

NOVATO SANITARY DISTRICT

Meeting Date: February 19, 2014

*** NOTE REVISED DATE AND TIME ***

The Wastewater Operations Committee of the Novato Sanitary District will hold a meeting at 3:00 PM, Wednesday, February 19, 2014 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 JANUARY 21 AND FEBRUARY 6, 2014 MEETINGS

4. WASTEWATER TREATMENT FACILITIES OPERATIONS AND MAINTENANCE REPORT FOR JANUARY 2014:

- a. Treatment Plant Performance Report
- b. Maintenance Report
- c. Safety and training
- d. Odor control, noise, and landscaping report

5. COLLECTION SYSTEM OPERATION AND MAINTENANCE REPORT FOR JANUARY 2014:

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

6. RECLAMATION FACILITY REPORT FOR JANUARY 2014:

- 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.

January 21, 2014

A regular meeting of the Wastewater Operations Committee of Novato Sanitary District was held at 2:00 p.m., Tuesday, January 21, 2014, at the District Office, 500 Davidson Street, Novato.

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

STAFF PRESENT: Beverly James, Manager-Engineer
Steve Krautheim, Field Services Superintendent
Tim O'Connor, Collections System Supervisor
John Bailey, Project Manager, Veolia Water
Vicki Shidell, Interim Environmental Services Supervisor
Julie Swoboda, Administrative Secretary
(Sandeep Karkal, Deputy Manager-Engineer, was absent)

ALSO PRESENT: Shilen Patel, Veolia Water
Sachin Chawala, Veolia Water, N. CA Area Manager
John Bailey, Plant Manager, Veolia Water

AGENDA APPROVAL: The agenda was approved as presented.

PUBLIC COMMENT: None.

APPROVAL OF MEETING MINUTES FOR DECEMBER 16, 2013: The December 16, 2013 minutes were approved as written.

WASTEWATER TREATMENT FACILITIES OPERATIONS AND MAINTENANCE REPORT FOR DECEMBER 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 December. He stated 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 noted that even though December is considered a "wet season", flow continues to hold a "dry season" pattern and are below normal levels.

Mr. Bailey stated that routine rounds, readings and maintenance were performed at the Novato Treatment Facility, the Ignacio Transfer Pump Station, the Recycled Water Plant and the Sludge Lagoons. He noted that the clearance was set on the bottom rake mechanism on the Primary Clarifier #2 while the clarifier was empty for repairs. Mr. Bailey stated that a floating boom was installed on Lagoon #3 to hold back sludge from the telescoping valves and he discussed various repairs that were needed because of freeze damage.

Mr. Bailey reported that Veolia employees have been accident free for a total of 1,308 days/58,860 hours. He stated that Jerome Meter (H2S) readings continue to be taken within the treatment plant as well as in the Lea Drive neighborhood area. Mr. Bailey stated that two odor complaints were received in December. He noted that construction on the sound attenuation enclosure had been completed.

Mr. Bailey noted that 0.82 million gallons of recycled water was produced in December.

- Odor control, noise, and landscaping report: The Manager stated that Mr. Dave McEwen of Brown and Caldwell had issued some preliminary recommendations for odor control at the aeration basins and she noted that staff had begun to implement the recommendations. The Manager stated that there was some frost damage to the landscaping installed on Lea Drive, the extent yet to be determined.

- Review Contract service Agreement for Operation, Maintenance, and Management of Wastewater Treatment Facilities. The Manager stated that the Service Agreement was recently reviewed and she discussed the extensions as outlined in the agreement. She stated that the agreement provides for a six year renewal with two three-year extensions. Board Member Long asked if the agreement could be revised so that in place of the two three-year extensions, the contract will allow for a six year extension. The Manager stated that the Agreement will be brought before the Committee for review prior to the renewal date.

COLLECTION SYSTEMS OPERATION AND MAINTENANCE REPORT FOR DECEMBER 2013:

Collection Systems Supervisor Tim O'Connor discussed the Collection Systems Monthly Report for December 2013. He reported that the Collection Systems crew cleaned a total of 61,944 feet of sewer pipeline and that the department completed 325 maintenance work orders which were generated in December. Mr. O'Connor stated that the Collections Department has worked accident free for a total of 334 days. He stated that the Collections department has shown consistent improvement over the prior 12 months and he reviewed graphs which outlined multi-year trends from 2008-2013.

The Collection Systems Supervisor stated that there was one sanitary system overflow on December 14th which resulted in a discharge of approximately 6,000 gallons. He stated that root intrusion was the cause and that only 3% of the discharge was recovered due to the close proximity of a storm drain.

RECLAMATION FACILITY REPORT FOR DECEMBER 2013:

Field Services Superintendent Steve Krauthem presented the Reclamation Facilities report for December. He stated that the rancher had completely removed his cattle from all sites and that parcel rehabilitation was completed on all affected parcels. Mr. Krauthem stated that no irrigation or sludge disposal activities took place in December.

ADJOURNMENT:

There being no further business to come before the Committee, the meeting adjourned at 3:06 p.m. The next Wastewater Operations Committee meeting will be held on Tuesday, February 18, 2014.

Respectfully submitted,

Beverly James
Manager-Engineer

Julie Swoboda, Recording

DRAFT

February 6, 2014

A special meeting of the Wastewater Operations Committee of Novato Sanitary District was held at 10:30 a.m., Thursday, February 6, 2014, 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
John Bailey, Project Manager, Veolia Water
Julie Swoboda, Administrative Secretary

ALSO PRESENT: Shilen Patel, Veolia Water
Lynda Rodefer, Veolia Water

AGENDA APPROVAL: The agenda was approved as presented.

PUBLIC COMMENT: None.

**REVIEW CONTRACT SERVICE AGREEMENT FOR OPERATION, MAINTENANCE,
AND MANAGEMENT OF WASTEWATER TREATMENT FACILITIES:**

- Review Contract Service Agreement and make recommendation to Board of Directors.

The Committee reviewed the agreement and discussed modifications. The Manager stated that modifications would be made and that the Draft Agreement would be reviewed by the full Board at their regular meeting on Monday, February 10th.

ADJOURNMENT:

There being no further business to come before the Committee, the meeting adjourned at 11:23 a.m.

Respectfully submitted,

Beverly James
Manager-Engineer

Julie Swoboda, Recording



February 12, 2014

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

Subject: Veolia Water Operations Report – January 2014

Dear Ms. James:

We are pleased to provide this updated activity report for January 2014.

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

Regards,

A handwritten signature in blue ink, appearing to read "John Bailey".

John Bailey
Project Manager

**MONTHLY OPERATIONS REPORT
January 2014**

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: January 2014:

Bay Discharge – NPDES Limits

Parameter	Value		Limit	
	Ave	Max	#1	#2
Flow, MGD (monthly ave/max)	3.73	4.39	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)	10,964	26,837	N/A	N/A
Influent TSS, lb/day (monthly ave/max)	16,184	68,942	N/A	N/A
Effluent BOD ₅ , mg/L (monthly ave/weekly max)	13	17	30	45
Effluent TSS, mg/L (monthly ave/weekly max)	<4	4	30	45
Effluent BOD ₅ - % Removal, Minimum	95	N/A	85	N/A
Effluent TSS - % Removal, Minimum	99	N/A	85	N/A
Ammonia, mg/L – (monthly ave/daily max)	2.33	4.83	6	21
pH, su (min / max)	6.9	7.1	6.5	8.5
Enterococcus, mpn (30 day geo mean)	3.3	N/A	35	N/A
Fecal Coliform, mpn (30 day median)	2.5	N/A	140	N/A
Fecal Coliform, mpn (90 th percentile)		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 (Off Line)

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

Total Rainfall. – 0.04 inches

OPERATIONS & MAINTENANCE STATUS / REVIEW:

Key events for the period:

Novato

- Routine rounds, readings and maintenance
- Performed Thermographic Imaging of Electrical Panels
- Replaced Thickened Waste Activated Sludge (TWAS) Pump #2 Drive
- Mixed Liquor Pump to Xylem for repairs
- Replaced Mercoid switch on Primary Clarifier #2 Bubbler Panel
- Placed Primary Clarifier #2 in Service
- Took Primary Clarifier #1 Out of Service for repair
- Cleaned Primary Clarifier #1
- Installed additional UV Transmittance T-Strainer
- Replaced Sump Pump in old influent pump station
- Repair UV (disinfection lamp) modules
- Replaced Uninterruptible Power Supply (UPS) on Blowers #1, 2, & 3

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

- Gravity Belt Thickener (GBT) Odor Fan #1 OOS - replace bearings/belts

Ignacio Transfer Pump Station

- Routine rounds, readings and maintenance
- Replaced backflow prevention device, damaged by December freeze

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

- Bio-Filter OOS

Recycled Water Plant

- Performed plant rounds and maintenance
- No recycled water production in January

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

- None

Sludge Lagoons

- Performed routine rounds and inspection

ADMINISTRATION:

- December Electronic Self Monitoring Report submitted on January 28, 2014
- December DMR submitted on January 28, 2014

SAFETY AND TRAINING:

- Monthly plant safety inspections for Novato WWTP and Ignacio Pump Station completed
- Five Minute Tailgate training is held daily with all staff.
- No safety incidents for the month of January 2014
- Accident Free: 6/1/10 – 1/31/14: 1,338 days / 61,013 Hours
- Hazard Communication Training

ODORS:

- Jerome Meter (H2S) readings performed in neighborhood and within treatment plant.
- Meeting held to update neighbors

MISCELLANEOUS

- Process Control Management Plan (PCMP) meetings held weekly.

