

MONTECITO SANITARY DISTRICT



2018 ANNUAL SUMMARY REPORT

NPDES No. CA0047899

Order No. R3-2012-0016

**Montecito Sanitary District
2018 Annual Report**

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MONTECITO SANITARY DISTRICT

January 2018 – December 2018

GOVERNING BOARD

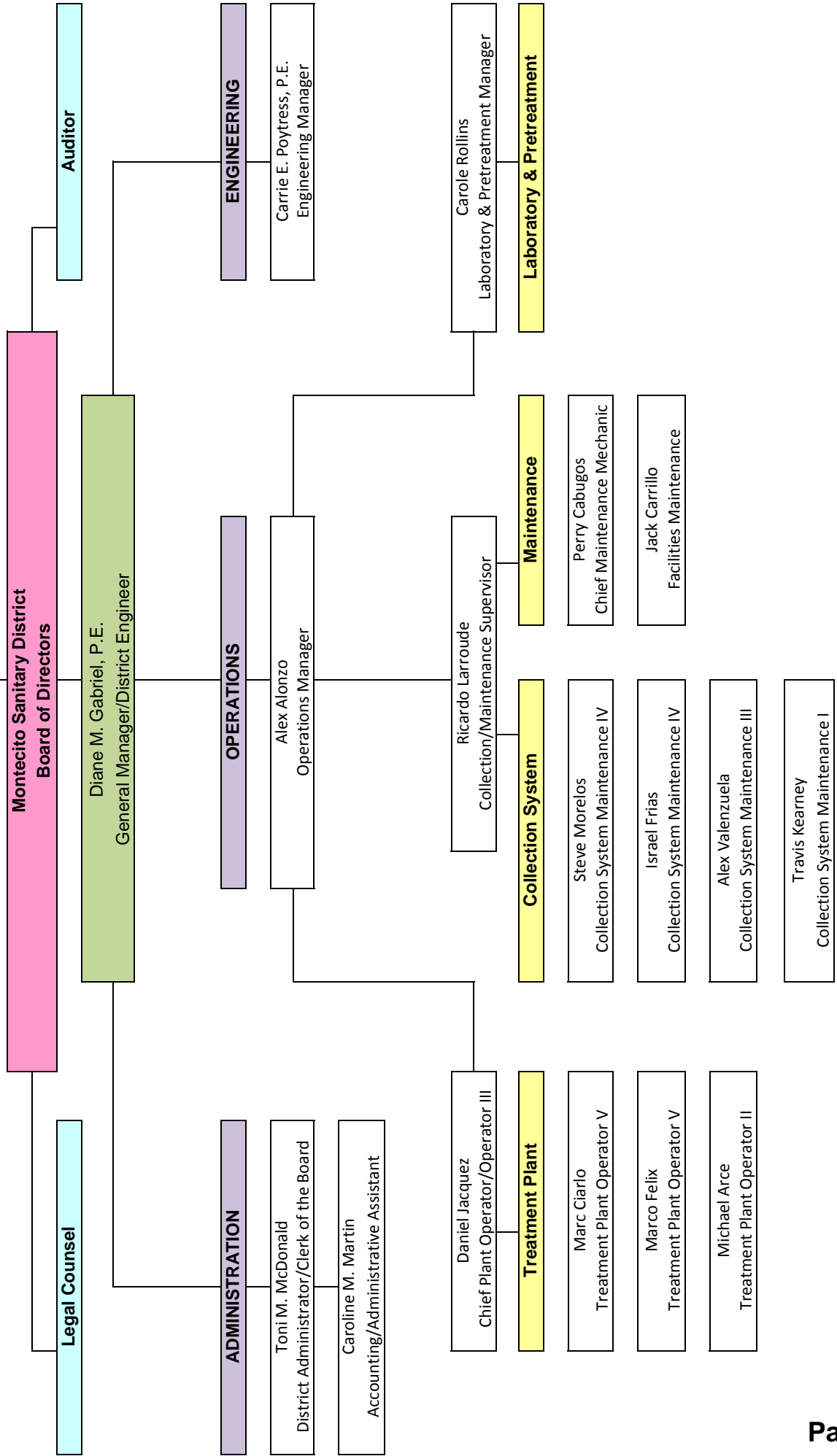
Judith Ishkanian	President (<i>Term ended 12/7/18</i>)
Robert Williams	Vice President (<i>Term ended 12/7/18</i>)
Tom Kern	Treasurer
Jeff Kerns	Secretary / Vice President
Warner Owens	Director (<i>Resigned from Board 10/15/18</i>)
Thomas Bollay	President (<i>appointed on 11/14/18</i>)
Ellwood "Woody" Barrett	Secretary (<i>elected 11/18 installed 12/7/18</i>)
Dana Newquist	Director (<i>elected 11/18 installed 12/7/18</i>)

January 2018 – December 2018

STAFF

Diane M. Gabriel, P.E.	General Manager/District Engineer
Carrie Poytress, P.E.	Engineering Manager
Toni McDonald	District Administrator
Caroline M. Martin	Accounting/Administrative Assistant
Alex Alonzo	Operations Manager
Daniel Jacquez	Chief Plant Operator - III
Marco Felix	Treatment Plant Operator V
Marc Ciarlo	Treatment Plant Operator V
Michael Arce	Treatment Plant Operator III
Carole Rollins	Pretreatment & Laboratory Manager
Ricardo Larroude	Collection/Maintenance Supervisor
Perry Cabugos	Chief Maintenance Mechanic
Jack Carrillo	Facilities Maintenance
Steve Morelos	Collection System Maintenance IV
Israel Frias	Collection System Maintenance IV
Alex Valenzuela	Collection System Maintenance III
William "Travis" Kearney	Collection System Maintenance I (<i>hired 10/22/18</i>)

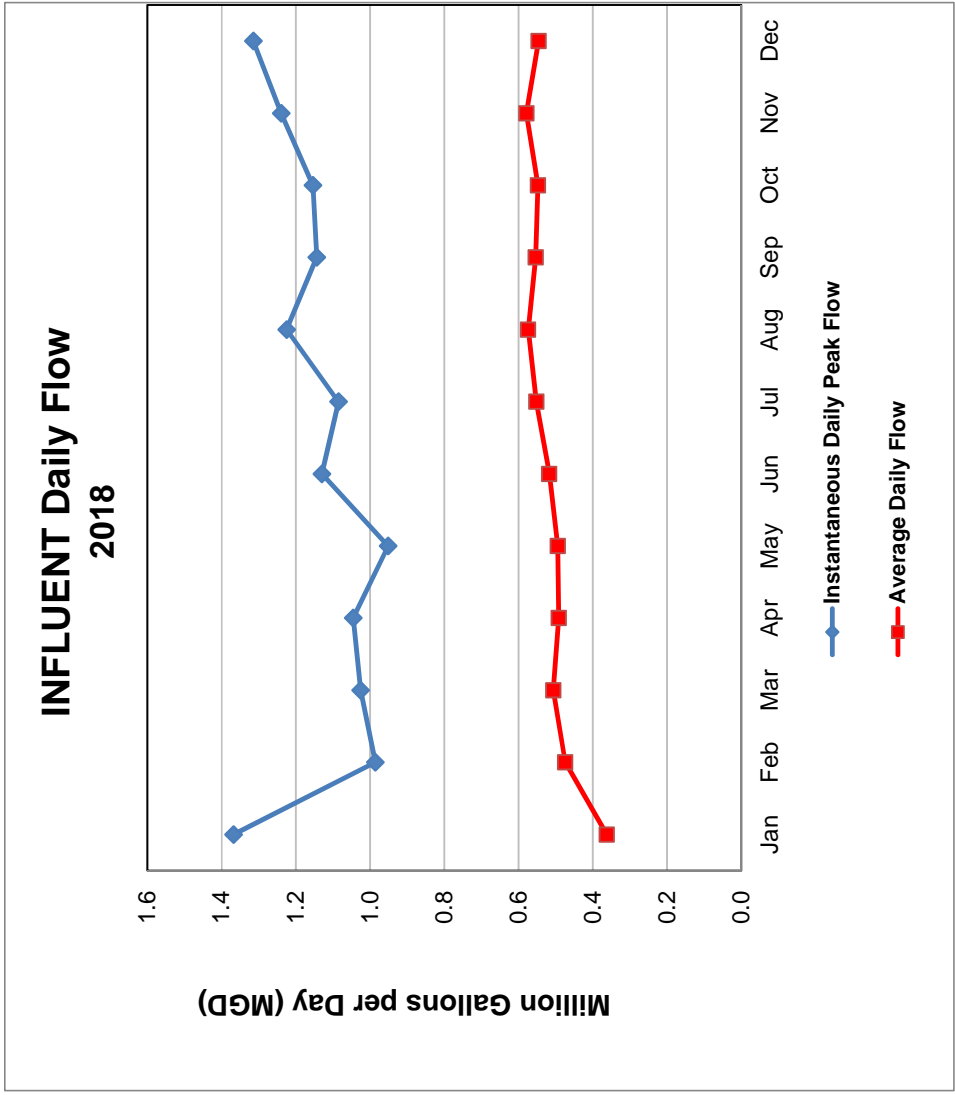
Property Owners Within the Montecito Sanitary District



MILLION GALLONS PER DAY (MGD)		
Month	Instant Daily Peak	Average Daily Flow
Jan	1.368	0.363
Feb	0.986	0.475
Mar	1.026	0.507
Apr	1.045	0.492
May	0.951	0.495
Jun	1.130	0.518
Jul	1.085	0.552
Aug	1.225	0.575
Sep	1.144	0.555
Oct	1.154	0.548
Nov	1.239	0.579
Dec	1.314	0.547
Avg	1.139	0.517

