

NOVATO SANITARY DISTRICT

Meeting Date: December 16, 2013

The Wastewater Operations Committee of the Novato Sanitary District will hold a meeting at 2:00 PM, Monday, December 16, 2013 at the District offices, 500 Davidson Street, Novato.

AGENDA

1. AGENDA APPROVAL:

2. PUBLIC COMMENT (PLEASE OBSERVE A THREE-MINUTE TIME LIMIT):

This item is to allow anyone present to comment on any subject not on the agenda, or to request consideration to place an item on a future agenda. Individuals will be limited to a three-minute presentation. No action will be taken by the Committee at this time as a result of any public comments made.

3. CONSIDER APPROVAL OF MINUTES OF THE NOVEMBER 14, 2013 MEETING

4. WASTEWATER TREATMENT FACILITIES OPERATIONS AND MAINTENANCE REPORT FOR NOVEMBER 2013:

- a. Treatment Plant Performance Report
- b. Maintenance Report
- c. Safety and training
- d. Odor control, noise, and landscaping report
- e. Review Contract Service Agreement for Operation, Maintenance, and Management of Wastewater Treatment Facilities

5. COLLECTION SYSTEM OPERATION AND MAINTENANCE REPORT FOR NOVEMBER 2013:

- a. Collection System Maintenance
- b. Pump Station Maintenance
- c. Collection System Performance
- d. Safety and Training

6. RECLAMATION FACILITY REPORT FOR NOVEMBER 2013

- a. Ranch Operations
- b. Irrigation Parcels
- c. Irrigation Pump Station
- d. Sludge Handling and Disposal

7. ADJOURNMENT:

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the District at (415) 892-1694 at least 24 hours prior to the meeting. Notification prior to the meeting will enable the District to make reasonable accommodation to help ensure accessibility to this meeting.

Materials that are public records and that relate to an open session agenda item will be made available for public inspection at the District office, 500 Davidson Street, Novato, during normal business hours.

November 14, 2013

A regular meeting of the Wastewater Operations Committee of Novato Sanitary District was held at 10:00 a.m., Thursday, November 14, 2013, at the District Office, 500 Davidson Street, Novato.

MEMBERS PRESENT: NSD Board Members William Long and Jerry Peters.

STAFF PRESENT: Beverly James, Manager-Engineer
Sandeep Karkal, Deputy Manager-Engineer
Steve Krauthem, Field Services Superintendent
Tim O'Connor, Collections System Supervisor
John Bailey, Project Manager, Veolia Water
Julie Swoboda, Administrative Secretary

ALSO PRESENT: Brian Exberger, Assistant Project Manager, Veolia Water

AGENDA APPROVAL: The agenda was approved as presented.

PUBLIC COMMENT: None.

APPROVAL OF MEETING MINUTES FOR OCTOBER 21, 2013: The October 21, 2013 minutes were approved as written.

WASTEWATER TREATMENT FACILITIES OPERATIONS AND MAINTENANCE REPORT FOR OCTOBER 2013:

- Treatment Plant Performance Report, Maintenance Report and Safety & Training:
John Bailey, Plant Manager, Veolia Water, gave an overview of the treatment plant operations for the month of October. He stated that there were no permit exceedances, violations or excursions and noted that the treatment facility and the recycled water facility continue to run very well. Mr. Bailey stated that the volume of recycled water produced in October was 9.15 million gallons.

Mr. Bailey reported on the key events at the Novato treatment facility, the Ignacio transfer pump station, the recycled water plant and the sludge lagoons. He discussed the repairs, maintenance and equipment replacements at the facility. Mr. Bailey noted that Veolia employees participated in the "Great Shakeout" earthquake training drill and reviewed Veolia's emergency action plan during that time. He reported that Veolia staffed a booth at the North Bay Science Fair and at the Senior Health Fair and that participation was high at both events.

Mr. Bailey reported that Veolia employees have been accident free for a total of 1,247 days/56,863 hours. He stated that Jerome Meter (H2S) readings continue to be taken

in the Lea Drive neighborhood and within the treatment facility. He discussed the safety training for the month and reviewed the treatment plant performance graphs.

- Odor control: Deputy Manager-Engineer Sandeep Karkal stated that staff continues to work to address issues of concern relating to odor control, noise, and landscaping. He stated that he had a conversation with Dave McEwen regarding the ongoing odor issue. Mr. McEwen reported that the initial analysis of air samples taken earlier at the District indicated the characteristic "signature" of two reduced sulfur compounds: dimethyl sulfide and methyl mercaptan. The Deputy Manager-Engineer noted that if the District can pinpoint the source of the odor, they can more specifically provide solutions to the odor issues.

The Deputy Manager-Engineer stated that a local contractor has been retained to move forward with a design for covering the blower enclosures to reduce noise. He stated that Veolia will provide a 50% cost sharing for the enclosures.

The Manager reported that the fencing at the Lea Drive neighborhood has been fortified to prevent deer from eating the vegetation. She noted that the Redwood trees are doing well.

COLLECTION SYSTEM OPERATION AND MAINTENANCE REPORT FOR OCTOBER 2013:

Collection Systems Supervisor Tim O'Connor discussed the Collections System Monthly Report for October 2013. He reported that the Collections System crew cleaned a total of 96,704 feet of sewer pipeline and that the department completed 548 maintenance work orders which were generated in October. He stated that the department's CCTV (closed caption televised) van was in the field for 16 working days and that 37,429 feet of main sewer line was televised. Mr. O'Connor stated that an additional 11,593 feet of sewer pipelines were cleaned using outside services. He pointed out that the Collections Department has been accident free for a total of 273 days.

The Collection Systems Supervisor reviewed the Collections System monthly and Pump Station reports. He stated that there was one sanitary sewer overflow in October, and that the event was caused by root intrusion. He noted that the estimated discharge was approximately 1,474 gallons with 673 gallons being recovered.

RECLAMATION FACILITY REPORT FOR OCTOBER 2013:

Field Services Superintendent Steve Krautheim presented the Reclamation Facilities report for October. He stated that the rancher had grazed cattle on all three sites but has begun to remove cows from the sites at this time. He stated that pump no. 1 at the Drainage Pump Station 7 was installed after being refurbished and that one control box was replaced in Parcel 21.

The Field Services Superintendent stated that approximately 44 million gallons of recycled water was used for irrigation in October. He noted that the average storage pond staff gauge depth at the beginning of October was 6.3 feet and 3.5 feet at the end of October.

ADJOURNMENT: There being no further business to come before the Committee, the meeting adjourned at 11:12 a.m. The next Wastewater Operations Committee meeting will be held on Monday, December 16th at 2:00 PM.

Respectfully submitted,

Beverly James
Manager-Engineer

Julie Swoboda, Recording

DRAFT



December 11, 2013

Ms. Beverly James
Manager - Engineer
Novato Sanitary District
500 Davidson Street
Novato, CA 94545

Subject: Veolia Water Operations Report – November 2013

Dear Ms. James:

We are pleased to provide this updated activity report for November 2013.

As always, please give me a call at 707-208-4491 should you have any questions.

Regards,

A handwritten signature in blue ink that reads "John Bailey".

John Bailey
Project Manager

**MONTHLY OPERATIONS REPORT
November 2013**

Prepared for

**NOVATO SANITARY DISTRICT (NSD)
WASTEWATER TREATMENT PLANT
500 Davidson Street
Novato, CA 94545**

Prepared by

Veolia Water West Operating Services, Inc. (VWWOS)

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TREATMENT PLANT PERFORMANCE SUMMARY: November 2013:

Bay Discharge – NPDES Limits

Parameter	Value		Limit	
	Ave	Max	#1	#2
Flow, MGD (monthly ave/max)	3.93	4.74	N/A	N/A
Max Peak Hour, MGD – Daily (Dry Weather)	N/A	N/A	N/A	N/A
Influent BOD ₅ , lb/day (month ave/max)	8,646	12,284	N/A	N/A
Influent TSS, lb/day (monthly ave/max)	11,013	14,117	N/A	N/A
Effluent BOD ₅ , mg/L (monthly ave/weekly max)	<8	11	30	45
Effluent TSS, mg/L (monthly ave/weekly max)	<4	5	30	45
Effluent BOD ₅ - % Removal, Minimum	97	N/A	85	N/A
Effluent TSS - % Removal, Minimum	99	N/A	85	N/A
Ammonia, mg/L – (monthly ave/daily max)	0.15	0.20	N/A	N/A
pH, su (min / max)	7.0	7.1	6.5	8.5
Enterococcus, mpn (30 day geo mean)	6.1	N/A	35	N/A
Fecal Coliform, mpn (30 day median)	10.5	N/A	140	N/A
Fecal Coliform, mpn (90 th percentile)	30	N/A	430	N/A
Total Permit Exceedances (NPDES)	0			

NA – Not Applicable

Discussion of Violations / Excursions: NONE

Title 22 - Recycled Water Production and Quality

Description	Units	Value	Limit
Volume Produced	Million Gallons	3.49	N/A
Average Turbidity	NTU	1.3	2.0
Turbidity > 5 NTU (in 24 hour)	Minutes	0	72
Minimum CT (disinfection)	ml-min/L	> 450	> 450
Minimum Dissolved Oxygen (DO)	mg/L	8.5	> 1.0
Maximum Total Coliform	mpn/100 ml	<2	2

Total Rainfall – 0.98 inches

OPERATIONS & MAINTENANCE STATUS / REVIEW:**Key events for the period:****Novato**

- Routine rounds, readings and maintenance
- Set clearance on bottom rake mechanism, Primary Clarifier #2
- Clean out Primary Clarifier #2 sump
- Headworks Channel #2 back in service – Contract “C” related construction to be completed next spring (after wet season)
- Replaced filters in Blower Variable Frequency Drives (VFD)
- Replaced gas valve operator on Boiler
- Troubleshoot VFD on Blower #3
- Influent Gate Valve Actuator in for Repair