Veolia Support Staff On/Off Site (Various Times)

John O'Hare	Technical Support
Chris McAuliffe	District Manager
Sachin Chawala	Northern California Area Manager
Bill Thompson	Technical Direction Group Manager
Jeremiah Danielson	Environmental, Health, and Safety
Mel Demsky	Regional Director of Asset Management
Dan Brown	Asset Manager

Novato Sanitary District
BOD/TSS Report



January, 2014

Date	Flow MGD	Influent				Effluent				BOD % Removal PERCENT	TSS % Removal PERCENT	
		BOD		TSS		BOD		TSS				
		mg/l	lb/d	mg/l	lb/d	mg/l	lb/d	mg/l	lb/d			
01/01/14	3.39											
01/02/14	3.64											
01/03/14	3.51											
01/04/14	3.60											
01/05/14	3.67											
01/06/14	4.05	271	9,154	298	10,066	19	642	3	101	93.0	99.0	
01/07/14	3.85											
01/08/14	4.05	229	7,735	326	11,011	15	507	<3	<101	93.4	99.1	
01/09/14	3.57											
01/10/14	4.21	314	11,025	361	12,675	17	597	3	105	94.6	99.2	
01/11/14	3.99											
01/12/14	4.21											
01/13/14	3.90	253	8,229	311	10,116	8	260	3	98	96.8	99.0	
01/14/14	3.64											
01/15/14	3.37	339	9,528	476	13,378	12	337	4	112	96.5	99.2	
01/16/14	3.52											
01/17/14	3.33	249	6,915	310	8,609	18	500	4	111	92.8	98.7	
01/18/14	3.46											
01/19/14	3.41											
01/20/14	3.58											
01/21/14	3.89	275	8,922	327	10,609	10	324	3	97	96.4	99.1	
01/22/14	4.14	240	8,287	354	12,223	17	587	<3	<104	92.9	99.2	
01/23/14	4.09											
01/24/14	4.39	733	26,837	1,883	68,942	13	476	3	110	98.2	99.8	
01/25/14	3.90											
01/26/14	4.03	258	8,671	345	11,596	6	202	8	269	97.7	97.7	
01/27/14	3.82											
01/28/14	3.45	230	6,618	306	8,805	10	288	<3	<86	95.7	99.0	
01/29/14	3.44											
01/30/14	3.27	256	6,982	353	9,627	8	218	<3	<82	96.9	99.2	
01/31/14	3.23											
Weekly Averages												
01/04/14	Week 1	272	3,775	366	5,078	16	224	3	46			
01/11/14	Week 2	271	4,220	328	5,103	17	264	3	47			
01/18/14	Week 3	280	3,730	366	4,854	13	166	4	49			
01/25/14	Week 4	416	6,660	855	13,876	13	210	3	47			
	Week 5											
Monthly												
Minimum		3.23	229	6,618	298	8,609	6	91	<3	<37	93	98
Maximum		4.39	733	26,837	1,883	68,942	19	291	8	122	98	100
Total		115.60										
Average		3.73	304	9,908	471	15,638	13	187	<4	<52	95	99

Novato Sanitary District
Conventional Pollutants Report



January, 2014

Date	INFLUENT - A001			Effluent - E002							
	Flow Total	pH	Ammonia	Coliform / Bacteria			pH	Ammonia	Unionized Ammonia	Oil & Grease	Temp
				Fecal	Entero	Total					
MGD	su	mg/L	MPN/100 mL			su	mg/L	mg/L		Deg C	
01/01/14	3.39										
01/02/14	3.64	7.2					7.0				18.4
01/03/14	3.51	7.3	41				7.0	4.83			18.6
01/04/14	3.60										
01/05/14	3.67										
01/06/14	4.05	7.5		<2.0	1.0		7.0				17.9
01/07/14	3.85	7.5					7.0			<1.4	17.9
01/08/14	4.05	7.4		2.0	6.2		7.0				18.4
01/09/14	3.57	7.0					7.0				18.9
01/10/14	4.21	7.1		500.0	3.0		6.9	1.70			18.7
01/11/14	3.99										
01/12/14	4.21										
01/13/14	3.90	6.9		<2.0	8.5		7.0				18.3
01/14/14	3.64	7.0					7.0	2.20			18.7
01/15/14	3.37	7.6		170.0	4.1		7.0	1.40			18.5
01/16/14	3.52	7.0		2.0			7.1	1.40			18.7
01/17/14	3.33	7.5		4.0	16.0		7.0	1.30			18.5
01/18/14	3.46										
01/19/14	3.41										
01/20/14	3.58						7.0				18.3
01/21/14	3.89	7.2		30.0	3.0		7.0				18.1
01/22/14	4.14			4.0	<1.0		7.0				18.2
01/23/14	4.09	7.1					7.0				18.6
01/24/14	4.39	6.4		170.0	2.0		7.0	3.50			18.3
01/25/14	3.90										
01/26/14	4.03			2.0	<1.0						
01/27/14	3.82	6.8					7.0				18.6
01/28/14	3.45	6.9		<2.0	1.0		7.0				18.9
01/29/14	3.44	7.7					7.0				19.4
01/30/14	3.27	7.7		130.0	<1.0		7.0				19.0
01/31/14	3.23	7.5					7.0				18.8
Monthly											
Minimum	3.23	6.4	41	<2.0	<1.0		6.9	1.30			17.9
Maximum	4.39	7.7	41	500.0	16.0		7.1	4.83		<1.4	19.4
Total	115.60										
Average	3.73	7.2	41				7.0	2.33		<1.4	18.5

Novato Plant : Bacterial Results
 EFFLUENT: E-002 Station
 Jan-14

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

January 1, 2014		
January 2, 2014		
January 3, 2014		
January 4, 2014		
January 5, 2014		
January 6, 2014	<	2
January 7, 2014		
January 8, 2014		2
January 9, 2014		
January 10, 2014		500
January 11, 2014		
January 12, 2014		
January 13, 2014	<	2
January 14, 2014		
January 15, 2014		170
January 16, 2014		2
January 17, 2014		4
January 18, 2014		
January 19, 2014		
January 20, 2014		
January 21, 2014		30
January 22, 2014		4
January 23, 2014		
January 24, 2014		170
January 25, 2014		
January 26, 2014		2
January 27, 2014		
January 28, 2014	<	2
January 29, 2014		
January 30, 2014		130
January 31, 2014		

90th Percentile	Ranking
Sample #1	<2
Sample #2	<2
Sample #3	<2
Sample #4	2
Sample #5	2
Sample #6	2
Sample #7	4
Sample #8	4
Sample #9	30
Sample #10	130
Sample #11	170
Sample #12	170
Sample #13	500
Sample #14	
Sample #15	
Sample #16	

January 1, 2014		
January 2, 2014		
January 3, 2014		
January 4, 2014		
January 5, 2014		
January 6, 2014		1.0
January 7, 2014		
January 8, 2014		6.2
January 9, 2014		
January 10, 2014		3.0
January 11, 2014		
January 12, 2014		
January 13, 2014		8.5
January 14, 2014		
January 15, 2014		4.1
January 16, 2014		
January 17, 2014		16.0
January 18, 2014		
January 19, 2014		
January 20, 2014		
January 21, 2014		3.0
January 22, 2014	<	1.0
January 23, 2014		
January 24, 2014		2.0
January 25, 2014		
January 26, 2014	<	1.0
January 27, 2014		
January 28, 2014		1.0
January 29, 2014		
January 30, 2014	<	1.0
January 31, 2014		

