

**2010 ANNUAL SUMMARY REPORT** 

NPDES No. CA0047899 Order No. R3-2006-0084

## Montecito Sanitary District

1042 Monte Cristo Lane Santa Barbara, CA 93108 A Public Service Agency

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General Manager: Diane M. Gabriel, P.E.

January 28, 2011

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. R3-2006-0084 Annual Summary Report 2010

#### 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 2010. 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.

As of January 1, 2011, the status of certified operators employed by the District are as follows:

- Brett J. Walker, Operations & Maintenance Manager, # III-6254, exp. date 12/31/2012
- James G. Montijo, Senior Plant Operator, # IV-2306, exp. date12/31/2012
- William E. Caudill, Jr., Operator, # III-28148, exp. Date 06/30/2012
- Michael Sullivan, Operator, # II-9932, exp. date 12/31/2012

During 2010, all parameters of the effluent quality were within the limits set by the District's discharge permit, with the exception of one Total Coliform 7 day median and one Total Coliform daily exceedance. The monthly Grease and Oil, the Ammonia (nitrogen) and the Total Coliform Organisms analyses were performed by FGL Environmental of Santa Paula, California.

California RWQCB

RE: MSD Annual Summary Report for 2010

Page 2

FGL Environmental completed the Annual Effluent / Receiving Water Testing, as well as Sludge Sampling which took place June 7, 2010 through June 11, 2010. Aquatic Bioassay & Consulting Laboratories, Inc. in Ventura, California, performed and completed the chronic and acute bioassay testing. All of the reports were submitted to the Regional Board on August 31, 2010 with the July 2010 monthly report.

On September 28, 2010 Harbor Offshore completed the inspection of the District's ocean outfall pipeline. The entire outfall pipeline was inspected and videotaped. A copy of their inspection report is enclosed. The outfall pipeline was found to be in good condition with no leaks and no evidence of stress or damage of any kind.

The Operations and Maintenance Manual for the Montecito Sanitary District Wastewater Treatment Plant that is on file with your office is still valid for the existing plant, however various updates will be made before January 2012.

The District's comments regarding their Collection System Maintenance and Renovation Program, as required by the District's NPDES permit, are included in the back of the Annual Report on Pages 19, 20 and 21. Also included in the back of the Annual Report 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

Encl: Harbor Offshore Report – September 2010

## Montecito Sanitary District 2010 Annual Report

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#### January 2010 - December 2010

#### **GOVERNING BOARD**

Judith M. Ishkanian President

Jeff Kerns Vice President

Charles C. Arnold Secretary

Ed McAniff Treasurer

Deirdre M. Cannata Director

\*\*\*

#### **January 2010 - January 2011**

#### STAFF

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

C. Michael McCaleb Associate Engineer

Debbie Hughey Office Manager/Clerk of the Board

Caroline M. Burnet Administrative Tech II

Brett J. Walker Operations & Maintenance Manager

James G. Montijo Senior Plant Operator

William E. Caudill Operator III
Michael D. Sullivan Operator II

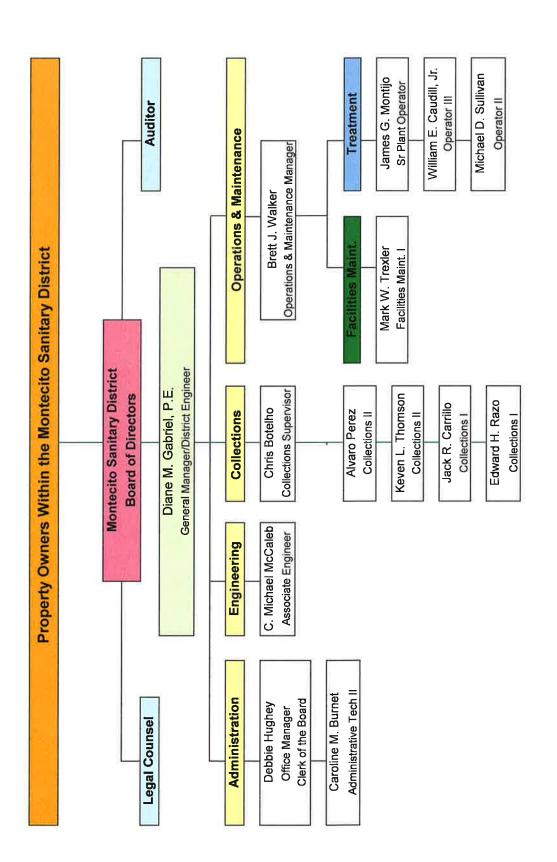
Mark W. Trexler Facilities Maintenance I (Left District 12/2010)
Chris Botelho Collections Supervisor (Retired 07/2010)
Alex Alonzo Collections System Manager (Hired 11/2010)

Alvaro A. Perez Collections II (Off Duty since 08/2010)