Equipment Out of Service – Due to Planned Servicing, Maintenance, or Replacement

- GBT Odor Fan #1 OOS - replace bearings/belts
- Influent Gate Valve Actuator – Out for Repair

Ignacio Transfer Pump Station

- Routine rounds, readings and maintenance

Equipment Out of Service – Due to Planned Servicing, Maintenance, or Replacement

- None

Recycled Water Plant

- Performed plant rounds and maintenance
- Produced 3.49 million gallons of recycled water in November

Equipment Out of Service – Due to Planned Servicing, Maintenance, or Replacement

- None

Sludge Lagoons

- Performed routine rounds and inspection
- Installed floating boom to hold back sludge on Lagoon #3
- Unplugged decant drain lines #5 & #6 (down stream of telescoping valves)

Construction on Sound Enclosure – Odor Control Fans at Primary Clarifier #2

- Construction began on sound enclosure structure

ADMINISTRATION:

- October Electronic Self Monitoring Report submitted on November 26, 2013.
- Contract Negotiations with Teamsters

SAFETY AND TRAINING:

- Monthly plant safety inspections for Novato WWTP and Ignacio Pump Station completed
- Five Minute Tailgate training is held daily with the O&M staff.
- No safety incidents for the month of November 2013
- Accident Free: 6/1/10 – 11/30/13: 1,277 days / 57,465 Hours
- Hearing Protection
- Fall Protection
- Diablo Boiler performed classroom and “hands-on” training on Boiler Operation
- SOP's Reviewed:
 - Anaerobic Digester Gas Sulfide Test
 - Ignacio Transfer Pump Station Wetwell Scouring
- Safety paint applied to identified tripping hazards/raised surfaces throughout plant – temporary help hired to perform

ODORS:

- Jerome Meter (H2S) readings performed in neighborhood and within treatment plant.
- Neighborhood meeting held week of 11/25/13

MISCELLANEOUS

- Process Control Management Plan (PCMP) meetings held regularly
- Hach/WIMS Support – Bryce Behnke & Bill Thompson onsite for update/review

Veolia Support Staff On/Off Site (Various Times)

John O'Hare	Technical Support
Chris McAuliffe	District Manager
John Herron	Northern California Area Manager
Bryce Behnke	Technical Support via conference call & web exchange
Jeremiah Danielson	Environmental, Health, and Safety
Mel Demsky	Regional Director of Asset Management
Dan Brown	Asset Manager

Novato Sanitary District
BOD/TSS Report



November, 2013

Date	Flow MGD	Influent				Effluent				BOD % Removal	TSS % Removal
		BOD		TSS		BOD		TSS		PERCENT	PERCENT
		mg/l	lb/d	mg/l	lb/d	mg/l	lb/d	mg/l	lb/d		
11/01/13	3.76										
11/02/13	4.01										
11/03/13	4.30										
11/04/13	3.97	371	12,284	424	14,039	14	464	6	199	96.2	98.6
11/05/13	3.71										
11/06/13	3.61	229	6,895	269	8,099	9	271	6	181	96.1	97.8
11/07/13	3.38										
11/08/13	3.28	278	7,605	341	9,328	6	164	4	109	97.8	98.8
11/09/13	3.50										
11/10/13	3.59										
11/11/13	3.98										
11/12/13	3.89										
11/13/13	3.97	279	9,238	407	13,476	8	265	3	99	97.1	99.3
11/14/13	3.82	238	7,582	324	10,322	<5	<159	<3	<96	97.9	99.1
11/15/13	3.79	227	7,175	308	9,735	<5	<158	3	95	97.8	99.0
11/16/13	4.04										
11/17/13	4.40										
11/18/13	3.78	302	9,521	370	11,664	6	189	<3	<95	98.0	99.2
11/19/13	4.74										
11/20/13	4.49	256	9,586	377	14,117	<5	<187	5	187	98.0	98.7
11/21/13	4.01										
11/22/13	3.69	250	7,694	324	9,971	5	154	4	123	98.0	98.8
11/23/13	3.79										
11/24/13	3.85	278	8,926	343	11,013	15	482	<3	<96	94.6	99.1
11/25/13	3.75	275	8,601	285	8,913	6	188	4	125	97.8	98.6
11/26/13	4.12	256		334	11,477	11		3	103		99.1
11/27/13	4.25										
11/28/13	4.37										
11/29/13	3.97										
11/30/13	4.06										
Weekly Averages											
11/02/13	Week 1	277	4,236	406	6,208	7	102	4	61		
11/09/13	Week 2	293	4,050	345	4,758	10	136	5	74		
11/16/13	Week 3	248	3,628	346	5,070	6	88	3	44		
11/23/13	Week 4	269	4,052	357	5,406	5	80	4	61		
11/30/13	Week 5	270	3,975	321	4,748	11	152	3	49		
Monthly											
Minimum	3.28	227	6,895	269	8,099	<5	70	<3	<43	95	98
Maximum	4.74	371	12,284	424	14,117	15	218	6	90	98	99
Total	117.87										
Average	3.93	270	8,646	342	11,013	<8	<111	<4	<57	97	99

Novato Plant : Bacterial Results

EFFLUENT: E-002 Station

Nov-13

Fecal Coliform		Enterococcus	
(1) 30-Day Median not to exceed 140 MPN/100 mL	(2) 90th Percentile not to exceed 430 MPN/100 mL	30-Day Geometric mean not to exceed 35 MPN/100 mL	

November 1, 2013		
November 2, 2013		
November 3, 2013		
November 4, 2013	13	
November 5, 2013		
November 6, 2013	6	
November 7, 2013		
November 8, 2013	22	
November 9, 2013		
November 10, 2013		
November 11, 2013		
November 12, 2013		
November 13, 2013	4	
November 14, 2013	13	
November 15, 2013	4	
November 16, 2013		
November 17, 2013		
November 18, 2013	13	
November 19, 2013		
November 20, 2013	8	
November 21, 2013		
November 22, 2013	4	
November 23, 2013		
November 24, 2013	< 2	
November 25, 2013	50	
November 26, 2013	30	
November 27, 2013		
November 28, 2013		
November 29, 2013		
November 30, 2013		

90th Percentile Ranking

Sample #1	2
Sample #2	4
Sample #3	4
Sample #4	4
Sample #5	6
Sample #6	8
Sample #7	13
Sample #8	13
Sample #9	13
Sample #10	22
Sample #11	30
Sample #12	50
Sample #13	
Sample #14	
Sample #15	
Sample #16	

November 1, 2013		
November 2, 2013		
November 3, 2013		
November 4, 2013	12.1	
November 5, 2013		
November 6, 2013	4.1	
November 7, 2013		
November 8, 2013	4.1	
November 9, 2013		
November 10, 2013		
November 11, 2013		
November 12, 2013		
November 13, 2013	6.3	
November 14, 2013	6.3	
November 15, 2013	3.1	
November 16, 2013		
November 17, 2013		
November 18, 2013	29.4	
November 19, 2013		
November 20, 2013	2.0	
November 21, 2013		
November 22, 2013	4.1	
November 23, 2013		
November 24, 2013	2.0	
November 25, 2013	18.1	
November 26, 2013	12.2	
November 27, 2013		
November 28, 2013		
November 29, 2013		
November 30, 2013		

