **0.631** |



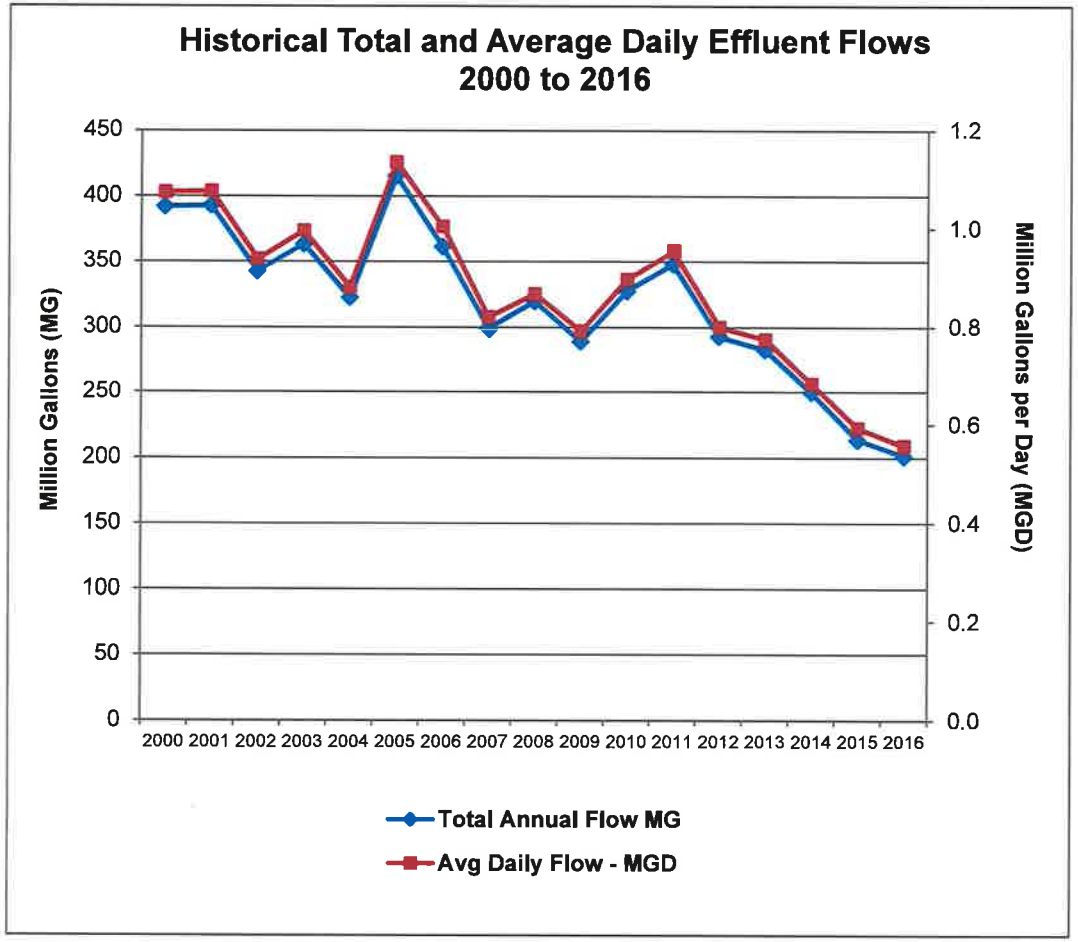

| MONTH | Instant. Daily Peak | | Average Daily Flow |
|---|---|---|---|
| Jan | 1.27 | | 0.601 |
| Feb | 1.16 | | 0.572 |
| Mar | 1.20 | | 0.562 |
| Apr | 1.11 | | 0.532 |
| May | 1.06 | | 0.532 |
| Jun | 1.10 | | 0.515 |
| Jul | 1.08 | | 0.521 |
| Aug | 1.10 | | 0.535 |
| Sep | 1.05 | | 0.527 |
| Oct | 1.16 | | 0.547 |
| Nov | 1.22 | | 0.570 |
| Dec | 1.24 | | 0.582 |

| AVG | 1.14 | | 0.550 |
|---|---|---|---|



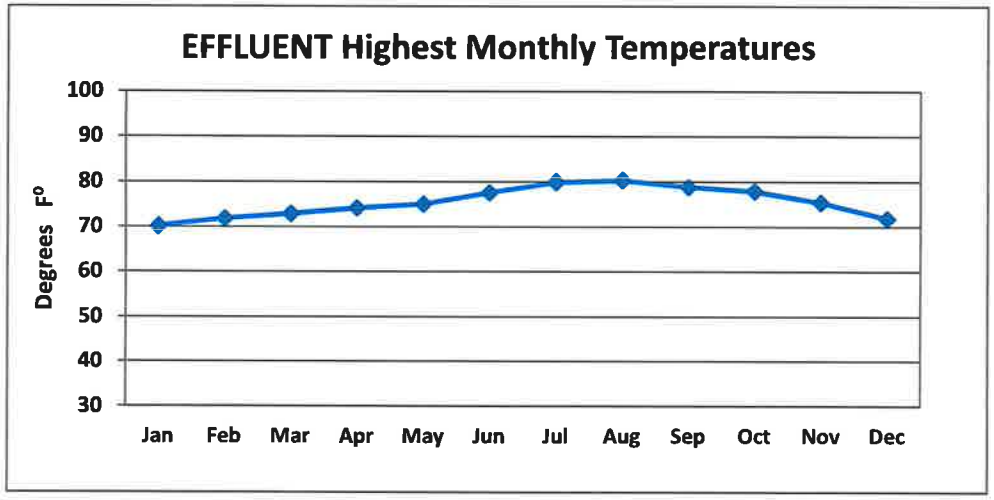

| Month | Total Influent Flow (MG) | Total Effluent Flow (MG) |
|---|---|---|
| Jan | 20.31 | 18.63 |
| Feb | 18.29 | 16.59 |
| Mar | 19.80 | 17.42 |
| Apr | 18.77 | 15.95 |
| May | 19.24 | 16.50 |
| Jun | 18.37 | 15.45 |
| Jul | 19.59 | 16.14 |
| Aug | 19.95 | 16.59 |
| Sep | 19.09 | 15.80 |
| Oct | 19.34 | 16.97 |
| Nov | 18.87 | 17.09 |
| Dec | 19.50 | 18.05 |
| **Total Annual Flows** | **231.1** | **201.2** |

**Note**: Influent and Effluent flow differences are due to process recycled flows and process cleaning or maintenance which drains water back to the influent flow.

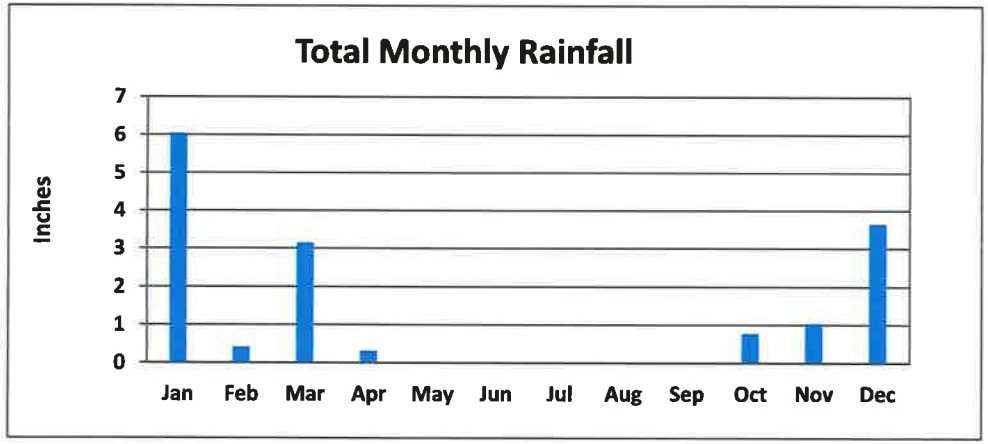



| YEAR | Total Annual Flow MG | Avg Daily Flow MGD |
|---|---|---|
| 2000 | 392.0 | 1.074 |
| 2001 | 392.6 | 1.076 |
| 2002 | 342.2 | 0.938 |
| 2003 | 363.4 | 0.996 |
| 2004 | 322.4 | 0.881 |
| 2005 | 415.3 | 1.135 |
| 2006 | 361.2 | 1.005 |
| 2007 | 299.2 | 0.820 |
| 2008 | 319.5 | 0.867 |
| 2009 | 289.0 | 0.792 |
| 2010 | 327.4 | 0.897 |
| 2011 | 348.0 | 0.954 |
| 2012 | 292.9 | 0.800 |
| 2013 | 282.7 | 0.775 |
| 2014 | 249.6 | 0.684 |
| 2015 | 213.4 | 0.593 |
| 2016 | 201.2 | 0.557 |

