

NOVATO SANITARY DISTRICT

Meeting Date: November 17, 2014

The Wastewater Operations Committee of the Novato Sanitary District will hold a meeting at 2:00 PM, Monday, November 17, 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. APPROVE MINUTES OF OCTOBER 20, 2014 MEETING

4. WASTEWATER TREATMENT FACILITIES REPORT FOR OCTOBER 2014:

- a. Treatment Plant Performance Report
- b. Maintenance Report
- c. Safety and training
- d. Odor control and landscaping report
- e. Committee member Request for Information (RFI) on odor control system
- f. Review presented materials, including a proposal from Veolia Water to provide environmental compliance services, consider options, and provide direction to staff.

5. COLLECTION SYSTEM REPORT FOR OCTOBER 2014:

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

6. RECLAMATION FACILITY REPORT FOR OCTOBER 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.

October 20, 2014

A regular meeting of the Wastewater Operations Committee of Novato Sanitary District was held at 2:00 p.m., Monday, October 20, 2014, at the District Office, 500 Davidson Street, Novato.

MEMBERS PRESENT: Committee Members Jerry Peters and Brant Miller.

STAFF PRESENT: Sandeep Karkal, Manager-Engineer
Steve Krautheim, Field Services Manager
Tim O'Connor, Collections System Superintendent
John Bailey, Project Manager, Veolia
Julie Swoboda, Administrative Secretary

ALSO PRESENT: Brian Exberger, Assistant Project Manager, Veolia
John O'Hare, Veolia

AGENDA APPROVAL: Approved as presented.

PUBLIC COMMENT: None

APPROVAL OF MEETING MINUTES FOR SEPTEMBER 15, 2014: The September 15, 2014 meeting minutes were approved as written.

WASTEWATER TREATMENT FACILITIES OPERATIONS AND MAINTENANCE REPORT FOR SEPTEMBER 2014:

- Treatment Plant Performance Report, Maintenance Report and Safety & Training:

Veolia Project Manager John Bailey gave an overview of treatment plant operations for the month of September and stated that September was another good month with no permit exceedances, violations or excursions. He discussed the key operations and maintenance events at the Novato facility, the Ignacio Transfer Pump Station, the Recycled Water Plant, and the Sludge Lagoons. He discussed training events completed in September and stated that as of September 31st, Veolia employees have been accident free for a total of 1,580 days / 72,048 hours. He discussed the training Veolia employees participated in during September. He reviewed the operations and maintenance report and stated that 10.87 million gallons of recycled water were produced.

The Project Manager stated that Jerome Meter (H₂S) readings continue to be taken within the treatment plant as well as in the Lea Drive neighborhood area and that sixteen (16) odor notifications were received in September.

- Odor control, noise, and landscaping report: The Manager-Engineer stated that staff continues to work with the odor control recommendations presented by Dave McEwen of Brown and Caldwell. He stated that Mr. McEwen's validation sampling activity as presented to the District in August contained contradictory results. Consequently it was decided that adjustments were needed to the air flow input to the converted anoxic zones. He stated that additional testing may be needed to gage impacts from this change and noted that staff continues to monitor performance.

The Manager-Engineer stated that additional bio filter material will be added to the media beds to enhance odor removal.

The Manager-Engineer discussed the landscaping in the northeast area of the plant site. He stated that there was only light activity in the area in September but that staff continues to work with District landscape contractor Cagwin and Dorward.

COLLECTION SYSTEMS OPERATION AND MAINTENANCE REPORT FOR SEPTEMBER 2014:

The Collections System Superintendent discussed the Collection Systems Monthly Report for September 2014. He reported that the Collection Systems crew cleaned a total of 71,429 feet of sewer pipeline and that the department completed 431 maintenance work orders which were generated in September. He stated that the District's CCTV van (Closed Circuit TV) televised 69 line segments for 12,090 feet of production and he outlined the areas identified as needing repairs or further evaluation. He reported that staff had identified and inspected a total of 3 air relief/vacuum valves. He stated that in the month of September, annual maintenance was performed on all on-site and trailer mounted generators as well as on the trailer mounted 4" pump.

The Collections System Superintendent gave an update of the pump station rehabilitations taking place at the Los Robles and the Digital Drive pump stations. He stated that construction has progressed to a point where these stations were preliminarily accepted for operation in September, and that punch list items are now being completed.

The Collections System Superintendent stated that there were zero sanitary sewer overflows in the month of September. He noted that as of September 31st, the Collections Department and the District have worked accident free for a total of 1,295 days.

RECLAMATION FACILITY REPORT FOR SEPTEMBER 2014:

The Field Services Manager presented the Reclamation Facilities report for September. He stated that the rancher continues to work on routine parcel maintenance. He stated that 33.77 million gallons of treated effluent was used for irrigation of the parcels in September.

The Field Services Manager stated that Custom Tractor Service of Petaluma began pumping sludge out of the sludge lagoons and into the Dedicated Land Disposal area. He stated that approximately 2.6 million gallons of sludge was pumped out of lagoons 1,2,4,5 & 6 and that lagoon 3 will be emptied in October.

ADJOURNMENT: There being no further business to come before the Committee, the meeting adjourned at 2:42 p.m. The next Wastewater Operations Committee meeting will be held on Monday, November 17, 2014.

Respectfully submitted,

Sandeep Karkal
Manager-Engineer



November 7, 2014

Mr. Sandeep Karkal
Manager - Engineer
Novato Sanitary District
500 Davidson Street
Novato, CA 94545

Subject: Veolia Water Operations Report – October 2014

Dear Mr. Karkal:

I am pleased to provide the Monthly Operation Report for October 2014.

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

Best regards,

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

John Bailey
Project Manager, Veolia



MONTHLY OPERATIONS REPORT
October 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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• Laboratory Data	
• Recycled Water Report	
• Annual Performance Graphs	
• Process Control Data / Graphs	
• Customer Notifications (Odor)	

TREATMENT PLANT PERFORMANCE SUMMARY: October 2014:

Bay Discharge – NPDES Limits

Parameter	Value		Limit	
	Ave	Max	#1	#2
Flow, MGD (monthly ave/max)	3.32	3.87	N/A	N/A
Max Peak Hour, MGD – 10/15/14, 0930 Hours	N/A	~7.00	N/A	N/A
Influent BOD ₅ , lb/day (month ave/max)	8,060	9,263	N/A	N/A
Influent TSS, lb/day (monthly ave/max)	10,612	14,056	N/A	N/A
Effluent BOD ₅ , mg/L (monthly ave/weekly max)	<7	12	15	30
Effluent TSS, mg/L (monthly ave/weekly max)	<5	7	10	20
Effluent BOD ₅ - % Removal, Minimum	98	N/A	85	N/A
Effluent TSS - % Removal, Minimum	99	N/A	85	N/A
Ammonia, mg/L – (monthly ave/daily max)	0.22	0.57	6	21
pH, su (min / max)	6.9	7.1	6.5	8.5
Enterococcus, mpn (30 day geo mean)	2.4	N/A	35	N/A
Fecal Coliform, mpn (30 day median)	8	N/A	140	N/A
Fecal Coliform, mpn (90 th percentile)	23	N/A	430	N/A
Total Coliform, mpn (5 Sample Median / Max)	N/A	N/A	240	10,000
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	5.54	N/A
Average Turbidity	NTU	1.2	2.0
Turbidity > 5 NTU (in 24 hour)	Minutes	7	72
Minimum CT (disinfection)	ml-min/L	<450	450
Minimum Dissolved Oxygen (DO)	mg/L	7.2	1.0
Maximum Total Coliform	mpn/100 ml	<2	2

Total Rainfall. – 1.11 inches

Daily Max 10/15 – 0.45 inches

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 October
- Accident Free: 6/1/10 – 10/31/14: 1,611 days / 73,462 hours
- Monthly Safety Topic and Training – 1st Aid/CPR/AED Certification
- Updated Material Safety Data Sheets (SDS)

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

- Switched to Bay Discharge – 10/1/14
- Routine rounds, readings and maintenance
- UV - tightened connections & continuity testing
- Performed annual inspection and service on filter screen channel #1
- Bulk diesel fuel tank - replaced supply & return lines, primed wet weather pumps, cleaned probes and fuel in tank, replaced anti siphon valve
- Replaced HVAC compressor in blower room
- Performed 36,000 hour service on blowers 1 & 2
- Replaced VFD cooling fan on influent pump #5
- Replaced hypochlorite tank drain valve
- Replaced high pressure water pump and motor – GBT #1
- Repaired gas leak on boiler piping

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

- Primary Clarifier #1 (not needed at current flows)
- Secondary Clarifier #2 (not needed at current flows)
- Aeration Basins 1 & 3 (not needed at current flows)

Ignacio Transfer Pump Station

- Routine rounds, readings and maintenance
- Re-installed rebuilt channel grinder
- Assisted collections with line pigging

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

- None

Recycled Water Plant (RWP)

- Performed plant rounds and maintenance

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

- None

Sludge Lagoons

- Performed routine rounds and inspection
- Flushed Digested Sludge Line and Decant Return Line
- Cleaned struvite from telescoping valves

ADMINISTRATION:

- September Electronic Self Monitoring Report submitted on October 20, 2014
- September DMR and Semi Annual Report submitted on October 20, 2014

ODORS:

- Jerome Meter (H2S) readings performed in neighborhood and within treatment plant.

MISCELLANEOUS

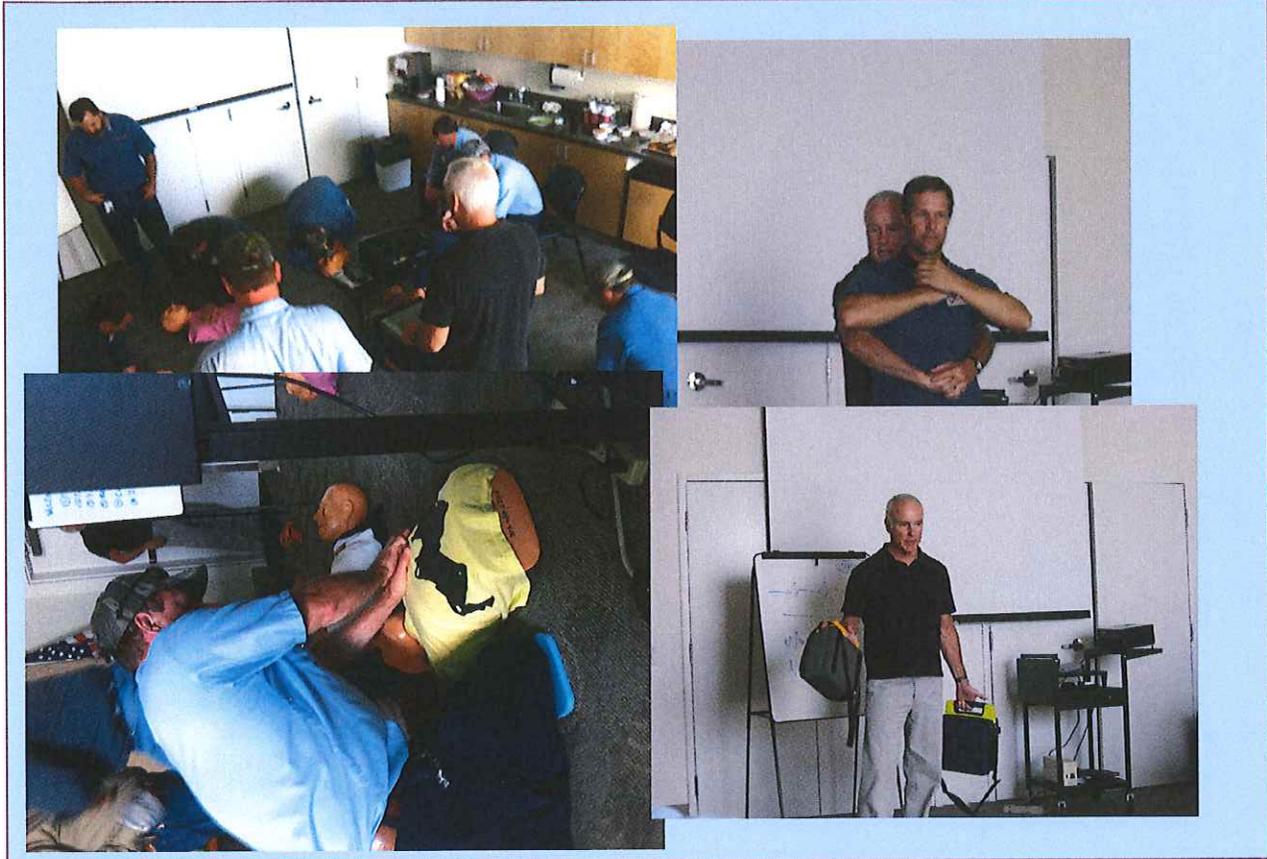
- Process Control Management Plan (PCMP) meetings held weekly.
- PCMP Audit – Internal
- Criticality Presentation to NSD Board

Veolia Support Staff On/Off Site (Various Times)

John O'Hare	Technical Support
Ed Dix	Technical Support
Melissa Demsky, P.E.	Director of Asset Management, West
Robert "Dave" Coffman	Asset Manager, West

SAFETY TRAINING – CPR AED CERTIFICATION

October Safety Training included bi-annual CPR and AED training and certification.