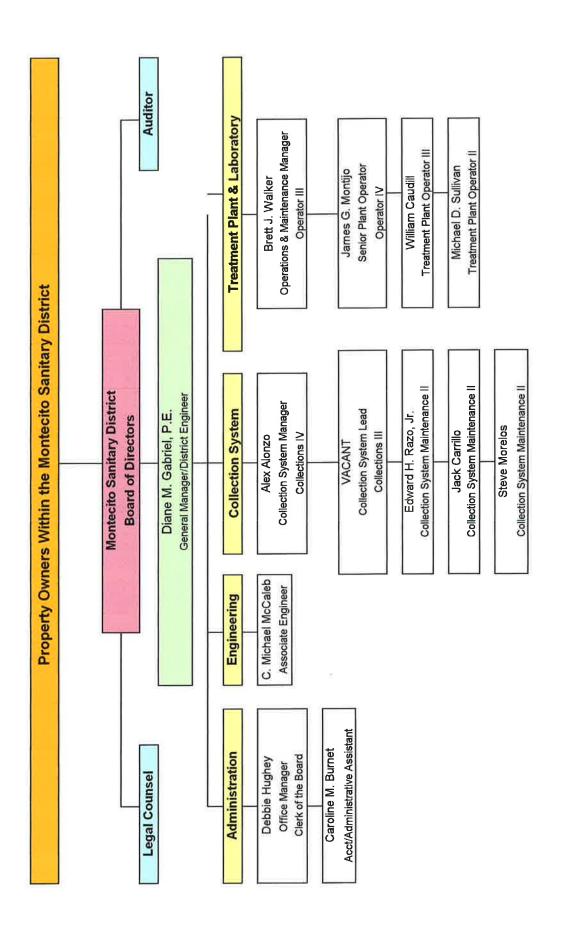
Keven L. Thomson Collections II (Retired 11/2010)

Jack R. Carrillo Collections II
Edward H. Razo, Jr. Collections II

Steve Morelos Collections II (Hired 01/2011)



Montecito Sanitary District Organizational Chart 2010

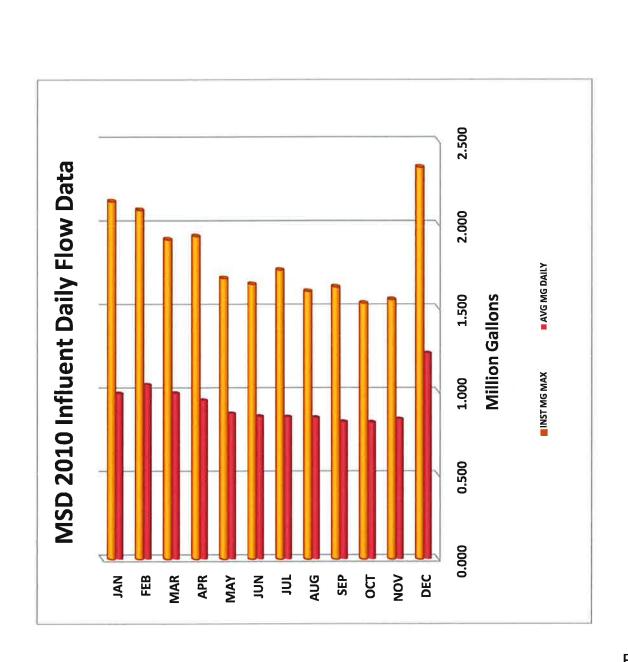


Montecito Sanitary District Organizational Chart As of January 2011

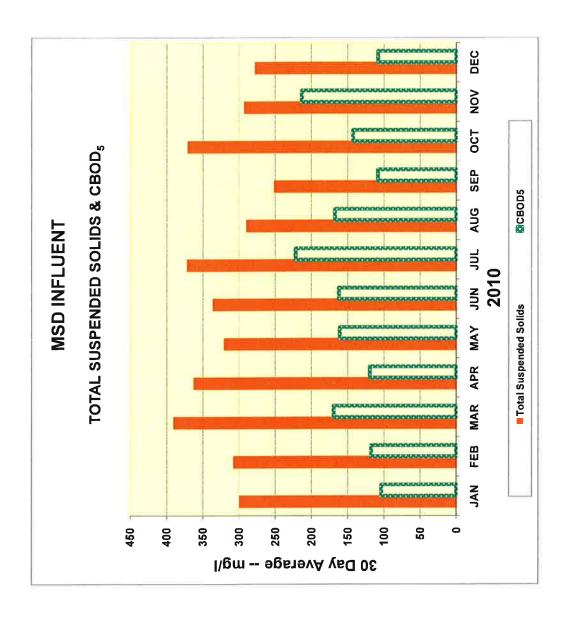
INFLUENT FLOW DATA	INST AVG	H MG MAX MG DAILY	2.141 0.991	2.089 1.043	1.913 0.992	1.932 0.950	1.681 0.870	1.645 0.853	1.730 0.850	1.603 0.846	1.629 0.821	1.531 0.818	1.553 0.837	2.345   1.232
INFL		MONTH	NAC	FEB	MAR	APR	MAY	NNC	INC	AUG	SEP	OCT	AON	DEC

1.816

AVG



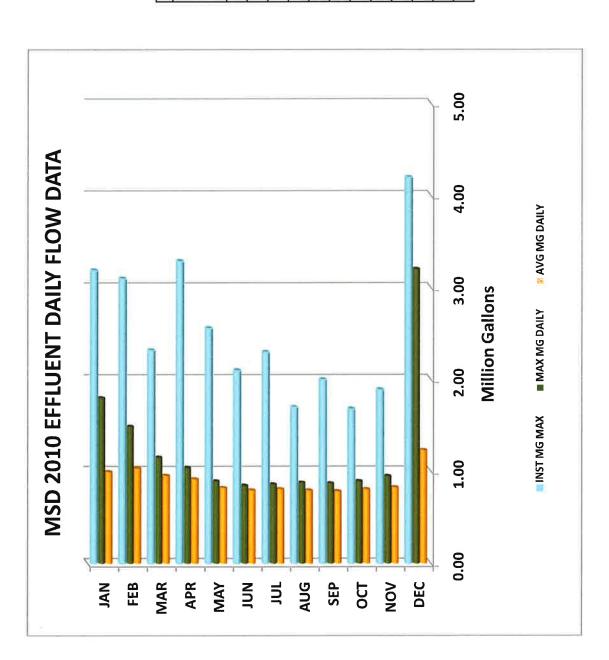
	INFLUENT	
	Total	
	Suspended	
Month	Solids	CBODs
	mg/l	l/gm
JAN	299	104
FEB	307	118
MAR	390	169
APR	362	119
MAY	320	161
NNC	336	162
nr	372	222
AUG	289	168
SEP	251	108
OCT	370	143
NOV	292	213
DEC	278	108