# 2016

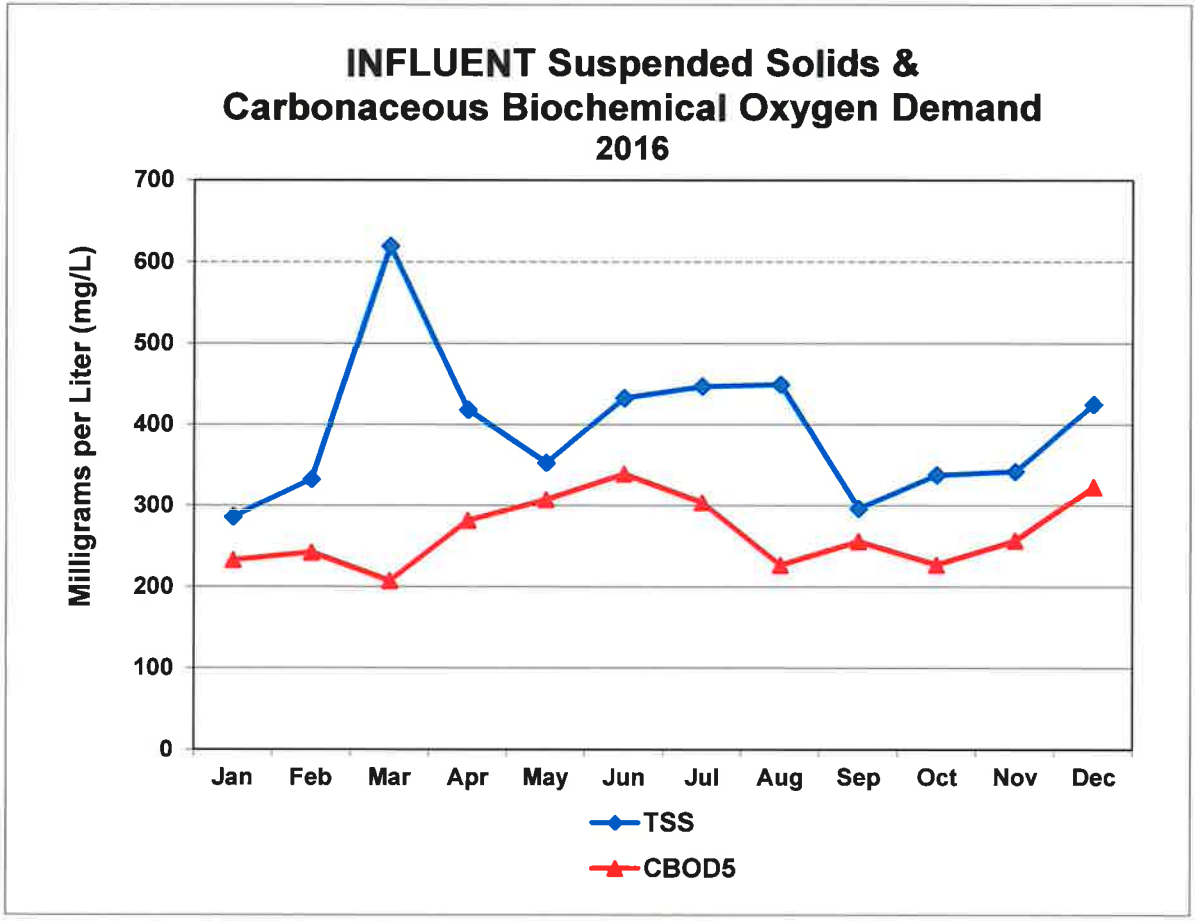



| Month | High Temp. °F |
|---|---|
| Jan | 70.2 |
| Feb | 71.8 |
| Mar | 72.9 |
| Apr | 74.1 |
| May | 75.0 |
| Jun | 77.5 |
| Jul | 79.9 |
| Aug | 80.2 |
| Sep | 78.8 |
| Oct | 77.9 |
| Nov | 75.4 |
| Dec | 71.8 |

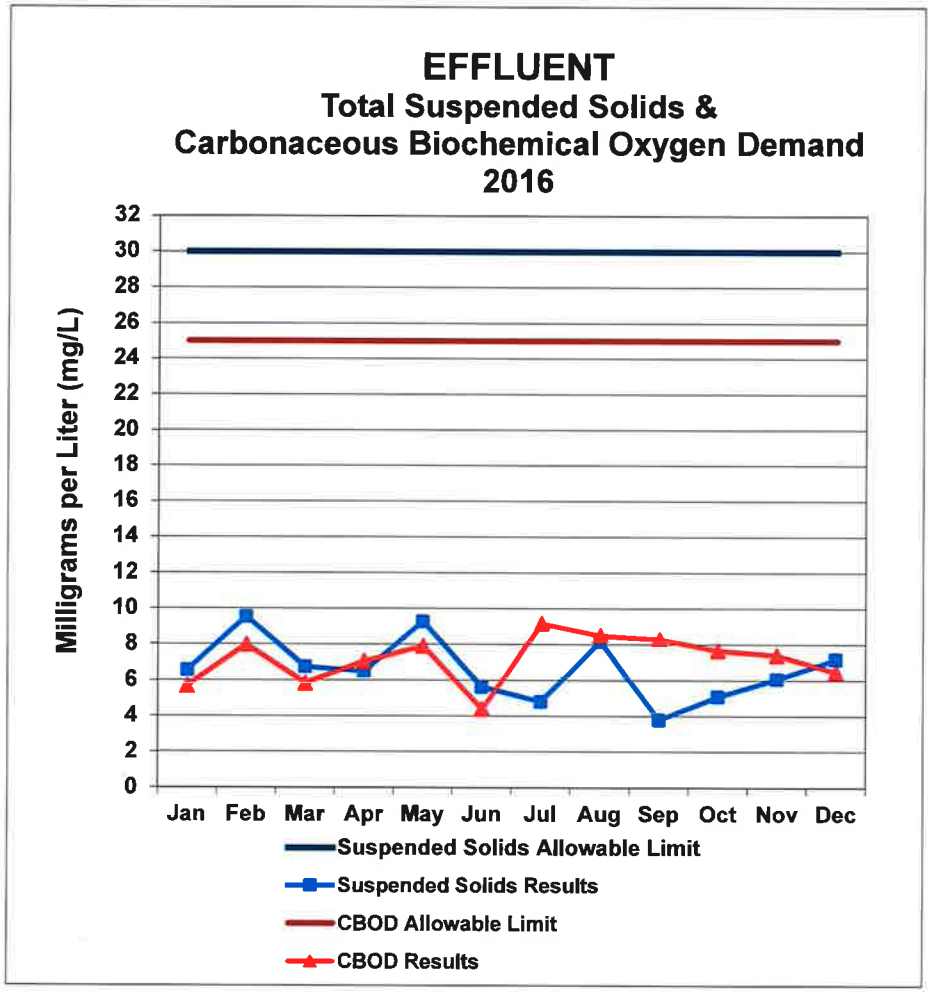



| Month | Rainfall Inches |
|---|---|
| Jan | 6.04 |
| Feb | 0.40 |
| Mar | 3.14 |
| Apr | 0.30 |
| May | 0.01 |
| Jun | 0.01 |
| Jul | 0.00 |
| Aug | 0.00 |
| Sep | 0.00 |
| Oct | 0.77 |
| Nov | 1.03 |
| Dec | 3.65 |