Max	50
Min	2.0
Avg	14.08
30-Day Median	10.5

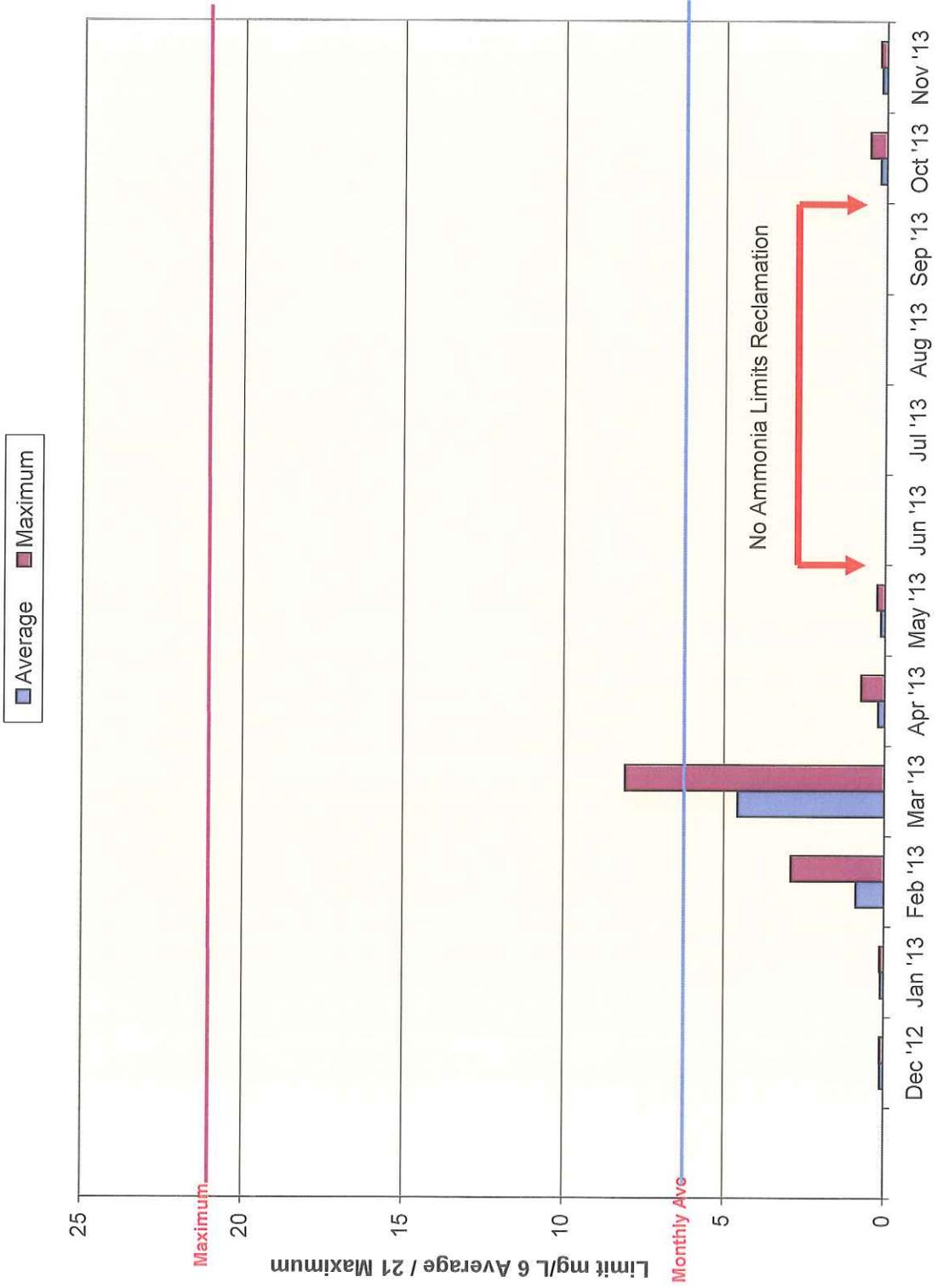
90th Percentile Value **30**

Max	29.4
Min	2.0
Avg	8.7
30 Day Geo. Mean	6.1

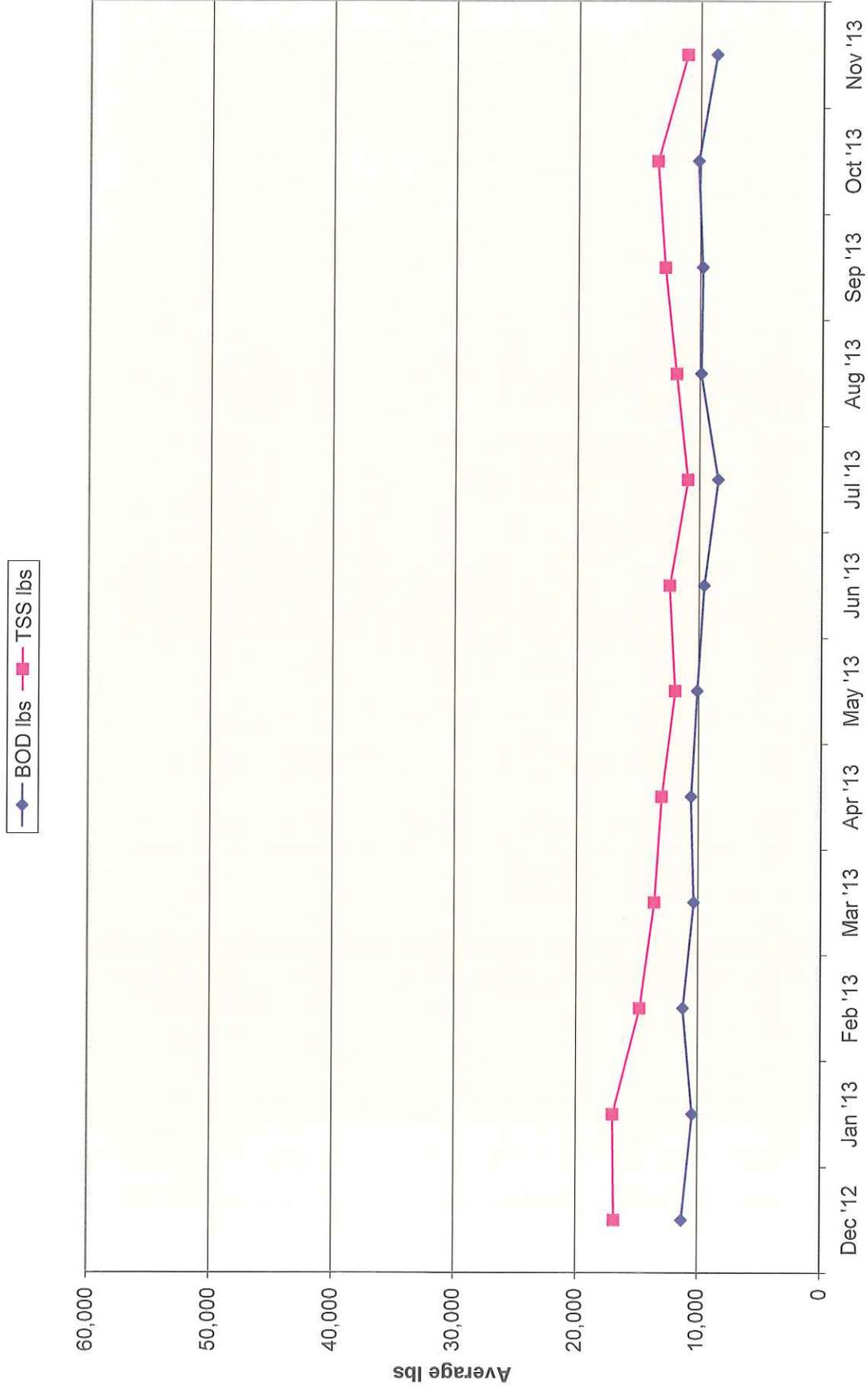
¹ = indicates that more than ONE UV channel was in operation at sample time; All UV channels in operation were sampled.

90th Percentile	12.00	0.9	10.8
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Effluent Ammonia



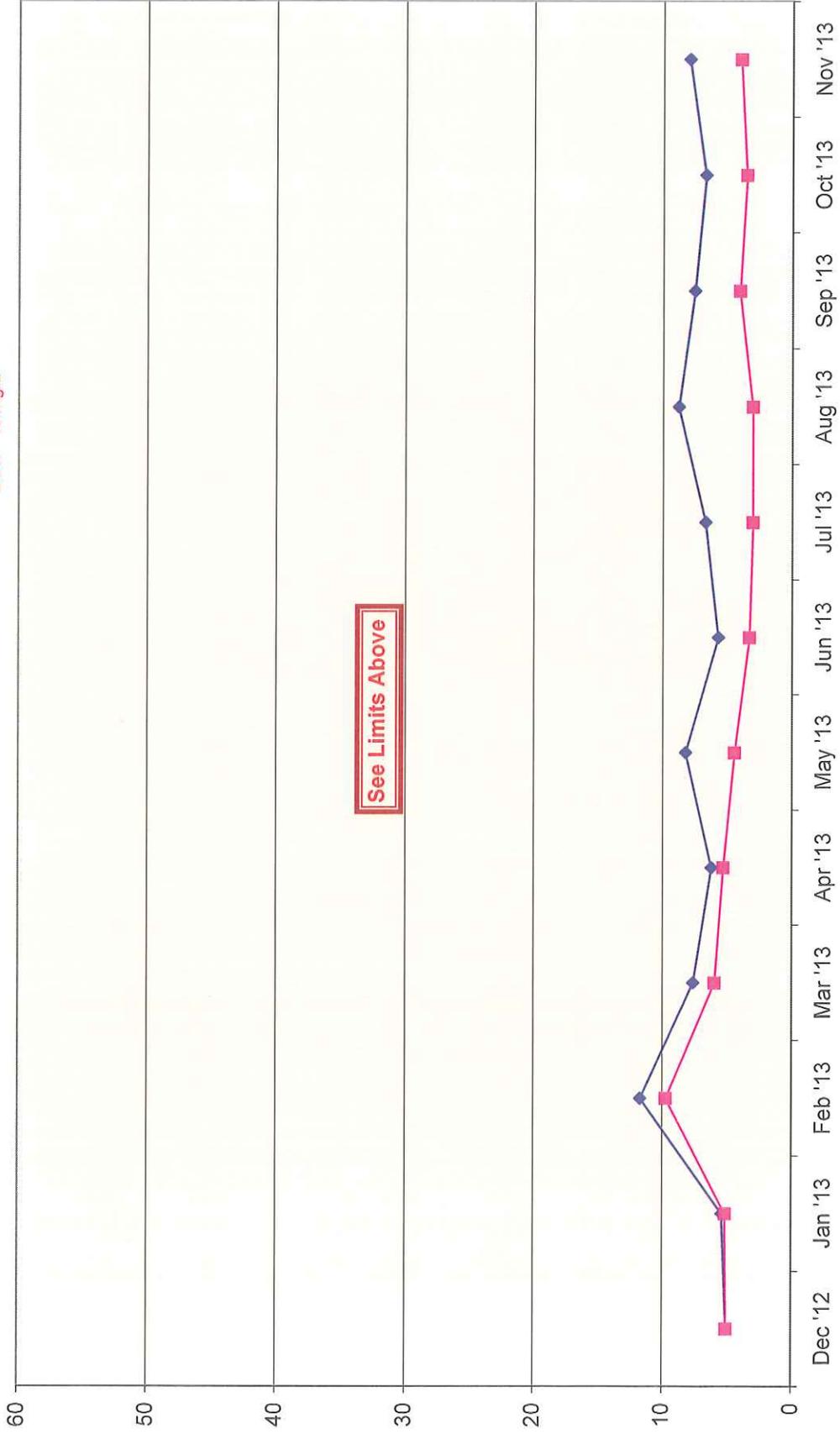
Influent Load BOD / TSS lbs



Effluent BOD / TSS Concentration

NPDES LIMITS WET SEASON
BOD & TSS - 30 mg/L Monthly Ave, 45 mg/L Weekly Ave
NPDES LIMITS DRY SEASON
BOD - 15 mg/L Monthly Ave, 30 mg/L Weekly Ave
TSS - 10 mg/L Monthly Ave, 20 mg/L Weekly Ave
WDR (Waste Discharge Requirements) RECLAMATION
BOD - 40 mg/L