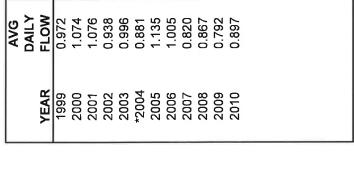


	<b>EFFLUENT</b>	<b>EFFLUENT FLOW DATA</b>	Ā
	INST	MAX	AVG
MONTH	MG MAX	MG DAILY	MG DAILY
JAN	3.19	1.80	1.00
FEB	3.10	1.49	1.03
MAR	2.32	1.15	0.95
APR	3.29	1.04	0.92
MAY	2.56	68.0	0.82
JUN	2.10	0.85	08.0
JUL	2.30	98.0	0.81
AUG	1.70	0.88	0.79
SEP	2.00	28.0	0.78
OCT	1.68	68.0	0.81
NOV	1.89	0.95	0.83
DEC	4.20	3.21	1.23

YEARLY AVERAGES
3 | 1.239 | 0.8

2.53



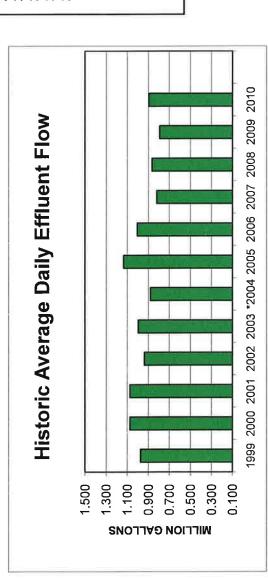


TOTAL	ANNUAL	FLOW	354.80	392.00	392.60	342.20	363.35	322.40	415.28	361.23	299.15	319.48	289.00	327.40			
		YEAR	1999	2000	2001	2002	2003	*2004	2005	2006	2007	2008	2009	2010			

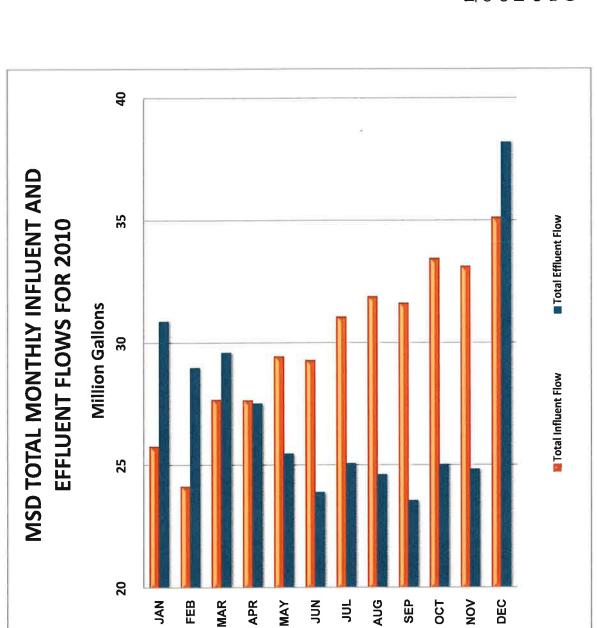
450.00 400.00 350.00 250.00 200.00 150.00 50.00 0.00

MILLION GALLONS

Historic Total Annual Effluent Flow



\* = New effluent flow meter on April 10, 2004.



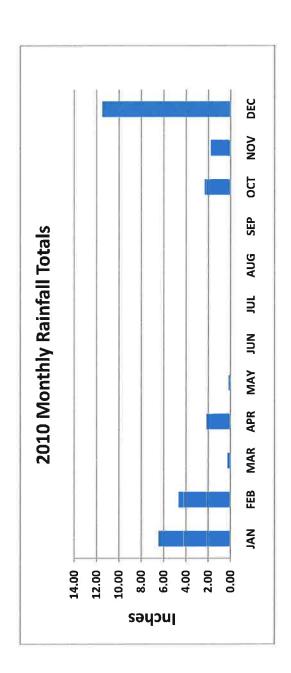
Effluent Flow 30.859 28.964 29.584 27.503 25.444 23.868 23.529 25.005 24.811 38.175 25.046 24.591 Influent Flow 25.765 24.133 27.675 27.655 29.441 29.282 31.063 31.882 31.620 33.443 35.112 33.121 Total Month JAN FEB MAR AUG SEP APR MAY OCT NN JUL

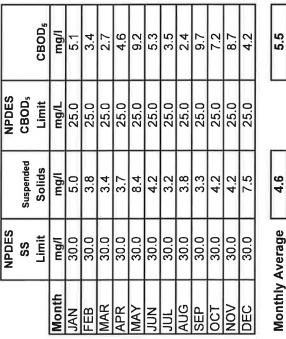
Mote: Influent and Effluent flow variations are
cleaning or maintenance draining water back to the headworks. Additionally, two different flow measuring devices are used "in-pipe" (Influent) and open channel (Effluent).