Max	500
Min	2.0
Avg	78.46
30-Day Median	4

90th Percentile Value **170**

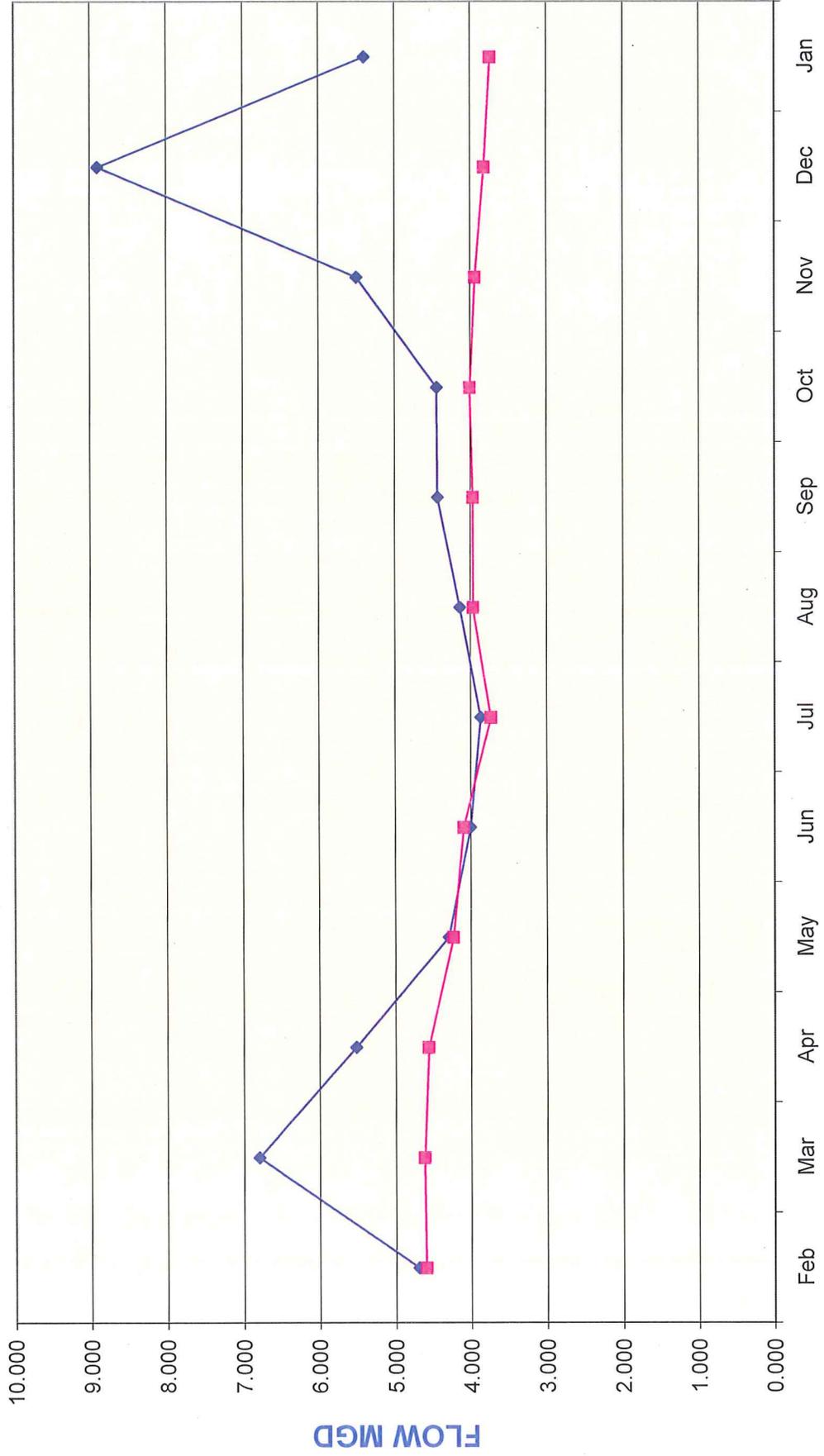
Max	16
Min	1.0
Avg	4.0
30 Day Geo. Mean	2.5

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

90th Percentile	13.00	0.9	11.7
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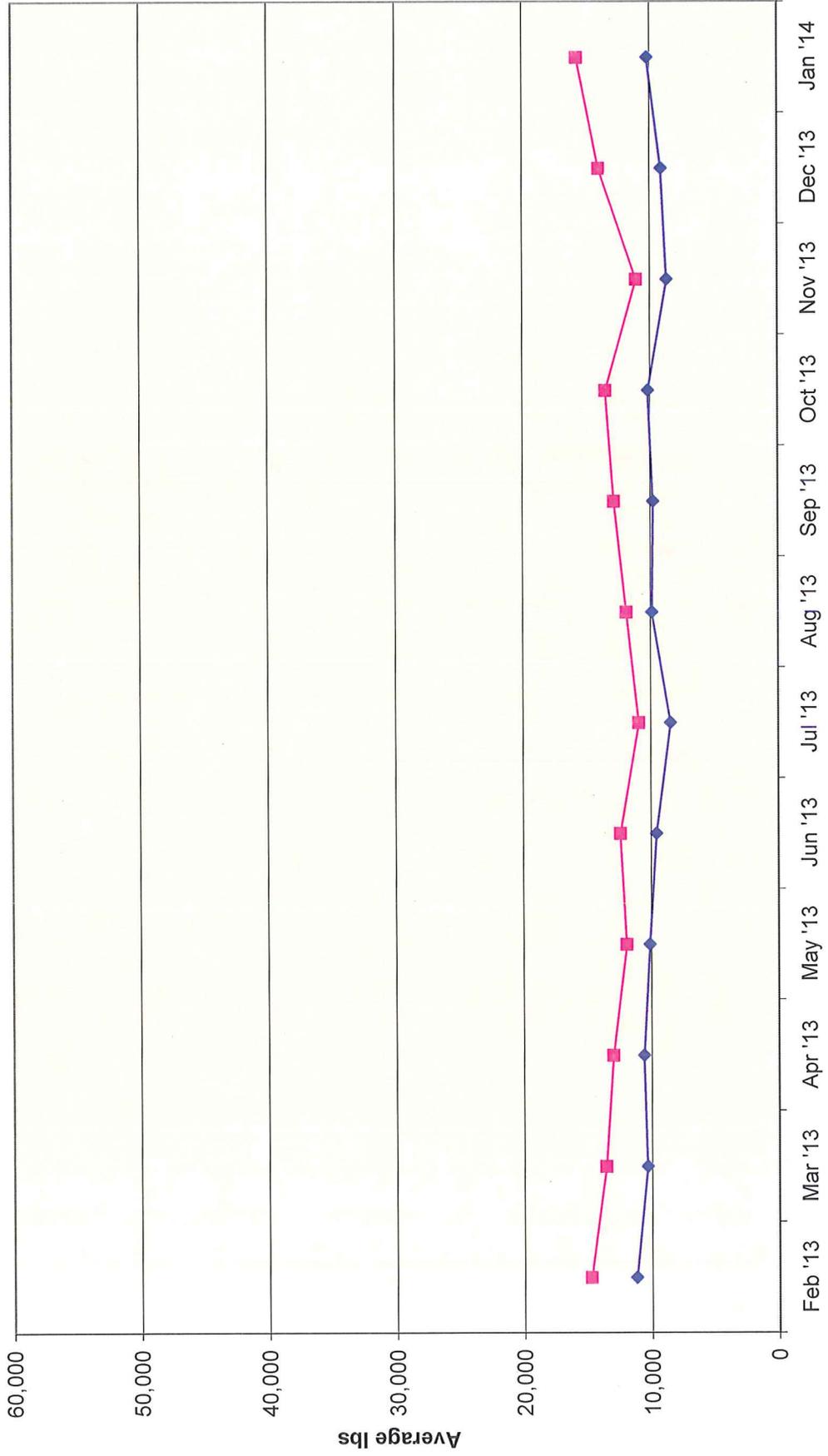
FLOW COMPARISON