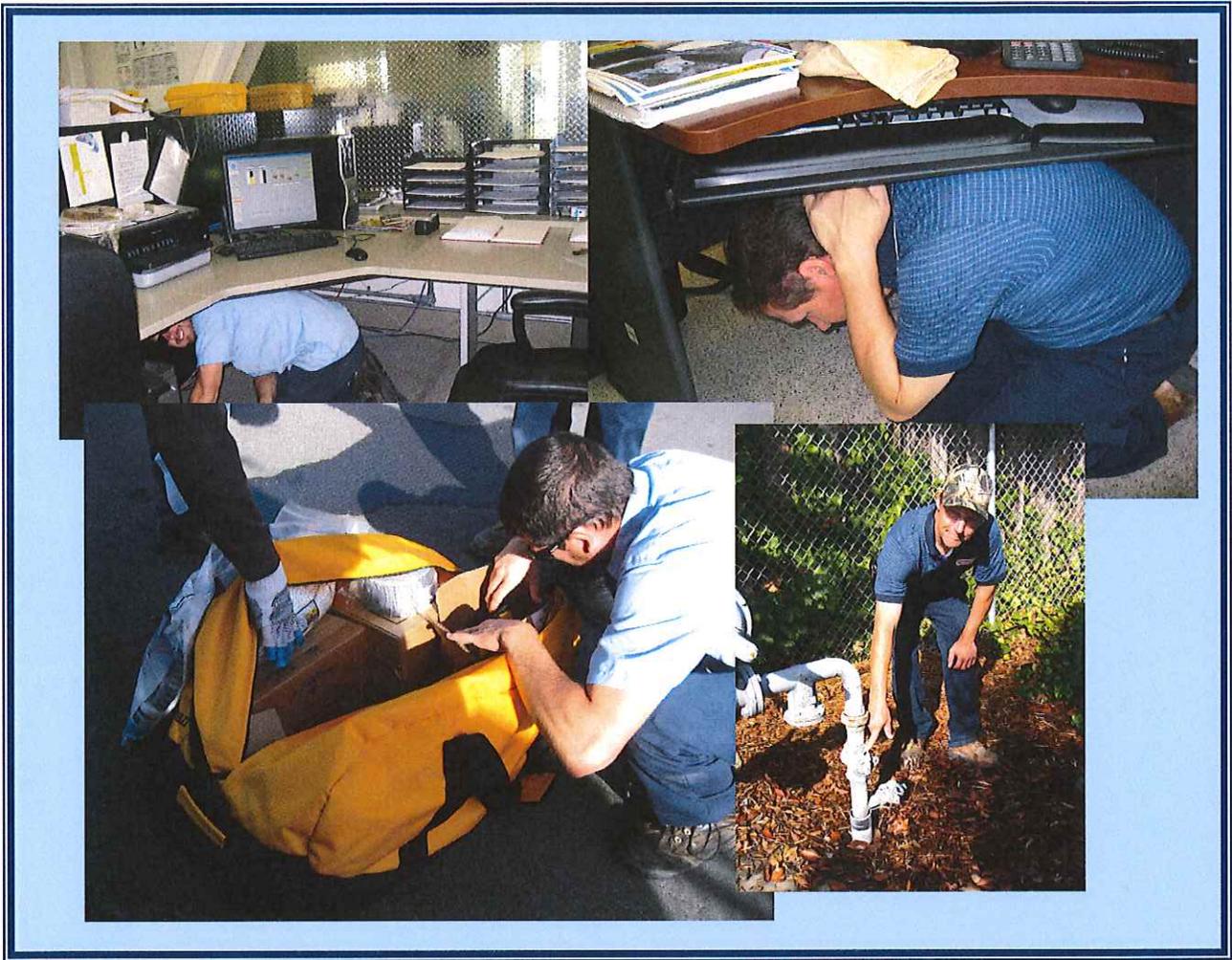
Top Left – Hands-on CPR.

Top Right – Brian Exberger Heimlich Manuever

Bottom Left – Ralph Loveless Chest Compressions

Bottom Right – Instructor, Ted Williams, demonstrates two types of AED units

GREAT SHAKEOUT – ANNUAL EARTHQUAKE DRILL
OCTOBER 16, 2014



Top Left – Christian Williams, Duck Cover Hold

Top Right – Brian Exberger, Duck Cover Hold

Bottom Left – Inventory Emergency Supplies

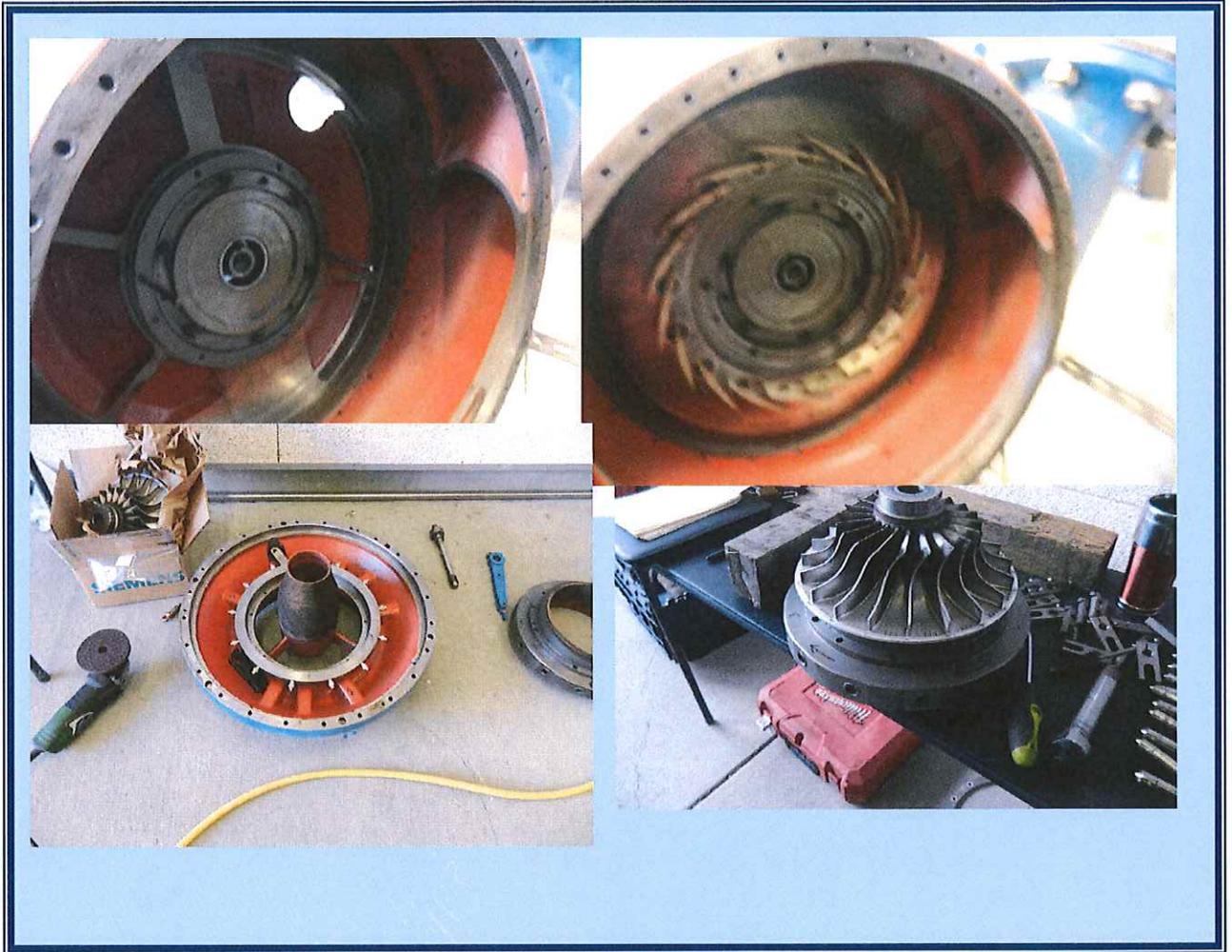
Bottom Right – Brian Exberger Simulates Shutoff of Natural Gas

REMOVAL AND CLEANING TELESCOPIC VALVE AT SLUDGE LAGOONS



- Top Left – Struvite Buildup in Telescoping Valve Receiver
- Top Right – Telescoping Valve Removed Ready for Cleaning
- Bottom Left – Buildup in Telescoping Valve
- Bottom Right – Cleaned Telescoping Valve

TURBLEX BLOWER - 36,000 HOUR LEVEL ONE INSPECTION



Complete disassembly of Turblex Blowers (1 & 2)
Blowers were found to be in excellent condition

Novato Sanitary District
BOD/TSS Report

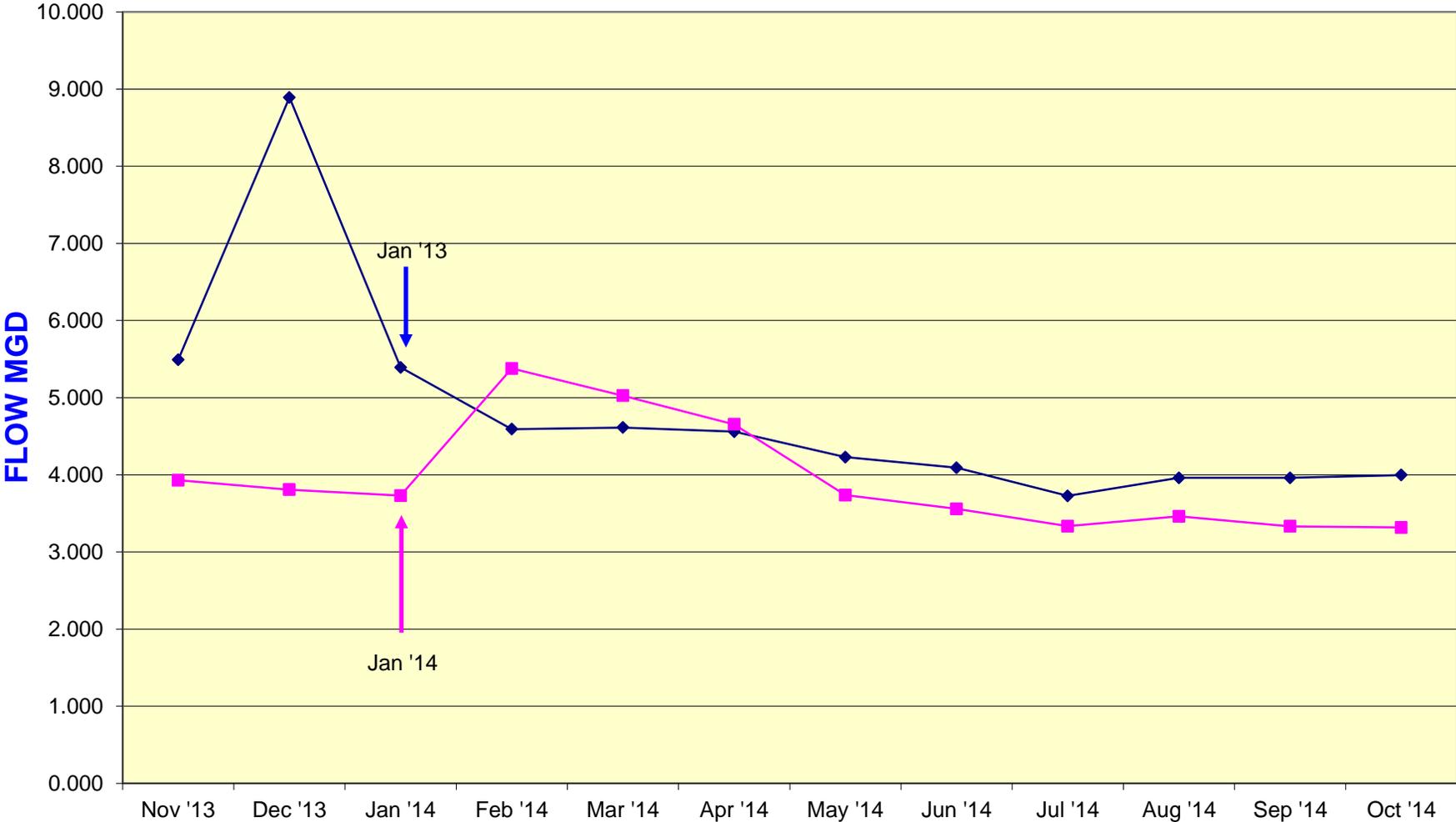


October, 2014

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		
10/01/14	3.54	288	8,503	370	10,924	6	177	<2	<59	97.9	99.5
10/02/14	3.17	267	7,059	384	10,152	7	185	2	53	97.4	99.5
10/03/14	2.80	315	7,356	384	8,967	9	210	3	70	97.1	99.2
10/04/14	3.04										
10/05/14	3.25										
10/06/14	3.18	296	7,850	530	14,056	6	159	5	133	98.0	99.1
10/07/14	2.98										
10/08/14	3.22	319	8,567	408	10,957	<5	<134	3	81	98.4	99.3
10/09/14	3.08										
10/10/14	2.99	296	7,381	344	8,578	6	150	14	349	98.0	95.9
10/11/14	3.14										
10/12/14	3.49										
10/13/14	3.72	206	6,391	249	7,725	<5	<155	7	217	97.6	97.2
10/14/14	3.44										
10/15/14	3.87	262	8,456	340	10,974	7	226	5	161	97.3	98.5
10/16/14	3.68										
10/17/14	3.46	321	9,263	413	11,918	16	462	<3	<87	95.0	99.3
10/18/14	3.60										
10/19/14	3.64	237	7,195	345	10,473	<5	<152	<3	<91	97.9	99.1
10/20/14	3.33										
10/21/14	3.13	343	8,954	422	11,016	6	157	6	157	98.3	98.6
10/22/14	3.20										
10/23/14	3.30	272	7,486	379	10,431	5	138	4	110	98.2	98.9
10/24/14	3.16										
10/25/14	3.32										
10/26/14	3.31										
10/27/14	3.64	285	8,652	387	11,748	<5	<152	5	152	98.2	98.7
10/28/14	3.41										
10/29/14	3.17	275	7,270	357	9,438	<5	<132	4	106	98.2	98.9
10/30/14	3.03										
10/31/14	3.51	309	9,045	404	11,826	<5	<146	5	146	98.4	98.8
Weekly Averages											
10/04/14	Week 1	290	7,639	379	10,014	7	191	2	61		
10/11/14	Week 2	304	7,933	427	11,197	6	148	7	187		
10/18/14	Week 3	263	8,037	334	10,206	9	281	5	155		
10/25/14	Week 4	284	7,878	382	10,640	5	149	4	119		
	Week 5										
Monthly											
Minimum	2.80	206	6,391	249	7,725	<5	<132	<2	53	95	96
Maximum	3.87	343	9,263	530	14,056	16	462	14	349	98	99
Total	102.80										
Average	3.32	286	7,962	381	10,612	<7	<182	<5	<131	98	99