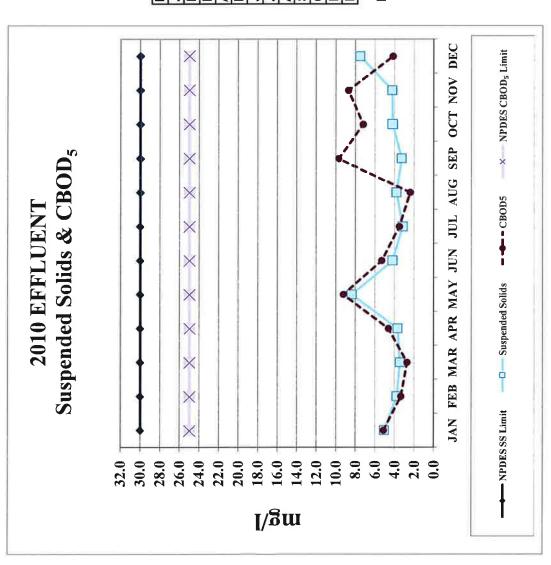
	AVG Temp
Month	Degrees F °
JAN	99
-EB	99
MAR	67
4PR	89
MAY	70
NOI	73
JUL	74
4UG	75
SEP	75
CT	74
NOV	70
DEC	[ 67
AVG	70

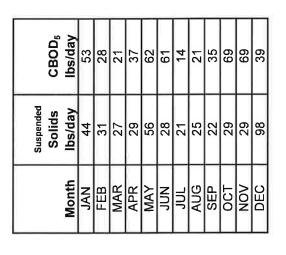
	Rainfall
Month	Inches
JAN	6.46
FEB	4.62
MAR	0.26
APR	2.16
MAY	0.17
NOC	0.00
JUL	00.00
AUG	0.00
SEP	0.00
OCT	2.31
NOV	1.76
DEC	11.49

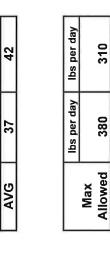
		DEC .
es		<b>S</b> S S
atur		<b>—</b> 5
nper		SEP GEN
ZUIU Average Montniy Effiuent lemperatures		AUG
Hiner		<u>=</u> =
		N N
/lont		MAY
age N		APR
Aver		MAR
		# #
		NA.
08	Degrees F <sup>o</sup>	0 0