—◆— 2012 —■— 2013



Influent Load BOD / TSS lbs

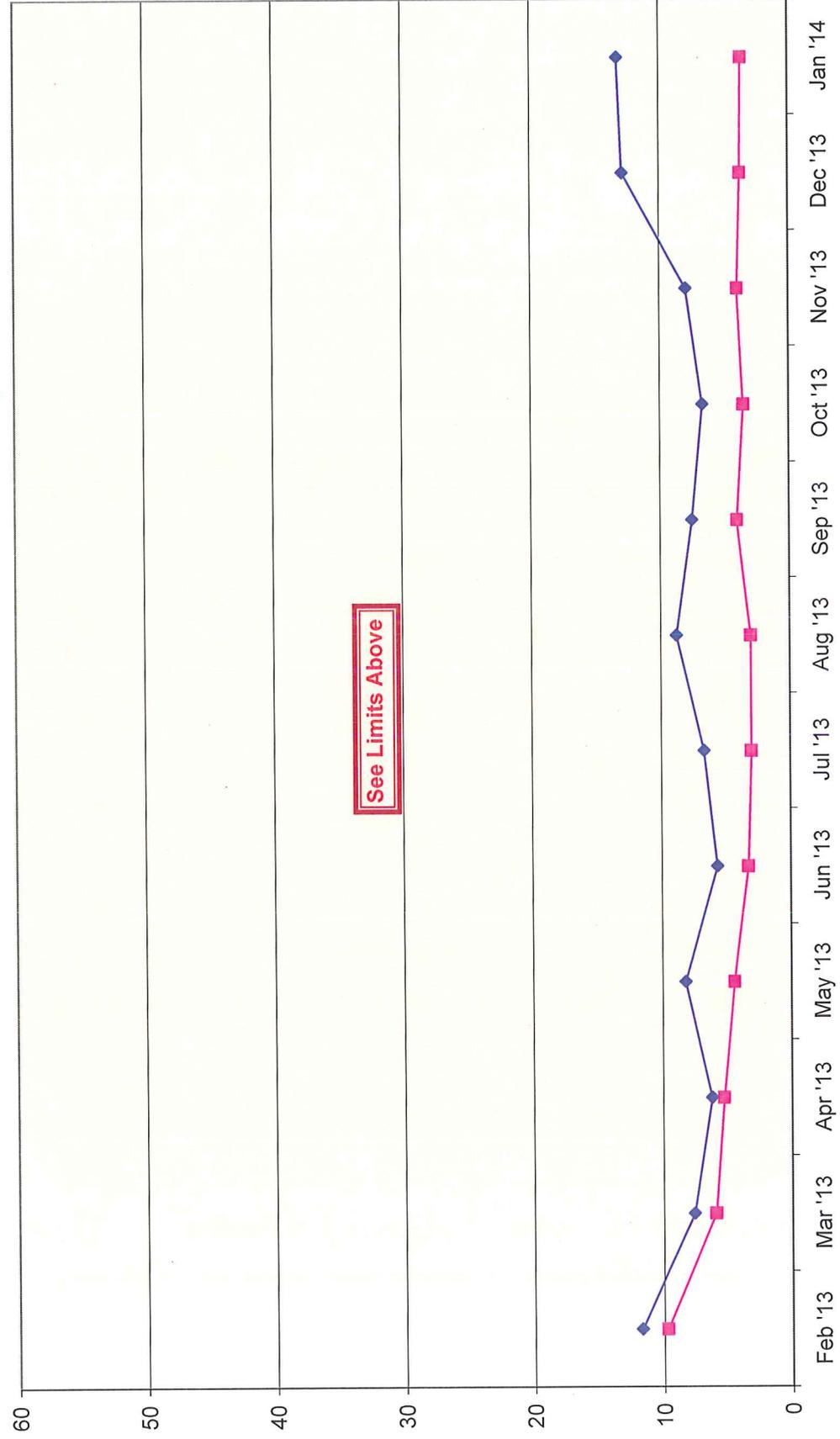
—◆— BOD lbs —■— TSS lbs



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

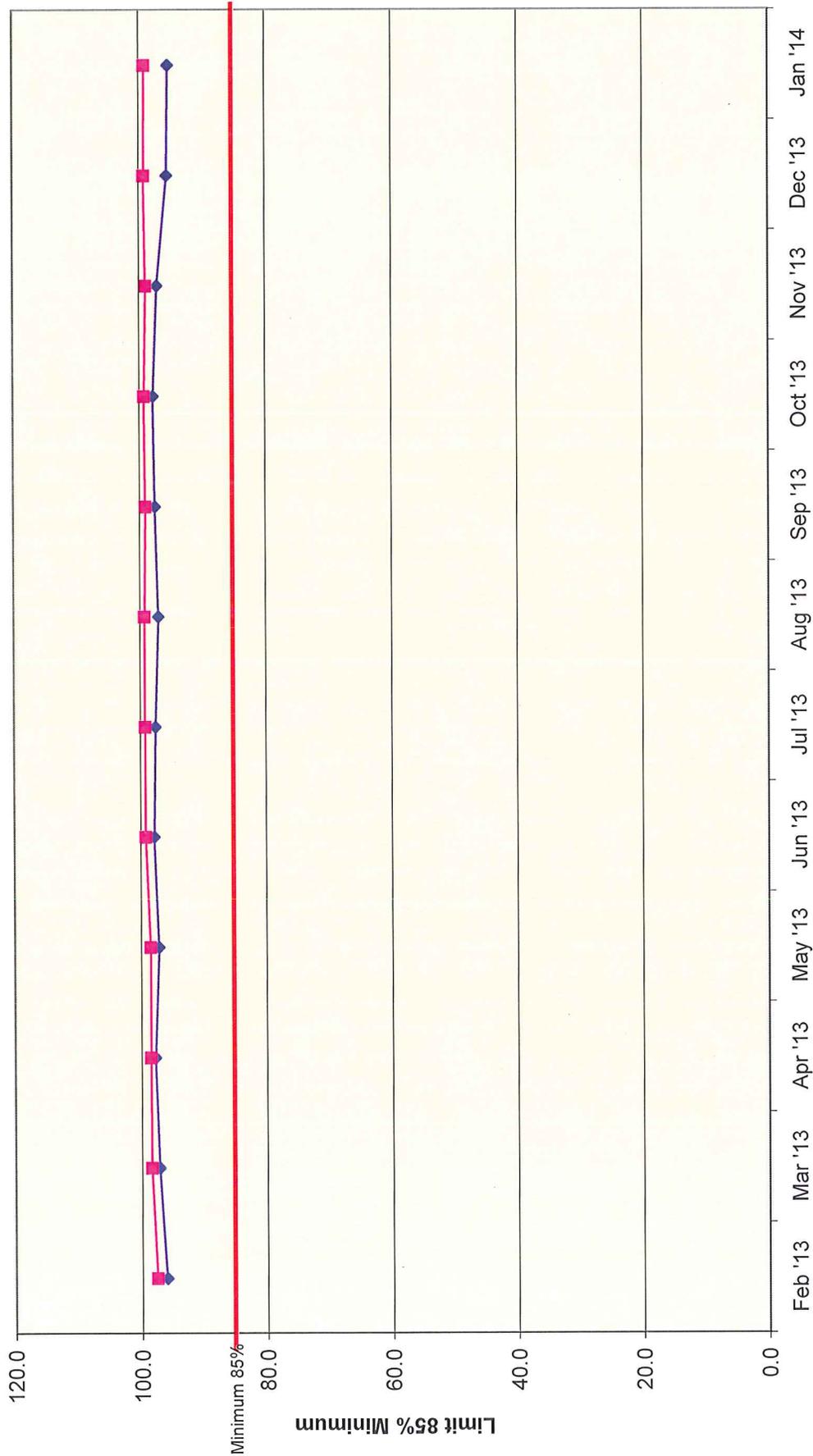
—◆— BOD —■— TSS