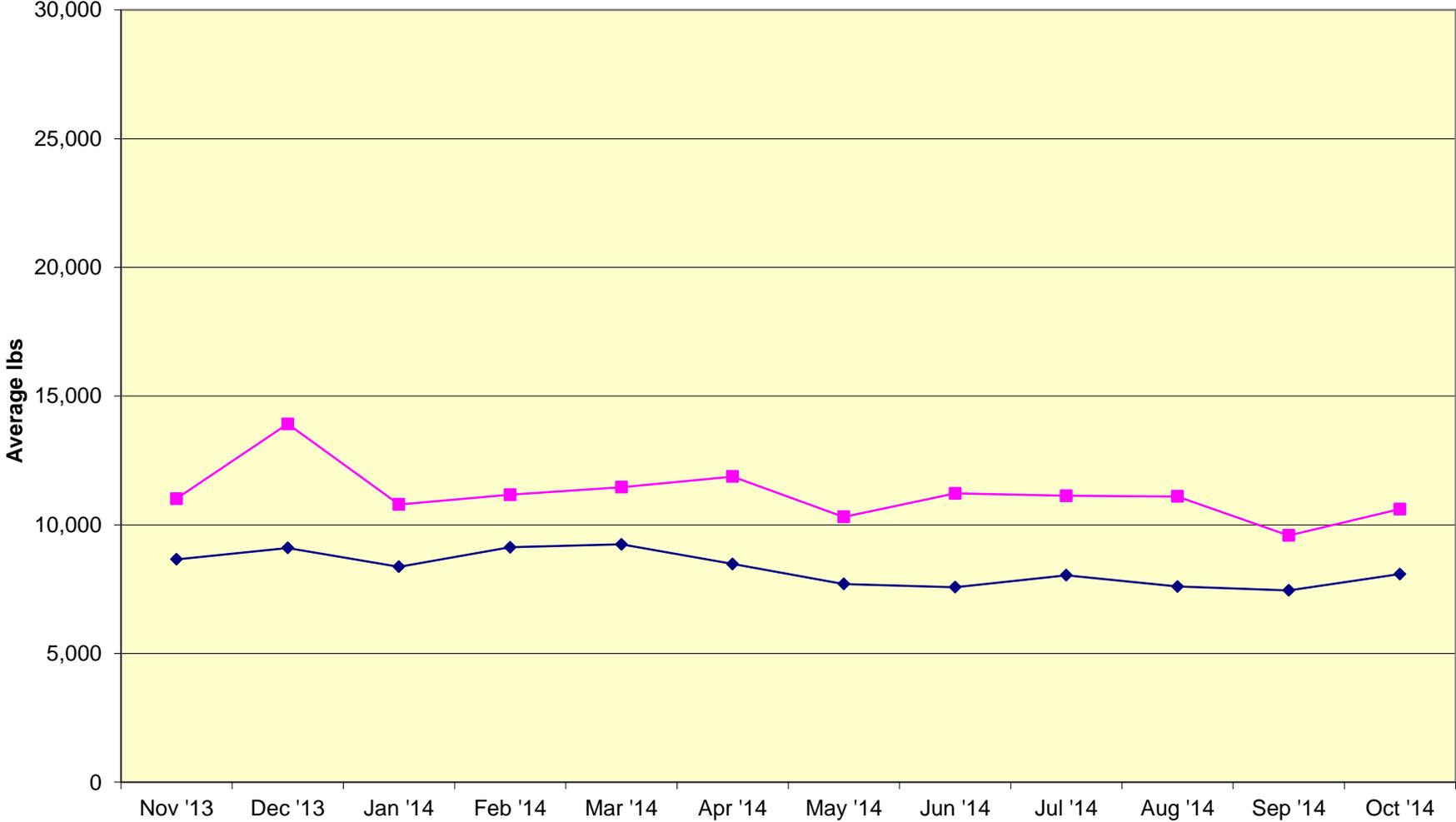
FLOW COMPARISON

—◆— 2012 / 13 —■— 2013 / 14



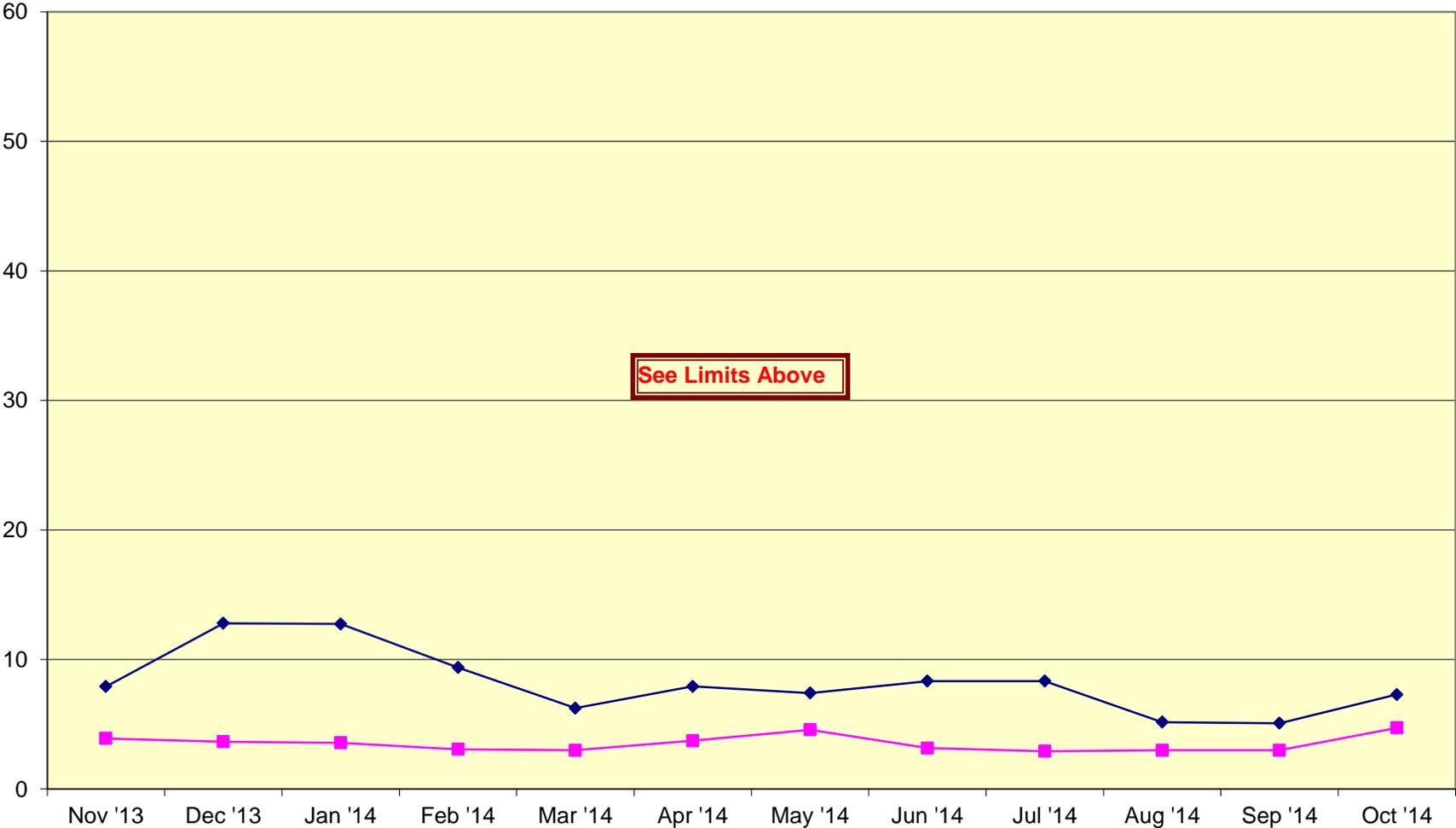
Influent Load BOD / TSS lbs

◆ BOD lbs ■ TSS lbs



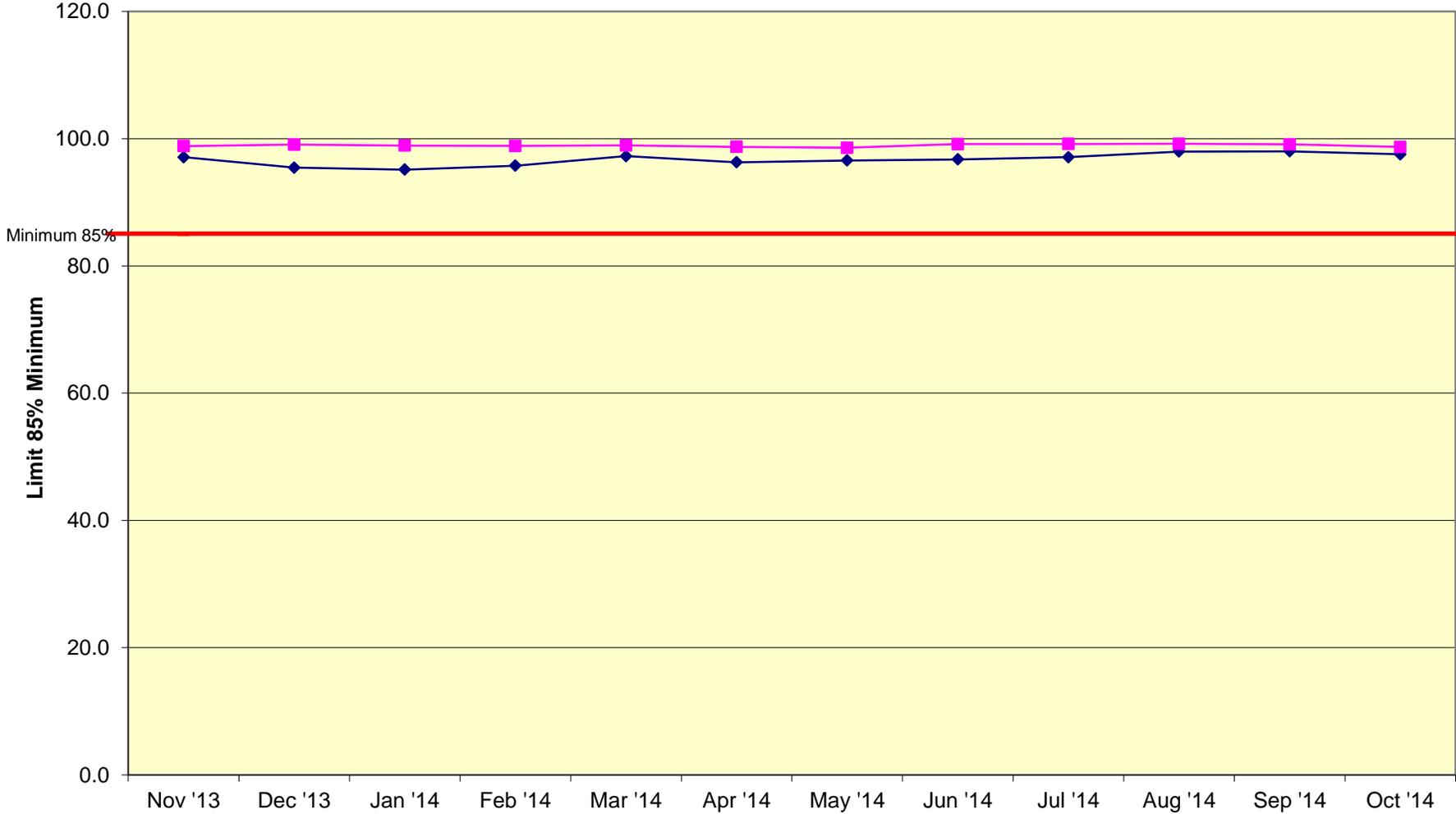
Effluent BOD / TSS Concentration

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



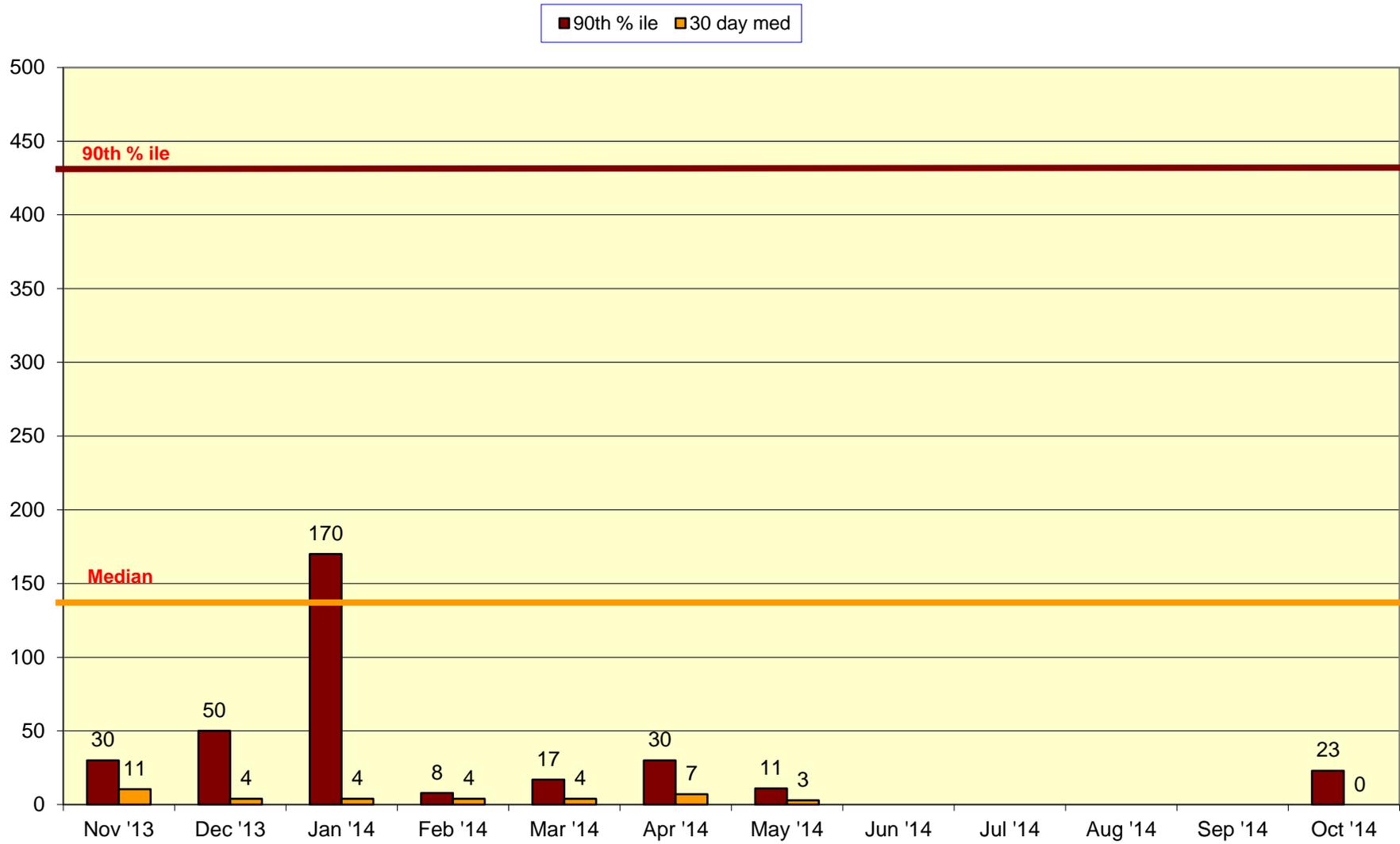
BOD / TSS Percent Removal

◆ BOD ■ TSS



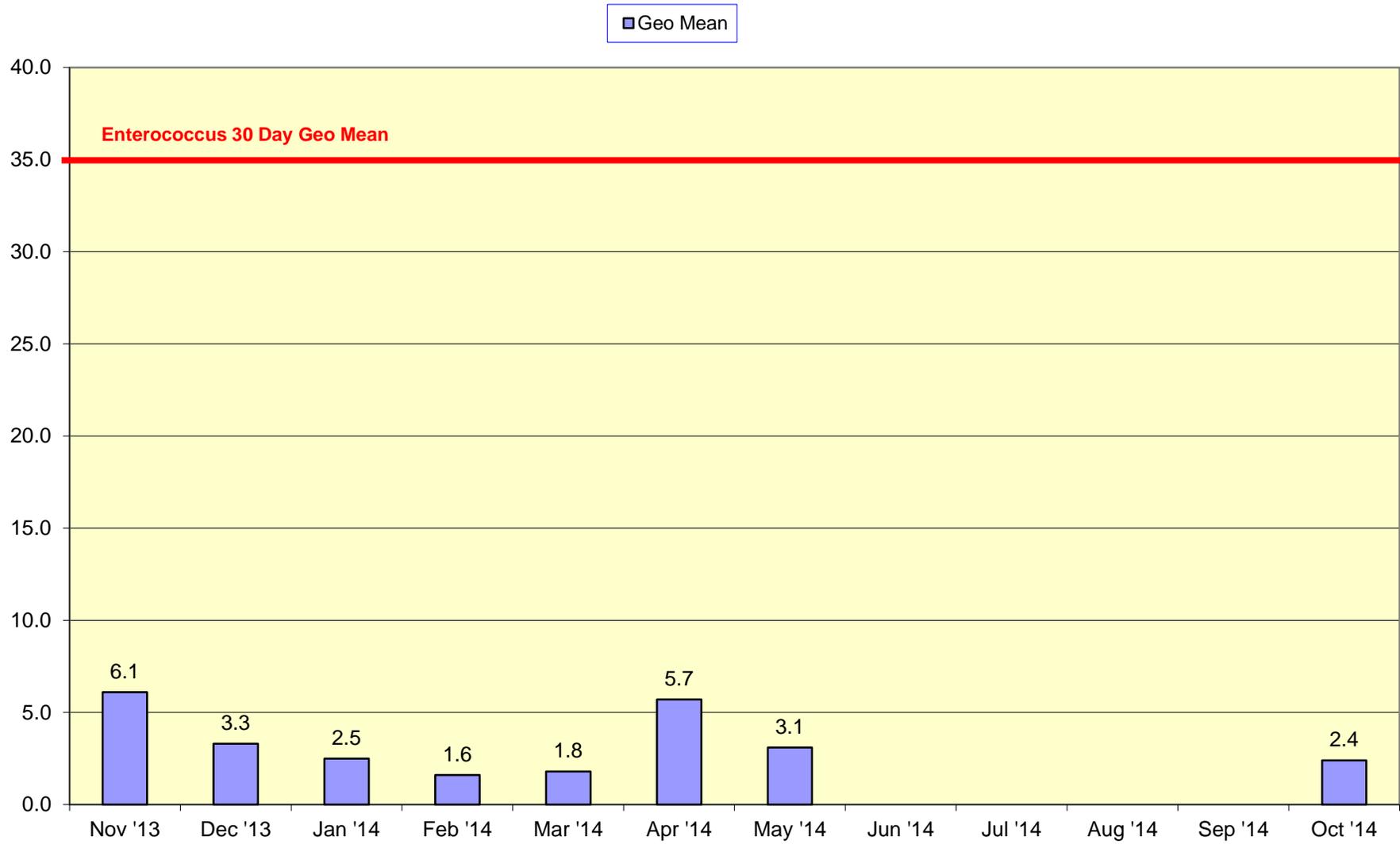
Disinfection

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



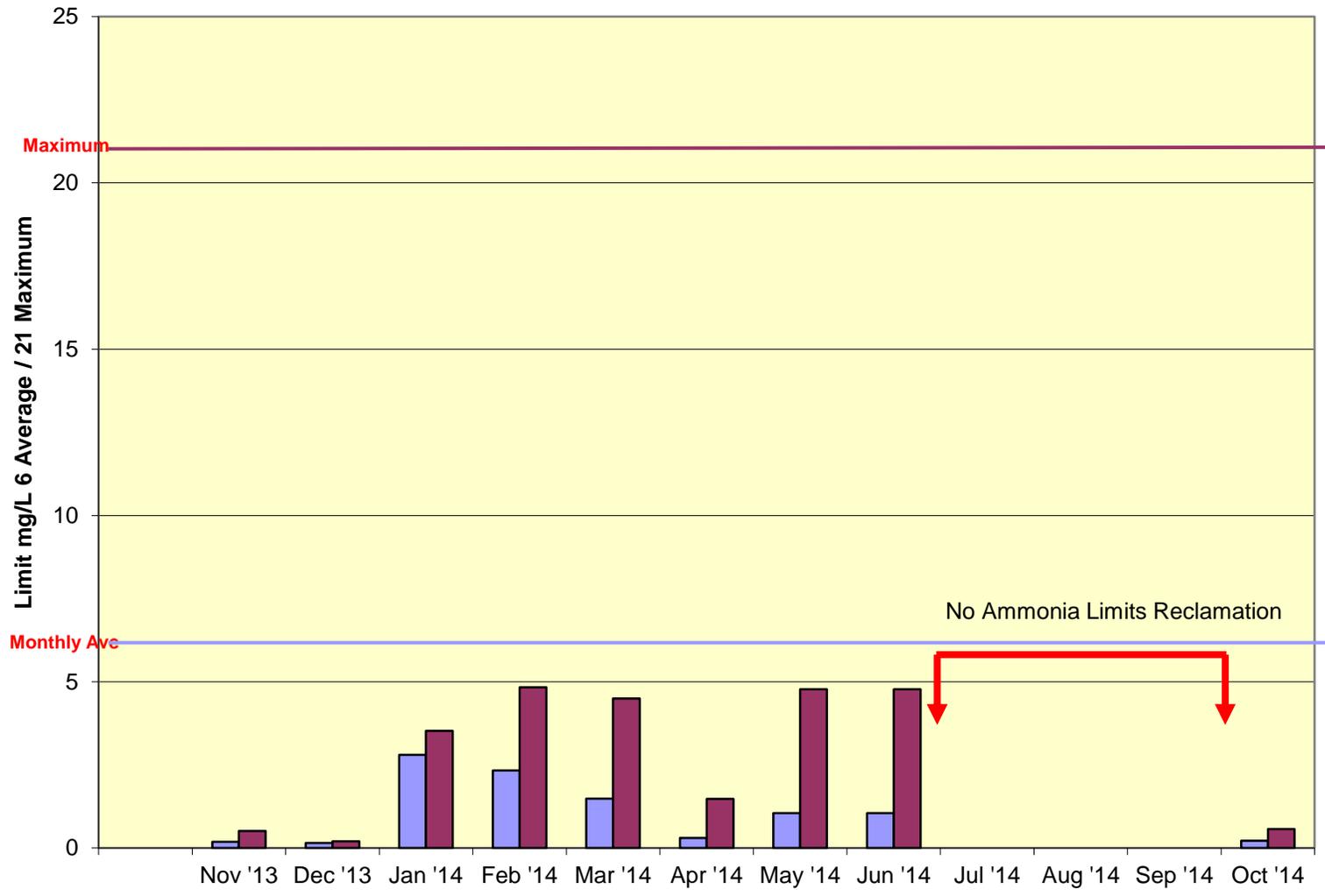
Disinfection

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