*

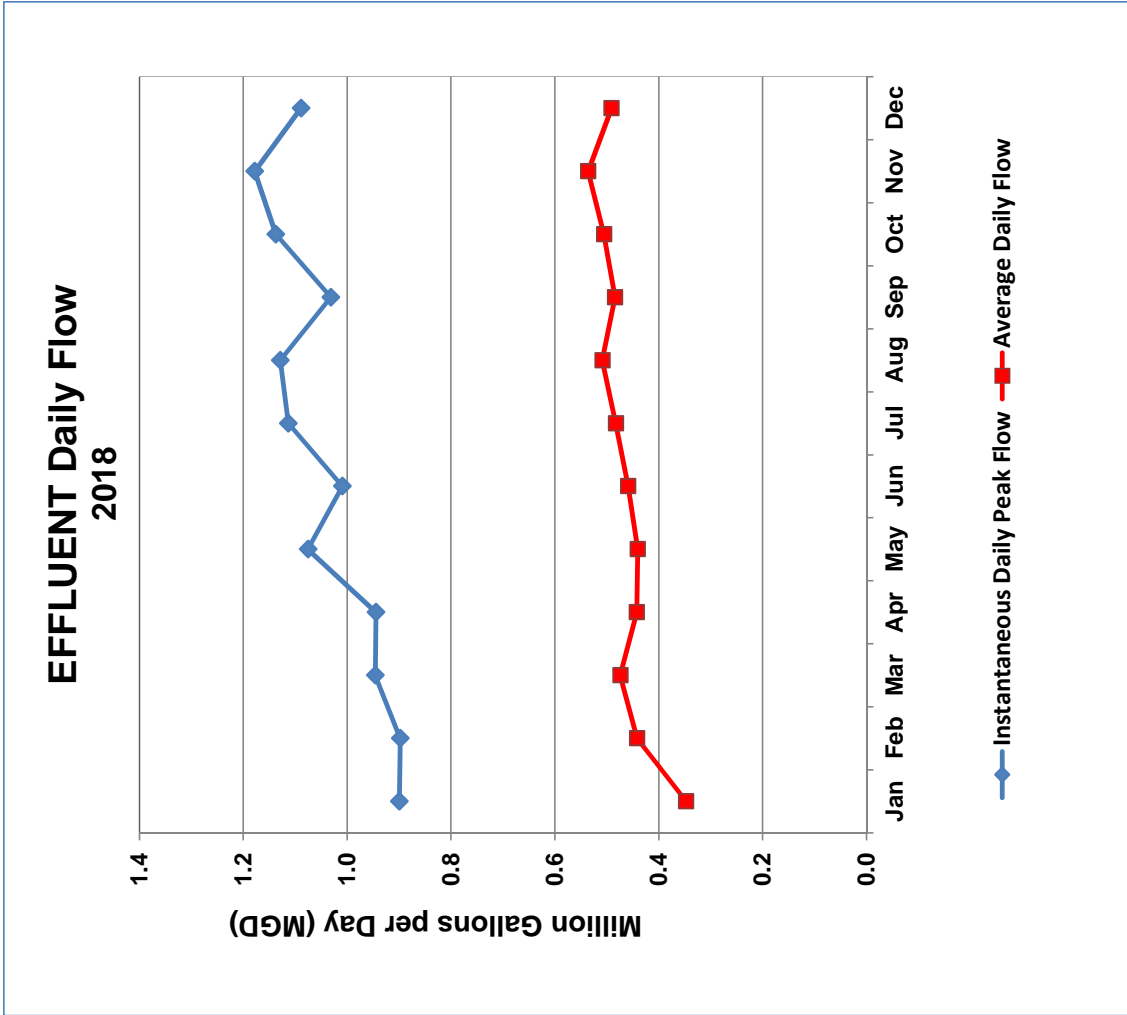
* Low flows due to the January 9, 2018 Thomas Fire Debris Flow and evacuations of the service area.



MILLION GALLONS PER DAY (MGD)		
MONTH	Instant Daily Peak	Average Daily Flow
Jan	0.900	0.348
Feb	0.898	0.442
Mar	0.946	0.474
Apr	0.945	0.442
May	1.076	0.441
Jun	1.009	0.459
Jul	1.114	0.483
Aug	1.129	0.509
Sep	1.031	0.484
Oct	1.137	0.506
Nov	1.178	0.536
Dec	1.089	0.491
AVG	1.038	0.468

*

* Low flows due to the January 9, 2018 Thomas Fire Debris Flow and evacuations of the service area.

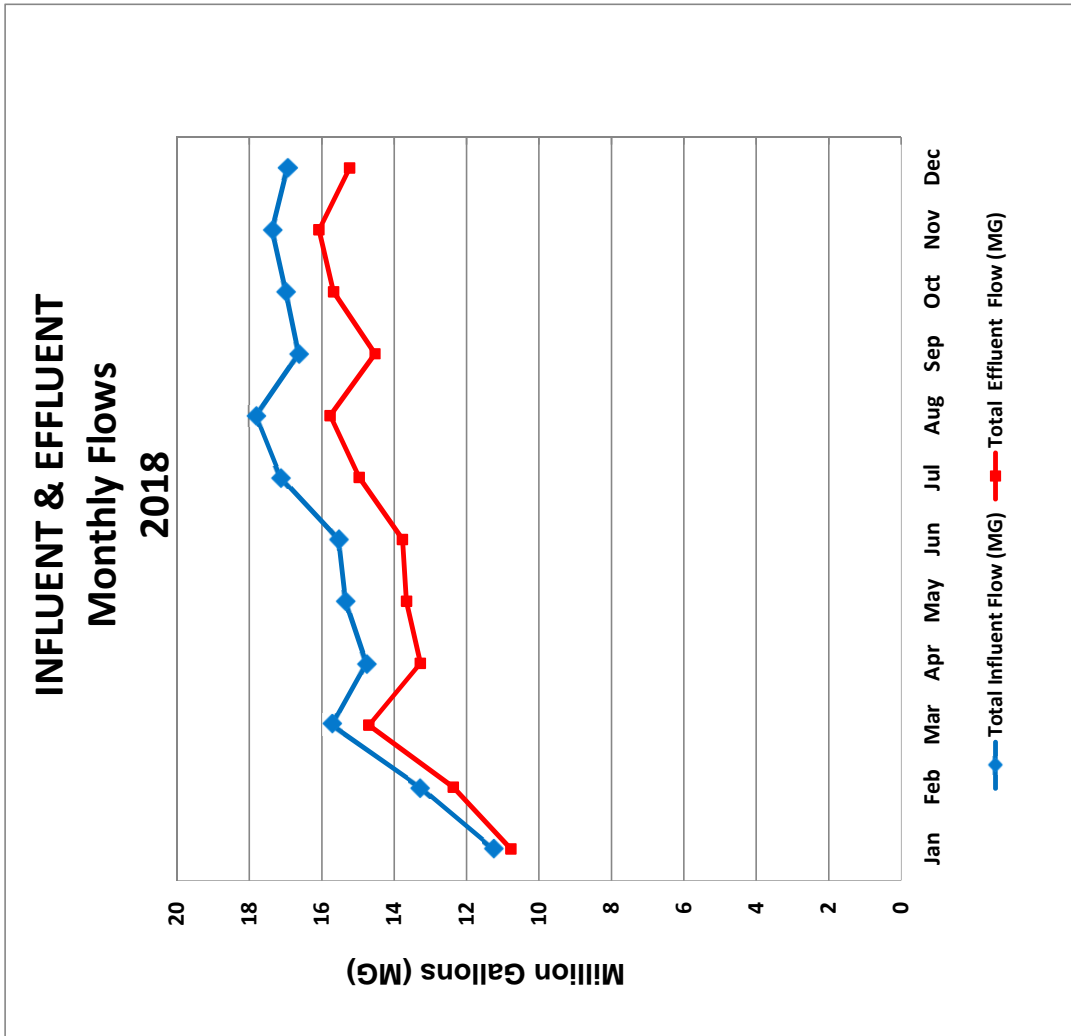


Month	Total Influent Flow (MG)	Total Effluent Flow (MG)
Jan	11.25	10.78
Feb	13.29	12.37
Mar	15.72	14.70
Apr	14.77	13.27
May	15.34	13.66
Jun	15.53	13.77
Jul	17.13	14.97
Aug	17.81	15.77
Sep	16.64	14.53
Oct	17.00	15.67
Nov	17.37	16.08
Dec	16.95	15.23

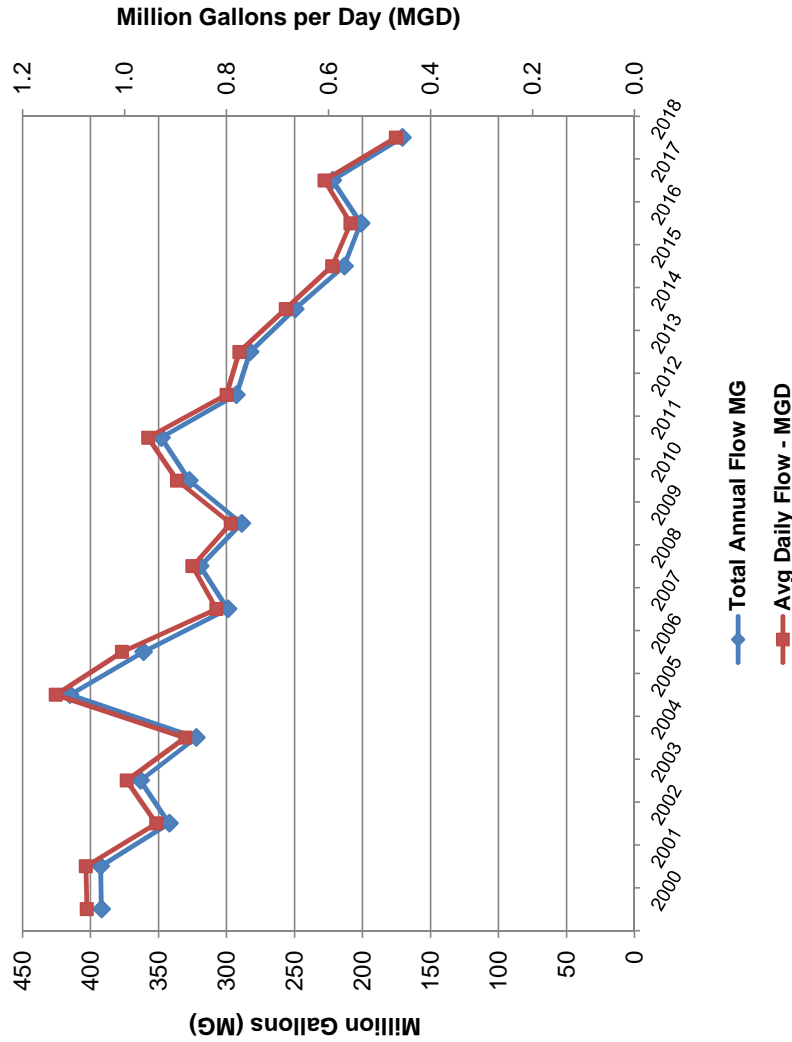
Total Annual Flows	188.78	170.80
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* Low flows due to the January 9, 2018 Thomas Fire Debris Flow and evacuations of the service area.