See Limits Above

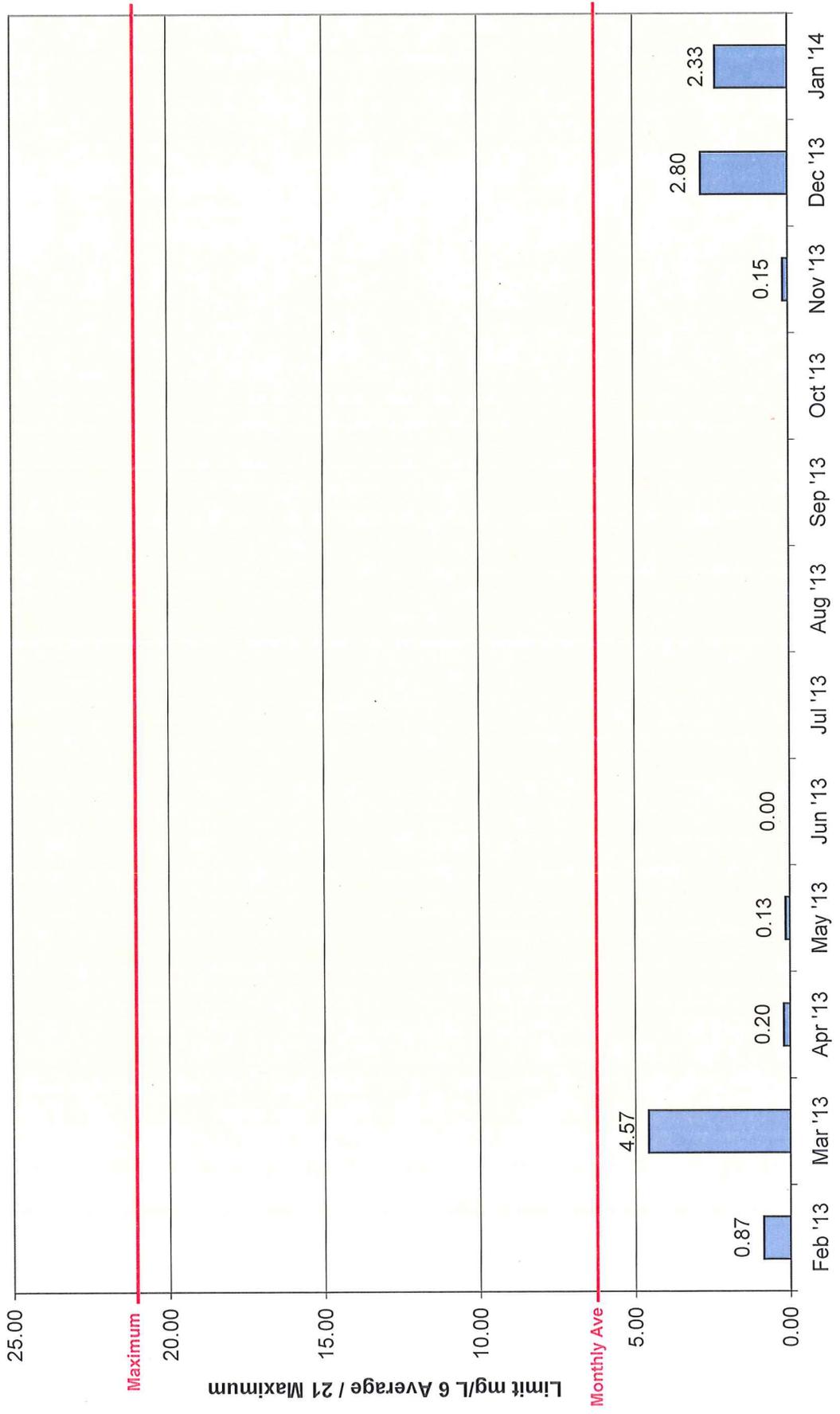
BOD / TSS Percent Removal

—◆— BOD —■— TSS



Effluent Ammonia

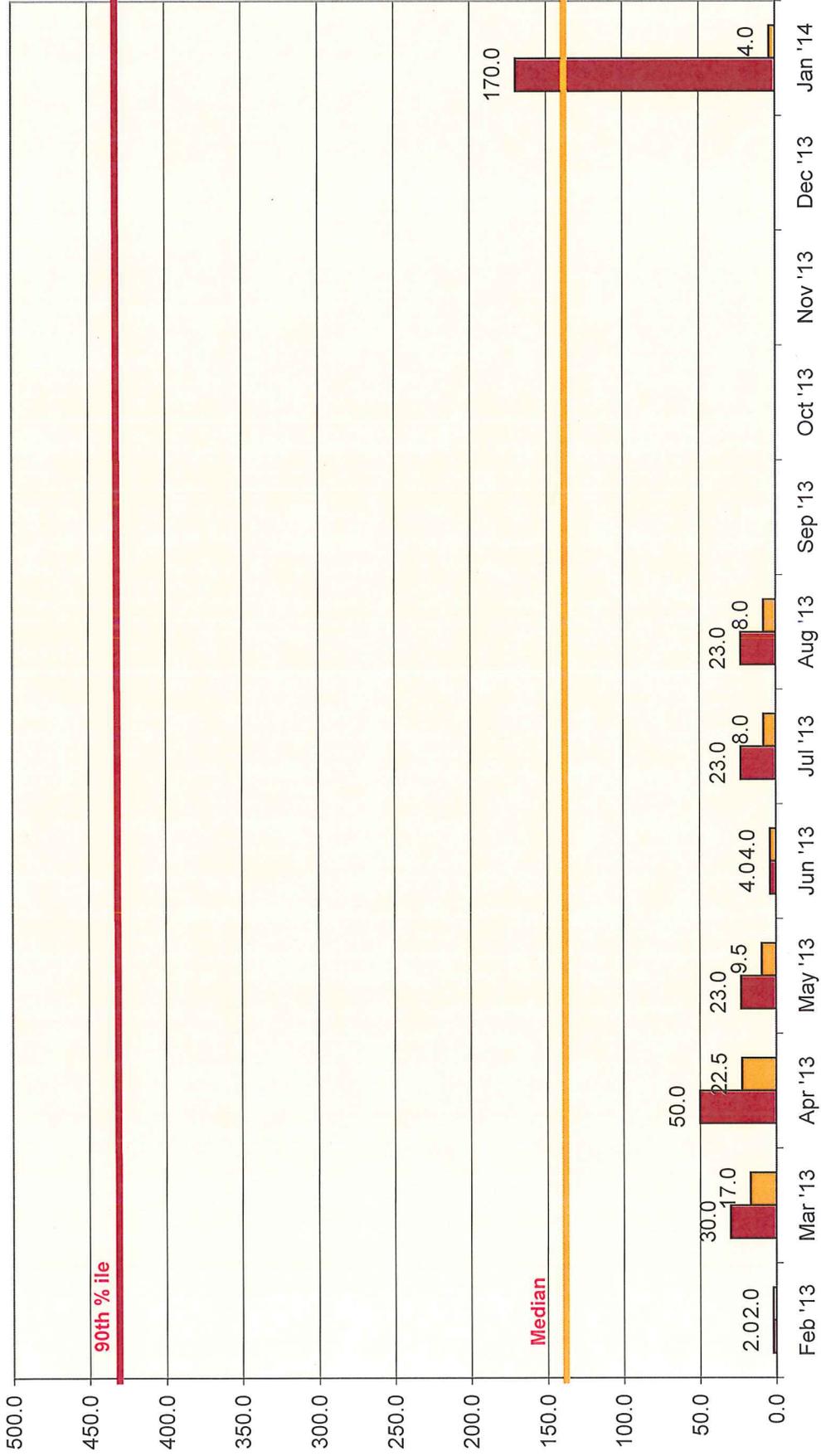
No Ammonia Limits During Reclamation, Jun - Sep