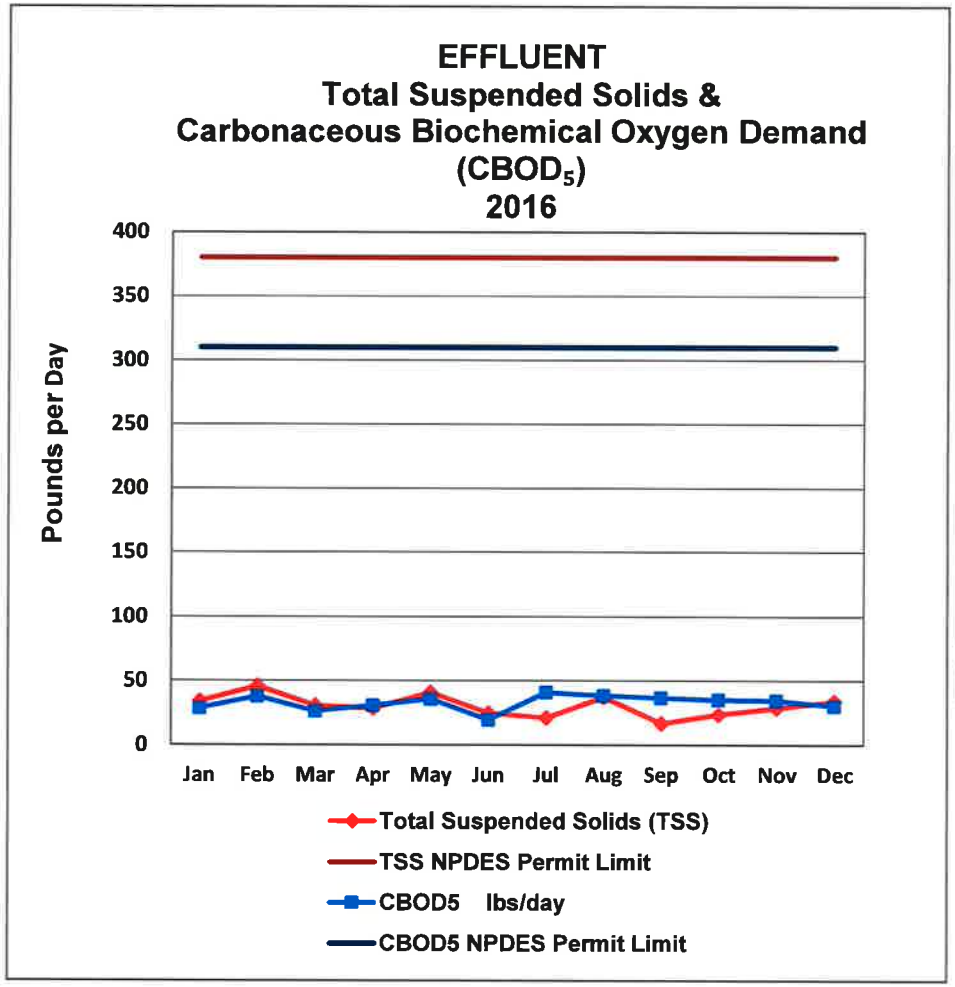
| TOTAL | 15.35 |
|---|---|



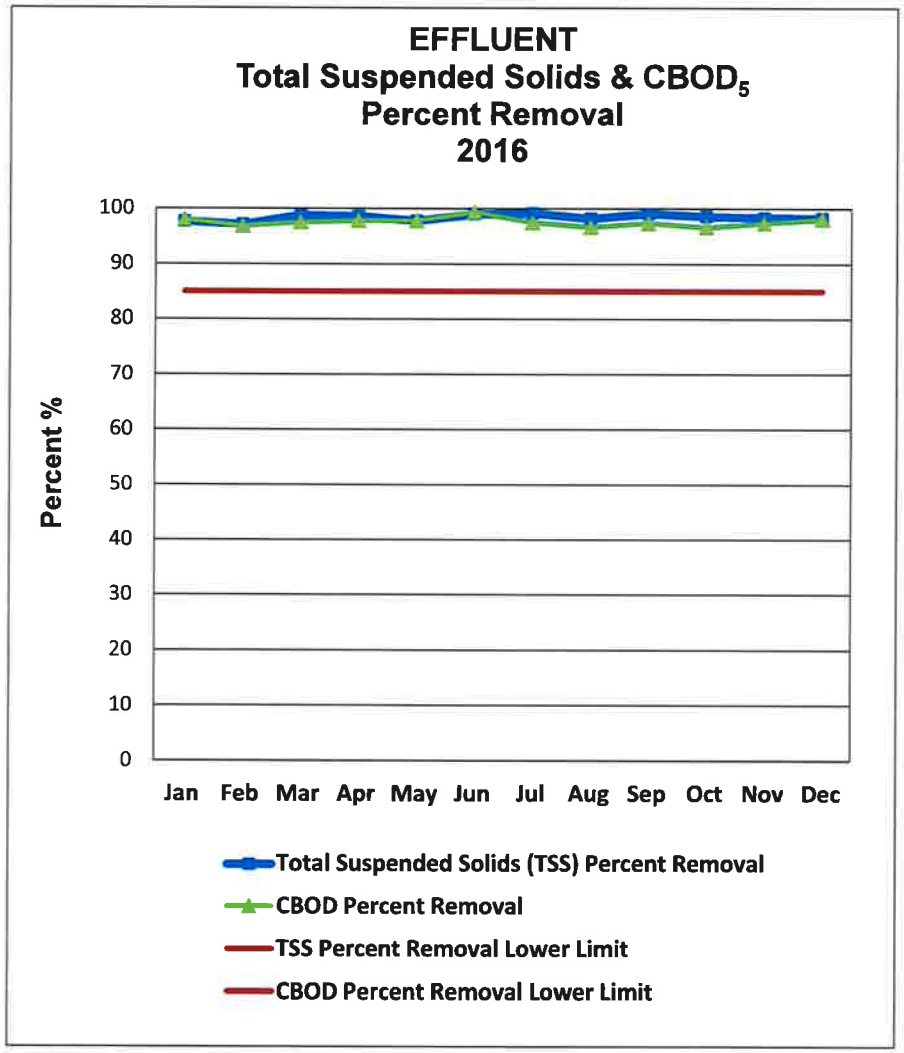

| Month | TSS | $CBOD_5$ |
|---|---|---|
| | mg/L | mg/L |
| Jan | 287 | 233 |
| Feb | 333 | 242 |
| Mar | 620 | 208 |
| Apr | 418 | 282 |
| May | 354 | 308 |
| Jun | 433 | 339 |
| Jul | 447 | 304 |
| Aug | 450 | 227 |
| Sep | 297 | 256 |
| Oct | 338 | 227 |
| Nov | 343 | 257 |
| Dec | 425 | 323 |
| **AVG** | **395** | **267** |



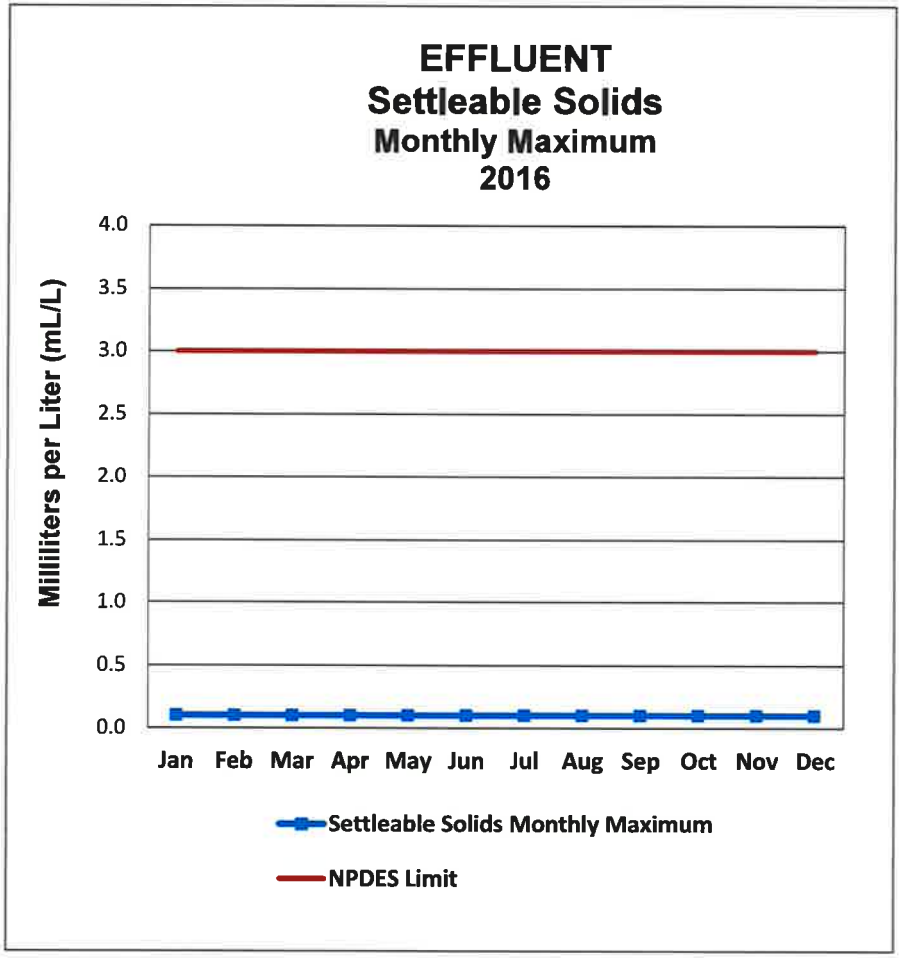

| | TSS | | $CBOD_5$ | |
|---|---|---|---|---|
| | Permit Limit | Results | Permit Limit | Results |
| | mg/L | mg/L | mg/L | mg/L |
| Jan | 30 | 6.6 | 25 | 5.7 |
| Feb | | 9.5 | | 8.0 |
| Mar | | 6.7 | | 5.8 |
| Apr | | 6.5 | | 7.1 |
| May | | 9.3 | | 7.9 |
| Jun | | 5.6 | | 4.4 |
| Jul | | 4.8 | | 9.2 |
| Aug | | 8.1 | | 8.5 |
| Sep | | 3.8 | | 8.3 |
| Oct | | 5.1 | | 7.7 |
| Nov | | 6.1 | | 7.4 |
| Dec | | 7.2 | | 6.5 |
| **AVG** | | **6.6** | | **7.2** |