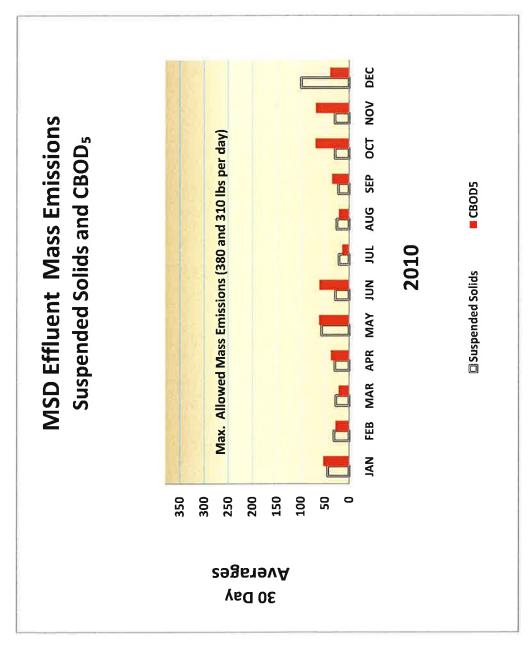






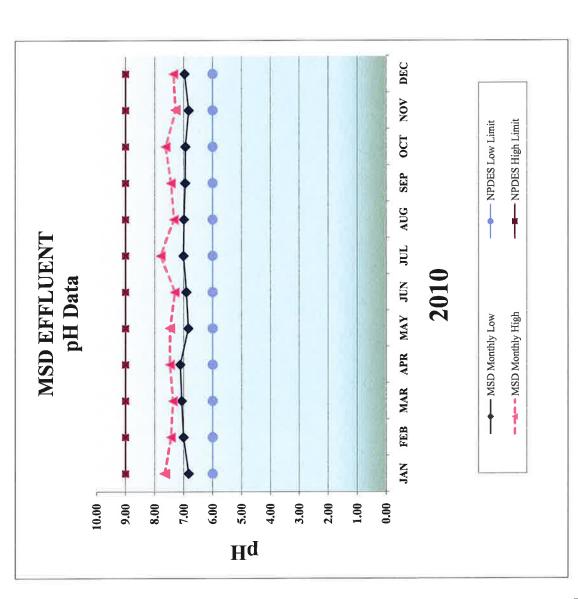




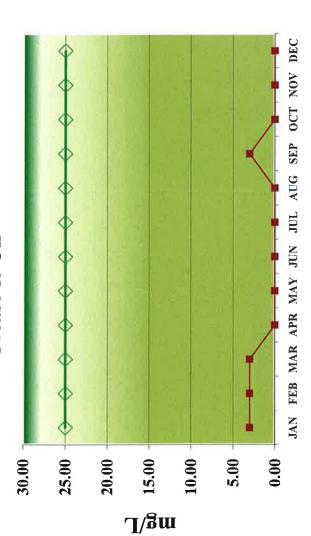


Month         Low           JAN         6.83           FEB         7.01           MAR         7.07           APR         7.12           MAY         6.84           JUN         6.91           JUL         7.01           AUG         6.99           SEP         6.95           OCT         6.94           NOV         6.83	MSD NPDES	MSD	NPDES
	thly Low	Monthly	High
	w Limit	High	Limit
	83 6.00	7.65	9.00
	01 6.00	7.45	9.00
	02   6.00	7.38	9.00
	12 6.00	7.48	9.00
	84 6.00	74.7	9.00
	91 6.00	7.31	9.00
	01 6.00	08'2	9.00
	00.9   66	7.34	9.00
-	95   6.00	7.45	9.00
	94 6.00	2.63	9.00
	83 6.00	7.28	9.00
DEC 6.97	97 6:00	7.36	9.00

**AVERAGES** 



MSD EFFLUENT Grease & Oil



#### Avg mg/l Monthly 3.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Grease & Oil NPDES Limit 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 Month FEB MAR APR AUG JAN NOV DEC MAY SEP N N OCT JUL

## Note:

The laboratory analysis Method Detection Limit (MDL) is 3.0 mg/L Non Detect is reported as 0.0 mg/L

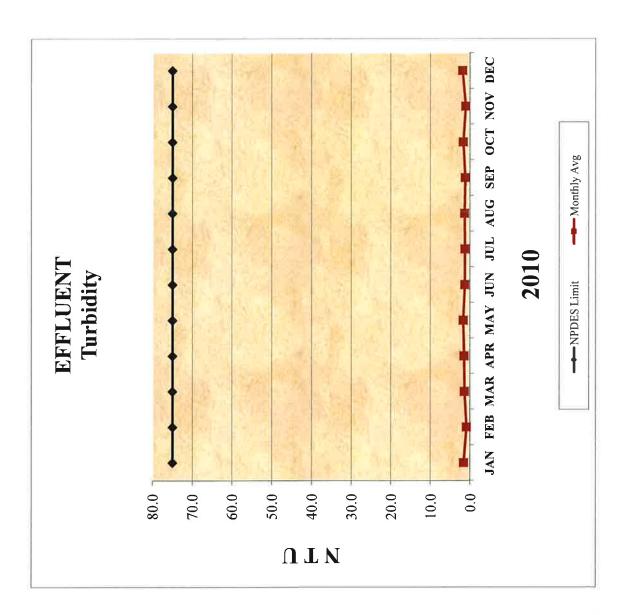
--- Monthly Avg mg/l

→ NPDES Limit

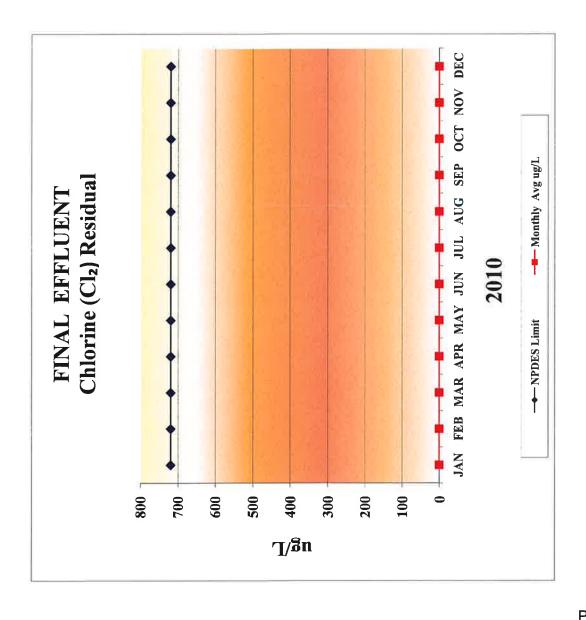
1 L	Turbidity - N	- NTU
	NPDES	Monthly
Month	Limit	Avg
JAN	75.0	1.60
FEB	75.0	06.0
MAR	75.0	1.39
APR	75.0	1.48
MAY	75.0	1.70
NOC	75.0	1.30
JUL	75.0	1.25
AUG	75.0	1.32
SEP	0'52	1.17
OCT	75.0	1.70
NOV	75.0	1.06
DEC	75.0	1.86



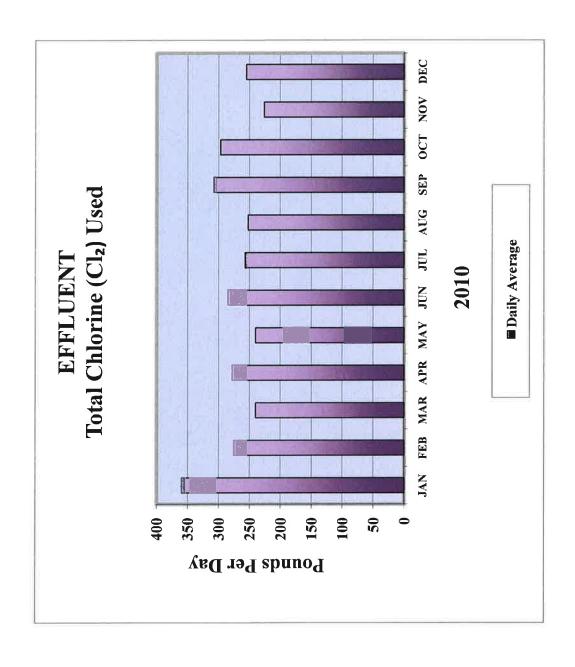
NTU= Nephelometric Turbidity Unit



CHI	CHLORINE RESIDUAL	DUAL
	NPDES	Monthly
Month	Limit	Avg ug/L
JAN	720	0
FEB	720	0
MAR	720	0
APR	720	0
MAY	720	0
JUN	720	0
JUL	720	0
AUG	720	0
SEP	720	0
OCT	720	0
NOV	720	0
DEC	720	0
	2/\6	