Disinfection

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

Fecal 90th %ile Fecal Med



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

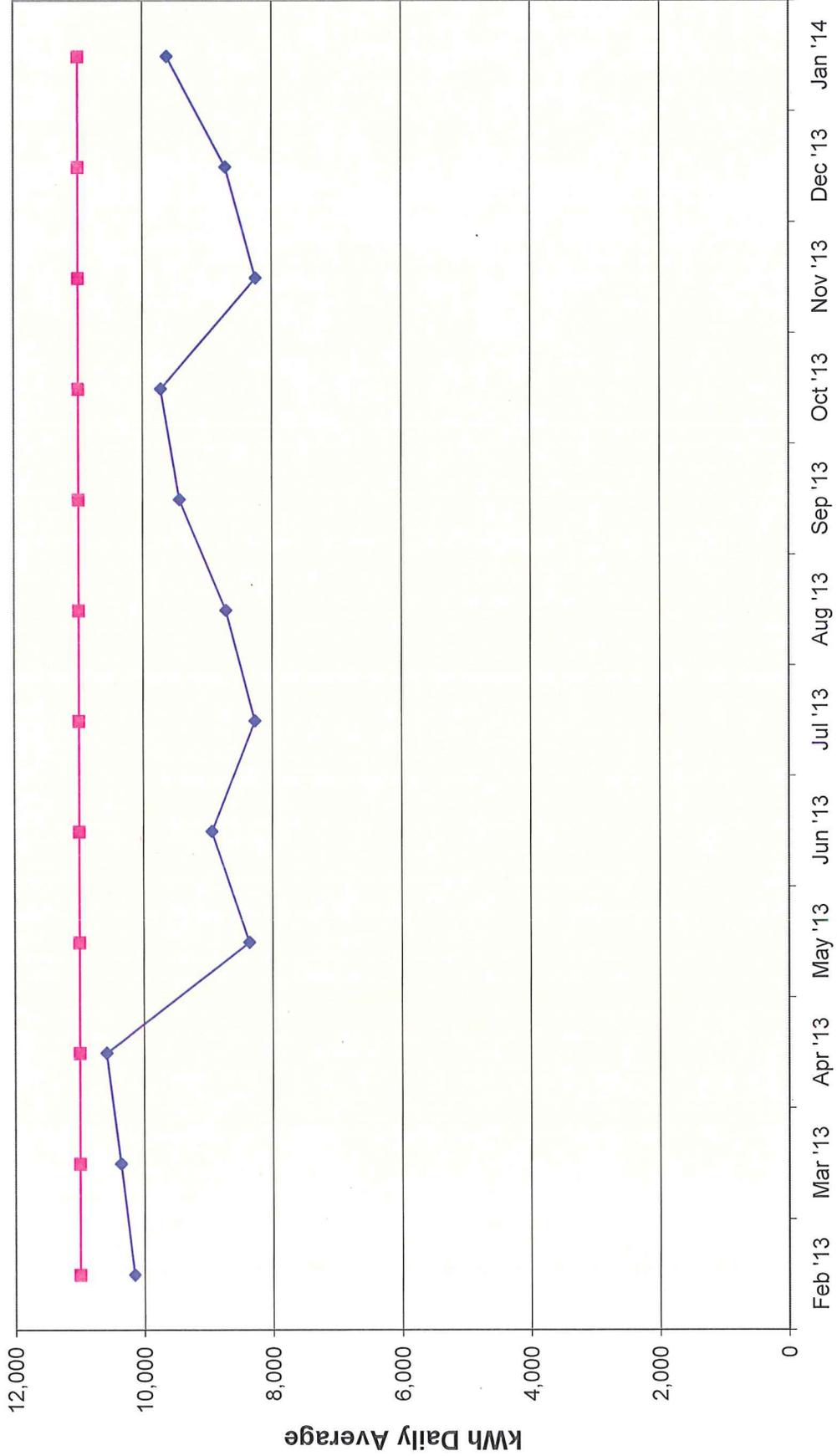
Disinfection

Enterococcus



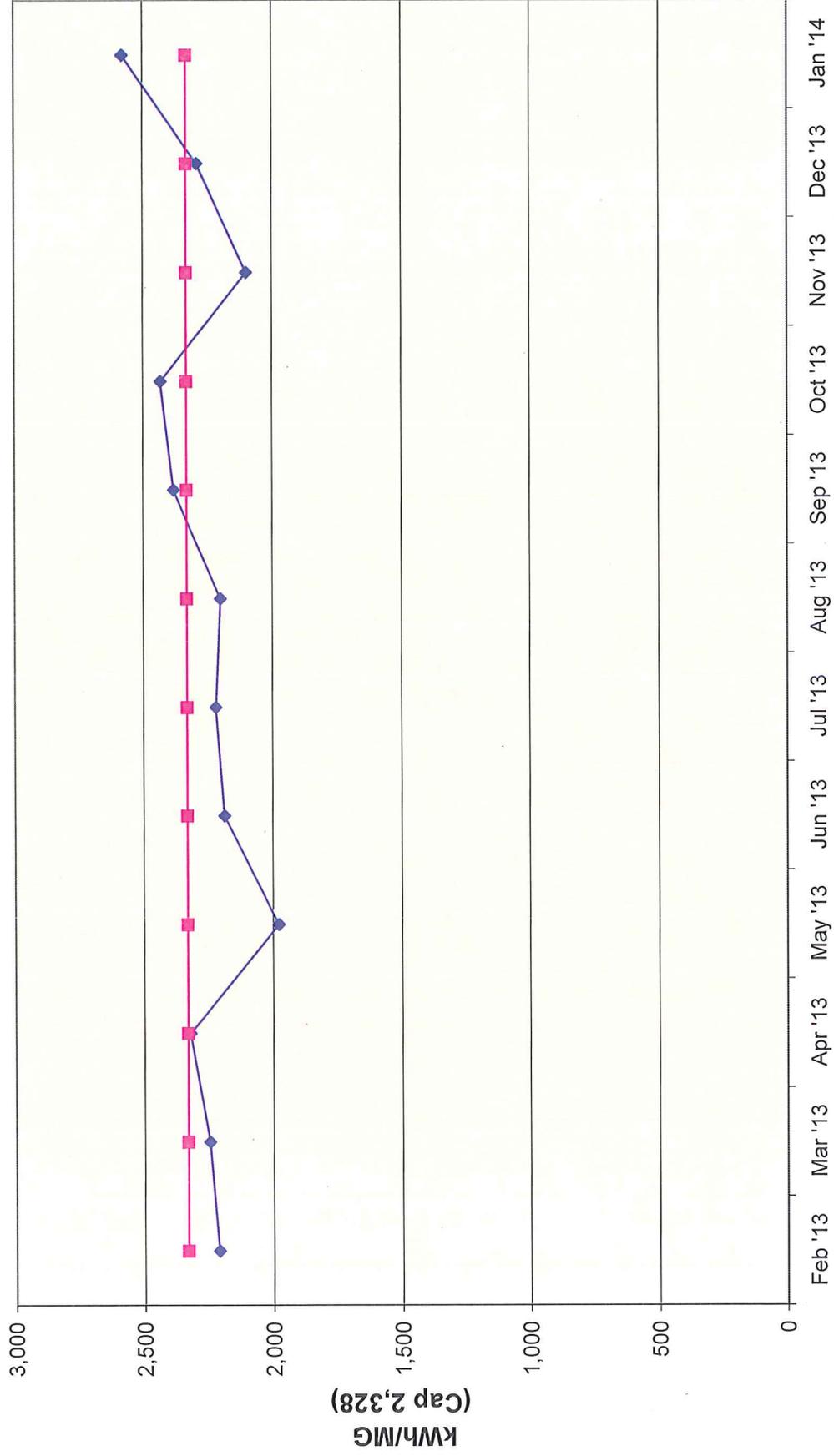
Energy kWh

—◆— kWh —■— Cap



Energy kWh/MG

—◆— kWh/MG —■— Cap

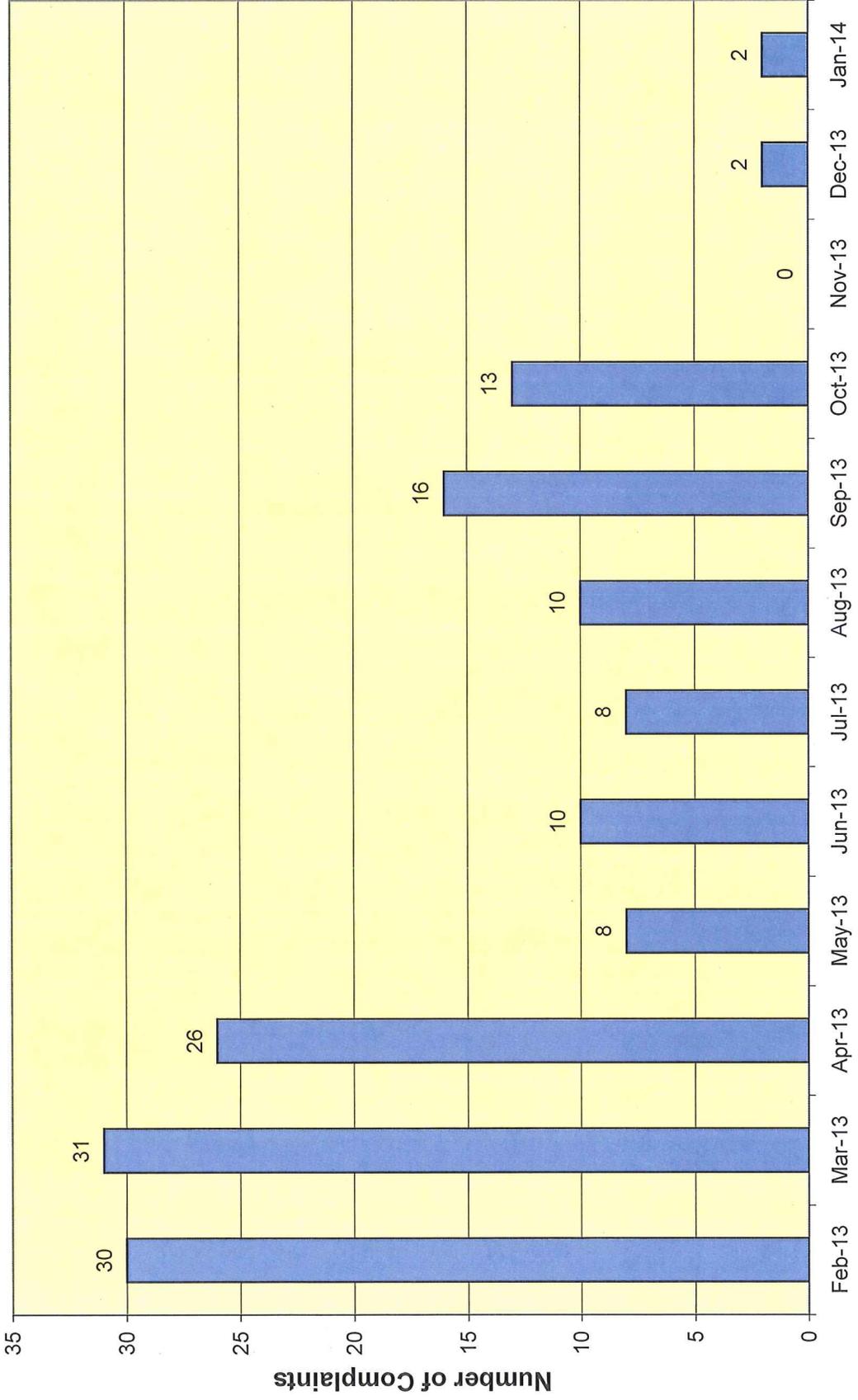


Natural Gas Use

—◆— Natural Gas —■— Cap



Complaints /Contacts Received



WORK ORDER STATISTICS

December 1, 2013 - December 31, 2013

	Open Work Orders Due Prior to 1/1/14	Open Work Orders 1/1/14 - 1/31/14	Total Open Work Orders
Preventative	5	292	297
Corrective	0	31	31
Total	5	323	328

	Closed Work Orders 1/1/14 - 1/31/14
Preventative	293
Corrective	17
Total	310

Total Outstanding Work Orders as of February 1, 2014	18
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NOVATO SANITARY DISTRICT
Wastewater Operations Committee Meeting
Odor Control, Noise, and Landscaping Report
January 2014

Summary:

Staff and the District's consultants continue 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 odor control measures, 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, and identify any other potential sources not previously considered or overlooked.

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) issued some preliminary recommendations for odor control at the aeration basins. Staff continued to feed sodium hypochlorite to the influent, but it is anticipated that implementation and further testing of Mr. McEwen's recommendations will occur more fully in February, and that he will issue a draft technical memorandum in spring 2014. An update meeting with Lea Drive neighborhood representatives will also be held in February to update the neighborhood on Mr. McEwen's progress.

Noise:

The low level noise concerns of some Lea Drive neighbors, from the fans for the main odor control biofilter, appears to have abated with completion of the construction of the permanent sound reducing enclosure for these fans, which up to this point had resided inside a temporary insulated enclosure.

Landscaping:

Staff continued to work with the District's landscaping contractor Cagwin and Dorward (C&D), on the landscaping installed at the District's fence-line on Lea Drive at the northeast corner area of the NTP. Staff received and addressed concerns from neighborhood representatives on the issue of frost impact to the oleander bushes along the Lea Drive fence-line. C&D will continue to provide services on an as-needed and as-requested basis by the District 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
January 2014**

General:

The breakdown of Collection System department staff time for January 2014, in terms of equivalent full-time employee (FTE) hours utilized, works out approximately as follows:

- 2.6 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
- 1.7 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
- 1.6 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 brief discussion is also provided below.

Line Cleaning Performance: A total of 64,518 feet of sewer pipelines were cleaned for the month by District staff. Staff completed 408 maintenance work orders generated by the ICOM3 CMMS system, with 66 outstanding work orders. Outside contractors cleaned 2,301 feet of District main line.

Both hydro-flusher trucks were down for mechanical issues for a total of 21 days which contributed to the outstanding work orders. Both trucks have been repaired, and staff expects to complete all scheduled work orders and backlog work orders in February.