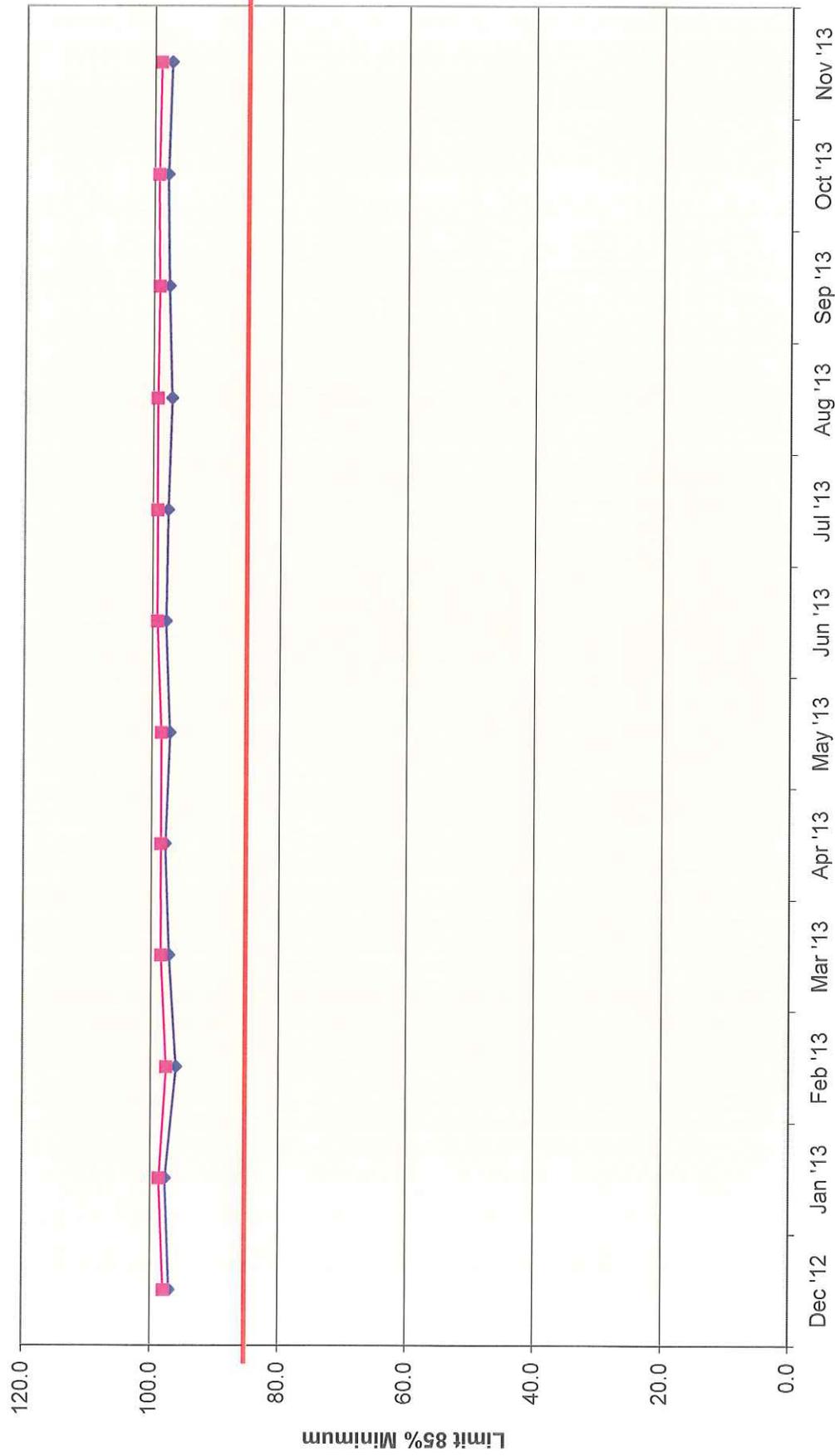
—◆— BOD —■— TSS



See Limits Above

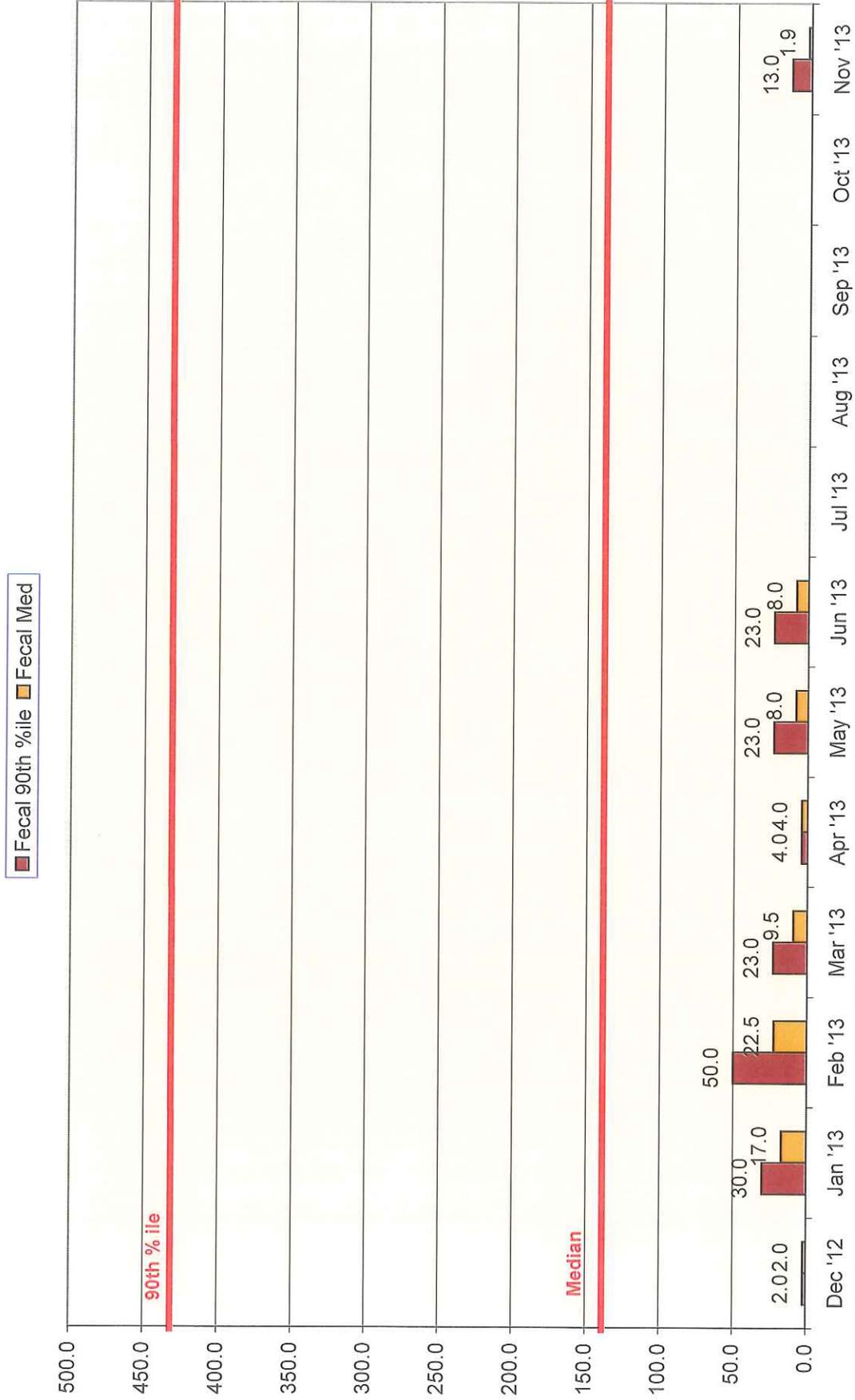
BOD / TSS Percent Removal

—◆— BOD —■— TSS



Disinfection

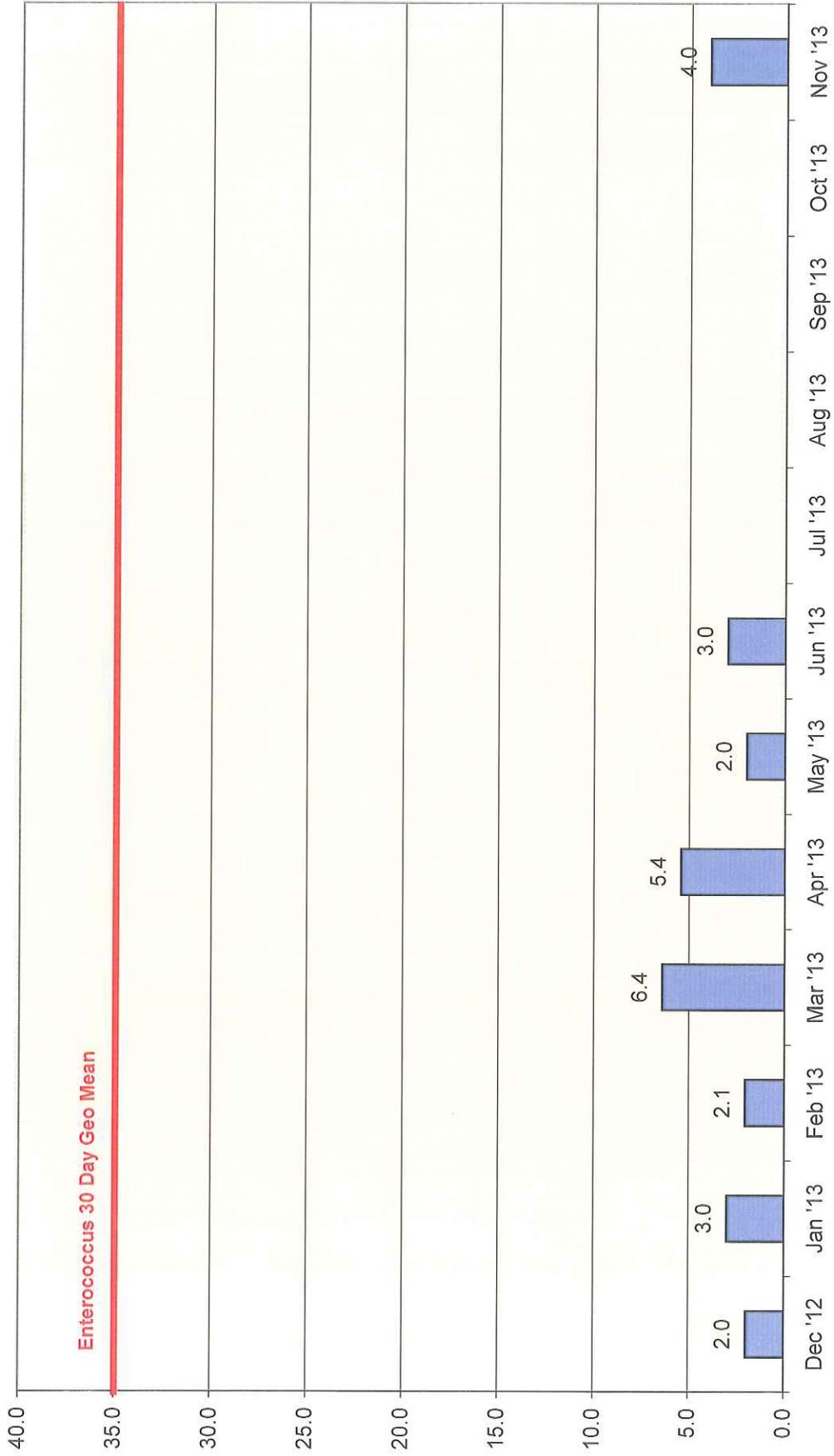
LIMITS - NPDES
 Fecal 140 mpn monthly median
 Fecal 430 mpn 90th percentile 30 day