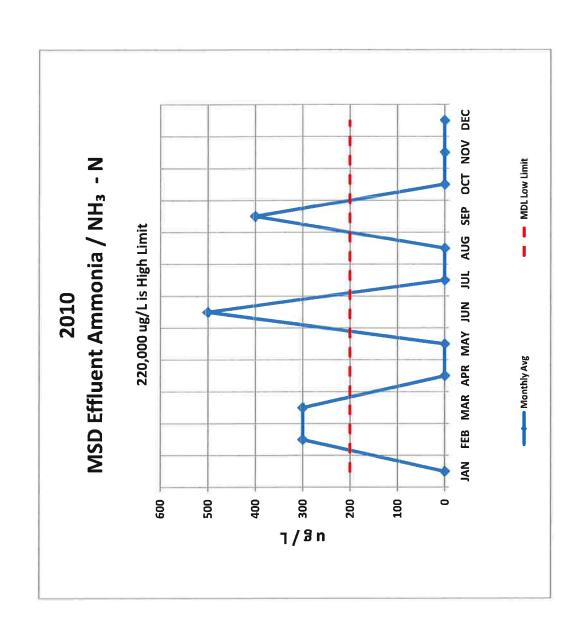
	Daily
	Average
Month	lbs Per Day
JAN	359
FEB	275
MAR	240
APR	278
MAY	240
NOL	285
JUL	257
AUG	252
SEP	308
OCT	297
NOV	226
DEC	255
	979

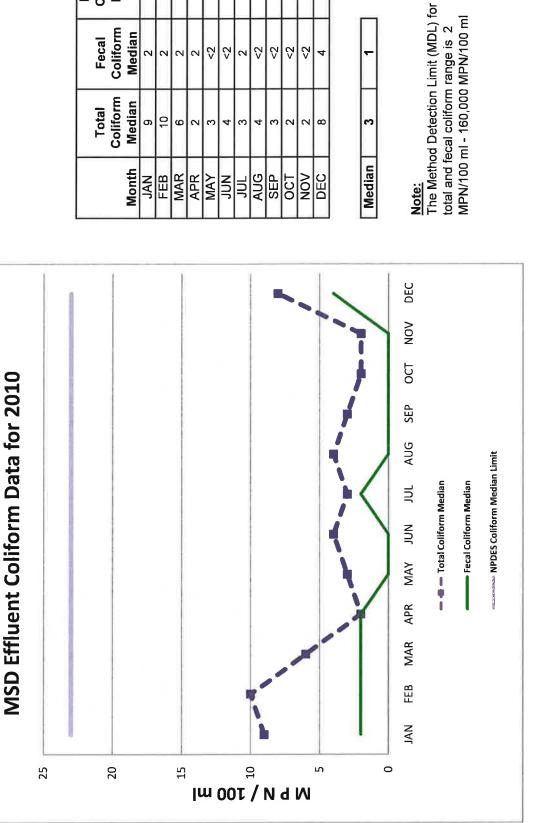


Monthly         MDL           Avg         Low Limit           ug/L         ug/L           0         200           300         200           0         200           0         200           500         200           0         200           0         200           0         200           0         200           0         200           0         200           0         200           0         200           0         200           0         200           0         200		Ar	Ammonia / NH3-N	13-N
Avg Low Limit  ug/L ug/L  0 200 300 200 300 200 0 200 0 200 0 200 0 200 0 200 0 200 0 200 0 200 0 200		Monthly	NDL	NPDES
ug/L ug/L 0 200 300 200 300 200 200 0 200 200 200		Avg	Low Limit	High Limit
300 200 300 200 0 200 0 200 0 200 0 200 0 200 0 200 0 200 0 200		ng/L	ng/L	ng/L
300 200 300 200 0 200 500 200 0 200 0 200 0 200 0 200 0 200	NAN	0	200	220,000
300 200 0 200 500 200 0 200 0 200 400 200 0 200 0 200	FEB	300	200	220,000
0 200 500 200 0 200 0 200 400 200 0 200	MAR	300	200	220,000
500 200 0 200 0 200 0 200 400 200 0 200	APR	0	200	220,000
500 0 200 0 400 200 0 200 0 200 0	MAY	0	200	220,000
0 0 400 0 0 0 200 0 0 200 0	NOS	200	200	220,000
400 200 0 200 0 200 0 200	JUL	0	200	220,000
400 200 0 200 0 200	AUG	0	200	220,000
0 200	SEP	400	200	220,000
0 500	OCT	0	200	220,000
UUC U	NOV	0	200	220,000
2007	DEC	0	200	220,000

G 125

Note: The laboratory Method Detection Limit (MDL) is 200 ug/L Non Detect is reported as 0 ug/L





NPDES Coliform Median Limit

Fecal Coliform Median

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# Tabular Data for 2010 Summary Report