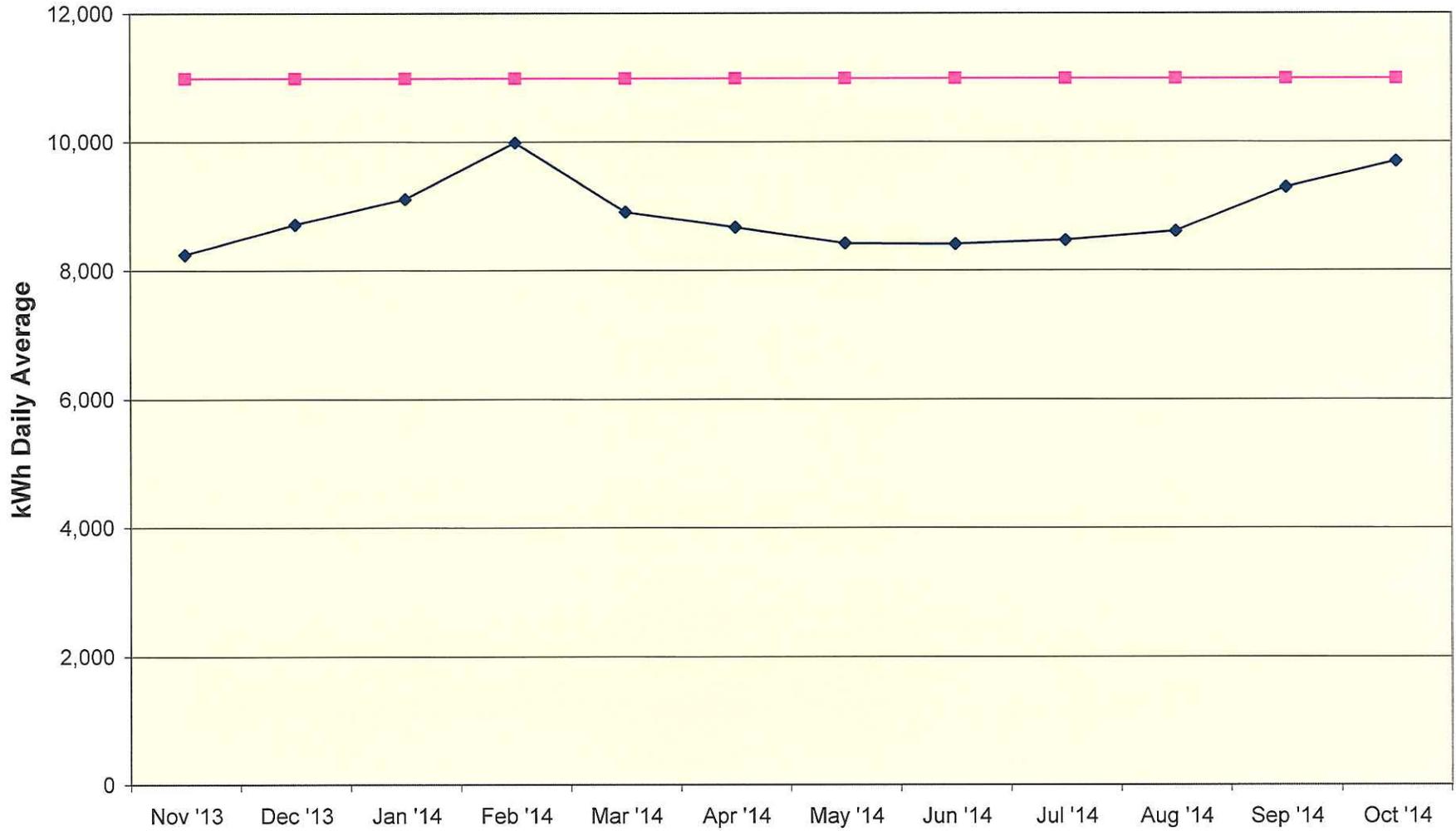
Effluent Ammonia

Average Maximum

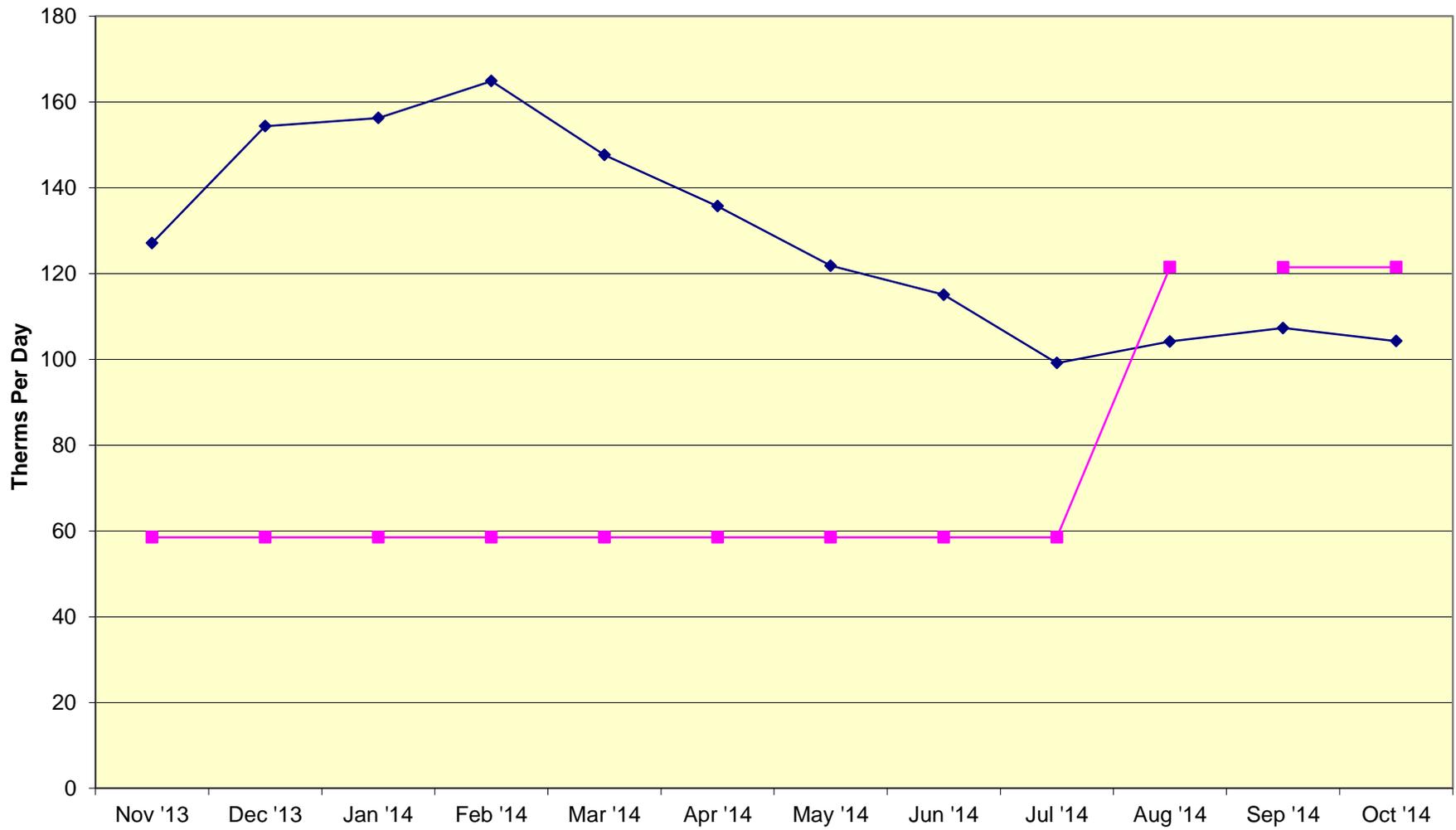


Energy kWh

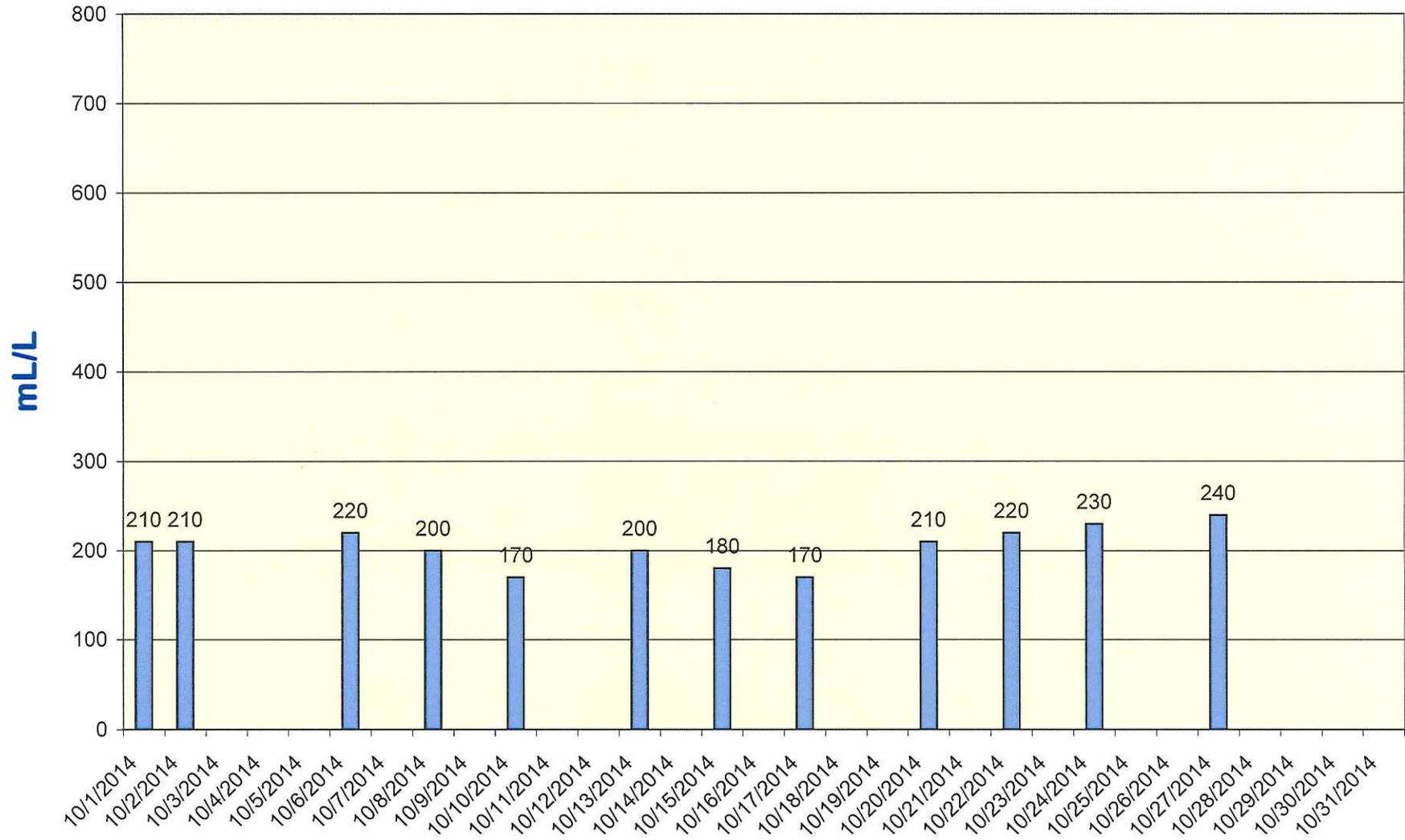
—◆— kWh —■— Cap



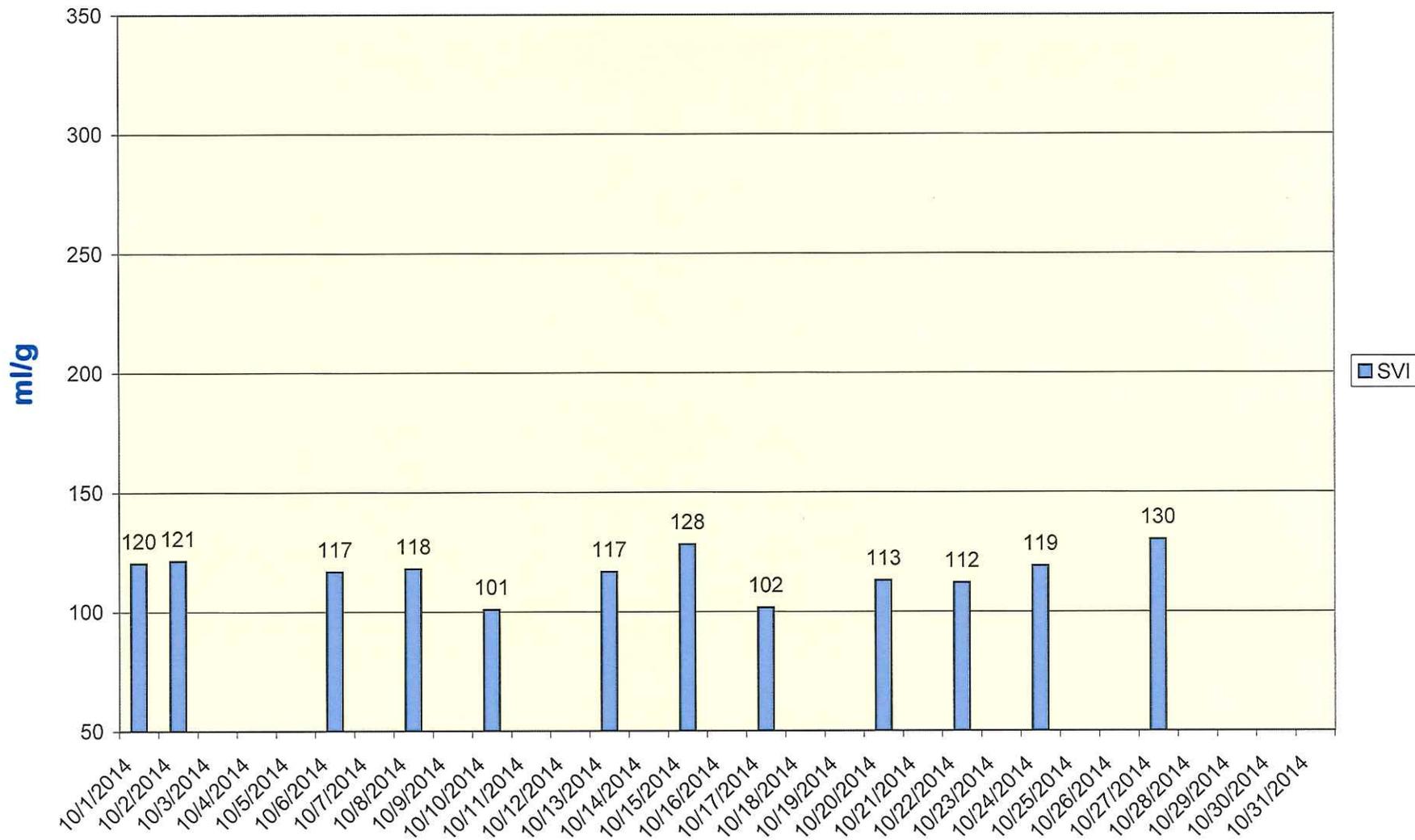
Natural Gas Use



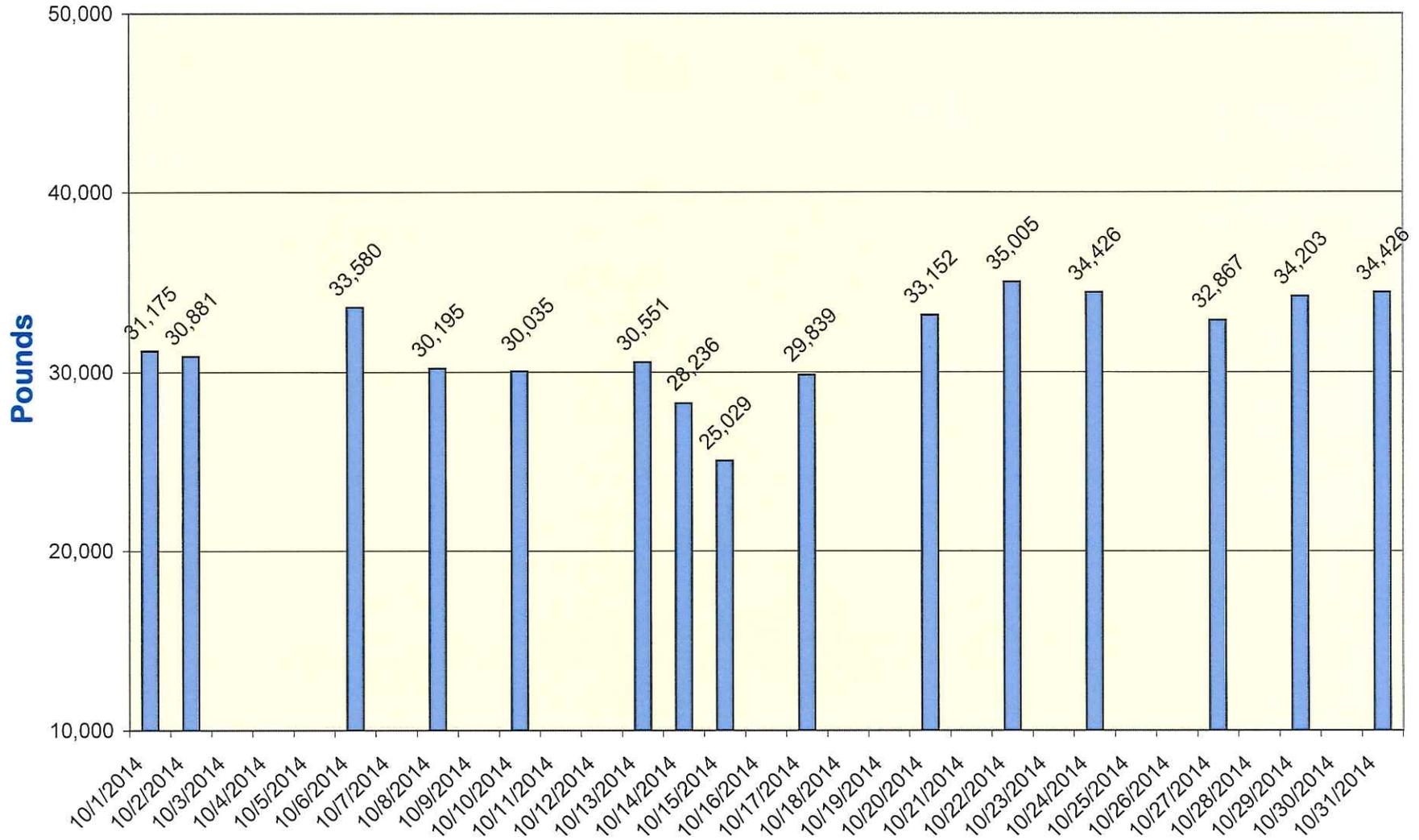
Settleability



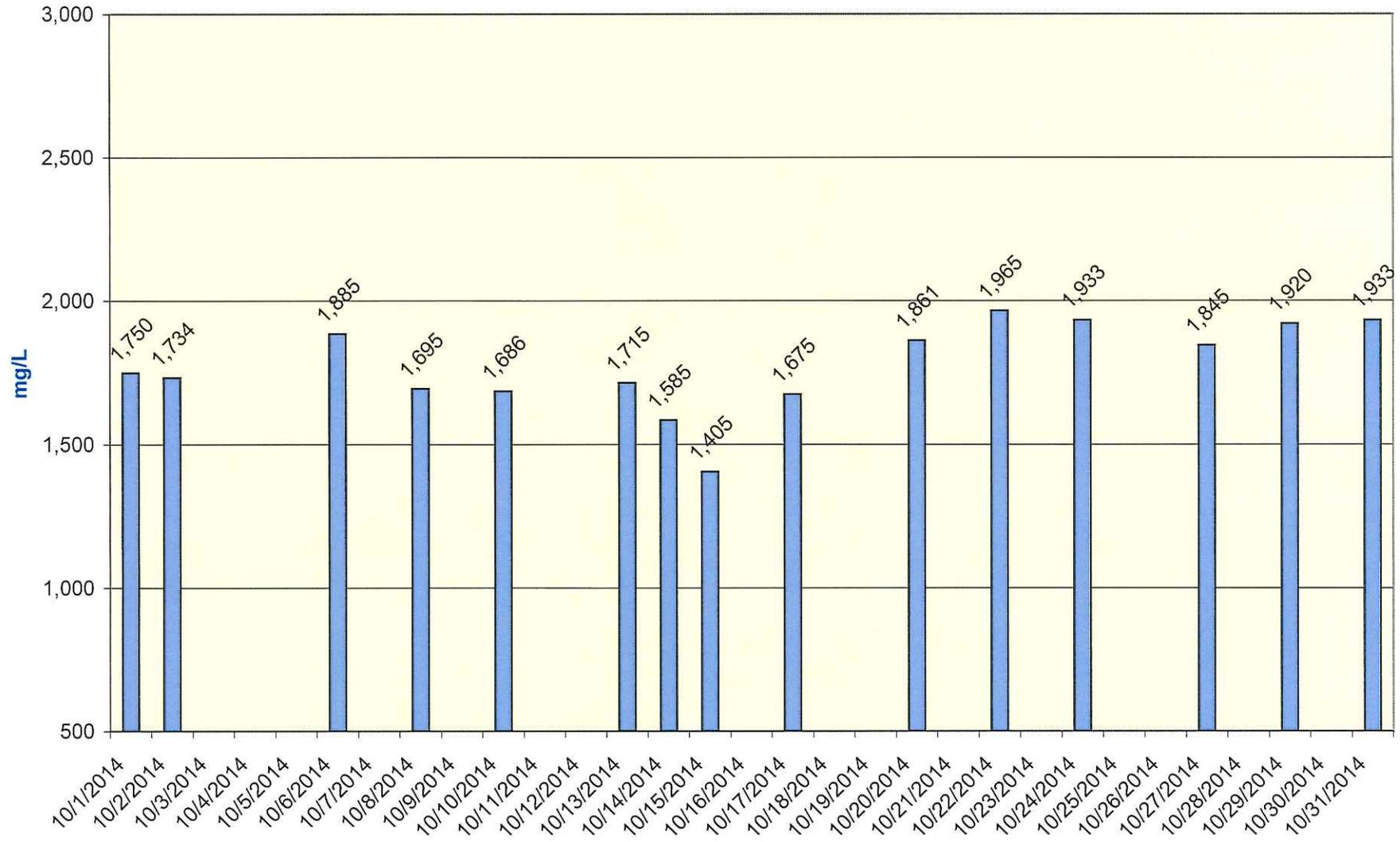
Sludge Volume Index



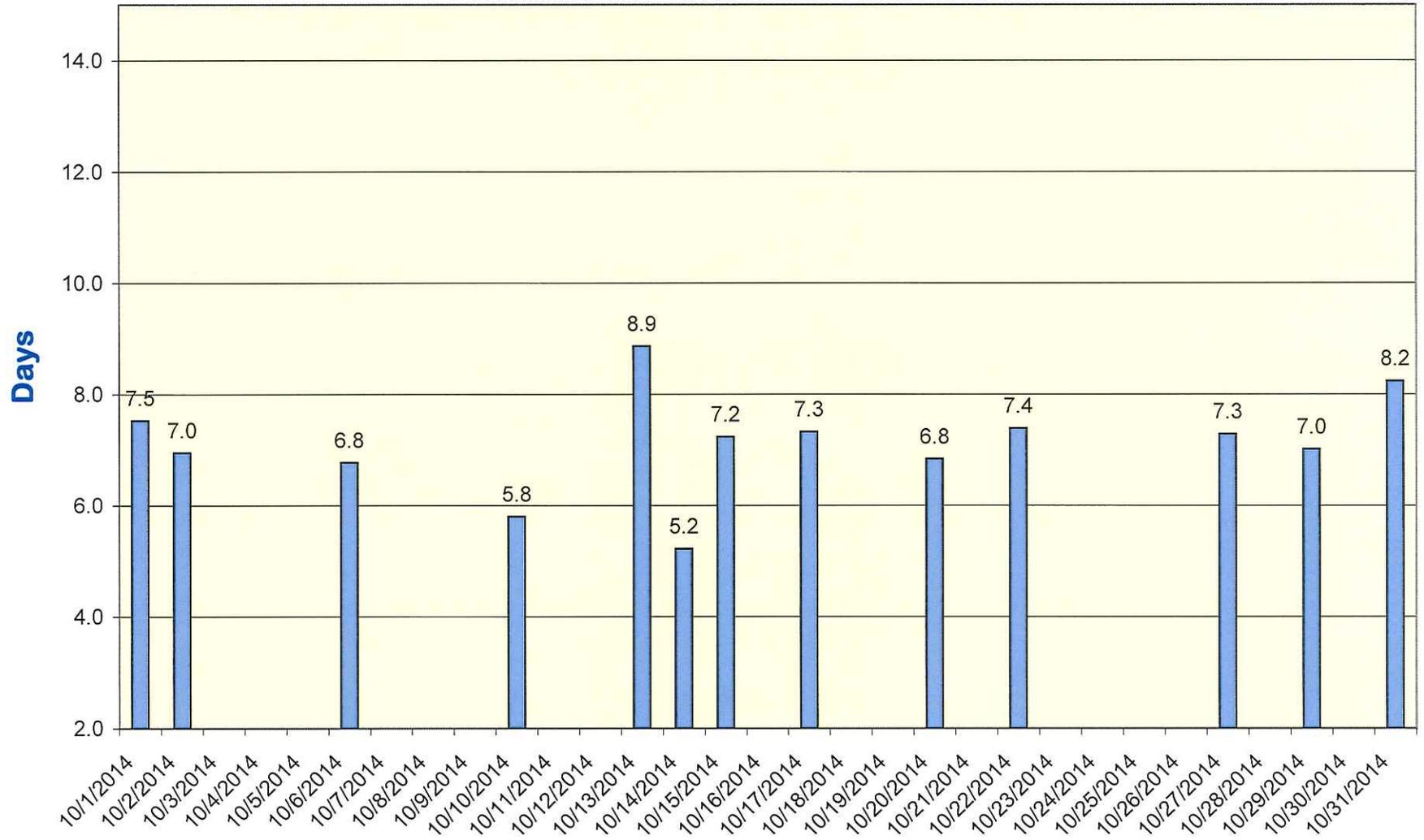
MLSS Inventory



MLSS Concentration



Mean Cell Residence Time

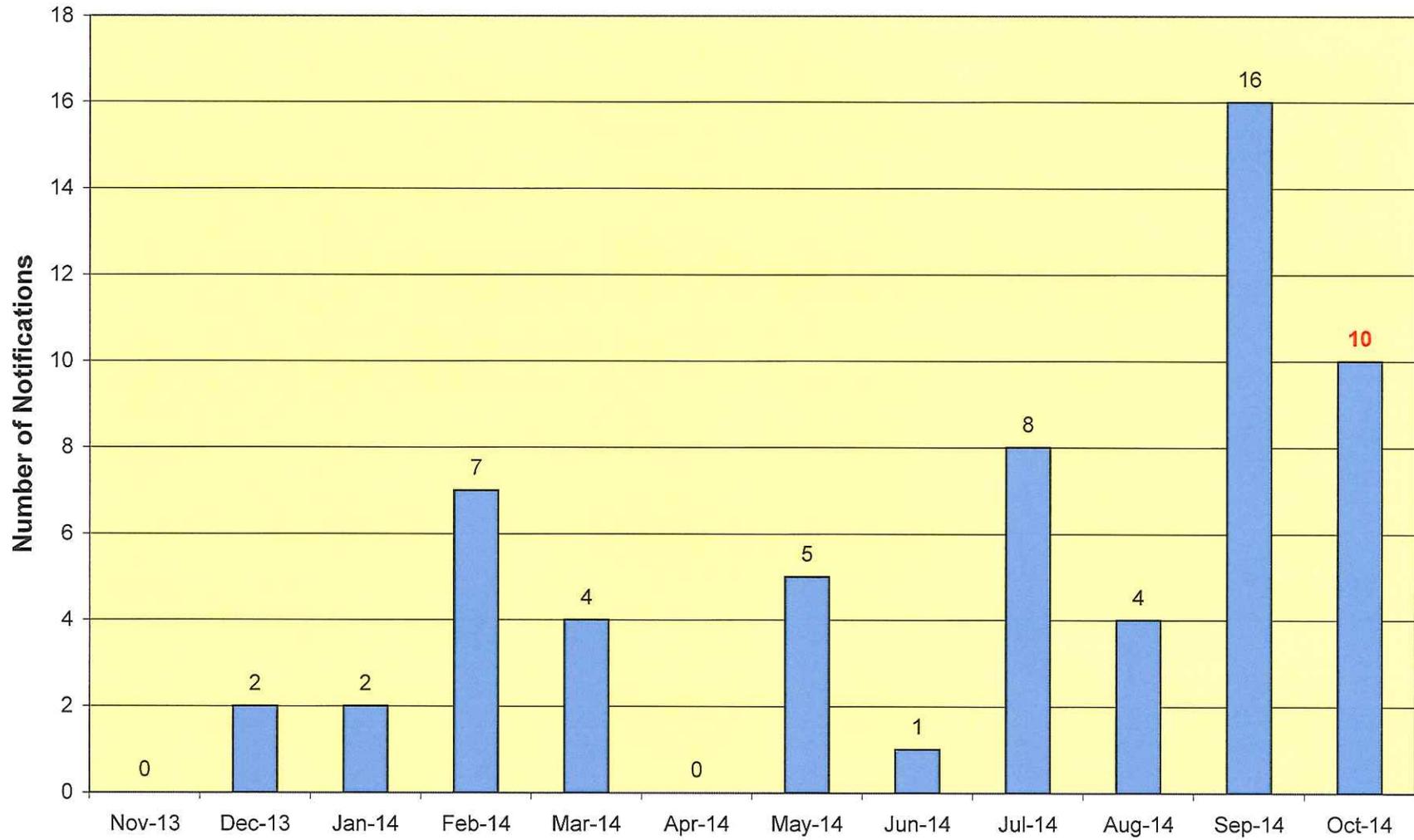


Process Control Data

	Influent Flow	Settleability	MLSS Concentration	MLSS Inventory	F:M Ratio	MCRT	SVI