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.



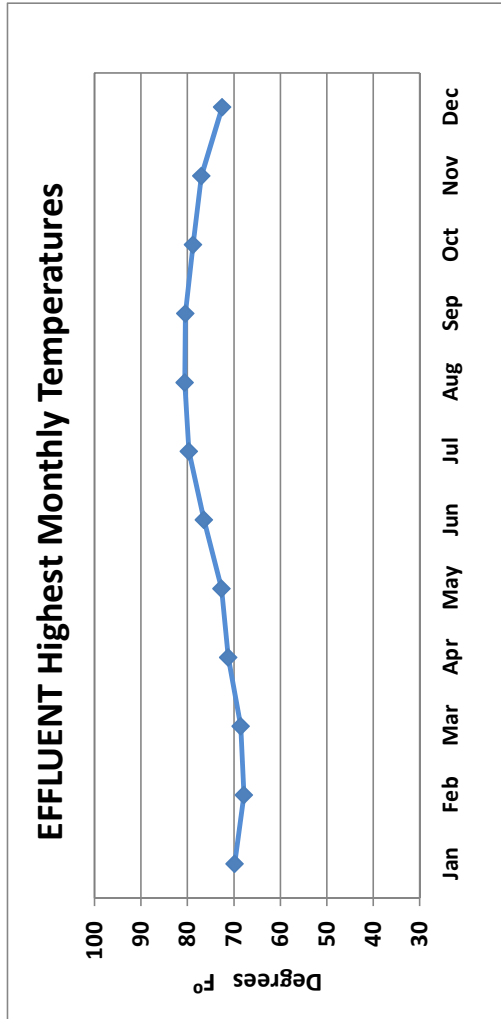
**Historical Total and Average Daily Effluent Flows
2000 to 2018**



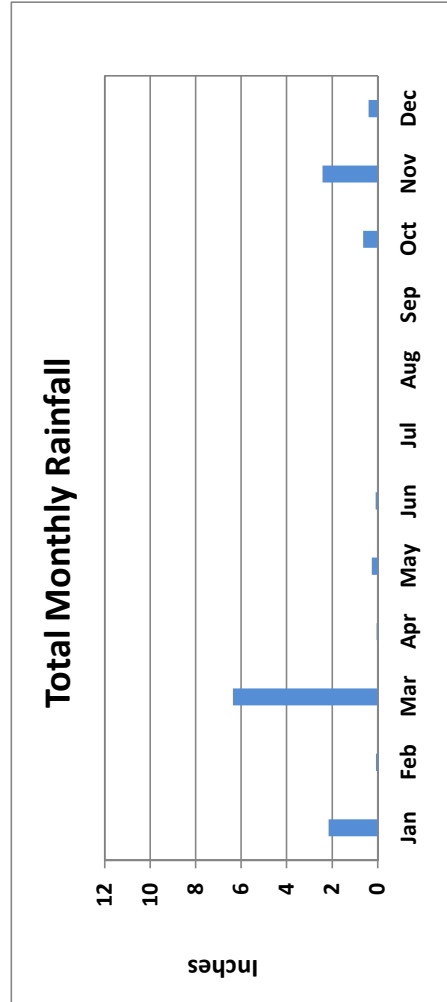
YEAR	Total Annual Flow MG	Avg Daily Flow MGD
2000	392.0	1.074
2001	392.6	1.076
2002	342.2	0.938
2003	363.4	0.996
2004	322.4	0.881
2005	415.3	1.135
2006	361.2	1.005
2007	299.2	0.820
2008	319.5	0.867
2009	289.0	0.792
2010	327.4	0.897
2011	348.0	0.954
2012	292.9	0.800
2013	282.7	0.775
2014	249.6	0.684
2015	213.4	0.593
2016	201.2	0.557
2017	222.1	0.608
2018	170.8	0.468

* Low flows due to the January 9, 2018 Thomas Fire Debris Flow and evacuations of the service area.

2018



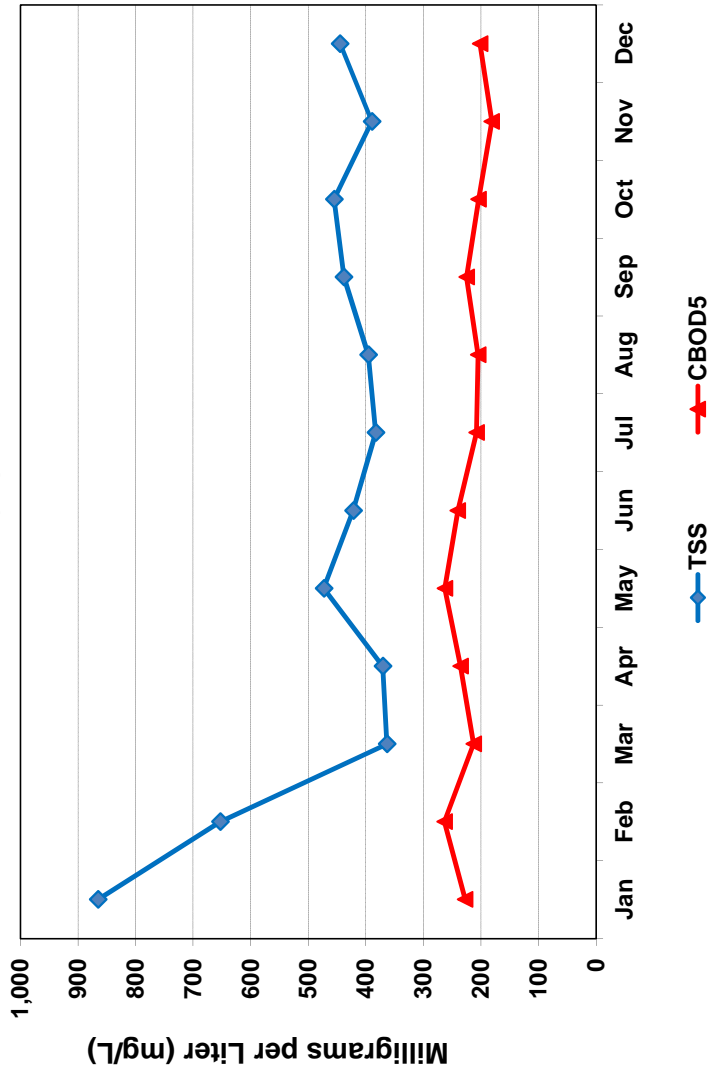
Month	High Temp. °F
Jan	69.8
Feb	67.8
Mar	68.5
Apr	71.2
May	72.7
Jun	76.5
Jul	79.7
Aug	80.6
Sep	80.4
Oct	78.8
Nov	77.0
Dec	72.5



Month	Rainfall Inches
Jan	2.15
Feb	0.07
Mar	6.37
Apr	0.05
May	0.25
Jun	0.09
Jul	0.00
Aug	0.00
Sep	0.01
Oct	0.63
Nov	2.42
Dec	0.39

TOTAL	12.43
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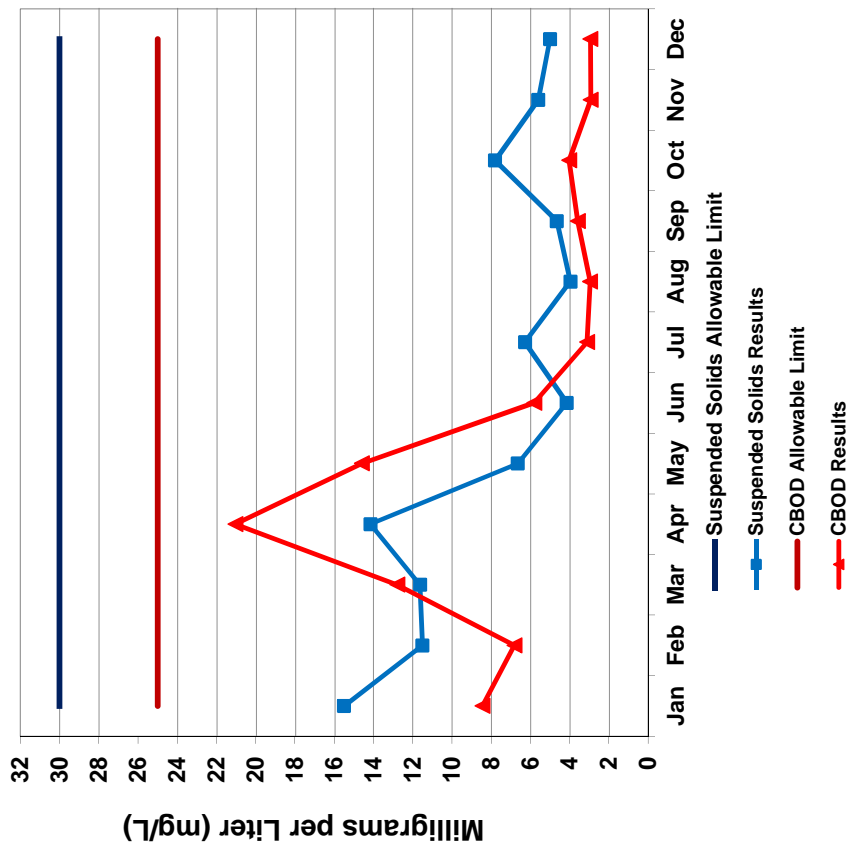
INFLUENT Suspended Solids & Carbonaceous Biochemical Oxygen Demand 2018



Month	TSS mg/L	CBOD ₅ mg/L
Jan	865	227
Feb	653	263
Mar	363	213
Apr	371	235
May	473	263
Jun	422	240
Jul	383	208
Aug	395	205
Sep	438	225
Oct	455	204
Nov	389	181
Dec	445	202
AVG	471	222

* High TSS due to incoming sand, silt and clay from the collections system from the January 9, 2018 Thomas Fire Debris Flow.