6-day	CBOD <sub>5</sub>	lbs	806	972	1,312	933	1,087	1,080	1,449	1,106	902	974	1,436	997
6-day	CBODs	mg/L	104	118	169	119	161	162	222	168	108	143	213	108
6-day 6-day	TSS	lps	2,529	2,551	3,113	2,825	2,169	2,235	2,436	1,925	1,645	2,542	1,980	2,407
6-day	TSS	mg/L	299	307	390	362	320	336	372	588	251	370	292	278
	Avg Daily	MGD	0.991	1.043	0.992	0.950	0.870	0.853	0.850	0.846	0.821	0.818	0.837	1.232
	Inst Peak	MGD	2.141	2.089	1.913	1.932	1.681	1.645	1.730	1.603	1.629	1.531	1.553	2.345
Monthly	Total Flow	MG	25.765	24.133	27.675	27.655	29.441	29.282	31.063	31.882	31.620	33.443	33.121	35.112
	2010	Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

AVG	30.016	1.816	0.925	322	2363	120	1072
TOTALS	360.2	TO SERVICE STATES	SI STATE				

			EFFLUENT	UENT			
Monthly	Monthly				6-day	6-day	6-day
Rain	Total Flow	Inst Peak	Inst Peak Max Daily	Avg	TSS	TSS	Susp Sol
Inches	MBM	MGD	MGD	MGD	mg/L	sql	Max Emiss
6.46	30.859	3.19	1.80	1.00	5.0	44	1297
4.62	28.964	3.10	1.49	1.03	3.8	31	806
0.26	29.584	2:32	1.15	0.95	3.4	72	849
2.16	27.503	3.29	1.04	0.92	3.7	29	844
0.17	25.444	2.56	68'0	0.82	8.4	99	1775
0.00	23.868	2.10	0.85	0.80	4.2	28	988
0.00	25.046	2.30	98'0	0.81	3.2	21	661
0.00	24.591	1.70	88'0	0.79	3.8	25	622
0.00	23.529	2.00	0.87	0.78	3.3	22	644
2.31	25.005	1.68	68'0	0.81	4.2	67	928
1.76	24.811	1.89	0.95	0.83	4.2	29	877
11.49	38.175	4.20	3.21	1.23	7.5	86	2394

29.23 327.4		27.282	2.53	1.239	0.897	4.6	37	1062
	29.23	327.4	F 8 70	18366W	215.36			

# Tabular Data for 2010 Summary Report

Г	E	_	Z												
	Coliform	Median	Fecal MPN	2	2	2	2	\$	\$	2	<2	\$	\$	\$	4
	Coliform	Median	Total MPN	6	10	9	7	m	4	8	4	3	2	2	8
		Temp	ት	99	99	29	89	70	73	74	75	75	74	70	<b>29</b>
	CI2	Total	lbs/day	359	275	240	278	240	285	257	252	308	297	226	255
	Final	Effluent	Cl2 ug/L	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Н	Low	SU	6.83	7.01	7.07	7.12	6.84	6.91	7.01	6.99	6.95	6.94	6.83	6.97
ENT	Hd	High	SU	7.65	7.45	7.38	7.48	7.47	7.31	7.80	7.34	7.45	7.63	7.28	7.36
FFLU	6-day	Turb	NTO	1.60	0.90	1.39	1.48	1.70	1.30	1.25	1.32	1.17	1.70	1.06	1.86
FINALEFFLUENT	Monthly	0 & G	lbs/day	35	25	24	0	0	0	0	0	19	0	0	0
ш.	Monthly	086	mg/l	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0
	Monthly	NH3-N	lbs	0	2	3	0	0	3	0	0	3	0	0	0
	Monthly   Monthly   Monthly   Monthly	NH3-N	ng/L	0	300	300	0	0	200	0	0	400	0	0	0
	6-day	CBODs	Max Emiss	1318	809	671	1058	1959	1055	731	492	1903	1502	1800	1324
	6-day	CBODs	lbs	53	28	21	37	62	61	14	21	35	69	69	39
	6-day	CBODs	mg/L	5.1	3.4	2.7	4.6	9.5	5.3	3.5	2.4	9.7	7.2	8.7	4.2

AVG
2
3 Median
70
273
0
96.9
7.47
1.4
8.6
1.0
1
125
1219
42
5.5

#### **Collection System Maintenance and Renovation Program**

#### **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.
- Implement a systematic maintenance program based on past years data to indentify lines that need to be cleaned and give each line segment a rating to be evaluated by CCTV.
- Implement 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 monitor the compliance from institutional facilities with the District's voluntary fats, oils & grease source control program.
- 5. Continue to enhance the District's GIS of the collection system piping, including routine updating of the District's maintenance activities consisting of maintenance, 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 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 2010-11 funding for this program is \$40,000.
- 8. Refurbish Lift Station #1 consisting of new pumps, piping, and SCADA controls. Also the installation of a new 150 hp emergency generator with auto transfer switch.

9. Investigate and analyze the need for more Smart Covers to assist the District in identifying sources of Inflow & Infiltration (I & I) and to prevent SSO's.

#### Long Term:

- Continue to investigate the I & I issues that are known to exist within the District.
- 2. Create and implement a manhole inspection program to identify buried and damaged manholes and also identify any source of I & I.
- 3. Create a lift station maintenance program consisting of a routine maintenance schedule and emergency by-pass training.
- 4. Invest in updating and modifying the CCTV Van, including updating of existing software and hardware.
- 5. Invest in purchasing an easement machine to facilitate easier access of difficult manhole and pipeline locations for routine maintenance.