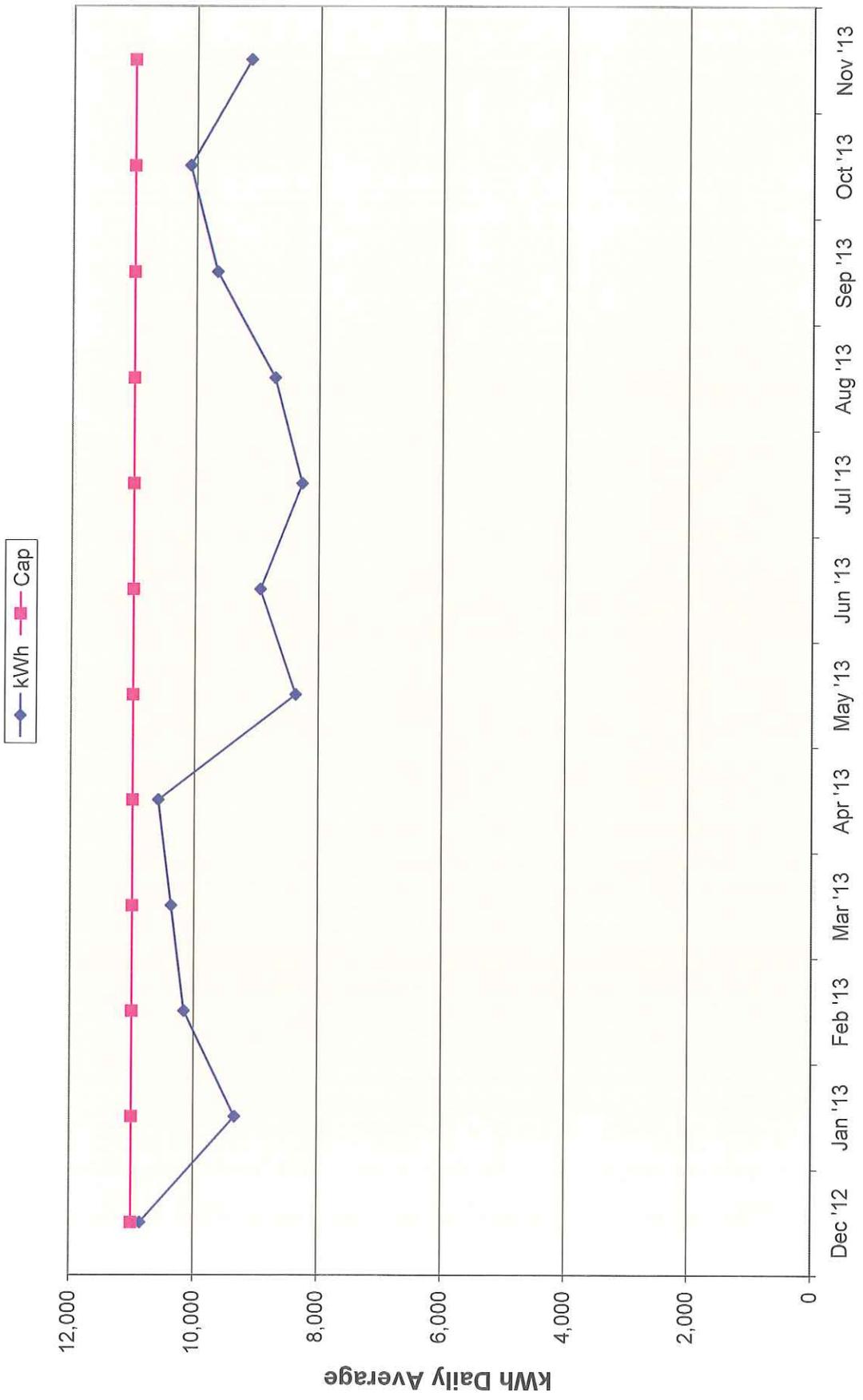
LIMITS - NPDES
Entero 30 day geo mean 35 mpn /100ml