10/1/2014	3.54	210	1,750	31,175	0.24	7.5	120
10/2/2014	3.17	210	1,734	30,881	0.22	7.0	121
10/3/2014	2.80						
10/4/2014	3.04						
10/5/2014	3.25						
10/6/2014	3.18	220	1,885	33,580	0.21	6.8	117
10/7/2014	2.98						
10/8/2014	3.22	200	1,695	30,195	0.21		118
10/9/2014	3.08						
10/10/2014	2.99	170	1,686	30,035	0.19	5.8	101
10/11/2014	3.14						
10/12/2014	3.49						
10/13/2014	3.72	200	1,715	30,551		8.9	117
10/14/2014	3.44		1,585	28,236		5.2	
10/15/2014	3.87	180	1,405	25,029	0.32	7.2	128
10/16/2014	3.68						
10/17/2014	3.46	170	1,675	29,839	0.23	7.3	102
10/18/2014	3.60						
10/19/2014	3.64						
10/20/2014	3.33	210	1,861	33,152		6.8	113
10/21/2014	3.13						
10/22/2014	3.20	220	1,965	35,005		7.4	112
10/23/2014	3.30						
10/24/2014	3.16	230	1,933	34,426			119
10/25/2014	3.32						
10/26/2014	3.31						
10/27/2014	3.64	240	1,845	32,867	0.18	7.3	130
10/28/2014	3.41						
10/29/2014	3.17		1,920	34,203		7.0	
10/30/2014	3.03						
10/31/2014	3.51		1,933	34,426		8.2	
Minimum	2.80	170.00	1,405.00	25,029	0.18	5.2	101
Maximum	3.87	240	1,965	35,005	0.32	8.9	130
Total	96.26	2,460	24,653	439,174	1.82	84.2	1,398
Average	3.32	205	1,761	31,370	0.23	7.0	117

Complaints / Contacts Received

Several emails referenced numerous days of odors. These were logged as one at this time.