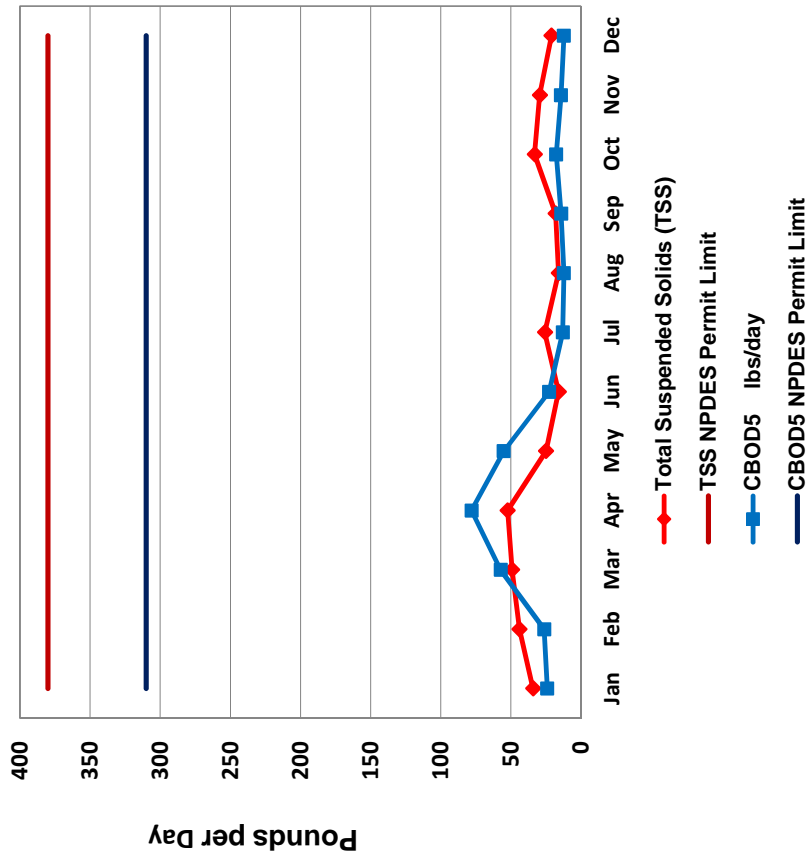
EFFLUENT Total Suspended Solids & Carbonaceous Biochemical Oxygen Demand 2018



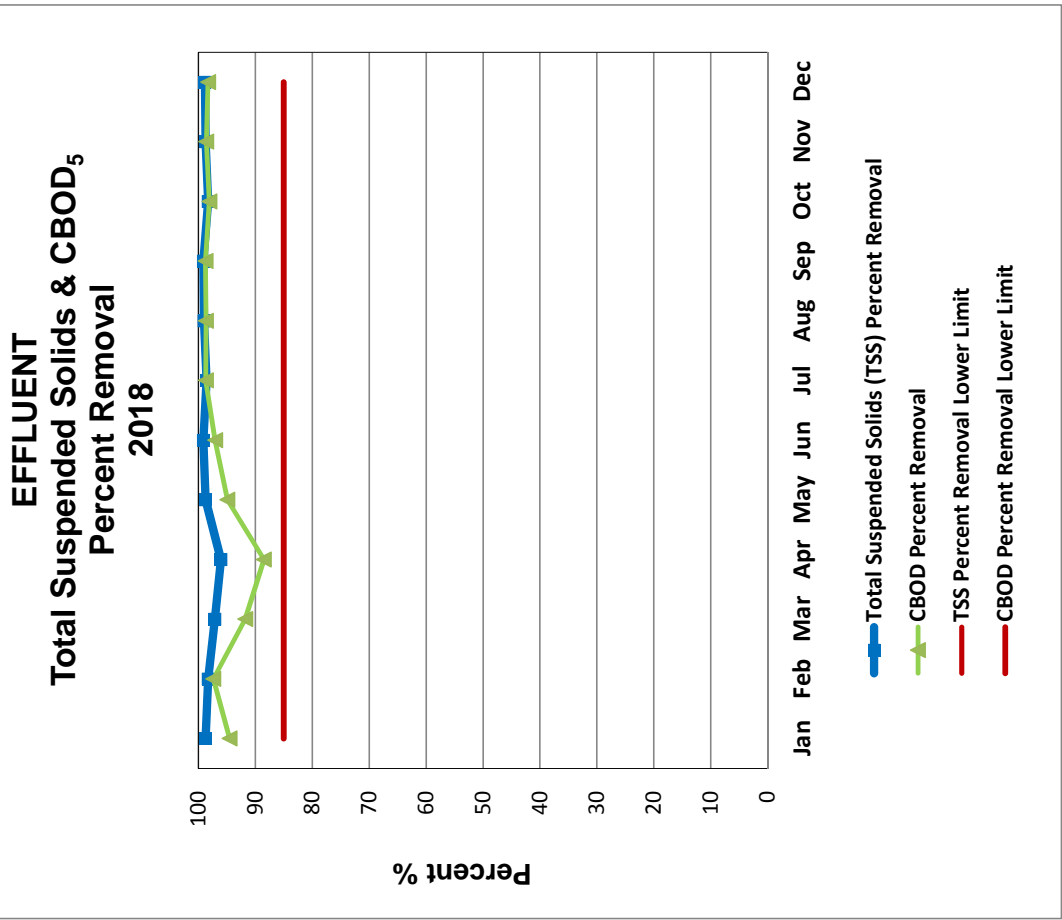
	TSS		CBOD ₅	
	Permit Limit	Results	Permit Limit	Results
	mg/L	mg/L	mg/L	mg/L
Jan	30	15.5	25	8.4
Feb		11.5		6.8
Mar		11.6		12.8
Apr		14.2		21.0
May		6.6		14.6
Jun		4.2		5.8
Jul		6.3		3.1
Aug		4.0		3.0
Sep		4.7		3.6
Oct		7.8		4.0
Nov		5.6		2.9
Dec		5.0		2.9
AVG		8.1		7.4

* Higher TSS and CBOD₅ due to lingering plant performance impacts of the sand, silt and clay from the collections system from the January 9, 2018 Thomas Fire Debris Flow.

EFFLUENT Total Suspended Solids & Carbonaceous Biochemical Oxygen Demand (CBOD₅) 2018

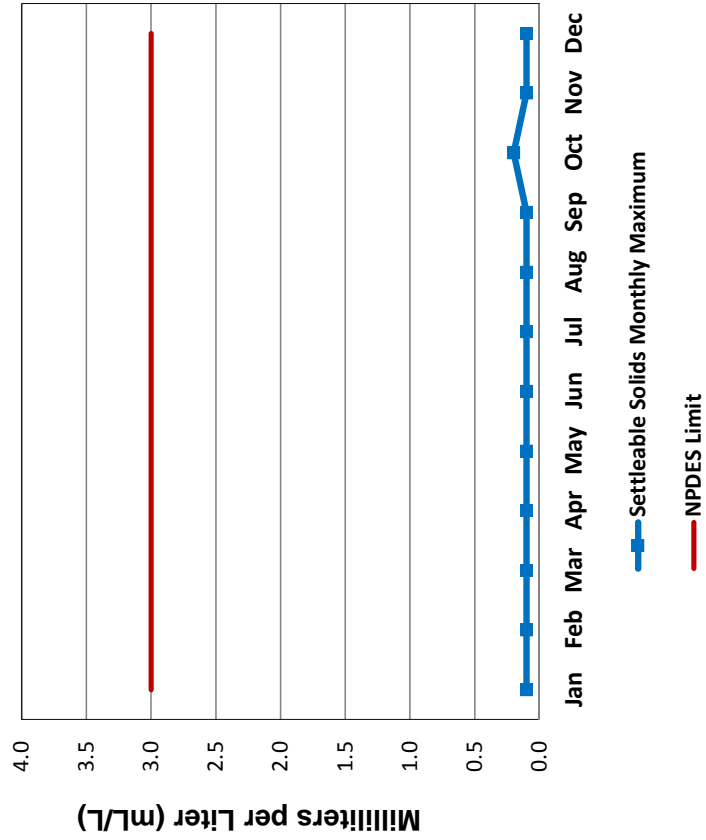


* Higher TSS and CBOD₅ due to lingering plant performance impacts of the sand, silt and clay from the collections system from the January 9, 2018 Thomas Fire Debris Flow.