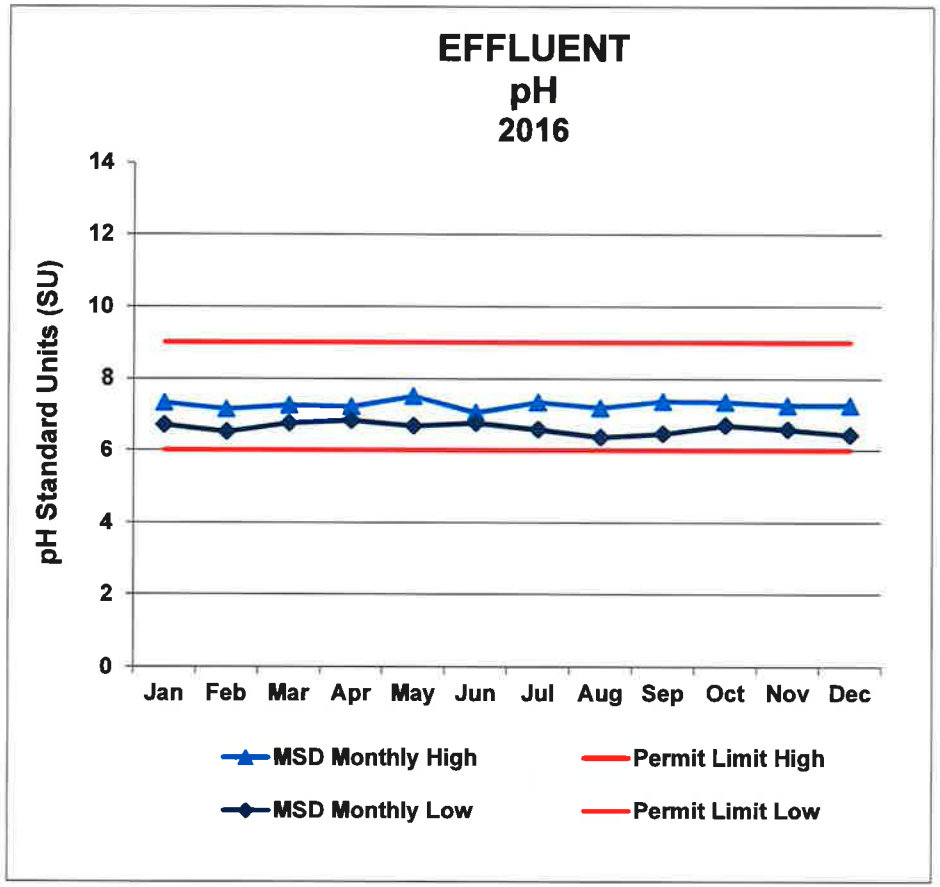

| Month | TSS lbs/day | TSS NPDES Permit Upper Limit | $CBOD_5$ lbs/day | $CBOD_5$ NPDES Permit Upper Limit |
|---|---|---|---|---|
| Jan | 34 | | 29 | |
| Feb | 46 | | 38 | |
| Mar | 30 | | 26 | |
| Apr | 28 | | 31 | |
| May | 41 | | 36 | |
| Jun | 25 | 380 | 19 | 310 |
| Jul | 21 | | 41 | |
| Aug | 37 | | 38 | |
| Sep | 17 | | 37 | |
| Oct | 23 | | 35 | |
| Nov | 29 | | 35 | |
| Dec | 34 | | 30 | |
| **AVG** | **30** | | **33** | |



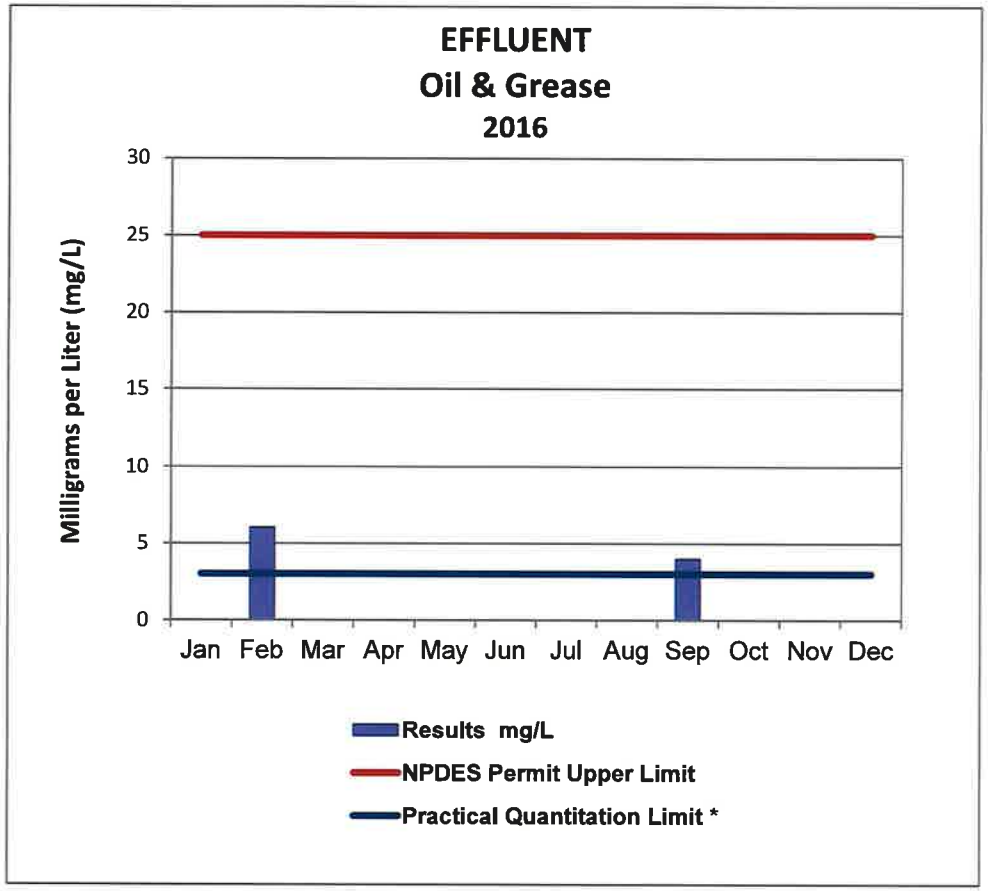

| Month | NPDES PERMIT LOWER LIMIT % | TSS Average Percent Removal % | NPDES PERMIT LOWER LIMIT % | $CBOD_5$ Average Percent Removal % |
|---|---|---|---|---|
| | | | | |
| Jan | | 98 | | 98 |
| Feb | | 97 | | 97 |
| Mar | | 99 | | 98 |
| Apr | | 99 | | 98 |
| May | | 98 | | 98 |
| Jun | 85 | 99 | 85 | 99 |
| Jul | | 99 | | 98 |
| Aug | | 98 | | 97 |
| Sep | | 99 | | 97 |
| Oct | | 99 | | 97 |
| Nov | | 98 | | 97 |
| Dec | | 98 | | 98 |
| AVG | | 98 | | 98 |




| Month | NPDES Permit Limit mL/L | Monthly Maximum mL/L |
|---|---|---|
| | Settleable Solids | |
| Jan | 3.0 | 0.1 |
| Feb | | <0.1 |
| Mar | | <0.1 |
| Apr | | <0.1 |
| May | | <0.1 |
| Jun | | <0.1 |
| Jul | | <0.1 |
| Aug | | 0.1 |
| Sep | | <0.1 |
| Oct | | 0.1 |
| Nov | | <0.1 |
| Dec | | <0.1 |

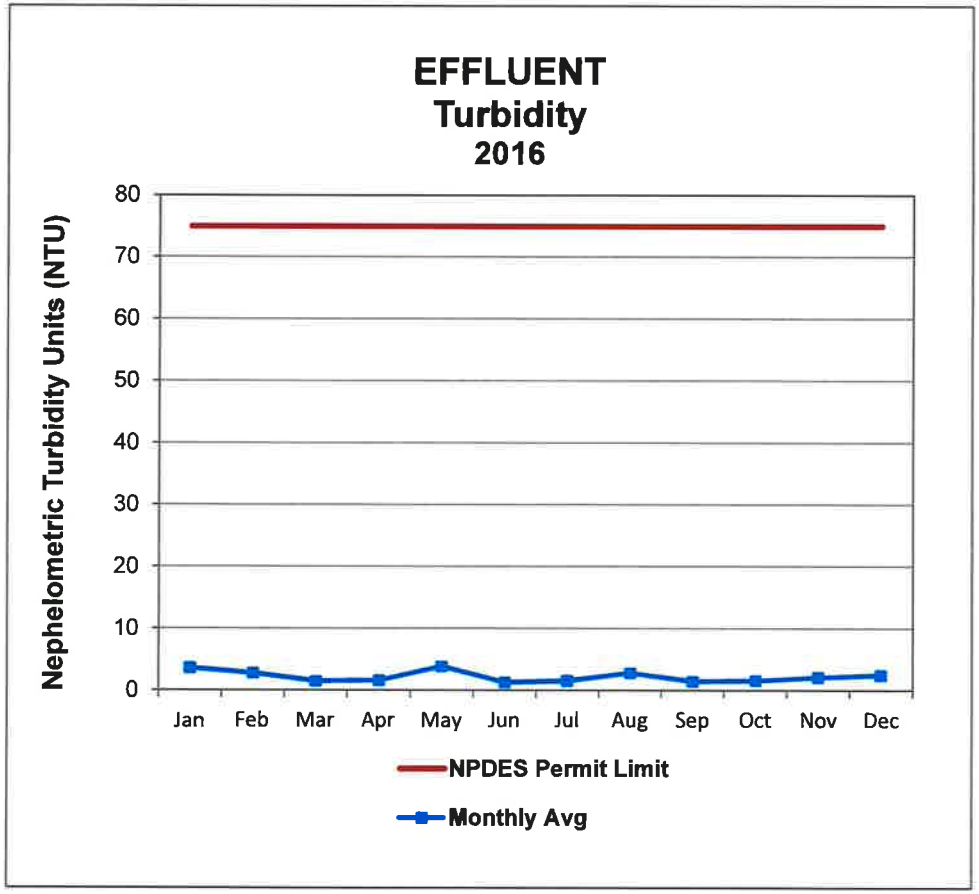



| Month | MSD Monthly Low | NPDES Low Limit | MSD Monthly High | NPDES High Limit |
|---|---|---|---|---|
| Jan | 6.71 | | 7.33 | |
| Feb | 6.51 | | 7.15 | |
| Mar | 6.76 | | 7.26 | |
| Apr | 6.84 | | 7.22 | |
| May | 6.68 | | 7.52 | |
| Jun | 6.77 | 6.0 | 7.06 | 9.0 |
| Jul | 6.58 | | 7.35 | |
| Aug | 6.37 | | 7.19 | |
| Sep | 6.46 | | 7.37 | |
| Oct | 6.70 | | 7.36 | |
| Nov | 6.58 | | 7.26 | |
| Dec | 6.43 | | 7.26 | |
| **Avg** | **6.62** | | **7.28** | |