WORK ORDER STATISTICS

October 1, 2014 - October 31, 2014

	Open Work Orders Due Prior to 10/1/14	Open Work Orders 10/1/14 - 10/31/14	Total Open Work Orders
Preventative	4	507	511
Corrective	5	35	40
Total	9	542	551

	Closed Work Orders 10/1/14 - 10/31/14
Preventative	505
Corrective	29
Total	534

Total Outstanding Work Orders as of November 1, 2014	17
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NOVATO SANITARY DISTRICT
Wastewater Operations Committee Meeting
Odor Control and Landscaping Report
October 2014

Background:

The District continues to work on odor control and landscaping on an ongoing basis, specifically in the Lea Drive neighborhood, and at the northeast portion of the Novato Treatment Plant (NTP) site. As mentioned in prior reports, the District has already invested significant amounts beyond the substantial investment for odor control and landscaping from the original WWTP Upgrade Project. These additional costs have included operational changes, measures related to further odor control measures, noise abatement, visual screening, wind shielding, and daily monitoring.

Odor control:

In October, it was found that media in the large odor control bed between primary clarifiers #1 & #2 was breaking down, and the breakdown was resulting in potential odor release from the media decomposition and/or breakthrough. While staff initially obtained quotes to replace the media in its entirety, it was recognized that the timeline (with wet weather and the holiday season coming up) may not be conducive to completing the entire replacement in a timely and effective fashion. Therefore, staff also obtained a quote to top-off the bed in November to account for the depleted media, with the concept that complete media replacement would occur next spring.

Also, as discussed in last month's report, operations staff continues work on tweaking the air flow input to the converted anoxic zones in the aeration basins to find the optimum operating range(s) where odor causing compounds can be oxidized. This follows from the validation testing that was conducted by Dave McEwen of Brown and Caldwell (B&C), the District's odor consultant.

Also, another of Mr. McEwen's odor control recommendations, i.e. adding an oxidizing agent, sodium hypochlorite, to the influent flow continues as needed, and while the results are good anecdotally, staff continues to monitor performance.

Landscaping:

There was only light landscaping activity in October, but staff continues to work with the District's landscaping contractor Cagwin and Dorward (C&D), on vegetation at the District's fence-line on Lea Drive and at the northeast corner area of the NTP. In October, staff also staked out areas in the Northwest portion of the plant site for locations to receive additional plantings. It is anticipated that all of the redwood trees currently in boxes along the western boundary of the plant site will be transplanted to this area in November, depending on weather, with some trees also being transplanted to the uphill area north of the primary clarifiers.

Sandeep Karkal

From: Brant Miller <bikeflyer@comcast.net>
Sent: Tuesday, November 11, 2014 10:38 AM
To: Sandeep Karkal
Subject: Ops Comm Meeting Preparation

Sandeep -

With the neighbor concern over H₂S odor now on our agenda for next Monday, it would be very helpful to me to renew and expand my limited knowledge of plant front-end odor control.

I would like to re-visit the Headworks. It would probably help to understand the neighbor's concerns if John Bailey could participate in the visit. If the Brown Act permits, you might consider inviting Jerry (or the visit could occur during the first part of an extended Ops Comm meeting, complete with neighbor participation if that is a good idea).

I would like to have a good look at the sealing of the various components of the Headworks, especially the screens. I would like to understand how the current odor control systems work in that area. I believe that the adjacent building is included in the odor control system, but I do not know whether the enclosed areas of the main flow paths are connected to the building (they must be to some extent) or have any other connection to the odor control system.

I would like to see the pressure sensors used to monitor the odor control system effectiveness and would like to visit the fan station and follow the vapor piping to its treatment bed. (The frequency and nature of operating involvement with the odor control system is not part of the monthly report. Should it be?)

I would like to know how often components of the Headworks are opened and why. Is there a routine operating need to open them or have they required corrective maintenance, or???

While we are considering plant front-end odors, I'd like to know whether the deep well (middle of plant, where sewage first enters the plant) is connected to the odor control system. Also, are there any manholes associated with incoming lines located on plant property. If so, how frequently are they opened.

I'd like your (and John Bailey's) thoughts on what, other than just leakage at the screens and in that area, might be the source of H₂S odor and why it seems to have recently increased. If the odor is consequence of the odor control beds having deteriorated, that we should fix that and adjust operations to prevent a recurrence.

If plant design drawings will help to understand the relevant systems, perhaps we could look at them too.

I'm available this afternoon, Wednesday after 3:00pm, Thursday except mid-day (although I hear rain if forecast for Thursday), all day Friday, and Monday morning. (I'm also available Saturday except 11 - 2:30 and all day Sunday.) My best guess is that the visit will take a couple of hours.

Please let me know what day and time works for you.

Thanks

Brant

NOVATO SANITARY DISTRICT WASTERWATER OPERATIONS COMMITTEE AGENDA ITEM SUMMARY

TITLE: Wastewater Treatment Facilities – Environmental Compliance Services	MEETING DATE: November 17, 2014 AGENDA ITEM NO.: 4.f.
RECOMMENDED ACTION: Review presented materials, including a proposal from Veolia Water to provide environmental compliance services, consider options, and provide direction to staff.	
SUMMARY AND DISCUSSION: <p>The District’s Environmental Services department is tasked with managing the District’s Laboratory functions, its Pretreatment Program, and portions of its Pollution Prevention Program and its Public Education Program. The District’s historical staffing for the department has included an Environmental Services Supervisor (ESS), and two Environmental Compliance Analysts (ECA). The current staffing for the department includes an ESS, an ECA, and additional part-time staffing from the North Marin Water District (primarily a part-time Lab Analyst), with the remaining workload being distributed amongst other District staff.</p> <p>The ESS position is currently vacant as the most recent ESS left to take up employment with another agency. Since then, the District has retained an experienced contract employee in an interim role. The staffing situation now has added urgency as the District’s current ECA has indicated that he will retire at year end, which would leave the District with no permanent full-time staff in the department.</p> <p>Also, the District has historically lacked success in attracting a critical mass of viable candidates for these positions during previous hiring processes. If the District were to try to hire its own staff, it is expected that this would occur again, especially given the short-time frame available. Staff also considered an option for neighboring agencies to provide staffing on a long term basis. Preliminary discussions indicated that even if these agencies were willing to take on the task, they would not be able to provide the required level of services with their existing staff structures, nor bring comparable levels of knowledge and expertise to the District, especially to the critical Pretreatment Program area.</p> <p>Consequently, staff asked Veolia Water to provide a proposal for Veolia to provide management and operation of the District’s environmental compliance program. Their proposal along with a detailed scope of services and annual cost estimate is attached as Item 4.f.1. The work would be performed under Sections 8.1(3) and 8.2 of the current Contract Service Agreement. A copy of these sections is attached as Item 4.f.2. Finally, the District’s actual and estimated laboratory/environmental services costs for the period from FY2008-09 through FY2015-16 is attached as Item 4.f.3.</p> <p>At this time, staff suggests that the Committee consider the following options and provide direction to staff: (1) Review the proposal from Veolia and recommend it for award by the District Board at the next Board meeting, or (2) Make a recommendation to the District Board at its next meeting for staff to begin the hiring process for the vacant positions.</p>	
ALTERNATIVES: See above.	
DEPT. MGR.:	MANAGER-ENGINEER:



November 13, 2014

Mr. Sandeep Karkal, Manager-Engineer
Novato Sanitary District
500 Davidson Street
Novato, California 94945

Subject: **Proposal for Operation of Laboratory and Pretreatment Programs**

Dear Mr. Karkal:

This document and attachments represent a proposal by **Veolia Water West Operating Services, Inc. (Veolia)** for on-going laboratory and pretreatment programs services. The Contract Service Agreement for *Operation and Management of Wastewater Facilities (Agreement)* dated March 18, 2014 between Veolia and the Novato Sanitary District (DISTRICT or NSD) allows for additional services under Section 8.1(3).

Description of Services:

Veolia proposes to assume functional responsibility for management and operation of the NSD laboratory, pretreatment, pollution prevention, and public education programs as well as associated reporting and record keeping. This is a labor only agreement; material supplies, consumables, hardware, equipment maintenance and replacement, contract laboratory services, etc. are not included in the base fee.

A detailed scope of services is included in Attachment A.

Compensation:

The initial cost and adjustment schedule is included in Attachment B.

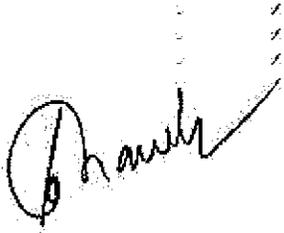
Veolia's price to perform the scope of work described above is predicated on the following

assumptions:

1. The term of the proposal will coincide with the existing Agreement through June 2021.
2. The Agreement's general terms and conditions will remain as they are.

Veolia is pleased to provide this proposal and we look forward to our continued partnership. In the meantime, should you have any questions concerning its content or require additional information, feel free to contact John Bailey at (415) 892-1694.

Sincerely,

A handwritten signature in black ink, appearing to read "Sachin Chawla", with a stylized flourish extending from the end.

Sachin Chawla
Vice President of Operations
Municipal and Commercial Business Line
Veolia North America

Novato Sanitary District

Laboratory and Environmental Services
Agreement

ATTACHMENT A

SCOPE OF SERVICES

Specific tasks included in the scope of services are:

Item 1.0 – General Responsibilities

1.1 – VEOLIA shall implement and maintain the laboratory and pretreatment programs as defined in 40 CFR Part 122, 136, 403, and 503.

1.2 – VEOLIA shall assist in the development of the budget; monitor expenditures; advise appropriate program personnel on budget matters; requisition chemicals, equipment, maintenance, and other supplies.

1.3 – VEOLIA shall develop, implement, and perform the laboratory and pretreatment procedures and guidelines to ensure compliance with applicable federal, state, and local regulations pertaining to water, wastewater, storm water, biosolids, and industrial waste.

1.4 – VEOLIA shall provide technical and functional supervision to the Laboratory/Pretreatment Technician.

1.5 – VEOLIA shall attend regulatory agency and environmental committee meetings and training to support and represent the DISTRICT's needs and goals.

1.6 - Incidentals Budget- The DISTRICT currently and will continue to budget for all laboratory and pretreatment materials, supplies, contracts, maintenance and replacement of equipment, buildings,

ATTACHMENT A

and structures.

1.7 - The DISTRICT shall continue to budget all laboratory, biosolids, storm water, pretreatment, pollution prevention, and industrial waste for analysis, materials, supplies, contracts, maintenance and replacement of equipment.

Item 2.0 – Laboratory Management

2.1 – VEOLIA shall maintain the California Environmental Laboratory Accreditation Program (ELAP). This program provides evaluation and accreditation of environmental testing laboratories to ensure the quality of analytical data used for regulatory purposes. ELAP accredited laboratories have demonstrated capability to analyze environmental samples using approved methods.

2.1 – VEOLIA staff shall develop schedules and methods for performing assigned duties, including sampling and analytical activities for monitoring wastewater plant operations, effluent, non-domestic discharges, WDR, NPDES, and other related activities. Function as project manager for work performed by outside, contract, and commercial laboratories. Schedule, evaluate, interpret, and appropriately apply sampling and analytical work performed by such outside, contract, and commercial laboratories.

2.2 – VEOLIA staff will ensure compliance with various reporting requirements; maintain State Department of Public Health laboratory certification for a variety of physical, chemical, biochemical and bacteriological analyses.

2.3 – VEOLIA shall collect, perform and/or contract the laboratory service in alignment with the DISTRICT's policies and procedures for the biological, chemical, and physical tests and analyses in both field and laboratory settings for water, wastewater, storm water, biosolids, and industrial waste, residuals, including the operation of current and future laboratory equipment; maintaining and cleaning laboratory equipment; implementing laboratory testing procedures as required by federal and/or state regulations; interpreting test results; and working in conjunction with the reuse water and wastewater treatment staff to effect necessary changes in plant operations.

2.4 – VEOLIA understands that we are responsible for and agrees to conduct in-house laboratory

ATTACHMENT A

testing to support the current ELAP certification. Attachment D Item 7 provides the reference to the DISTRICT's Certificate No. 1092, Expiration Date: 01/31/2016, Effective Date: 02/01/2014 which is the basis for this analysis.