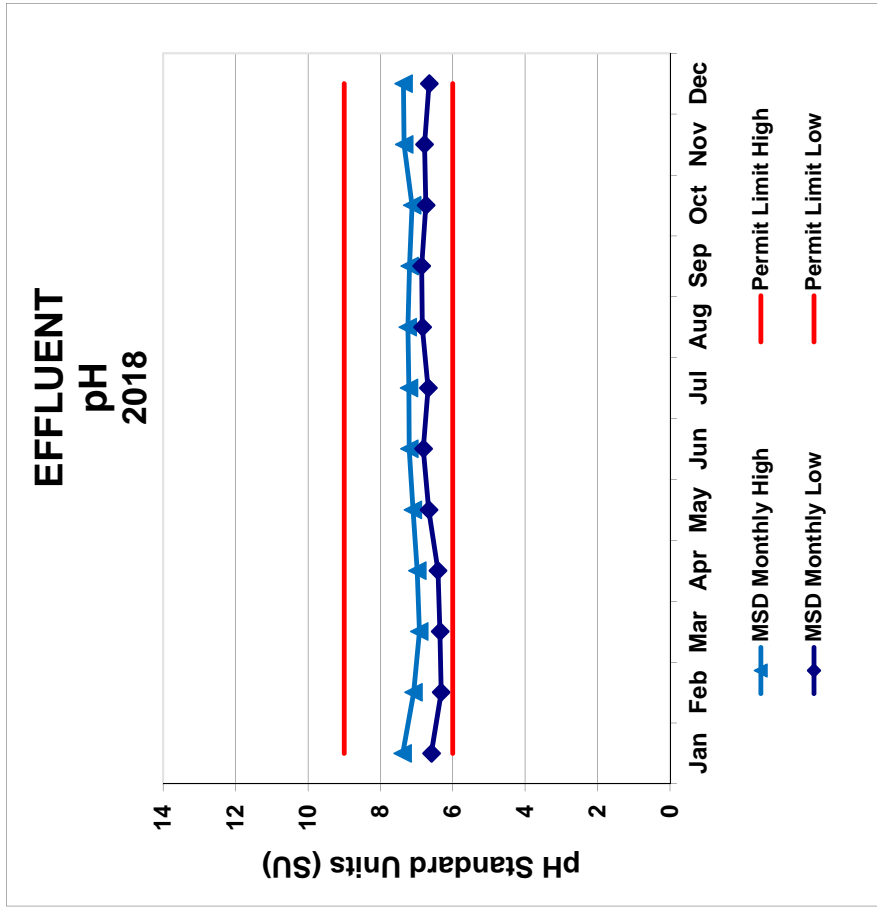


Month	NPDES PERMIT LOWER LIMIT %	TSS Average Percent Removal %	NPDES PERMIT LOWER LIMIT %	CBOD ₅ Average Percent Removal %
Jan	85	99	85	95
Feb	85	98	85	97
Mar	85	97	85	92
Apr	85	96	85	89
May	85	99	85	95
Jun	85	99	85	97
Jul	85	99	85	99
Aug	85	99	85	99
Sep	85	99	85	99
Oct	85	98	85	98
Nov	85	99	85	99
Dec	85	99	85	98
AVG		98		96

EFFLUENT Settleable Solids Monthly Maximum 2018

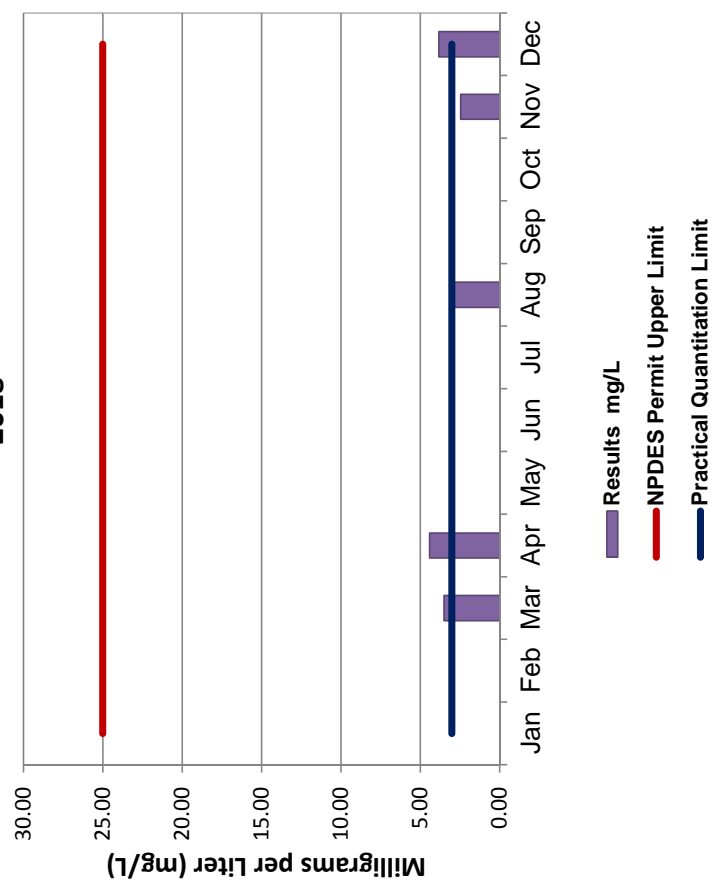


Month	NPDES Permit Limit mL/L	Monthly Maximum mL/L
Jan	3.0	<0.1
Feb		<0.1
Mar		<0.1
Apr		<0.1
May		<0.1
Jun		<0.1
Jul		<0.1
Aug		<0.1
Sep		<0.1
Oct		0.2
Nov		0.1
Dec		<0.1



Month	MSD Monthly Low	NPDES Low Limit	MSD Monthly High	NPDES High Limit
Jan	6.59	6.0	7.38	9.0
Feb	6.32		7.08	
Mar	6.35		6.92	
Apr	6.41		6.98	
May	6.66		7.10	
Jun	6.81		7.20	
Jul	6.68		7.21	
Aug	6.84		7.24	
Sep	6.86		7.19	
Oct	6.74		7.12	
Nov	6.78		7.34	
Dec	6.65		7.36	
Avg	6.64		7.18	

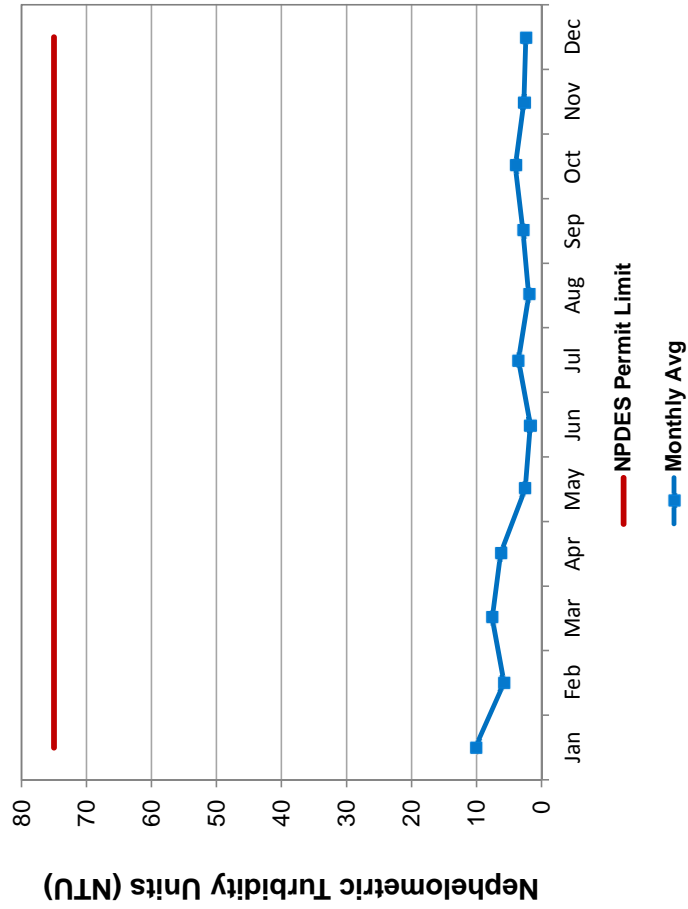
EFFLUENT Oil & Grease 2018



Month	Oil & Grease		
	Results mg/L	PQL	NPDES Limit
Jan	ND	3.0	25
Feb	ND		
Mar	3.50		
Apr	4.40		
May	ND		
Jun	ND		
Jul	ND		
Aug	3.04		
Sep	ND		
Oct	ND		
Nov	DNQ2.45		
Dec	3.83		

Note: Practical Quantitation Limit (PQL) is the concentration below which data cannot be reported with accuracy.

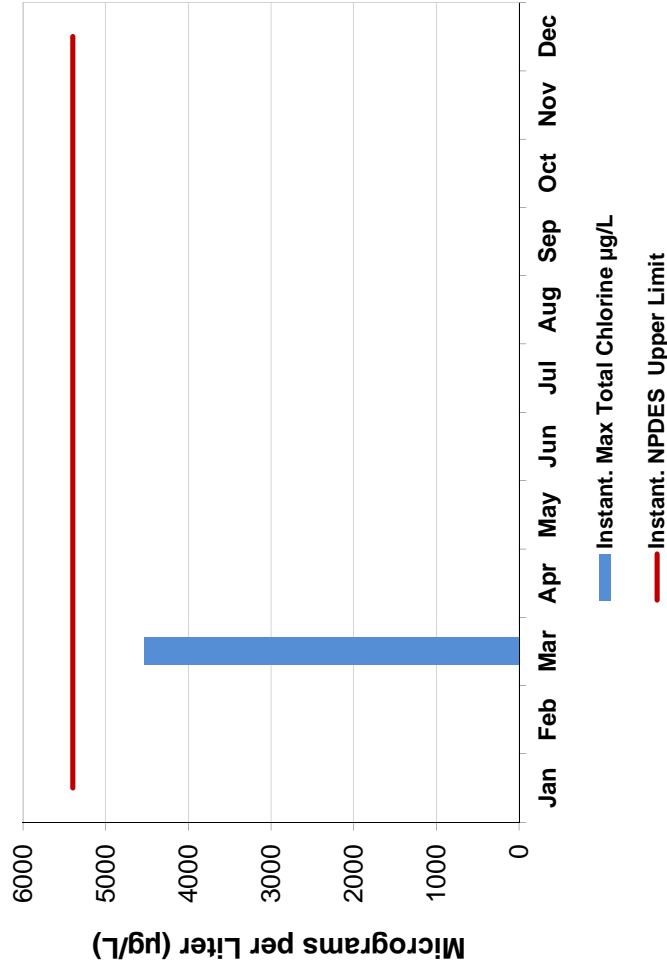
EFFLUENT Turbidity 2018



Turbidity - NTU		
Month	NPDES Limit	Monthly Avg
Jan	75	10.2
Feb		5.7
Mar		7.6
Apr		6.3
May		2.5
Jun		1.7
Jul		3.5
Aug		2.0
Sep		2.9
Oct		4.0
Nov		2.7
Dec		2.4
AVG		4.3

*Higher effluent turbidity due to the January 9, 2018 Thomas Fire Debris Flow.