Disinfection

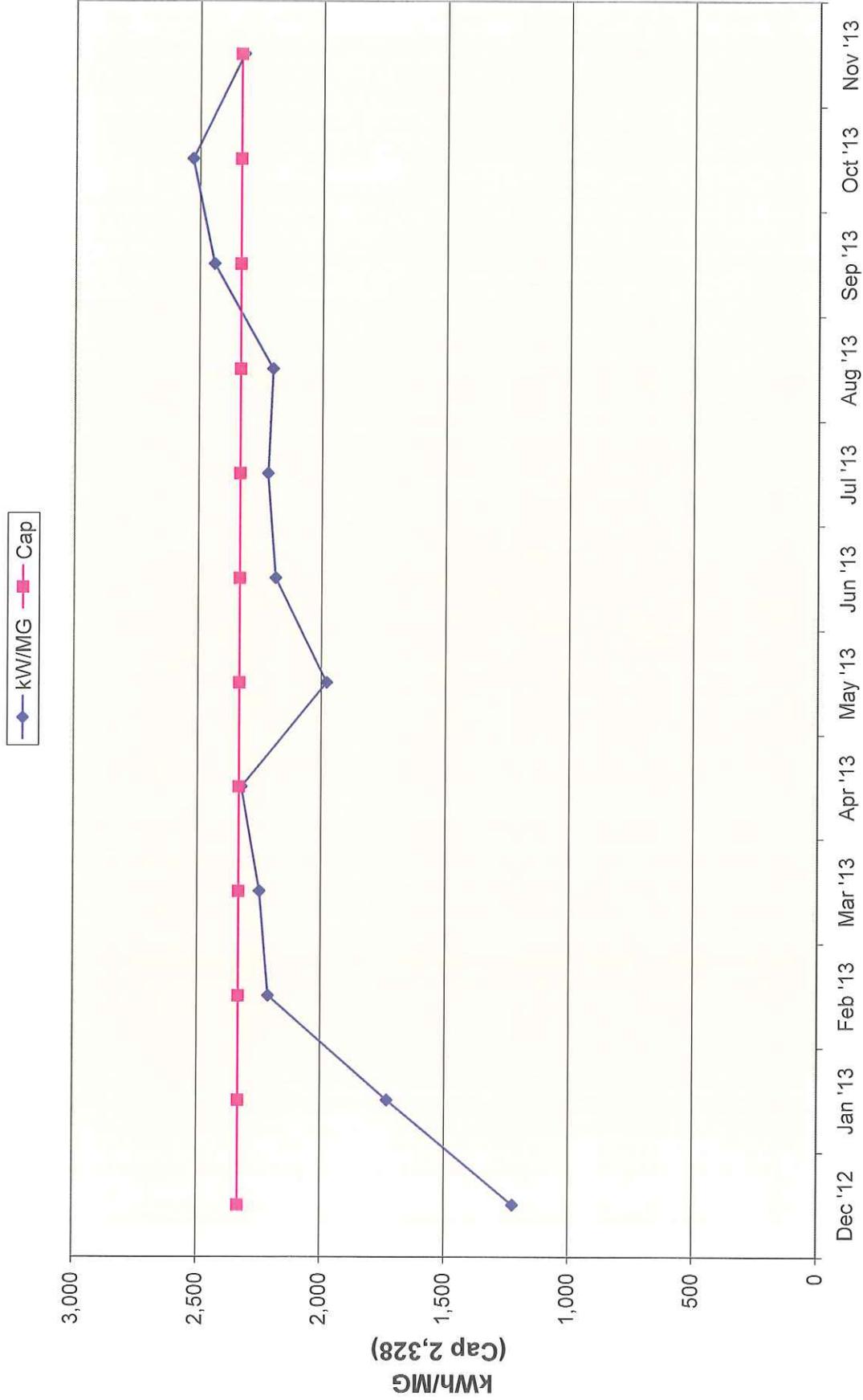
■ Enterococcus



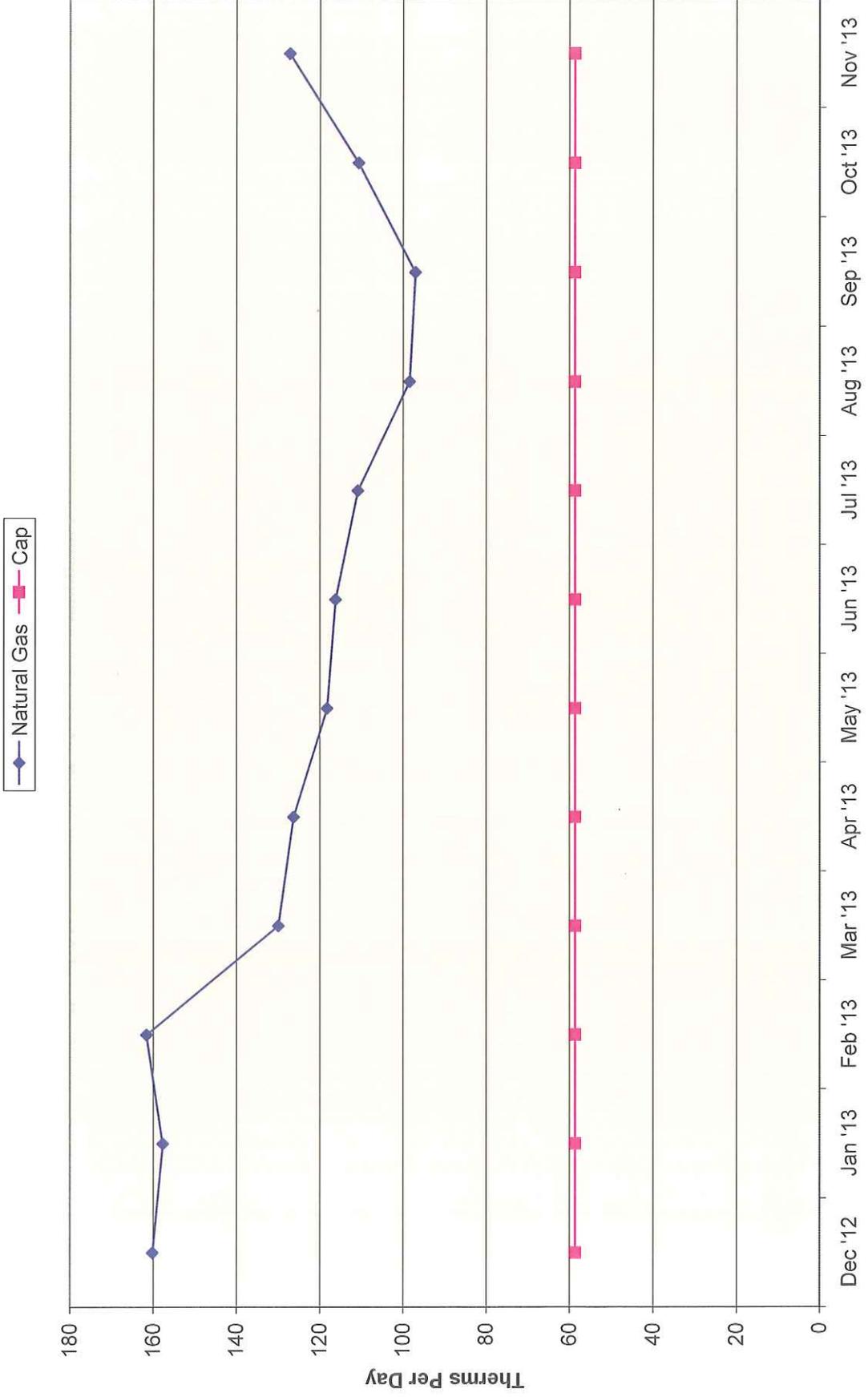
Energy kWh



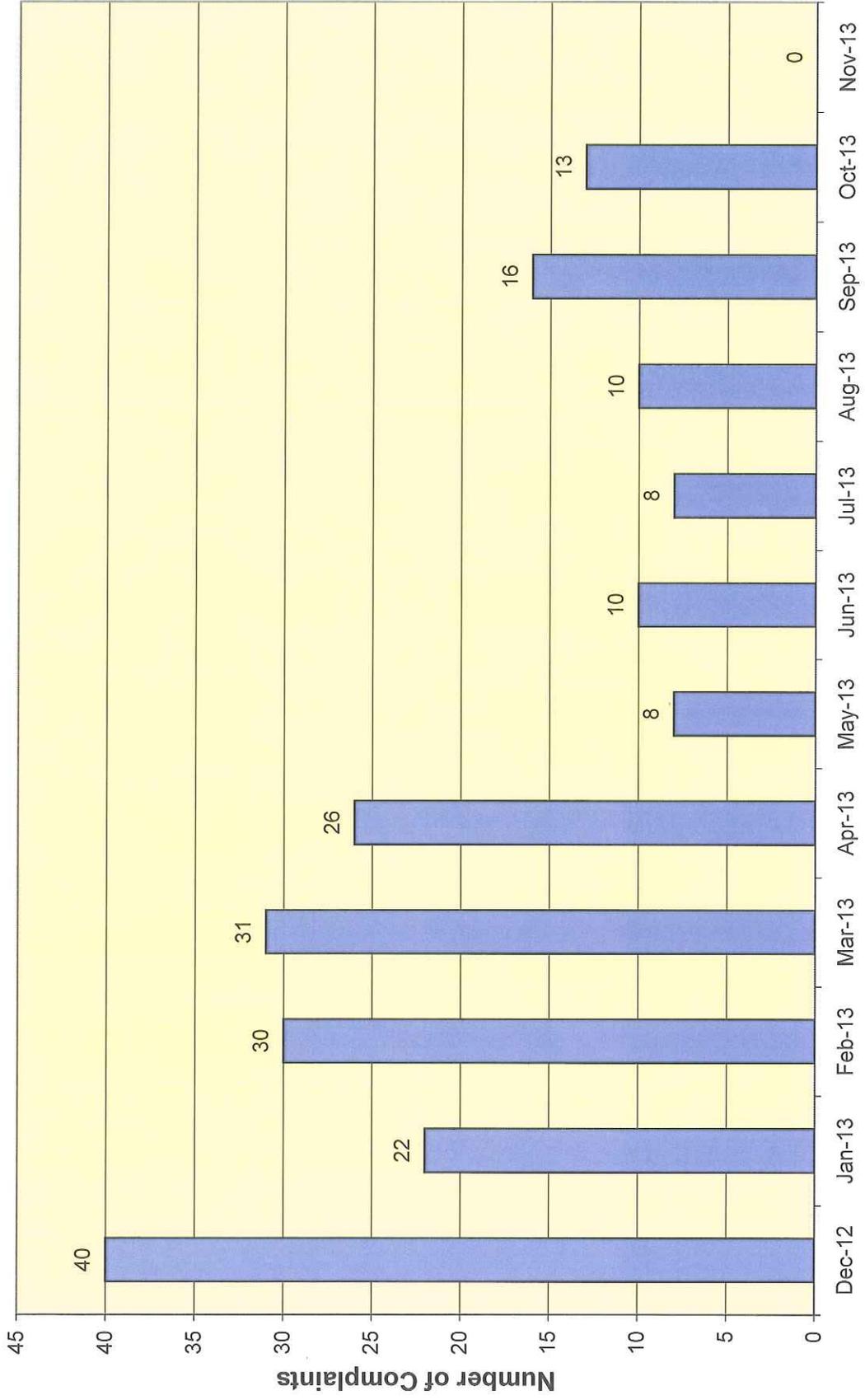
Energy kWh/MG



Natural Gas Use



Complaints Received



WORK ORDER STATISTICS

November 1, 2013 - November 30, 2013

	Open Work Orders Due Prior to 11/1/13	Open Work Orders 11/1/13 - 11/30/13	Total Open Work Orders
Preventative	2	275	277
Corrective	7	39	46
Total	9	314	323

	Closed Work Orders 11/1/13 - 11/30/13
Preventative	275
Corrective	25
Total	300

Total Outstanding Work Orders as of December 1, 2013	23
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NOVATO SANITARY DISTRICT
Wastewater Operations Committee Meeting
Odor Control, Noise, and Landscaping Report
November 2013

Summary:

Staff continues to work to address issues of concern relating to odor control, noise, and landscaping, specifically from the Lea Drive neighborhood, and in the northeast corner of the Novato Treatment Plant (NTP) site.

As explained in earlier reports, and to demonstrate its commitment, the District has already expended significant amounts beyond the substantial investment for odor control, noise, and landscaping included in the original WWTP Upgrade, Contract B - Novato Treatment Plant (NTP), Project No. 72609. These additional costs have included operational changes and measures related to further noise abatement, visual screening, wind shielding, and daily monitoring. The District has also retained Brown and Caldwell (B&C) and their project manager, Mr. Dave McEwen to study the issue of potential odor emissions from the aeration basins.

A summary of activities since the last Wastewater Operations Committee meeting is provided below.

Odor control:

The District's odor control consultant, Mr. Dave McEwen of Brown and Caldwell (B&C) continued to work on studying potential odor emissions from the aeration basins. Earlier, he had reported that initial analysis of air samples off the aeration basins appeared to indicate the characteristic "signature" of two reduced sulfur compounds, dimethyl sulfide and methyl mercaptan. He had also indicated that the primary source appeared to be the anoxic zones of the aeration basins.

Mr. McEwen carried out further reduced sulfide compound sampling in October (liquid phase sampling) to analyze potential formation areas for these compounds within the liquid stream, as this might lead to a potential solution for odor suppression at the source of formation. Results of this sampling became available in November, and Mr. McEwen has been able to make findings that confirm his theories, and will be finalizing recommendations in December. It is expected that implementation and testing of his recommendations will be occurring thru' January and February, and that he will issue a technical memorandum in March.

Noise:

In November, staff continued to address the low level noise issues raised by some Lea Drive neighbors, related to the fans for the main odor control biofilter in the northeast corner of the Novato plant. Construction began on a permanent sound reducing enclosure for these fans which up to this point had resided inside a temporary insulated enclosure. As part of this effort, Veolia and the District retained a local contractor who will place the fans and the immediately adjacent air ducting within this permanent enclosure to minimize the sound. It is anticipated that contractor will complete the work by December 2013.

NOVATO SANITARY DISTRICT
Wastewater Operations Committee Meeting
Odor Control, Noise, and Landscaping Report
November 2013

In addition, staff continued to monitor sound levels at the property line on Lea Drive, which continued to indicate that the sound levels are those of an “Average Quiet Street” and well below the 60 decibels the Novato General Plan specifies for residential neighborhoods.