Also, staff is working with ICOM to correct a discrepancy between the footage listed in the ICOM3 system and that listed on District maps; 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 measure line segment lengths using a measuring wheel whenever they note a line segment length discrepancy of more than 10 ft between the work order and District maps.

CCTV Performance: The District's CCTV van was in the field for a total of 12 working days and televised 125 line segments for 24,487 feet of CCTV production. A total of 449 ft of main line was inspected w the push camera, and outside contractors televised 2,301 ft of District main.

CCTV Findings: The January CCTV work indicated four (4) significant defects in District mains televised that will require a change in cleaning methods and/or frequency. These defects were determined to be grease buildup related and they have been added to the mechanical rodding schedule in addition to routine cleaning using the hydro-flushers. There were no defects noted that require infrastructure repair.

**Novato Sanitary District
Wastewater Operations Committee meeting
Collection System Operations Report
January 2014**

Collection System Projects:

As part of the ongoing Collections System repair projects (Account No. 72803), three manholes in easements were raised to grade, one at 10 Jeffery Court and two at 10 Saddle Lane. Also, the Center Road Sewer Project, Phase H: Diablo Avenue to Kristy Court, (Account 72706), reached substantial completion.

Pump Station Maintenance:

The Collection System Department conducted 245 lift station inspections for the month with 124 of the inspection visits generated through the JobCal Plus CMMS system*. There are 3 outstanding work orders for the month of January. 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.

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

Staff upgraded pumps at BMK 4 and 7 during January. Staff also worked with Industrial Electric and C&D Power to repair emergency generators at the Marin Village and Bahia Main pump stations.

***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 are no pump stations 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 begin construction in March 2014.

Safety and Training:

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

Specialized training: Collection System staff attended Injury and Illness Prevention Program, Injury Reporting, and Annual Flygt pump service training during the month of January. Tim O'Connor and Dasse de longh attended a webinar on Great Utility Operations in January.

Safety performance: There were no lost time accidents this month for a total of 365 accident-free days.

**Novato Sanitary District
Wastewater Operations Committee meeting
Collection System Operations Report
January 2014**

Standard Operating Procedures (SOPs):

Department staff continues to work on generating new SOPs, and working towards finalizing earlier draft SOPs. One (1) SOP revision was issued in January. Staff also continues to assist the District's consultant DFK Solutions in updating its Sewer System Emergency Overflow Response Plan (EORP).

Emergency Operating Procedures (EOPs) – Pump Stations:

Staff has also been working with DKF Solutions since summer 2013 to generate the 36 Emergency Operating Procedures (EOPs) required for all of the District pump stations. At this time, one EOP is almost complete (except for some minor edits), 11 have had a final review and need some minor edits, and 14 more require edits before staff gives them a final review. It is anticipated that the EOPs will be in place (along with all relevant training performed) by April 2014.

Sanitary Sewer Overflows (SSOs):

For the month of January, there were no (zero) SSO's.