FINAL EFFLUENT Total Chlorine Residual - Instantaneous Max (Grab) 2018

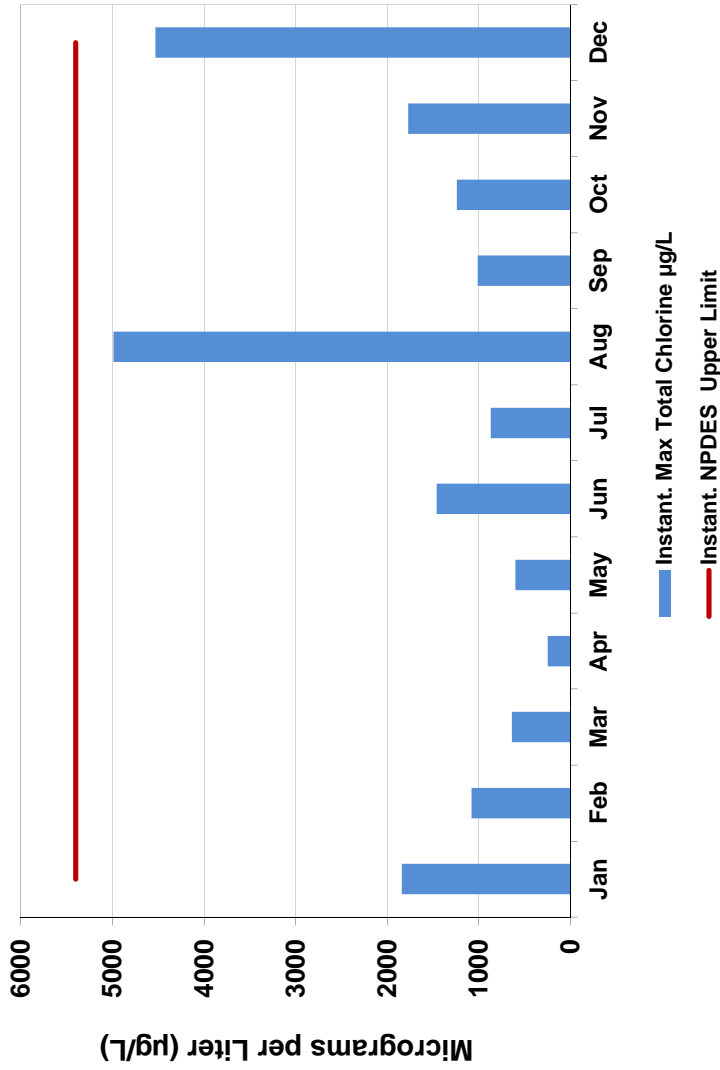


Month	Instant. NPDES Upper Limit	Instant. Max Total Chlorine µg/L
Jan	5400	0
Feb		0
Mar		4530
Apr		0
May		0
Jun		0
Jul		0
Aug		0
Sep		0
Oct		0
Nov		0
Dec		0

* High instantaneous total chlorine residual due to an instrumentation malfunction.

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

FINAL EFFLUENT
Total Chlorine Residual - Instantaneous Max (Meter)
2018

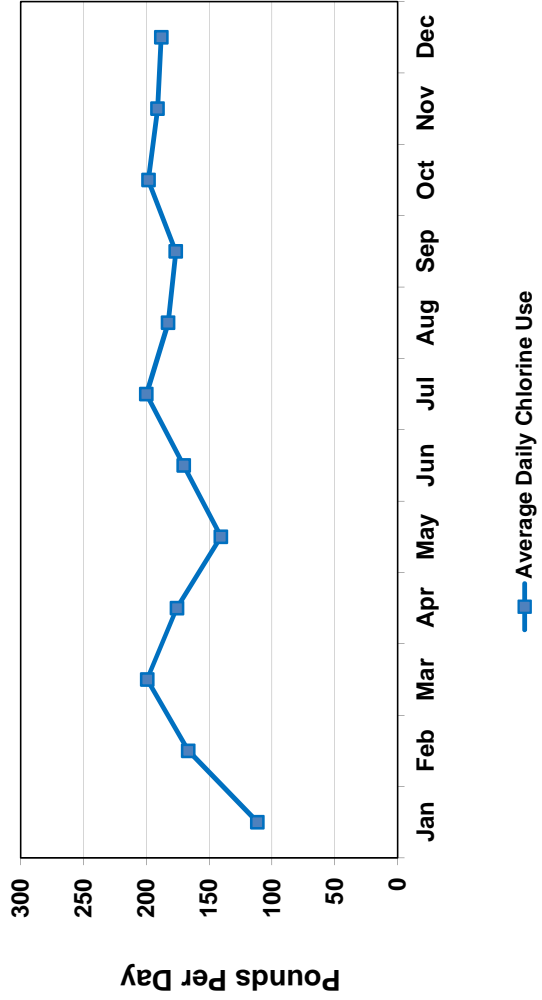


Month	NPDES Instant. Upper Limit µg/L	Instant. Max Total Chlorine µg/L
Jan	5400	1840
Feb		1080
Mar		640
Apr		248
May		601
Jun		1460
Jul		869
Aug		4990
Sep		1013
Oct		1240
Nov		1770
Dec		4532

* Higher total chlorine residual in August and December due to instrumentation malfunction.

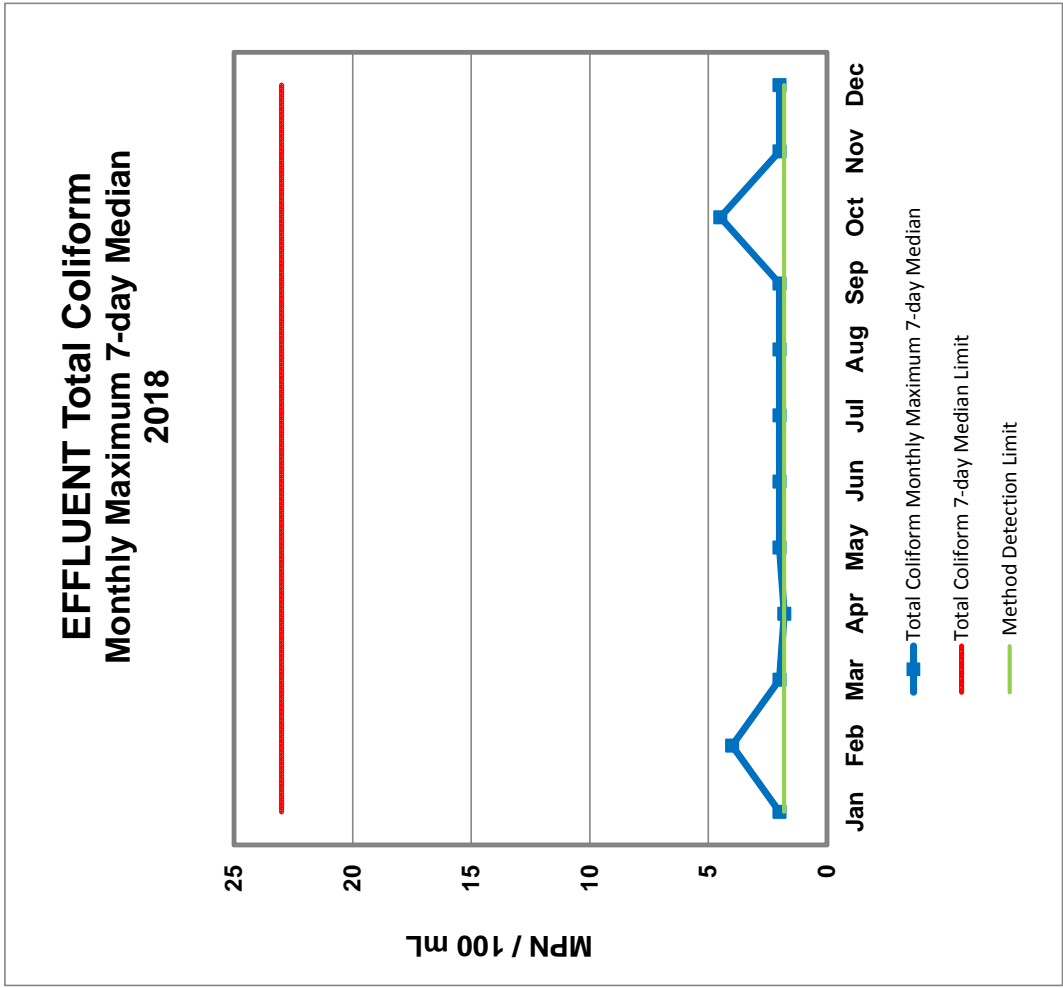
Note: "Meter" refers to instrumentation that continuously monitors and analyzes data.