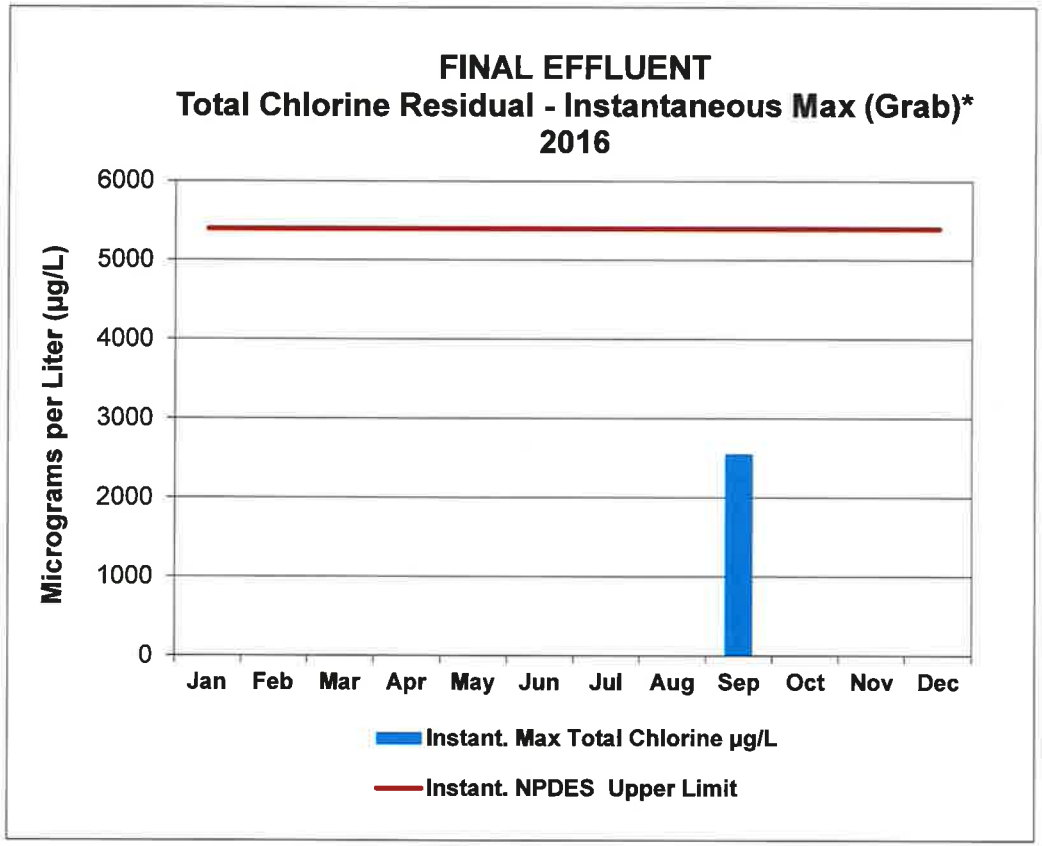

| Oil & Grease | | |
|---|---|---|
| Month | NPDES Limit | Results mg/L |
| Jan | 25 | ND |
| Feb | | **6** |
| Mar | | ND |
| Apr | | ND |
| May | | ND |
| Jun | | ND |
| Jul | | ND |
| Aug | | ND |
| Sep | | **4** |
| Oct | | ND |
| Nov | | ND |
| Dec | | ND |

*Note: PQL is the concentration below which data cannot be reported with accuracy.



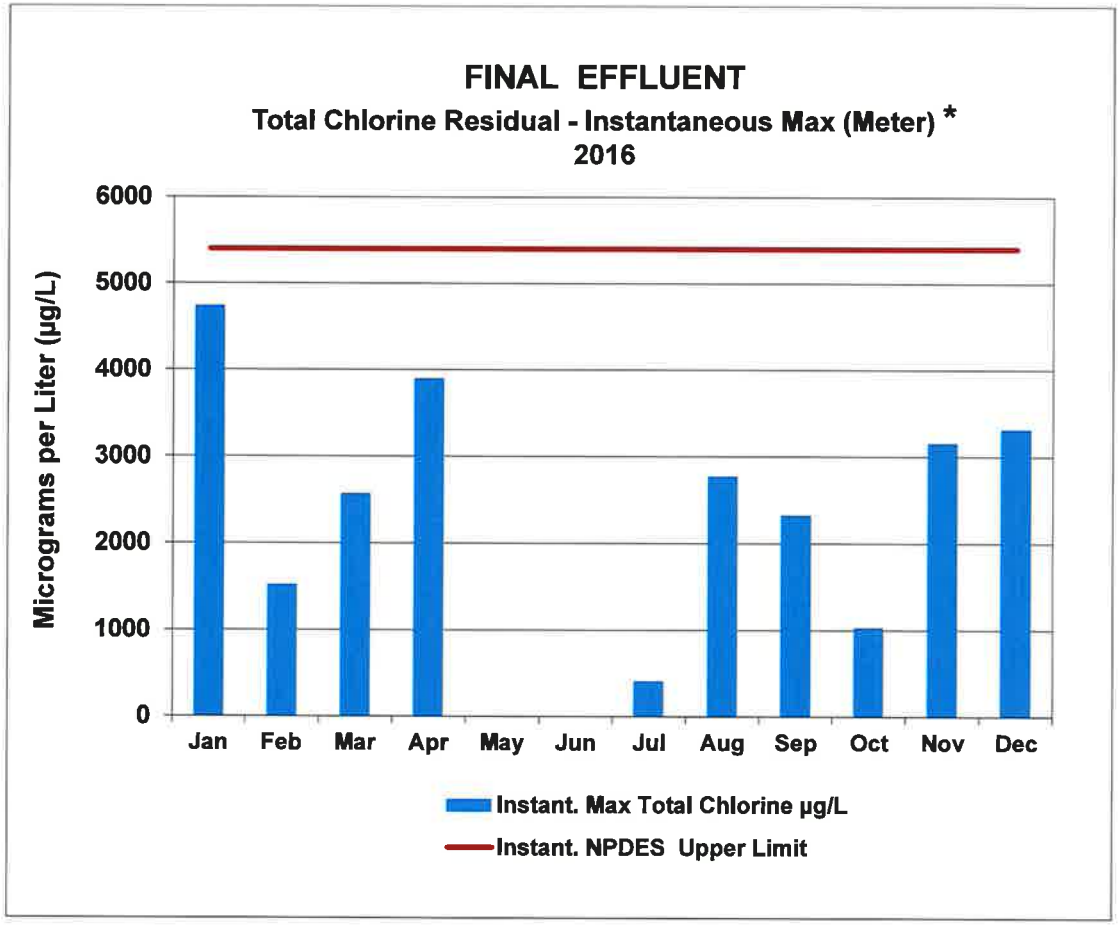

| Turbidity - NTU | | |
|---|---|---|
| **Month** | **NPDES Limit** | **Monthly Avg** |
| Jan | 75 | 3.6 |
| Feb | | 2.8 |
| Mar | | 1.5 |
| Apr | | 1.6 |
| May | | 3.8 |
| Jun | | 1.2 |
| Jul | | 1.5 |
| Aug | | 2.8 |
| Sep | | 1.5 |
| Oct | | 1.6 |
| Nov | | 2.1 |
| Dec | | 2.4 |

| | | |
|---|---|---|
| **AVG** | | **2.2** |



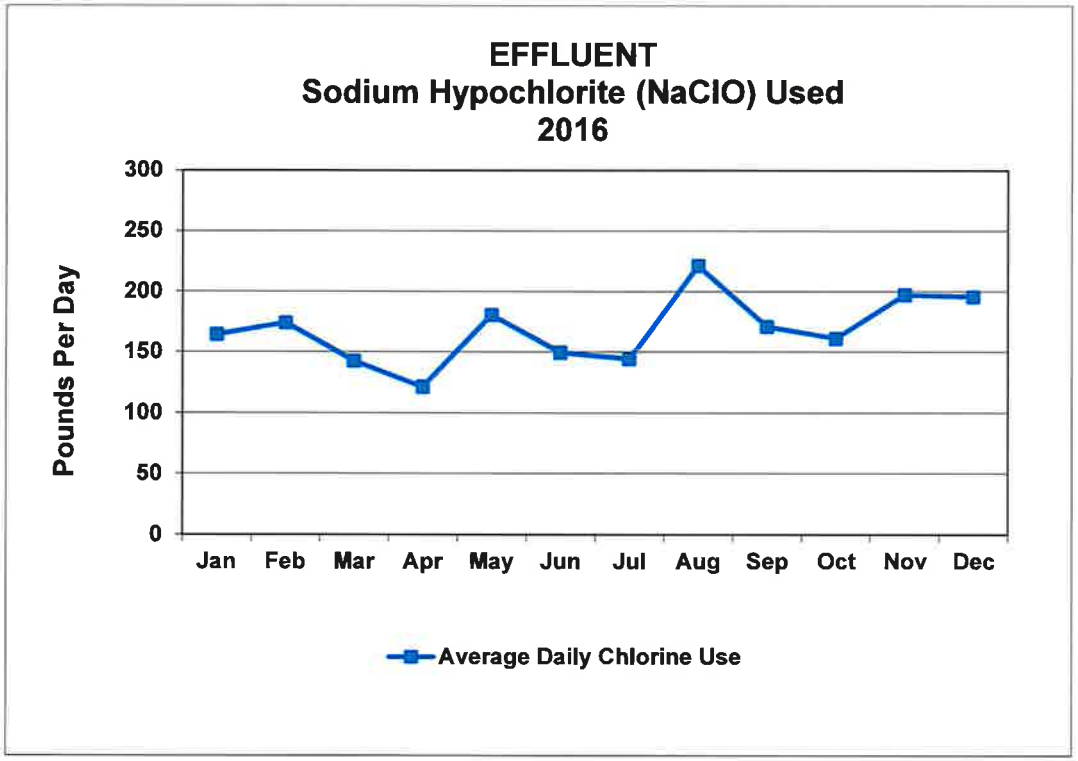

| Month | Instant. NPDES Upper Limit | Instant. Max Total Chlorine µg/L |
|---|---|---|
| Jan | 5400 | ND |
| Feb | | ND |
| Mar | | ND |
| Apr | | ND |
| May | | ND |
| Jun | | ND |
| Jul | | ND |
| Aug | | ND |
| Sep | | 2550 |
| Oct | | ND |
| Nov | | ND |
| Dec | | ND |

* Note: "Grab" is a sample taken manually from the effluent channel.