#### **ACTIONS COMPLETED IN 2010**

- 1. Performed CCTV inspection of approximately 10 miles of collection system piping.
- 2. Approximately 27 miles of collection system piping has been cleaned over the course of the past year.
- 3. Promoted and provided financial incentive for the rehabilitation/replacement of private sewer laterals. In the 2010 calendar year, 18 property owners participated in this program and replaced/repaired their deteriorated laterals.
- 4. Construction of approximately 1,740 feet of collection system piping relining/rehabilitation in various locations throughout the District. The value of the construction completed by the end of December 2010 was approximately \$150,000. This continues to be an ongoing project.
- 5. Identified and performed emergency sewer main repairs and replacements in two locations for a cost of approximately \$99,000.

6. The District contracted with Hadronex Incorporated in March of 2010 for the purchase of 10 additional Smart Covers to be placed in manholes and installed throughout the District's Collection System. The District now has a total of 30 Smart Covers. Smart Covers are stand-alone ultrasonic sensors that were placed in site-sensitive, critical areas in various locations of the collections system as well as in front of each of the District's four lift stations and treatment plant to help reduce SSO's. The Collections Crew maintains and monitors the Smart Covers. Since inception, the District had documented 19 confirmed cases where the sensors have given staff adequate time to respond with the Vac-Con to clear the obstructions in the District mainlines well before a spill could occur.

#### 2010 SANITARY SEWER OVERFLOW (SSO) REPORT SUMMARY

#### PRIVATE

1. 1/29/10 – <u>Private Lateral</u>: Private manhole in parking Lot of Piatti's Restaurant located on the property of 516 San Ysidro Road – Grease getting through the Piatti's grease trap and roots caused a spill of approximately 100 gallons to occur. The spill was contained by the parking lot curbing within 30 feet of the manhole. The Collections Crew used the Vac-Con to vacuum out the manhole to allow the plumber to snake the private mainline and clear blockage. The Vac-Con was also used to vacuum up the standing liquid and the area was sprayed with micro-septic liquid to disinfect the area.

#### DISTRICT

- 1. 5/12/10 <u>Category 1</u>: Manhole #1151-5E located in an easement on the property of 595 San Ysidro Road Roots and two large pieces of grease caused a spill of approximately 200 gallons to occur. Collections Crew used the Vac-Con to clear the blockage and restore flow. The surface area of the spill was then thoroughly sprayed with micro-septic liquid disinfectant.
- 2. 5/19/10 <u>Category 1</u>: Manhole #587-4D in the roadway of the 400 block of Hot Springs Road. Root intrusion into the sewer main from a capped lateral caused a spill of approximately 100 gallons to occur. The path of the spill ran south down Hot Springs Road along roadway crossing East Pepper Lane and ended at a dry creek bed. Collections Crew used the Vac-Con to clear the blockage. The surface area of the spill was sprayed with micro-septic liquid disinfect and the contaminated dirt was removed from the surrounding area and disposed of at the treatment plant.

- 3. 6/02/10 <u>Category 2</u>: Manhole #346-3C in the center of the roadway in front of 1060 Alston Road. Roots in mainline caused a slow backup in the manhole. The blockage had cleared itself prior to the arrival of the Collections Crew. Due to the evidence on site, a spill of approximately 10 gallons occurred. The path of the spill ran east approximately 15 feet to curbside. The surface area of the spill was thoroughly sprayed with microseptic liquid disinfectant.
- 4. 7/28/10 <u>Category 1</u>: Manhole #502-4C in easement located on the property of 1411 School House Road. Heavy roots and grease caused a spill of approximately 2,380 gallons to occur. With assistance from the City of Santa Barbara and their Vactor Truck the blockage was cleared and flow was restored. The path of the spill from manhole headed in a southerly direction towards San Ysidro Road about 180 feet. The surface area of the spill was thoroughly sprayed with micro-septic liquid disinfectant. Due to the location of the spill clean-up equipment was inaccessible.
- 5. 9/09/10 Category 2: Manhole #805-6F in center of roadway in front of 735 Park Lane. Root blockage in the main caused a spill of approximately 50 gallons. The path of the spill was east from manhole approximately 300 feet to curbside. Collections Crew used the Vac-Con to clear the blockage. The surface area of the spill was thoroughly sprayed with micro-septic liquid disinfectant.
- 6. 11/28/10 <u>Category 2</u>: Manhole #1473-9E in center of roadway in front of 2714 East Valley Road. Rags and debris caused a spill of approximately 50 gallons to occur. Collections Crew used the Vac-Con to clear the blockage. The path of the spill was west from manhole to the side of the street's unpaved shoulder approximately 200 feet. There was no clean-up due to the liquid soaking into the ground and drying prior to cleanup activity.

#### 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.

- 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; completed a SCADA control center and a new 3,600 square foot maintenance building was constructed.
- 2007 2008: The Montecito Board of Director's identified and 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: The District completed the following capital improvement projects: 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) were refurbished; the effluent channel was refurbished, and rehabilitation/relining of approximately 4 miles of collection system pipeline was completed.
- 2010: 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.

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

 Goals for 2011: The new laboratory building is scheduled to be completed in 2011 and the District has contracted with a consulting firm to assist with the laboratory certification by California Environmental Laboratories Accreditation Program. The District is also working on the addition of new SCADA equipment monitoring along with updating the after-hours alarm notification system to operators.