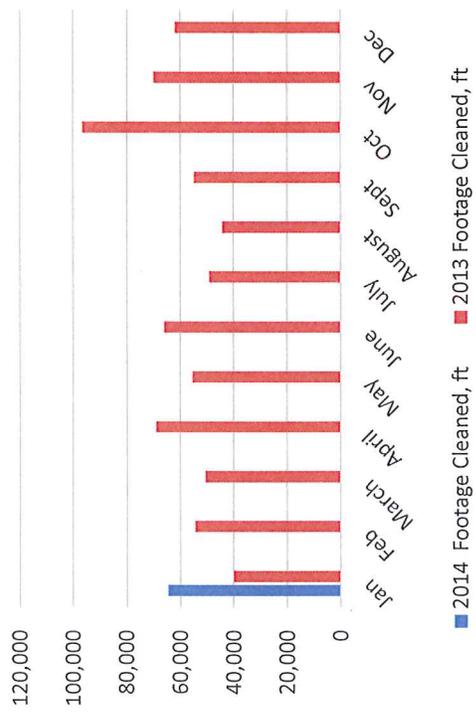
**Novato Sanitary District
Collection System Monthly Report For January 2014 (as of January 31, 2014)**

	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.	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	0.2
Number of FTEs (other)	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	0.1
Number of FTEs (CCTV)	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	0.1
Total, FTEs	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	0.4
Regular Time Worked, (main line cleaning), hrs	448													
Regular Time Worked on Other, hrs (1)	294													
Regular Time Worked on CCTV (2)	158													
Total Regular time, worked, hrs	900	0	0	0	0	0	0	0	0	0	0	0	900	75
Total Vacation/Sick Leave/Holiday, hrs	285													285
Vacation/Sick Leave/Holiday, FTEs	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.1
Overtime Worked on Coll. Sys., hrs	2												2	2
Overtime Worked on Other, hrs (1)	22												22	22
Overtime Worked on CCTV (2)	0												0	0
Total Overtime, hrs	24	0	0	0	0	0	0	0	0	0	0	0	24	2
B. Productivity														
1. Line Cleaning														
Rodder Work Orders generated	57												57	57
Rodder 3203 ft. cleaned	10,989												10,989	10,989
Rodder - outside services, ft cleaned	0												0	0
Flusher Work Orders generated	351												351	351
Truck 3205V ft. cleaned	16,187												16,187	16,187
Truck 3206V ft. cleaned	37,342												37,342	37,342
Flusher - outside services, ft. cleaned	2,301												2,301	2,301
Total Footage cleaned(3)	64,518	0	0	0	0	0	0	0	0	0	0	0	64,518	5,377
Work Orders completed	408												408	408
Work Orders backlog	66												66	6
2. Closed Circuit Television (CCTV)														
Camera Work Orders generated	0												0	0
CCTV Truck 3126T, ft. videoed	24,487												24,487	24,487
CCTV (hand cam), ft. videoed	449												449	449
CCTV Inspection - outside services, ft. videoed	2,301												2,301	2,301
Total CCTV footages(3)	27,237	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	27,237	24,487
C. Sanitary Sewer Overflows (SSOs)														
Minor (Category III)	0												0	NA
Major (Category II)	0												0	NA
Minor (Category I)	0												0	NA
Overflow Gallons	0												0	NA
Volume Recovered	0												0	NA
Percent Recovered	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	#DIV/0!	NA
D. Service Calls (non-SSO related)														
Service calls, normal hours, #	8												8	8
Normal hours S.C. response time, mins (avg.)	38												38	38
Service Callouts, after hours, #	0												0	0
After Hours S.C. response time, mins (avg.)	0												0	0
E. Benchmarks														
Average Ft. Cleaned/Hour Worked	144	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	144
Total Stoppages/100 Miles	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
Average spill response time (mins)	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
Callouts/100 Miles	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Overtime hours/100 Miles	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Overflow Gallons/100 Miles	0	0	0	0	0	0	0	0	0	0	0	0	0	0

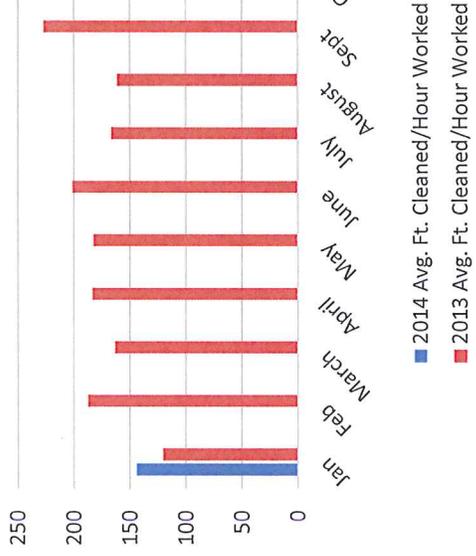
(1) This category includes time spent on: Data input, Training, Service Calls, Overflow Response, as well as any other activity that does not directly relate to main line cleaning or CCTV work.
(2) This category separates time spent on CCTV from other Collection System maintenance activities.
(3) Does not include outside services (tracked separately)

Collection System 2013-14 Graphs

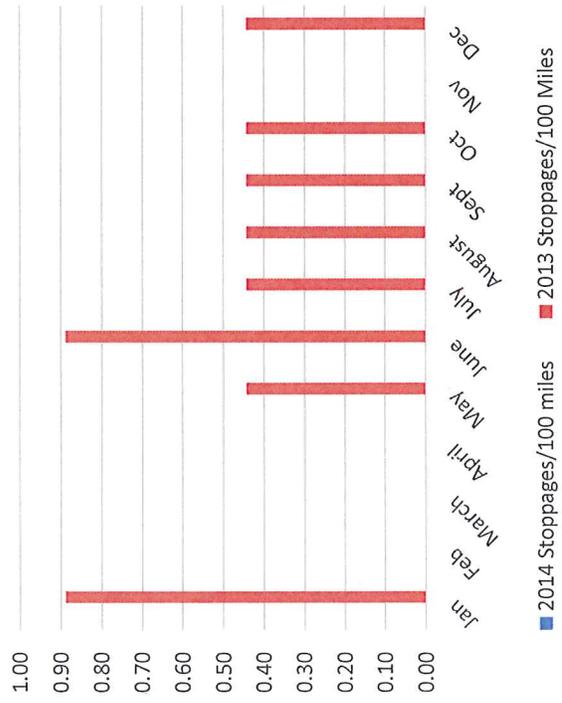
Total Length Cleaned, ft



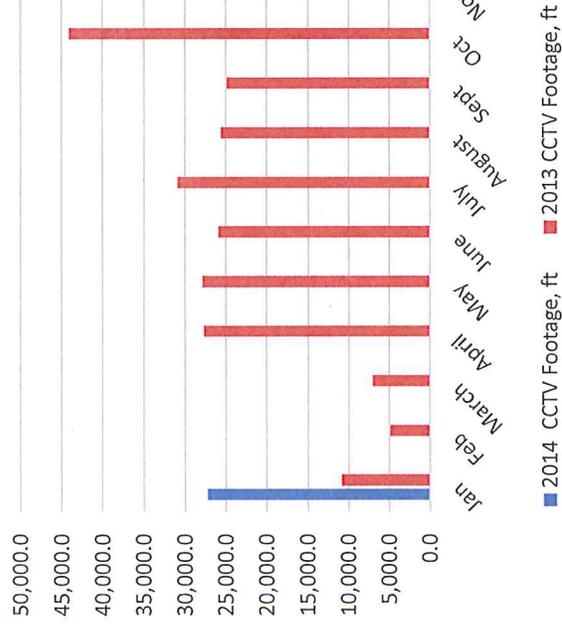
Cleaning Efficiency



Stoppages/100 miles



CCTV Footage, ft



NOVATO SANITARY DISTRICT
Wastewater Operations Committee Meeting
Reclamation Facilities Report
January 2014

Summary:

The rancher continued to spray weed suppressant around sprinkler heads this month. A repair to the irrigation feed system was completed in Site 2. Control system voltage was documented at various locations on all Sites to help identify irrigation zones that may require new large voltage drop actuators. Approximately 17.87 MG of recycled water was used this month for irrigation. The main breaker to the irrigation pump station tripped once this month and the cause is unknown.

Ranch Operations:

The rancher continued to spray weed suppressant around sprinkler heads this month.

In October, Mosquito Abatement found a sinkhole in Parcel 27. The sinkhole appears to be over one of the large irrigation mains. Staff issued a Work Order to a local contractor for repair which was completed this month. The contractor found a six inch plastic coupling that had failed.

Irrigation Parcels:

As previously reported, 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 this issue. Staff received an e-mail report this month on the results of the investigation. The electrical engineer recommended installing actuators that can handle large voltage drops at locations that experience a large voltage drop when the valve is actuated.

Staff worked with a local electrical contractor to take voltage and amperage readings at various locations on all three sites to determine voltage drop. This information was forwarded on to the electrical engineer for review.

Irrigation Pump Station:

Due to the dry conditions, the District was granted permission from the Regional Water Quality Control Board to irrigate the pastures to encourage newly planted seed to sprout and the pasture grass to grow. Approximately 17.87 MG of recycled water was used this month for irrigation. The average storage pond staff gauge depth at the beginning of January was 3.3 feet and 2.3 feet at the end of the month with a considerable amount of the bottom showing.

At the end of the month the pump station shut down due to a power failure due to the main breaker tripping off. This apparently occurred when the irrigation pumps were called to pump. An investigation by staff with the assistance of a local electrician did not reveal any problems.

A purchase order was issued to remove Irrigation Pump 2 for repair.

Sludge Handling & Disposal:

There were no sludge handling and disposal activities this month.