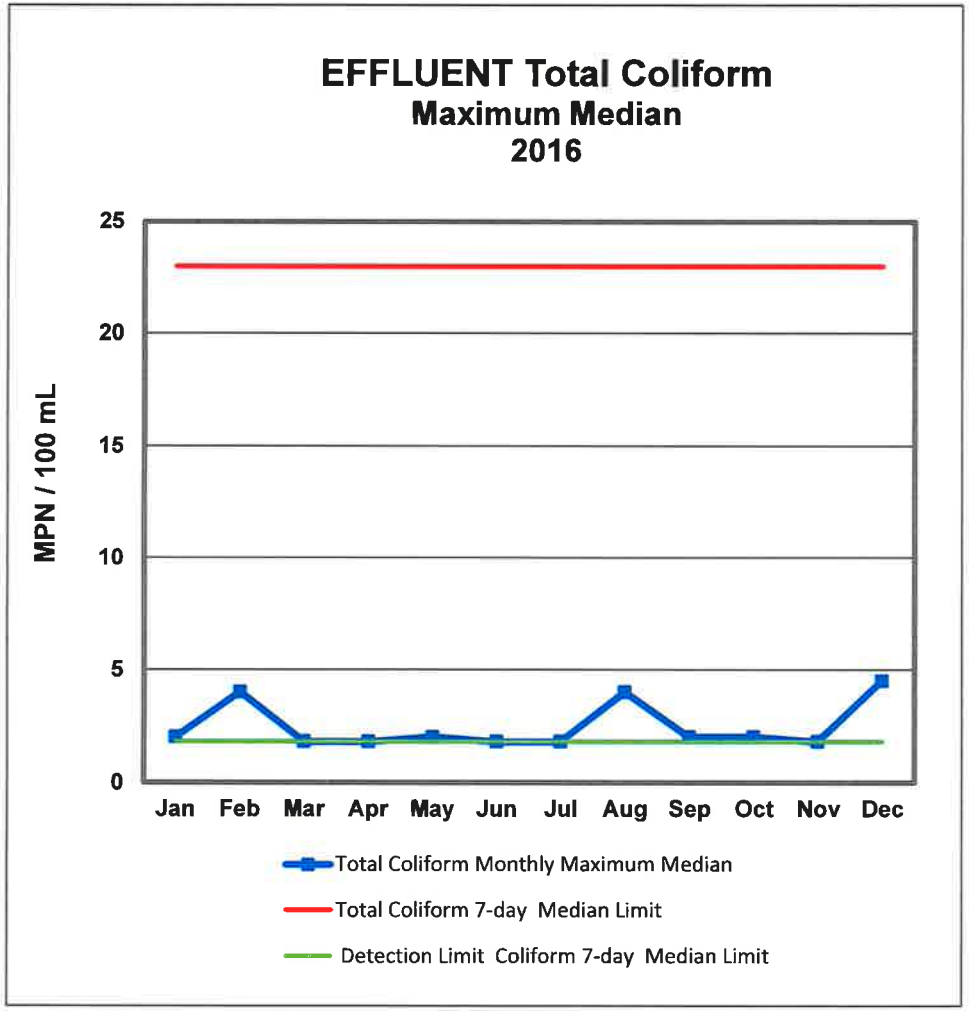

| Month | NPDES Instant. Upper Limit µg/L | Instant. Max Total Chlorine µg/L |
|---|---|---|
| Jan | 5400 | 4740 |
| Feb | | 1520 |
| Mar | | 2570 |
| Apr | | 3900 |
| May | | ND |
| Jun | | ND |
| Jul | | 400 |
| Aug | | 2770 |
| Sep | | 2325 |
| Oct | | 1030 |
| Nov | | 3150 |
| Dec | | 3311 |

*Note: "Meter" refers to analysis on a continuously monitored flow.

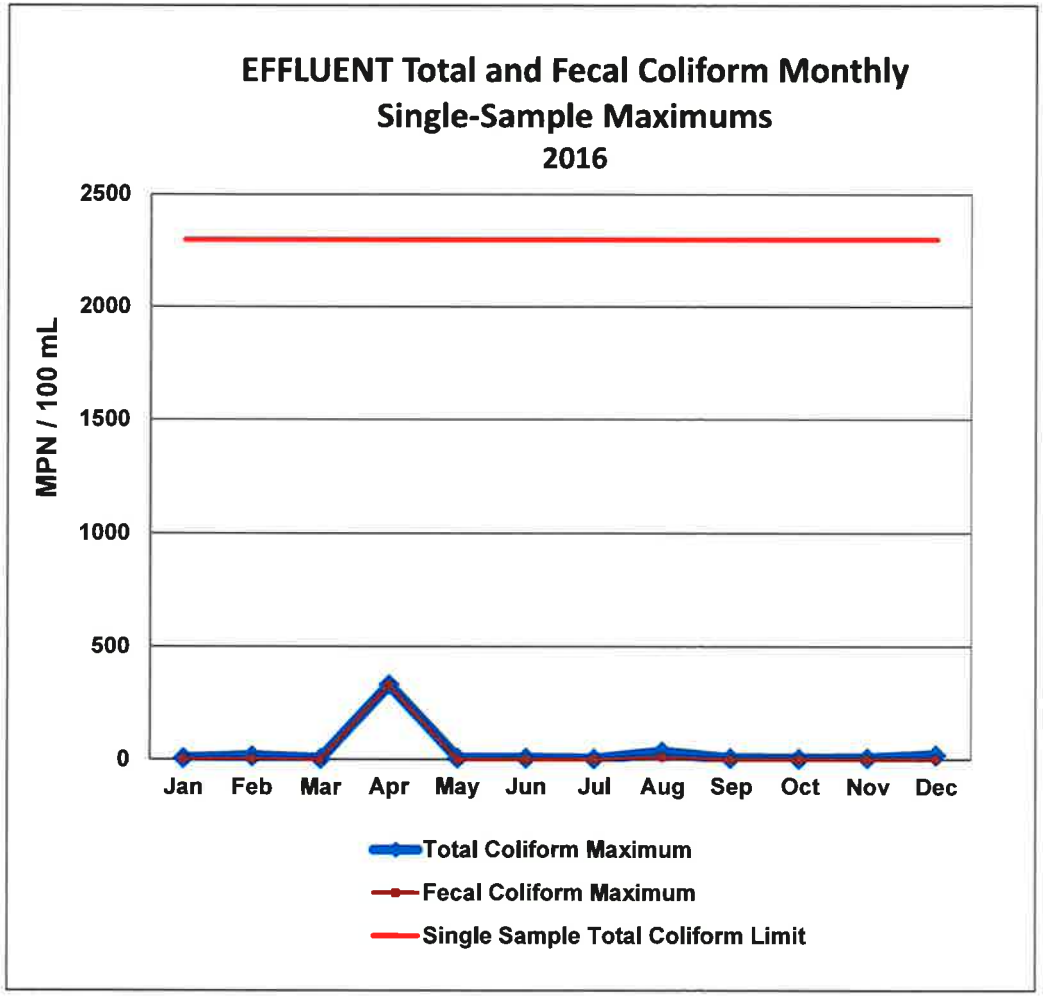



| Month | NaClO Used lbs/day |
|---|---|
| Jan | 164 |
| Feb | 174 |
| Mar | 142 |
| Apr | 121 |
| May | 180 |
| Jun | 149 |
| Jul | 144 |
| Aug | 221 |
| Sep | 171 |
| Oct | 161 |
| Nov | 197 |
| Dec | 196 |