Landscaping:

Staff continued to work with its landscaping contractor Cagwin and Dorward (C&D), to care for the attributes to the landscaping installed at the District’s fence-line on Lea Drive at the northeast corner area of the NTP. C&D will continue to provide services on an as-needed and as-requested (by the District) basis to care for the landscaping in this area through the winter, and the scope of their services will be re-evaluated in the spring.

**Novato Sanitary District
Wastewater Operations Committee meeting
Collection System Operations Report
November 2013**

General:

For November 2013, after accounting for all leaves, the breakdown of Collection System department staff time, in terms of equivalent full-time employee (FTE) hours utilized, works out approximately as follows:

- 2.3 FTE field workers for Sewer Maintenance (main line cleaning)
- 1.4 FTE field workers for Pump Station Maintenance
- 0.9 FTE field workers for CCTV work
- 1.5 FTE field workers for time spent on data input, training, service calls, overflow response, or any other activity that does not directly relate to main line cleaning, CCTV work or pump station maintenance, and
- 1.8 FTE field workers Vacation/Sick Leave/Holiday.

Collection System Maintenance:

Performance metrics for the department are presented in the attached graphs showing the length of line cleaned/month, footage cleaned/hour worked, overflows/month, and the CCTV footage achieved.

A total of 70,008 feet of sewer pipelines were cleaned for the month by District staff. Staff completed 331 maintenance work orders generated by the ICOM3 CMMS system, with 37 outstanding work orders. A discrepancy between the footage listed in the ICOM3 system and that listed on the District maps have been identified, therefore the footage listed in the Collection System reports is based off of footage obtained by the field crews during cleaning operations. The field crews are measuring line segment lengths using a measuring wheel whenever they note a line segment length discrepancy of more than ten feet between the work order and District maps.

The District's CCTV van was in the field for a total of 15 working days and televised 159 line segments; the CCTV production was 37,443 ft. for the month. Staff televised 31,620 feet of sewer lines using the CCTV van, and televised 5,823 feet of sewer lines using the push (hand) camera while performing easement area maintenance.

Pump Station Maintenance:

The Collection System Department conducted 232 lift station inspections for the month with 112 of the inspection visits generated through the JobCal Plus CMMS system*. There are 16 outstanding work orders for the month of November. Of these, 6 work orders are for annual flow meter calibration at various pump stations and are scheduled for completion by a certified contractor in December. Two work orders are related to Reclamation maintenance, and the remaining 7 work orders are for pump station maintenance activities that were not completed in November.

The breakdown of the lift station inspections is as follows: 27 Flygt submersible pump stations, 1 time per month, 6 Gorman/Rupp dry well/wet well stations, 1 entry per month, and 4 main stations that are visited daily.

**Novato Sanitary District
Wastewater Operations Committee meeting
Collection System Operations Report
November 2013**

A Collection Systems (Pump Stations) Work Order Statistics summary is attached.

At Bel Marin Keys (BMK) #5 pump station, pump #2 was taken out of service and sent in for repair due to wear to the impeller and volute, and returned to service. Staff also upgraded 6 pumps in the BMK area replacing the wear plate and impeller for each pump, converting them from an older series of impellers to more durable hardened iron style impellers that are less prone to excessive wear and less susceptible to clogging from rags and wipes.

***Note:** The JobCal Plus program is not only used for scheduling and tracking pump station related maintenance work orders, it is also used for ladder inspections, reclamation maintenance work orders, SCADA backup scheduling, and vehicle maintenance scheduling.

Pump Station Rehabilitation:

Currently, there is no pump station under construction as part of the District's continuing multi-year Pump Station Rehabilitation Project (Capital Improvement Project No. 72403). The next phase, (Unit 5), includes rehabilitation/reconstruction of the Los Robles and Digital Drive pump stations and will likely initiate construction in early 2014.

Safety and Training:

General: The Collection System crew attended four safety tailgate meetings.

Specialized training: Collection System staff attended Blood Borne Pathogen training during the month of November. Three members from the Collection System staff also attended training via webinars on SSMPs, Employee Training Requirements, and SSO Response - Defensible Volume Calculations.

Safety performance: There were no lost time accidents this month for a total of 303 accident-free days.

Standard Operating Procedures (SOPs):

Department staff continues to work on generating new SOPs, and working towards finalizing earlier draft SOPs. No (0) SOPs were issued in November.

Sanitary Sewer Overflows (SSOs):

For the month of November, there were zero (0) SSO's.

Novato Sanitary District
Collection System Monthly Report For November 2013 (as of November 30, 2013)