EFFLUENT Chlorine Used 2018



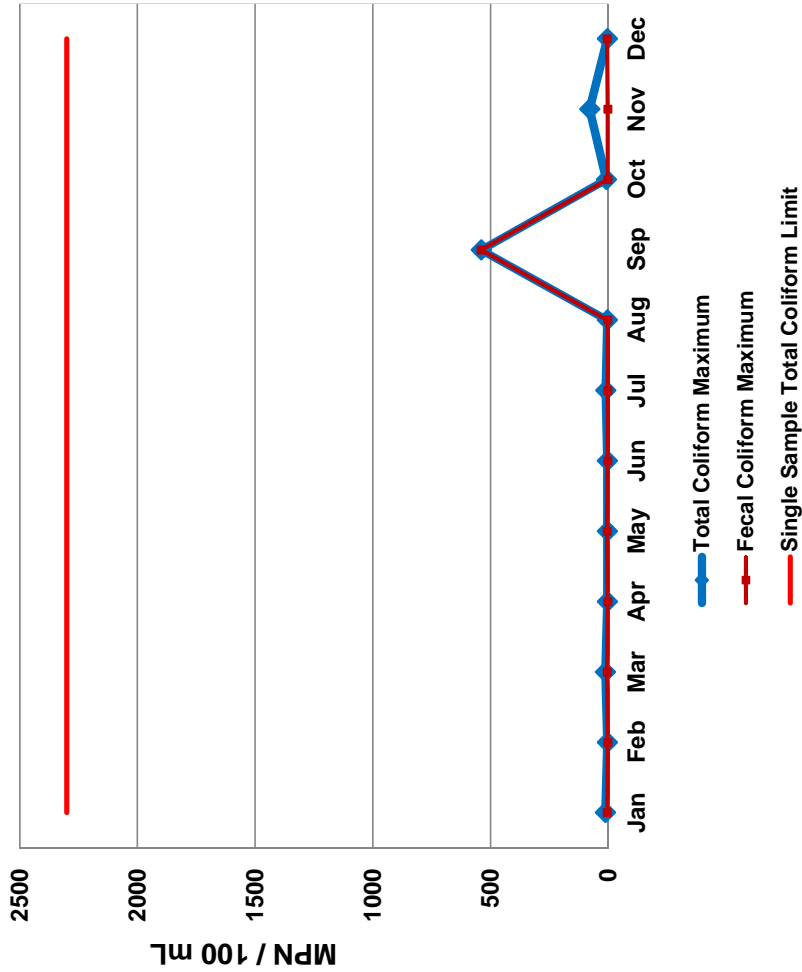
Month	Chlorine Used lbs/day
Jan	112
Feb	167
Mar	199
Apr	176
May	141
Jun	170
Jul	200
Aug	183
Sep	177
Oct	198
Nov	191
Dec	188
AVG	175

* Lower amount of chlorine used due to lower flows because of the January 9, 2018 Thomas Fire Debris Flow and evacuations of the service area.



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

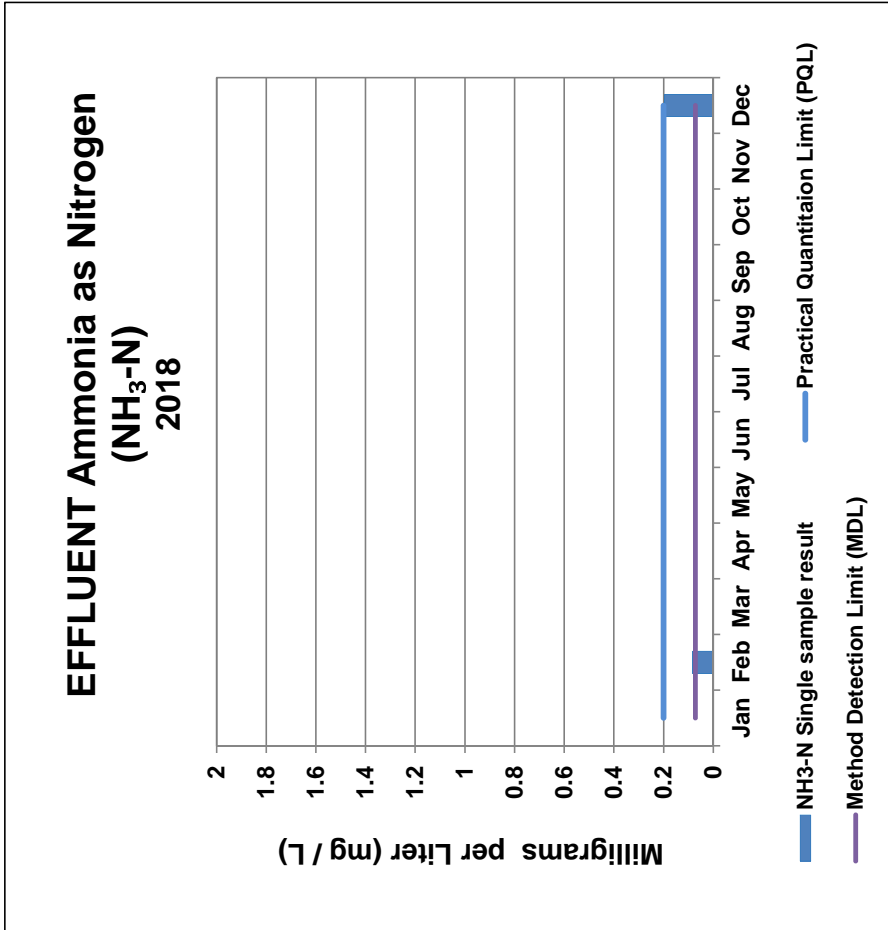
EFFLUENT Total and Fecal Coliform Monthly Single-Sample Maximums 2018



Month	MPN/100mL		
	Total Coliform Monthly Maximum	Fecal Coliform Monthly Maximum	Total Coliform Single Sample Limit
Jan	13.0	4.0	2300
Feb	4.5	2.0	
Mar	13.0	4.5	
Apr	4.5	1.8	
May	4.5	4.5	
Jun	4.5	1.8	
Jul	11.0	2.0	
Aug	4.5	2.0	
Sep	540	540	
Oct	7.8	2.0	
Nov	79.0	2.0	
Dec	4.5	4.5	

*

*High total and fecal coliform due to suspected toxic loading coming into the treatment plant.



Ammonia / NH ₃ -N			
Month	Results	Method Detection Limit (MDL)	NPDES Permit Limit
	mg/L	mg/L	mg/L
Jan	ND		
Feb	DNQ0.082		
Mar	ND		
Apr	ND		
May	ND		
Jun	ND	0.072	NA
Jul	ND		
Aug	ND		
Sep	ND		
Oct	ND		
Nov	ND		
Dec	DNQ0.196		

Note: MDL is the lowest value the test method can detect. PQL is the concentration below which data cannot be reported with accuracy.

Tabular Data for 2018 Summary Report

2018 Month	INFLUENT						
	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	11.25	1.37	0.36	865.00	2369.79	227.33	871.25
Feb	13.29	0.99	0.47	652.80	2680.52	263.00	1085.61
Mar	15.72	1.03	0.51	363.25	1613.86	212.50	929.75
Apr	14.77	1.05	0.49	370.50	1484.77	235.25	943.17
May	15.34	0.95	0.49	472.60	1971.73	262.50	1103.27
Jun	15.53	1.13	0.52	421.50	1808.55	240.00	1048.60
Jul	17.13	1.09	0.55	382.50	1786.29	207.67	977.60
Aug	17.81	1.22	0.57	395.40	1800.19	204.75	935.82
Sep	16.64	1.14	0.55	438.00	2234.39	224.75	1147.73
Oct	17.00	1.15	0.55	454.80	2111.26	204.00	954.43
Nov	17.37	1.24	0.58	389.25	2111.41	181.00	833.33
Dec	16.95	1.31	0.55	444.50	2011.74	201.50	870.65
AVG	15.73	1.14	0.517	471	2120	222	1430
TOTALS	188.8						

Total Rain Inches	FINAL EFFLUENT							
	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	
2.15	10.78	0.90	0.61	0.35	15.50	34.11	98.76	
0.07	12.37	0.90	0.50	0.44	11.50	43.83	98.27	
6.37	14.70	0.95	0.95	0.47	11.63	49.15	97.10	
0.05	13.27	0.94	0.52	0.44	14.15	52.33	96.03	
0.25	13.66	1.08	0.48	0.44	6.64	24.88	98.72	
0.09	13.77	1.01	0.50	0.46	4.15	15.92	99.12	
0.00	14.97	1.11	0.53	0.48	6.28	25.68	98.58	
0.00	15.77	1.13	0.55	0.51	3.96	15.95	99.05	
0.01	14.53	1.03	0.53	0.48	4.65	18.05	99.14	
0.63	15.67	1.14	0.56	0.51	7.80	32.99	98.30	
2.42	16.08	1.18	0.72	0.54	5.60	29.37	98.72	
0.39	15.23	1.09	0.54	0.49	5.00	20.99	98.83	
12.43	14.23	1.04	0.582	0.468	8.1	30	98	
	170.8							