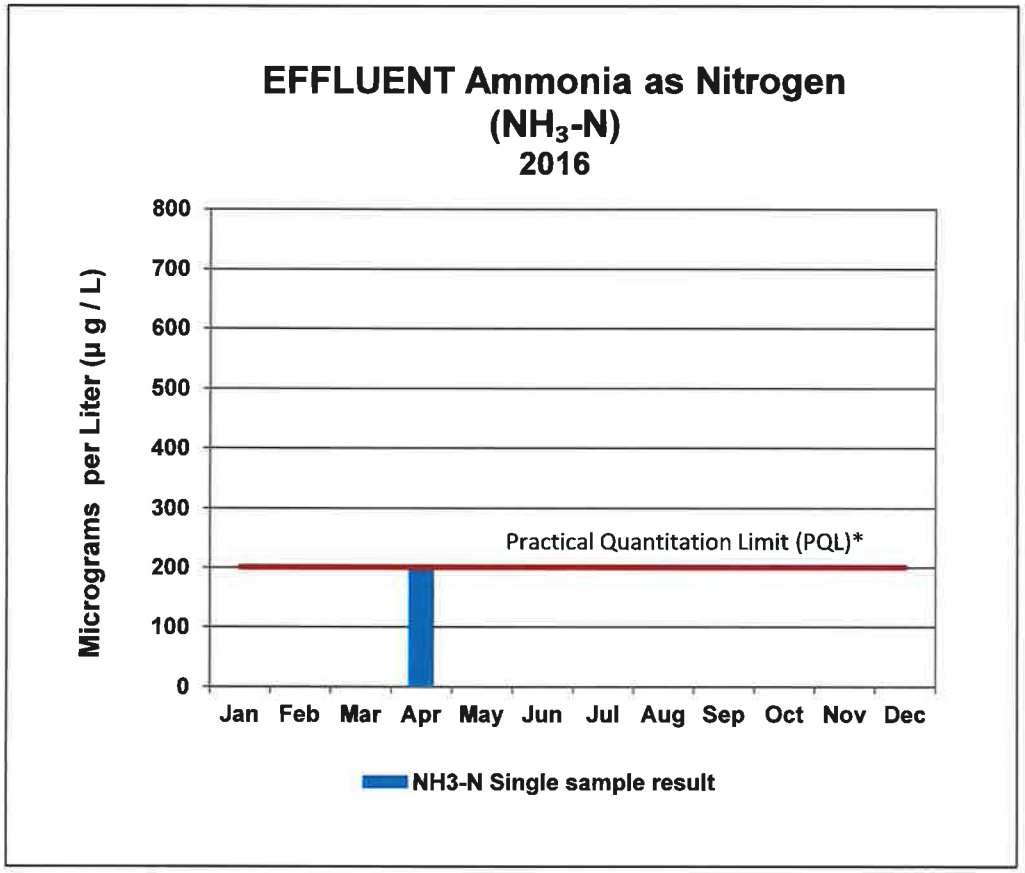
| AVG | 168 |
|---|---|




| MPN/100mL | | | |
|---|---|---|---|
| Month | Total Coliform Monthly Maximum Median | Total Coliform 7-day Median Limit | Detection Limit |
| Jan | 2.0 | 23 | 1.8 |
| Feb | 4.0 | | |
| Mar | 1.8 | | |
| Apr | <1.8 | | |
| May | 2.0 | | |
| Jun | <1.8 | | |
| Jul | <1.8 | | |
| Aug | 4.0 | | |
| Sep | 2.0 | | |
| Oct | 2.0 | | |
| Nov | <1.8 | | |
| Dec | 4.5 | | |




| | MPN/100mL | | |
|---|---|---|---|
| Month | Total Coliform Monthly Maximum | Fecal Coliform Monthly Maximum | Total Coliform Single Sample Limit |
| Jan | 4.5 | 2.0 | |
| Feb | 13 | 2.0 | |
| Mar | 2.0 | <1.8 | |
| Apr | 330 | 330 | |
| May | 4.5 | <1.8 | |
| Jun | 4.5 | <1.8 | 2300 |
| Jul | 1.8 | <1.8 | |
| Aug | 33 | 11 | |
| Sep | 4.5 | <1.8 | |
| Oct | 2.0 | <1.8 | |
| Nov | 4.5 | <1.8 | |
| Dec | 17 | 2.0 | |




| Month | Ammonia / $NH_3$-N | | |
|---|---|---|---|
| | Results | Practical Quantitaion Limit (PQL) | NPDES Permit Limit |
| | µg/L | µg/L | µg/L |
| Jan | ND | 200 | NA |
| Feb | ND | | |
| Mar | ND | | |
| Apr | 200 | | |
| May | ND | | |
| Jun | ND | | |
| Jul | ND | | |
| Aug | ND | | |
| Sep | ND | | |
| Oct | ND | | |
| Nov | ND | | |
| Dec | ND | | |

*Note: PQL is the concentration below which data cannot be reported with accuracy.

## Tabular Data for 2016 Summary Report

| INFLUENT | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2016 Month | Monthly Total Flow MG | Avg Inst Peak MGD | Avg Flow MGD | Avg TSS mg/L | Avg TSS lbs/day | Avg $CBOD_5$ mg/L | Avg $CBOD_5$ lbs/day |
| Jan | 20.31 | 1.70 | 0.655 | 287 | 1830 | 233 | 1430 |
| Feb | 18.29 | 1.36 | 0.631 | 333 | 1760 | 242 | 1280 |
| Mar | 19.80 | 1.46 | 0.639 | 620 | 3230 | 208 | 1080 |
| Apr | 18.77 | 1.39 | 0.626 | 418 | 2160 | 282 | 1470 |
| May | 19.24 | 1.29 | 0.621 | 354 | 1820 | 308 | 1590 |
| Jun | 18.37 | 1.32 | 0.612 | 433 | 2260 | 339 | 1780 |
| Jul | 19.59 | 1.26 | 0.632 | 447 | 2450 | 304 | 1700 |
| Aug | 19.95 | 1.22 | 0.643 | 450 | 2430 | 227 | 1220 |
| Sep | 19.09 | 1.23 | 0.636 | 297 | 1640 | 256 | 1420 |
| Oct | 19.34 | 1.25 | 0.624 | 338 | 1790 | 227 | 1180 |
| Nov | 18.87 | 1.36 | 0.629 | 343 | 1800 | 257 | 1350 |
| Dec | 19.50 | 1.35 | 0.629 | 425 | 2210 | 323 | 1670 |
| **AVG** | **19.26** | **1.35** | **0.631** | **395** | **2120** | **267** | **1430** |
| **TOTALS** | **231.1** | | | | | | |

| FINAL EFFLUENT | | | | | | | |
|---|---|---|---|---|---|---|---|
| Total Rain Inches | Total Monthly Flow MG | Avg Inst Peak Flow MGD | Max Flow MGD | Avg Flow MGD | Avg TSS mg/L | Avg TSS lbs/day | Avg Monthly TSS % Removal |
| 6.04 | 18.63 | 1.27 | 0.954 | 0.601 | 6.6 | 34 | 98 |
| 0.40 | 16.59 | 1.16 | 0.605 | 0.572 | 9.5 | 46 | 97 |
| 3.14 | 17.42 | 1.20 | 0.806 | 0.562 | 6.7 | 30 | 99 |
| 0.30 | 15.95 | 1.11 | 0.592 | 0.532 | 6.5 | 28 | 99 |
| 0.01 | 16.50 | 1.06 | 0.586 | 0.532 | 9.3 | 41 | 98 |
| 0.01 | 15.45 | 1.10 | 0.576 | 0.515 | 5.6 | 25 | 99 |
| 0.00 | 16.14 | 1.08 | 0.569 | 0.521 | 4.8 | 21 | 99 |
| 0.00 | 16.59 | 1.10 | 0.583 | 0.535 | 8.1 | 37 | 98 |
| 0.00 | 15.80 | 1.05 | 0.570 | 0.527 | 3.8 | 17 | 99 |
| 0.77 | 16.97 | 1.16 | 0.595 | 0.547 | 5.1 | 23 | 99 |
| 1.03 | 17.09 | 1.22 | 0.633 | 0.570 | 6.1 | 29 | 98 |
| 3.65 | 18.05 | 1.24 | 0.931 | 0.582 | 7.2 | 34 | 98 |
| | **16.77** | **1.14** | **0.667** | **0.550** | **6.6** | **30** | **98** |
| **15.35** | **201.2** | | | | | | |