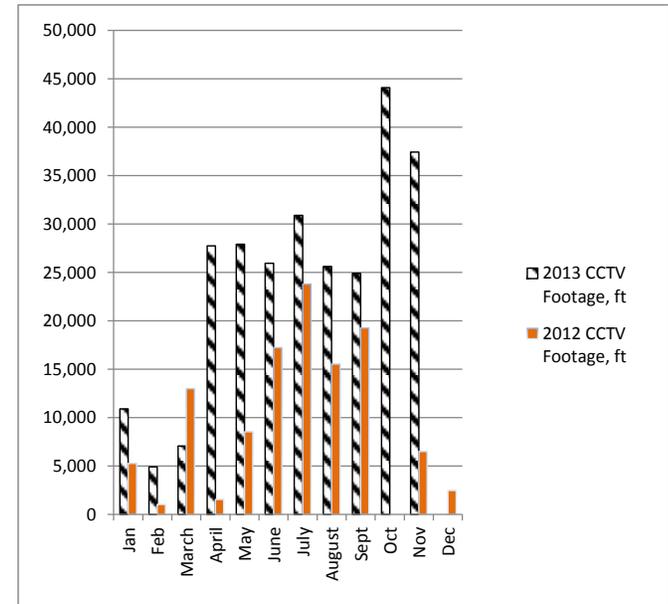
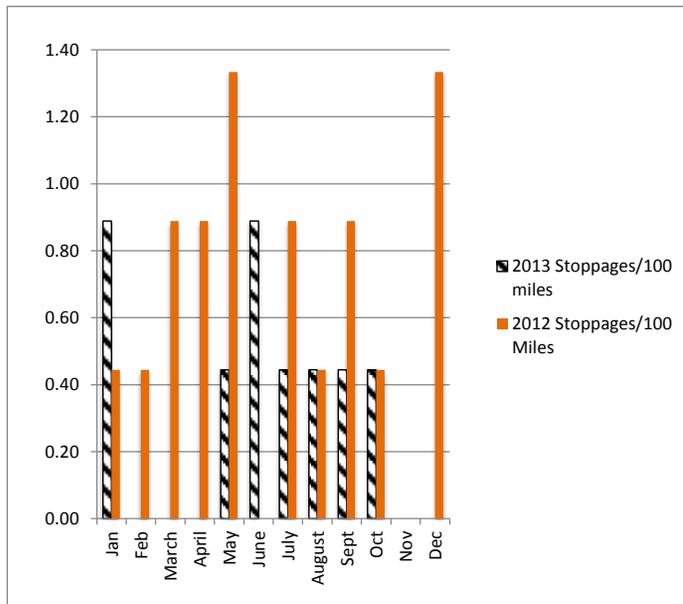
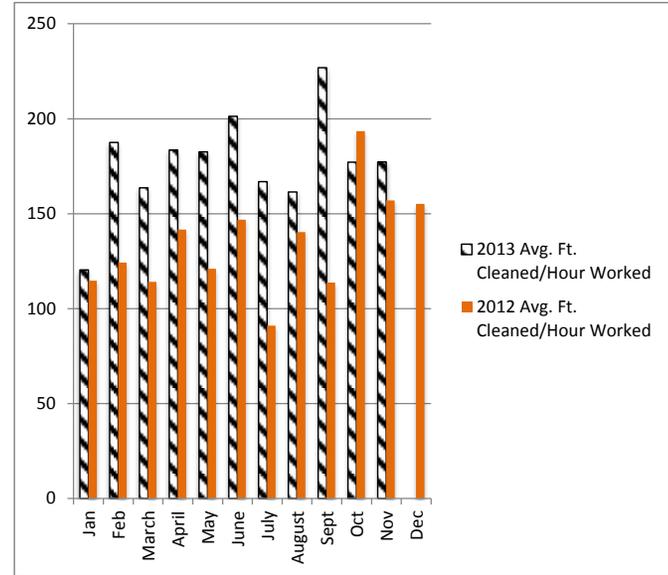
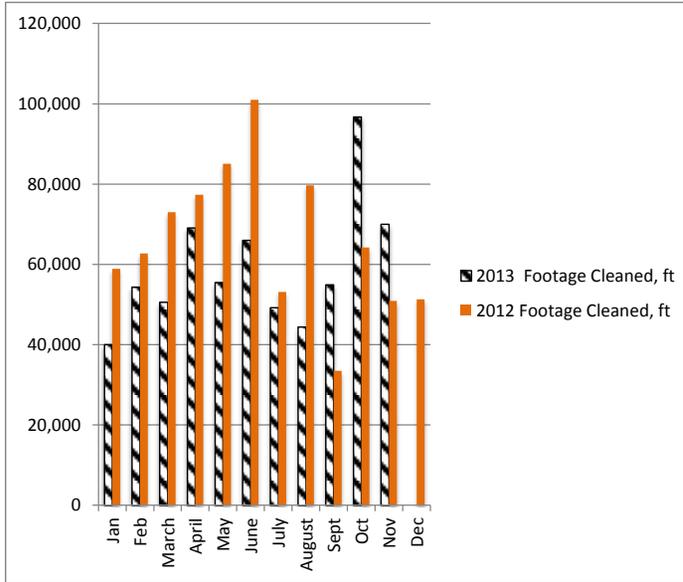
	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total Year to Date	Average Year to Date
A. Employee Hours Worked														
Number of FTEs (main line cleaning), hrs.	1.9	1.7	1.8	2.2	1.8	1.9	1.7	1.6	1.4	3.1	2.3		NA	1.9
Number of FTEs (other)	1.9	1.4	2.4	1.5	1.8	1.2	1.8	1.4	2.1	2.1	1.5		NA	1.7
Number of FTEs (CCTV)	0.1	0.3	0.5	1.7	1.1	1.2	1.5	1.3	1.2	1.2	1.1		NA	1.0
Total, FTEs	3.9	3.4	4.7	5.4	4.6	4.3	4.9	4.2	4.7	6.4	4.9		NA	4.7
Regular Time Worked, (main line cleaning), hrs	333	290	309	377	304	328	295	275	242	546	395		3,693	336
Regular Time Worked on Other, hrs ⁽¹⁾	326	249	415	259	308	216	304	235	363	369	264		3,306	301
Regular Time Worked on CCTV ⁽²⁾	20	46	85	300	192	200	258	221	206	203	191		1,920	175
Total Regular time, worked, hrs	678	585	809	935	804	744	857	731	811	1,118	849		8,919	811
Total Vacation/Sick Leave/Holiday, hrs	204	77	101	114	239	62	191	238	174	128	307		1,834	167
Vacation/Sick Leave/Holiday, FTEs	1.2	0.4	0.6	0.7	1.4	0.4	1.1	1.4	1.0	0.7	1.8		10.6	1.0
Overtime Worked on Coll. Sys., hrs	6	45	5	47	5	1	24	24	33	31	4		224	20
Overtime Worked on Other, hrs ⁽¹⁾	3	19	5	28	12	6	16	17	27	50	28		211	19
Overtime Worked on CCTV ⁽²⁾	1	3	0	0	0	0	2	1	2	3	0		12	1
Total Overtime, hrs	10	67	10	75	17	7	42	42	62	83	31		446	41
B. Productivity														
1. Line Cleaning														
Rodder Work Orders generated	14	0	24	31	83	66	51	51	51	121	74		566	51
Rodder 3203 ft. cleaned	3,138	0	3,856	5,490	678	4,371	760	1,842	1,214	10,325	12,709		44,383	4,035
Rodder - outside services, ft cleaned	0	0	0	0	0	0	0	0	0	8,333	0		8,333	758
Flusher Work Orders generated	187	252	290	385	438	361	277	256	340	440	294		3,520	320
Truck 3205V ft. cleaned	2,782	5,146	2,755	13,698	15,477	10,186	0	12,537	0	14,307	8,000		84,888	7,717
Truck 3206V ft. cleaned	34,114	49,225	43,954	49,898	39,332	51,468	48,444	30,024	53,692	72,072	49,299		521,522	47,411
Flusher - outside services, ft. cleaned	0	0	0	0	0	0	0	0	0	3,260	0		3,260	0
Total Footage cleaned ⁽³⁾	40,034	54,371	50,565	69,086	55,487	66,025	49,204	44,403	54,906	96,704	70,008	NA	650,793	59,163
Work Orders completed	201	252	286	374	314	267	239	222	281	548	331		3,315	301
Work Orders backlog	6	0	28	42	207	160	89	85	110	13	37		777	71
2. Closed Circuit Television (CCTV)														
Camera Work Orders generated	0	0	0	0	0	0	0	0	0	0	0		0	
CCTV Truck 3126T, ft. videoed	10,905	4,912	7,075	27,756	27,913	25,938	30,910	25,628	24,900	37,429	31,620		254,986	23,181
CCTV (hand cam), ft. videoed	0	0	0	0	0	0	0	0	0	6,654	5,823	0	12,477	
CCTV Inspection - outside services, ft. videoed	0	0	0	0	0	0	0	0	0	3,260	0		3,260	
Total CCTV footage ⁽³⁾	10,905	4,912	7,075	27,756	27,913	25,938	30,910	25,628	24,900	44,083	37,443	NA	267,463	
C. Sanitary Sewer Overflows (SSOs)														
Minor (Category III)	0	0	0	0	1	2	1	1	1	1	0		9	NA
Major (Category II)	0	0	0	0	0	0	0	0	0	0	0		4	NA
Major (Category I)	2	0	0	0	0	1	0	0	1	1	0		0	NA
Overflow Gallons	2,200	0	0	0	158	1,111	10	50	312	1,474	0		5,315	NA
Volume Recovered	880	0	0	0	158	100	0	0	117	673	0		1,928	NA
Percent Recovered	40%	NA	NA	NA	100%	9%	0%	0%	38%	46%	NA	NA	36%	NA
D. Service Calls (non-SSO related)														
Service calls, normal hours, #	7	5	7	12	6	6	8	5	8	9	8		81	7
Normal hours S.C. response time, mins (avg.)	12	15	14	18	17	22	19	13	23	15	18		186	17
Service Callouts, after hours, #	1	0	0	1	1	0	1	2	1	3	0		10	1
After Hours S.C. response time, mins (avg.)	23	NA	NA	20	30	0	27	34	30	28	0		192	21
E. Benchmarks														
Average Ft. Cleaned/Hour Worked	120	187	164	183	183	201	167	161	227	177	177	NA	NA	177
Total Stoppages/100 Miles	0.9	0.0	0.0	0.0	0.4	0.9	0.4	0.4	0.4	0.4	0.0	NA	4.0	NA
Average spill response time (mins)	18	0	0	0	15	19	15	27	7	41	0		NA	13
Callouts/100 Miles	0.4	0.0	0.0	0.4	0.4	0.0	0.4	0.9	0.4	1.3	0.0		4.4	0.4
Overtime hours/100 Miles	3	20	2	21	2	0	11	11	15	14	2		100	9
Overflow Gallons/100 Miles	978	0	0	0	70	494	4	22	139	655	0	NA	2362	215

⁽¹⁾This category includes time spent on: Data input, Training, Service Calls, Overflow Response, as well as any other activity that does not directly relate to main line cleaning or CCTV work.

⁽²⁾This category separates time spent on CCTV from other Collection System maintenance activities.

⁽³⁾ Does not include outside services (tracked separately)

Collection System 2012-13 Graphs



Novato Sanitary District

Pump Station Monthly Report For November 2013 (as of November 30, 2013)

	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total Year to Date	Average Year to Date
Employee Hours Worked	253	224	313	226	256	249	320	301	236	266	205		2,849	
Number of Employees	1.4	1.3	1.8	1.3	1.4	1.4	1.8	1.4	1.2	1.4	0.9			1.4
Regular Time Worked on Pump Sta	185	189	223	182	227	201	273	239	201	246	161		2,326	
Overtime Worked on Pump Sta	69	35	90	44	29	48	47	62	35	20	45		523	
After Hours Callouts	4	3	1	8	1	0	5	5	2	0	9		38	
Average Callout response time (mins)	24	35	20	30	0	0	26	35	30	0	35		235	21
Work Orders														
Number generated in month	107	112	116	124	110	125	134	107	126	122	128		1311	
Number closed in month	104	110	116	124	110	123	134	106	126	122	101			
Backlog	3	2	0	0	0	2	0	1	0	0	27			

**COLLECTION SYSTEM (Pump Stations)
WORK ORDER STATISTICS
November 1, 2013 - November 30, 2013**

	Open Work Orders Due Prior to 11/1/2013	Open Work Orders 11/1/2013 - 11/30/2013	Total Open Work Orders
Preventive	0	128	0
Corrective	0	0	0
Total	0	128	128

	Closed Work Orders 11/1/2013 - 11/30/2013
Preventive	112
Corrective	0
Total	112

Total Outstanding Work Orders as of 11/30/2013	16
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**NOVATO SANITARY DISTRICT
Wastewater Operations Committee Meeting
Reclamation Facilities Report
November 2013**

Summary:

The rancher continues to remove cows from the Sites. Only a small herd is left on Site 3 and Site 7. Parcel rehabilitation was completed on Parcels 38 & 78 and continues on Parcels 21, 24, 25 & 28. Approximately 6 MG of recycled water was used for irrigation this month. Sludge handling is complete for the season.

Ranch Operations:

The rancher continues to move cattle off of all Sites. Small herds remain on Site 3 and Site 7.

Parcel rehabilitation was finished on Parcel 78. Staff tested the irrigation system on Parcel 38 to evaluate if repairs are needed or if sprinkler heads need to be replaced. The testing identified 280 sprinkler heads which need to be replaced and six locations where the irrigation system requires excavation for repairs. The six locations were excavated and repaired by the Rancher. The sprinkler replacement work will be completed next spring. The parcel rehabilitation work was completed and the parcel was seeded. Parcels 24 & 28 were leveled, disked, chiseled, limed, rotovated, seeded and rolled in preparation for rain. Sprinklers in these two parcels will be tested and repaired in the spring. A leak was repaired in Parcel 25 and Parcels 21 & 25 were rotovated, seeded and rolled. Staff will identify additional parcels to disk, chisel, rotovate, seed and roll (Phase 1 rehabilitation) next month and if weather permits, complete the work. This work is to prepare the parcels for leveling next fall.

Last month, Mosquito Abatement found a sinkhole in Parcel 27. Staff located the sinkhole and will investigate after the irrigation season is over. The sinkhole appears to be over one of the large irrigation mains. This leak will be repaired in December, weather permitting.

Irrigation Parcels:

As previously reported, on occasion, the valve actuators for some irrigation zones within the parcels will not fully open or close and some motors have failed. The District's electrical engineering consultant is investigating options to address the issue.

All irrigation on all Sites was turned on November 4th. The Wildlife Pond Feed Pump was turned off for the year as recommended in the Reclamation Operations & Maintenance Manual.

Irrigation Pump Station:

Approximately 6.01 million gallons of recycled water was used for irrigation in November. The average storage pond staff gauge depth at the beginning of November was 3.5 feet and 3.3 feet at the end of November.

Sludge Handling & Disposal:

Sludge handling and disposal season is over and the District's contractor cleaned up his sludge handling equipment in preparation for storage.