Tabular Data for 2018 Summary Report

FINAL EFFLUENT																			
2018 Month	Avg CBOD ₅ mg/L	Avg CBOD ₅ lbs	Avg CBOD ₅ % Removal	NH3-N mg/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
Jan	8.44	24.00	94.51	ND	ND	ND	ND	10.17	7.38	6.59	0.00	12.86	111.55	69.80	13.00	2.00	4.00	1840.00	<0.1
Feb	6.81	26.18	97.37	DNQ0.082	DNQ0.30	ND	ND	5.74	7.08	6.32	0.00	23.14	166.53	67.82	4.50	4.00	2.00	1080.00	<0.1
Mar	12.79	57.15	91.79	ND	ND	3.50	12	7.59	6.92	6.35	4530.00	23.10	199.32	68.54	13.00	2.00	4.50	640.00	<0.1
Apr	21.04	77.97	88.51	ND	ND	4.40	18	6.29	6.98	6.41	0.00	19.55	175.57	71.24	4.50	1.80	1.80	248.00	<0.1
May	14.59	55.05	94.91	ND	ND	ND	ND	2.52	7.10	6.66	0.00	15.09	140.61	72.68	4.50	2.00	4.50	601.00	<0.1
Jun	5.80	22.68	97.05	ND	ND	ND	ND	1.72	7.20	6.81	0.00	17.56	170.34	76.46	4.50	2.00	1.80	1460.00	<0.1
Jul	3.11	12.88	98.71	ND	ND	ND	ND	3.54	7.21	6.68	0.00	18.20	199.98	79.70	11.00	2.00	2.00	869.00	<0.1
Aug	2.95	12.15	98.66	ND	ND	3.04	13	1.95	7.24	6.84	0.00	17.05	182.58	80.60	4.50	2.00	2.00	4990.00	<0.1
Sep	3.58	14.03	98.77	ND	ND	ND	ND	2.86	7.19	6.86	0.00	16.64	176.53	80.42	540.00	2.00	540.00	1013.00	<0.1
Oct	4.02	17.63	98.08	ND	ND	ND	ND	4.03	7.12	6.74	0.00	19.83	198.33	78.80	7.80	4.50	2.00	1240.00	0.2
Nov	2.93	14.18	98.61	ND	ND	DNQ2.45	DNQ10	2.69	7.34	6.78	0.00	21.00	191.07	77.00	79.00	2.00	2.00	1770.00	0.1
Dec	2.94	12.13	98.31	DNQ0.196	DNQ0.83	3.83	16	2.38	7.36	6.65	0.00	21.07	188.15	72.50	4.50	2.00	4.50	4532.00	<0.1
AVG	7.4	29	96					4.3	7.18	6.64		18.8	175	74.6					

MONTECITO SANITARY DISTRICT

Collection System Maintenance and Renovation Program 2018

OBJECTIVE

To reduce Sanitary Sewer Overflows (SSO's), increase system reliability, optimize service life of all collection system components through continued systematic assessment and maintenance, and plan for future facility rehabilitation and/or replacement.

GOALS – SHORT AND LONG TERM

Short Term:

1. Protect the District collection system infrastructure to minimize damage from future potential debris flow events. These efforts consist of the installation of pipeline protectors in designated manholes in debris flow hazard areas.
2. Continue a systematic maintenance program based on past years data to identify 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 pipe 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 repair collection system piping when and if damage is found during regular CCTV'ing activities.
7. Rehabilitate pipe sections that have been identified as needing repair/replacement.
8. 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 2018-19 funding for this program is \$75,000.

MONTECITO SANITARY DISTRICT
Collection System Maintenance & Renovation Program – 2018

9. Continue a proactive lift station maintenance program consisting of de-ragging pumps, exercising valves, maintaining backup generators, and setting up emergency by-pass pumps at each of the lift stations.

Long Term:

1. Clean and CCTV the entire collection system for inspection and condition assessment purposes. Complete this condition assessment using the District owned and operated CCTV equipment in accordance with the NASSCO pipe rating system for each line segment.
2. Rehabilitate / reline District pipelines as determined necessary by the NASSCO rating.
3. Rehabilitate and replace manholes as determined necessary.
4. Continue to investigate the inflow and infiltration issues that may still exist within the District.

ACTIONS COMPLETED IN 2018

1. Immediately following the January 9, 2018 Thomas Fire Debris Flow Event, the District hired National Plant Services (NPS) to perform necessary emergency work. Their work included the cleaning and closed circuit video inspection of the sewer mainlines to remove the mud and debris that entered the sewer system. NPS cleaned and CCTV'd 31 miles of District pipeline.
2. District staff performed CCTV inspection of approximately 8.5 miles of District pipeline.
3. District staff cleaned approximately 90 miles of collection system piping.
4. Promoted and provided financial incentive for the rehabilitation/replacement of private sewer laterals. In 2018, twenty-six property owners participated in the Private Lateral Rehabilitation Program by replacing or repairing their deteriorated or damaged laterals. The District issued rebates for a total of \$48,881 to property owners for these repairs.
5. Identified and rehabilitated and/or raised to grade 70 manholes and 8 cleanouts in various locations throughout the District for a total cost \$66,784.
6. The District funded and completed an 8" diameter sewer mainline extension of approximately 386 linear feet on Romero Canyon Road to serve 6 properties for a total cost of \$191,634. The property owners are required to

pay the District their proportionate share of the construction cost before they are issued a permit to abandon their septic system and tie into the public sewer system.

7. The District also funded a 1,700 linear feet sewer main extension project on Olive Road to provide sewer service to 11 properties. The project is anticipated to be complete in early February 2019. Once completed, the property owners desiring a public sewer connection will pay the District their proportionate share of the project cost.

2018 SANITARY SEWER OVERFLOW (SSO) REPORT SUMMARY

PRIVATE

None reported to the District.

DISTRICT

On January 9, 2018, Montecito area experienced a tragic and devastating natural disaster that has been named the Thomas Fire Debris Flow Event. The following sanitary sewer overflows were caused by the disaster:

Spill Event ID: 846391 – Category 3, Olive Mill Road, Manhole 604-4B

Spill Event ID: 846394 – Category 1, Loureyro Road, Manhole 1258-7B

Spill Event ID: 846396 – Category 1, East Valley Road, Manhole 757-6E

Spill Event ID: 845226 – Category 3, 1285 Channel Drive Lift Station No. 1

On February 27, 2018, District staff found sewer water was seeping to the ground surface by Lift Station 1. After further investigation it was determined that the force main leaving Lift Station 1 had been fractured. The District hired Lash Construction to make the necessary repairs to the pipeline. During the repair efforts the contractor collected the leaking sewer water to the sanitary sewer system using a sump pump and hose discharging to a nearby manhole. District staff used a micro-septic disinfectant to clean the area immediately after the spill.

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 the 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 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.

MONTECITO SANITARY DISTRICT
Mission, History and Future Goals -- Continued

- 2000 - 2006: During this time period the District completed the following capital improvement projects: bulk chemical storage tanks were replaced with larger, double wall containment with earthquake restraints; six new disinfection chemical feed pumps for sodium hypochlorite and sodium bisulfite were installed, improving reliability and adding redundancy; a paperless data trend process recorder was installed; an aeration system optimization project was completed, the laboratory was upgraded; the influent pump station was replaced, increasing the station's pumping capacity from 3.5 MGD to 5.0 MGD; a SCADA control center and the construction of a new 3,600 square foot maintenance building.
- 2007 - 2008: Board of Director's approved "mission critical" capital improvement projects totaling approximately \$11 million. The District then issued Certificates of Participation (COP's) to fund the capital program. The following projects were completed in 2007 and 2008: a new SCADA server with expandability for future was put on line for the influent pump station control; the waste activated sludge pump was replaced; the aeration air header made of deteriorated ductile iron pipe was replaced with a new stainless steel pipe; a new 125 KW portable emergency generator that can be used to power a portion of the treatment plant or as a redundant back up at pump stations was purchased; the Posilipo Lift Station (Lift Station No. 4) was completely refurbished including the replacement of the existing 6" dual force mains with dual 8" lines; a new fully redundant pumping system (three new pumps) were installed along with an automatic switch over to generator power.
- 2009 - 2010: The influent channel grinders were replaced with two new units increasing flow volume from 3.5 mgd to 6.0 mgd; the secondary clarifiers (3 & 4) and the effluent channel were refurbished. The District completed the refurbishment of two motor control centers (MCC) and replacement of another (MCC); installation of a new 450 KW emergency diesel powered generator providing 100 percent of the treatment plant and associated facilities power requirements during main power outages. The total cost of these treatment plant electrical upgrades was \$540,000. The new laboratory building design and site grading was completed in the fall of 2010.
- 2011 - 2012: The new laboratory building construction was completed. Upgrades to the treatment plant SCADA monitoring system and additional essential treatment plant equipment was added to the SCADA system. 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.

MONTECITO SANITARY DISTRICT
Mission, History and Future Goals -- Continued

- 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 impellers 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. Between 2004 and 2016, a total of 26 miles of sewer main have been rehabilitated.
- 2017: The District completed the following Capital Improvement Projects: Aeration Air Header Replacement; Cushman Contracting was hired in conjunction with District staff to remove and install new swing-fusers in the Aeration Basin for a total cost of \$268,168. Granite Construction continued to perform asphalt paving work around the wastewater treatment plant. A Notice of Completion was issued on June 12, 2017 for a total contract price of \$415,056. The District purchased a new plant compressor for a total cost of \$26,955. Capital Improvements projects also include repairs to the air headers in Aeration Basin #1, replacement of the meter and metering pump on the sodium hypochlorite tank, and impeller replacement at Lift Station 4 pumps.
- 2018: The District endured the tragic January 9th Thomas Fire Debris Flow event and began efforts on the following Capital Improvement Projects:

MONTECITO SANITARY DISTRICT
Mission, History and Future Goals -- Continued

On July 31, 2018 the District Board of Directors approved a Purchase Order contract with IDE Technologies in the amount not to exceed \$80,000 for the design and manufacturer of an ultrafiltration and reverse osmosis system for the onsite recycled water pilot project. World Water Works was awarded the Dissolved Air Floatation Thickener (DAFT) Replacement contract on October 15, 2018 for a total amount of \$532,068. Toro Enterprises was awarded the rough grading contract for the Essential Services Building on October 29, 2018 for a total amount of \$119,500.

- 2019: Current/Future Capital Improvement Projects include the following:
 - Rough Grading for the Essential Services Building will be completed in January 2019.
 - Survey work for the design of sewer main extensions in Romero Canyon Road and in the Riven Rock Development are scheduled for February 2019.
 - The Dissolved Air Floatation Thickener (DAFT) Replacement is scheduled for installation and testing in April 2019.
 - The Onsite Recycled Water Pilot Project skid mounted ultrafiltration and reverse osmosis systems are expected to be delivered in April 2019.
 - Essential Services Building design will be complete in February 2019 and anticipated to start construction in June 2019.