## Tabular Data for 2016 Summary Report

| FINAL EFFLUENT | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Avg $CBOD_5$ mg/L | Avg $CBOD_5$ lbs | Avg $CBOD_5$ % Removal | NH3-N ug/L | NH3-N lbs | O & G mg/L | O & G lbs/day | Avg Turb NTU | pH High SU | pH Low SU | Maximum Effluent Cl2 (Grab) µg/L | Avg $Cl_2$ mg/L Before Dechlor | Avg $Cl_2$ Total lbs/day | Maximum Temp °F | Max Total Coliform MPN | Total Coliform Max Median MPN/100mL | Fecal Coliform Maximum MPN/100mL | Maximum Effluent Cl2 (Meter) µg/L | Maximum Settleable Solids mL/L |
| 5.7 | 29 | 98 | ND | ND | ND | ND | 3.6 | 7.33 | 6.71 | ND | 20.5 | 164 | 70.2 | 4.5 | 2.0 | 2.0 | 4,740 | 0.1 |
| 8.0 | 38 | 97 | ND | ND | 6 | 30 | 2.8 | 7.15 | 6.51 | ND | 23.4 | 174 | 71.8 | 13 | 4.0 | 2.0 | 1,520 | <0.1 |
| 5.8 | 26 | 98 | ND | ND | ND | ND | 1.5 | 7.26 | 6.76 | ND | 17.1 | 142 | 72.9 | 2.0 | 1.8 | <1.8 | 2,570 | <0.1 |
| 7.1 | 31 | 98 | 200 | 0.9 | ND | ND | 1.6 | 7.22 | 6.84 | ND | 13.9 | 121 | 74.1 | 330 | <1.8 | 330 | 3,900 | <0.1 |
| 7.9 | 36 | 98 | ND | ND | ND | ND | 3.8 | 7.52 | 6.68 | ND | 24.8 | 180 | 75.0 | 4.5 | 2.0 | <1.8 | ND | <0.1 |
| 4.4 | 19 | 99 | ND | ND | ND | ND | 1.2 | 7.06 | 6.77 | ND | 17.6 | 149 | 77.5 | 4.5 | <1.8 | <1.8 | ND | <0.1 |
| 9.2 | 41 | 98 | ND | ND | ND | ND | 1.5 | 7.35 | 6.58 | ND | 15.0 | 144 | 79.9 | 1.8 | <1.8 | <1.8 | 400 | <0.1 |
| 8.5 | 38 | 97 | ND | ND | ND | ND | 2.8 | 7.19 | 6.37 | ND | 29.8 | 221 | 80.2 | 33 | 4.0 | 11 | 2,770 | 0.1 |
| 8.3 | 37 | 97 | ND | ND | 4 | 17 | 1.5 | 7.37 | 6.46 | 2,550 | 21.7 | 171 | 78.8 | 4.5 | 2.0 | <1.8 | 2,325 | <0.1 |
| 7.7 | 35 | 97 | ND | ND | ND | ND | 1.6 | 7.36 | 6.70 | ND | 18.6 | 161 | 77.9 | 2.0 | 2.0 | <1.8 | 1,030 | 0.1 |
| 7.4 | 35 | 97 | ND | ND | ND | ND | 2.1 | 7.26 | 6.58 | ND | 27.5 | 197 | 75.4 | 4.5 | <1.8 | <1.8 | 3,150 | <0.1 |
| 6.5 | 30 | 98 | ND | ND | ND | ND | 2.4 | 7.26 | 6.43 | ND | 30.8 | 196 | 71.8 | 17 | 4.5 | 2.0 | 3,311 | <0.1 |
| **7.2** | **33** | **98** | | | | | **2.2** | **7.28** | **6.62** | | **21.7** | **168** | **75.5** | | | | | |

# MONTECITO SANITARY DISTRICT

## Collection System Maintenance and Renovation Program 2016

OBJECTIVE

To reduce Sanitary Sewer Overflows (SSO's), increase system reliability, optimize service life of all collection system components and plan for facility replacement.

GOALS – SHORT AND LONG TERM

Short Term:

1. Rehabilitate pipe sections that have been identified as needing repair/replacement.

2. Continue a systematic maintenance program based on past years data to indentify lines that need to be cleaned and evaluated by Closed Circuit Television (CCTV) using the NASSCO pipe rating system.

3. Continue a systematic CCTV program based on the maintenance line segment ratings to identify intrusion of roots, grease and/or structural defects and also check on the effectiveness of the District's cleaning procedures and equipment.

4. Continue to enforce District Ordinance No. 13 - To Regulate and Reduce Fat, Oil, And Grease in the Sewer System and to Require Fat, Oil, and Grease Removal Devices.

5. Continue to enhance the District's Geographic Information System (GIS) of the collection system piping, including routine updating of the District's maintenance activities consisting of cleaning, CCTV, and manhole inspection.

6. Continue to prioritize and make repairs on collection system piping as it is found during regular CCTV'ing activities.

7. Continue to promote and fund a program which provides a financial incentive to property owners (offering a rebate up to $2,000) for the rehabilitation and/or replacement of private sewer laterals. The District's FY 2016-17 funding for this program is $100,000.

8. Continue to train staff and perform the lift station maintenance program consisting of de-ragging pumps, exercising valves, generators and setting up emergency by-pass pumps at each of the four lift stations.

Long Term:

1. Continue to investigate the Inflow & Infiltration issues that may still exist within the District.

2. Continue to clean and CCTV the entire collection system for the inspection and recordation of the system with the closed circuit television truck. Complete a condition assessment of the system using the NASSCO pipe rating system for each line segment.

3. Continue with the pipeline rehabilitation and relining projects.

4. Rehabilitate and replace manholes as determined necessary.

## ACTIONS COMPLETED IN 2016

1. Performed closed circuit video inspection of approximately 16.5 miles of collection system piping.

2. Cleaned approximately 70 miles of collection system piping.

3. Promoted and provided financial incentive for the rehabilitation/replacement of private sewer laterals. In 2016, seventeen property owners participated in this program and replaced/repaired their deteriorated laterals. The District issued rebates for a total of $34,000 to property owners for these repairs.

4. Identified and raised/rehabilitated 7 manholes and 7 cleanouts in various locations throughout the District for a total cost $63,875.

5. Continuation of the Sewer Rehabilitation Project. Insituform Technologies completed approximately 4.6 miles of sewer relining and rehabilitation for the District in 2016. On May 9, 2016 District Board of Directors approved the Notice of Completion for the Sewer Main Rehabilitation Project for a final contract amount totaling $2.7 million, which rehabilitated 25.9 miles of existing pipe.

6. On November 9, 2015 the District Board of Directors approved the purchase of a new Truck Mounted High Pressure Sewer Cleaner to assist the District in performing sewer cleaning work in easement areas, on narrow roadways and low tree limb areas. The truck was delivered and inspected by District staff and on July 25, 2016 the District Board of Directors approved the Notice of Completion to Sewer Equipment Company of America for a final adjusted price of $177,699.

7. On December 14, 2015 the District Board of Directors approved the purchase of a new Toyota Tacoma Truck to replace the 2002 Dodge Dakota. The truck was delivered on January 22, 2016 for a total price of $35,641.

## 2016 SANITARY SEWER OVERFLOW (SSO) REPORT SUMMARY

### PRIVATE

1. 10/20/16 – 940 Channel Drive; Property line clean-out to a private sewer lateral overflowed resulting in a spill of approximately 30 gallons. The Collections Crew notified the property owner to stop using the water and immediately call a plumber to clear the blockage. Staff then helped to disinfect the area. At that time, the owner was given a written Notice to CCTV their private sewer lateral and to provide a video inspection to the District to determine if repairs are required.

### DISTRICT

NONE

# MONTECITO SANITARY DISTRICT

## Mission, History and Future Goals

OUR MISSION

To provide the residents of Montecito with a community service to protect public health and to preserve the natural environment through collection, treatment and disposal of wastewater in the most cost effective way possible.

To meet all regulatory discharge requirements as directed by Local, State and Federal agencies.

OUR BACKGROUND

The Montecito Sanitary District (MSD) is an independent special district voted into existence in 1947 by the residents of Montecito. A few highlights of MSD's history include the following:

- 1947: The Montecito Sanitary District was voted into existence by the residents.
- 1947-1960: The community worked toward implementation of service by approving a bond issue, selecting a plant site, and establishing a District boundary.
- 1960: A $900,000 bond issue was passed to build a 750,000 gallon per day extended aeration, secondary treatment plant, an ocean outfall and trunk sewer system.
- 1961-1969: Six assessment districts were formed to finance the installation of 70 miles of collection system pipelines.
- 1981: Voters approved a $3.1 million revenue bond issue to incorporate new technology and expand the plant's capacity to 1.5 MGD.
- 1982-1999: During this time period a second activated sludge reactor basin was added to the treatment plant; two additional secondary clarifiers were constructed; the volume of the aerobic digester was increased; a dissolved air flotation thickener and a belt filter press were installed; a second effluent chlorine contact chamber was constructed along with a de-chlorination chamber; a 250 KW emergency generator was installed at the treatment plant. In the mid 1990's, sodium hypochlorite and sodium bisulfite liquids, replaced gaseous chlorine and sulfur dioxide for safety reasons.

An after-hours alarm notification system was added to the SCADA system as the primary notification system with the existing auto dialer (ADA) becoming the back up. Three effluent disinfection chemical dosing pumps were replaced with new pumps.

- 2012: Refurbishment of all four Secondary Clarifiers; installation of two new sodium hypochlorite chemical feed pumps and one sodium bisulfite chemical feed pump; all three Influent Pumps were retrofitted with new high chrome impellors and volutes and the Influent Variable Frequency Drive motors were replaced with new energy efficient units.

- 2013: Capital projects completed included the remodel of the former lab into an Operations Control Center; the refurbishment of the Belt Filter Press System; the replacement of the sodium hypochlorite and sodium bisulfite analyzers and the replacement of a 3,000 gallon hypochlorite tank.

- 2014: Preventative maintenance was completed on the Secondary Treatment Clarifiers No. 2 and No. 3; the Aeration Basin Blower No.1 and the Belt Press.

- 2015: The Influent grinders at the wastewater treatment plant were replaced.

  The Montecito District Laboratory received accreditation by California ELAP, effective June 1, 2015. Subsequently, the District added coliform analyses by method SM9221B,E to its list of approved laboratory tests.

  Completed the installation of Mission boxes at the treatment plant for the internet SCADA system to monitor flows.

- 2016: The District completed the Plant Paving and Resurfacing Project.

  On November 14, 2016 the District Board of Directors approved a Purchase Order to WSG Solutions in the amount not to exceed $300,000 for parts needed for the Aeration Basin Air Header Rehabilitation Project.

  The District is nearing completion of the design specification for the replacement of the Dissolved Air Floatation Thickener (DAFT).

- 2017: Current/Future Capital Improvement Projects include the following:

  - Completion of the Aeration Basin Air Header Rehabilitation Project
  - Replacement of Aeration Blowers and Motors