Item 3.0 – Pretreatment Program Management

3.1 – VEOLIA will conduct on-site visits and inspections of non-domestic waste generators; review non-domestic waste discharge permit applications, prepare permits, monitor compliance with permits, prepare enforcement actions as necessary, and monitor compliance with such actions.

3.2 - VEOLIA shall develop, implement, and perform the procedures and guidelines for the DISTRICT's Pretreatment Program as provided in 40 CFR Part 403; including inspecting commercial and industrial facilities for compliance with all applicable federal, state, and local standards and laws; and responding to complaints regarding industrial waste dischargers. This includes the review of ground water discharge permits.

3.3 - VEOLIA shall develop, implement, and perform the duties related to industrial waste discharge and sewer use ordinance, including preparing and issuing permits; inspecting and monitoring commercial and industrial facilities to ensure compliance with all applicable federal, state, and local statutes and guidelines; maintaining an updated commercial and industrial wastewater survey discharge permit file; and preparing periodic reports on the effects of commercial and industrial discharges into the DISTRICT's wastewater treatment system.

3.4 - VEOLIA shall assist in the review and revision of the DISTRICT's Local Limits.

3.5 - VEOLIA shall prepare Pretreatment Permits, Notices of Violation, Administrative Orders, and Compliance Schedules for the DISTRICT's signature for new and existing industrial users and special discharges.

3.6 – VEOLIA will assist with the DISTRICT's pollution prevention fats, oils and greases (FOG) program.

ATTACHMENT A

Item 4.0 – Data Management, Recordkeeping, and Reporting

4.1 - VEOLIA shall coordinate the maintenance of work records and documents; prepare, maintain and validate statistical and analytical reports for the DISTRICT, regional, state, and federal agencies; represent the DISTRICT during inspections of the laboratory, the pretreatment program, and any other related audits and inspections.

4.2 - VEOLIA shall maintain the laboratory Quality Assurance Program in accordance with US EPA and Environmental Laboratory Assurance Program (ELAP), and maintains minimum certification of the facility as an Environmental Monitoring Laboratory. This includes updating the Quality Assurance Manual and Standard Operating Procedures.

4.3 - VEOLIA shall perform the duties to compose, compile, track, and analyze information and data relating to the environmental programs and compliance. Management and oversight duties, including compiling information and preparing a variety of records and reports related to regulatory monitoring requirements; creating, maintaining, and manipulating databases; preparing the laboratory, biosolids, reuse and pretreatment (Were applicable monthly/quarterly/semiannual/annual) reports.

4.4 – VEOLIA shall collect samples relating to quality assurance and quality control through a third party contracted laboratory. This includes performance testing as required by the NPDES Permit.

4.5 – VEOLIA shall collect samples for Acute Toxicity, Chronic Toxicity, ELAP Certification and Special Studies. The DISTRICT will continue to budget to this analysis.

Item 5.0 – Biosolids Monitoring Program

4.1 – VEOLIA shall collect and transfer samples to a contracted laboratory for stabilized biosolids as required in the NPDES Permit and 40 CFR Part 503.

4.2 – VEOLIA shall consolidate and provide biosolids analytical data to the DISTRICT's consultant to prepare the Annual 40 CFR Part 503 Biosolids Report.

ATTACHMENT A

Item 6.0 – Proposed Staffing Plan

6.1 - Current DISTRICT Staffing

6.1.1 - The DISTRICT currently utilizes one full time Environmental Compliance Supervisor, one full time Environmental Compliance Analyst, and one part time Laboratory Technician from the North Marin Water District (Funded by the DISTRICT and North Marin Water District) . The direction to these staff is provided by the DISTRICT's Manager-Engineer with supporting direction and assistance from VEOLIA management (Project and Assistant Project Managers and Pretreatment Programs Manager) staff. VEOLIA currently works in collaboration with the DISTRICT's staff and is not compensated for this work.

6.1.2 - The Pretreatment Program is administered by a part time outside contractor that reports to the DISTRICT's Manager-Engineer.

6.2 - Proposed VEOLIA Staffing and Organization

6.2.1 - The DISTRICT shall transfer all responsibilities and management described above including hire and retention of staff for two positions within the Environmental Compliance Department.

6.2.2 - Upon retirement of the DISTRICT's Environmental Compliance Analyst, VEOLIA will hire and retain a qualified candidate for this position.

6.2.3 - VEOLIA shall hire (provides salary, benefits, and employee management) and retain one full time Environmental Compliance Supervisor, one full time Environmental Compliance Analyst.

6.2.3 - The DISTRICT presently contracts with the North Marin Water District to provide one part time Laboratory Technician (Funded by the DISTRICT and North Marin Water District) to assist with the laboratory program. This program shall continue based on the DISTRICT's goals and objectives for this department.

ATTACHMENT A

6.2.4 - The DISTRICT will compensate VEOLIA for the two positions based on a monthly fee included in the annual contract adjustment.

6.2.5 – VEOLIA shall provide technical support to the VEOLIA staff through its National Pretreatment Programs Manager to provide guidance, training, and measurement of the performance of the programs.

Item 7.0 – Public Outreach and Education Program

7.1 - When requested VEOLIA will assist with recommendations for public education materials regarding the DISTRICT’s laboratory, pretreatment, reuse water, biosolids, pollution prevention, and wastewater treatment programs.

7.2 – VEOLIA will assist with public tours and presentations to provide training and education to participants.

7.3 – VEOLIA will assist with data collection and management for performance measurements to support the pollution prevention program.

ATTACHMENT B

Novato Sanitary District

Laboratory and Environmental Services
Agreement

ATTACHMENT B

COMPENSATION

- A. Compensation:
1. Initial annual base fee described in this proposal is **Three Hundred Sixteen Thousand Three Hundred Eighty Seven Dollars (\$316,387.00)**
 2. Service Fee Adjustment: The annual service fee will be adjusted on July 1st using the San Francisco, Oakland, San Jose - Bay Area CPI, Series ID: CUURA422SAO, April – April.
The July 2015 adjustment will be prorated at 50% (representing one half year).
- B. Invoicing:
1. VEOLIA shall provide monthly invoices describing the services performed.
 2. Correctness of performed work and billed amount(s) on all invoices shall be signed by the VEOLIA designated project manager.
- C. Material Supplies:
- a. VEOLIA shall procure material supplies as directed by the District utilizing preferred vendor for cost effective pricing and bill the District as direct pass through with a five (5) percent mark-up.

7.15 Business License

Company must obtain a business license from the City of Novato.

7.16 Further Assurances

The District and Company each agree to execute and deliver such further instruments and to perform any acts that may be necessary or reasonably requested in order to give full effect to this Agreement. The District and the Company, in order to carry out this Agreement, each shall use all reasonable efforts to provide such information, execute such further instruments and documents and take such actions as may be reasonably requested by the other and not consistent with the provisions of this Agreement and not involving the assumption of obligations or liabilities different from or in excess of or in addition to those expressly provided for herein.

7.17 Counterparts

This Agreement may be executed in any number of original counterparts. All such counterparts shall constitute one and the same document.

7.18 Governing Law

This Agreement shall be governed by and construed in accordance with the domestic laws of the State of California, without giving effect to any choice of law provision or rule that would cause the application of laws of any jurisdiction other than the State of California.

7.19 Headings

The Table of Contents and any heading preceding the text of Articles, Sections and Subsections of this Agreement shall be solely for convenience of reference and shall not constitute a part of this Agreement, nor shall they affect its meaning, construction or effect.

8.0 ADDITIONAL SERVICES

8.1 Description of Additional Services

The following items shall be considered to be Additional Services under this Agreement:

(1) any change in Facility operations, personnel qualifications or staffing or other cost which is a result of an Uncontrollable Circumstance or from the treatment of wastewater that exceeds the design capacity and / or capability of the Facility as specified in Schedule 1 of this Agreement;

(2) changes in raw wastewater influent that are subject to the adjustment methodology of Schedule 8.

(3) District's request of Company to provide additional or reduced services upon terms mutually agreed to by the Parties.

8.2 Payment for Additional Services

For Additional Services described in Sections 8.1(1) and 8.1(2), the District shall compensate Company for all costs and expenses reasonably incurred by Company in dealing with such event. For Additional Services described in Sections 8.1(3), the District and Company shall negotiate a mutually acceptable fee for such Additional Services. Company shall provide the District with Cost Substantiation with respect to the Additional Services described in Section 8.1 above.

[TEXT ENDS HERE – SIGNATURES ON THE FOLLOWING PAGE]

**NOVATO SANITARY DISTRICT
ENVIRONMENTAL SERVICES DEPT. COSTS**

Item							Estimated	Estimated
	2008-09 ⁽¹⁾	2009-10 ⁽¹⁾	2010-11 ⁽¹⁾	2011-12 ⁽¹⁾	2012-13 ⁽¹⁾	2013-14 ⁽¹⁾	2014-15	2015-16
Staffing - salaries & services ⁽²⁾	283,612	287,063	299,921	254,171	247,091	252,124	264,945	298,858
Staffing - Benefits ⁽³⁾	109,278	161,114	156,959	122,676	105,022	97,541	81,191	94,876
Total staffing costs	392,890	448,177	456,880	376,846	352,113	349,666	346,136	393,734
Research & Monitoring⁽⁴⁾								
Caltest Analytical	76,796	58,051	119,143	84,256	94,256	93,339	80,000	85,000
NMWD				4,110	21,628	19,865	18,000	19,000
Total Research & Monitoring	76,796	58,051	119,143	88,366	115,884	113,205	98,000	104,000
Total Estimated Costs	469,686	506,228	576,023	465,212	467,997	462,870	444,136	497,734

⁽¹⁾ All costs adjusted to FY14-15 basis at a 3%/year escalation.

⁽²⁾ Includes actual and estimated costs across Accounts #64010, #66010, and #66123.

⁽³⁾ Includes actual and estimated costs across Accounts #64020 and #66020.

⁽⁴⁾ Includes actual and estimated costs across Account #64160.

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

General:

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

- 1.5 FTE field workers for Sewer Maintenance (main line cleaning)
- 1.3 FTE field workers for Pump Station Maintenance
- 0.6 FTE field workers for Closed Circuit Television (CCTV) work
- 2.1 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 594 work orders were generated for October by the ICOM3 Computerized Maintenance Management System (CMMS). The CMMS scheduled over 80,000 LF of line cleaning for October. Staff completed 382 work orders leaving 212 work orders outstanding due to other collection system and pump station maintenance needs and staff availability; the outstanding work orders will be completed in November when the CMMS has scheduled only 18,205 LF of cleaning. The 382 maintenance work orders completed in October resulted in 59,982 feet of sewer pipelines cleaned by staff.

CCTV Performance: The District's CCTV van was in the field for 8 working days, inspecting 85 line segments totaling 11,282 feet. Staff also televised 268 feet using the Push Cam.

CCTV Findings:

- Infrastructure related: The October CCTV work did not identify any areas that require further evaluation.
- O&M related: The October CCTV work identified one area that requires a change in sewer line operations.

Collection System Projects:

The District awarded two informal contracts under the provisions of the Uniform Public Construction Cost Accounting Act (UPCCAA): (1) Repair of a sewer main at 14 Angelica

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

Court, and (2) Replacement of 199 feet of sewer main across Redwood Blvd. at Hill Road. Work has not commenced at either location.

Pump Station Maintenance:

The Collection System Department conducted 297 lift station inspections this month. 147 of the inspection visits were generated through the District's JobsCal Plus CMMS system. There are 6 outstanding work orders for the month that will be completed in November. Lift station inspections included 30 submersible pump station visits, once per month; 4 underground style, dry well/wet well pump station visits, once per month; and 4 main pump stations that are visited daily.

Pump #2 at BMK 10 was removed, repaired and reinstalled this month. The Ignacio Transfer Pump Station Force Main was cleaned by "pigging". This operation is completed by launching a rubber coated foam, bullet shaped pipe cleaning "pig" at the Ignacio Transfer Pump Station and retrieving it at the force main discharge structure located on the north side of Novato Creek, west of the railroad tracks.

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

Air Relief/Vacuum Valves (ARVs):

Staff completed maintenance inspections on 15 air relief/vacuum valves.

Pump Station Rehabilitation:

The rehabilitation of the Los Robles Pump Station and Digital Pump Station are complete and the contractor is currently performing punch list work.

Safety and Training:

General: Collection System staff attended four safety tailgate meetings.

Specialized training:

- Steve Krautheim, Tim O'Connor and Dasse de longh attended a webinar on SSMP SOP Requirements.
- Aaron Hendricks and Bob Stiles attended the Woodland Safety Training Day.
- The Department attended Control Panel Training at Digital Pump Station.
- The Collection System crew received SOP based training for CCTV Procedures and Ignacio Transfer Pump Station Pigging operations.

Safety performance:

There were no lost time accidents this month for a total of 1,325 accident free days.

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

Standard Operating Procedures (SOPs):

Department staff did not generate any SOP's during the month of October.

Emergency Operating Procedures (EOPs) – Pump Stations:

The EOP's are complete and are being printed. Staff will present the EOPs to the Committee at its December meeting.

Sanitary Sewer Overflows (SSOs):

The District experienced one (1) SSO in October, as discussed below.

No.	Date	Location	Amount, gal	Cause
1	10/20/2014	7 Marion Ct.	5	Debris

1. SSO at 7 Marion Ct.: This SSO was a Category III event with the estimated discharge volume of approximately 5 gallons which was fully contained in the gutter pan resulting in full recovery (100%). Staff determined that this was an intermittent, low volume event.

The discharge was determined to be the result of a partial debris blockage in the main line. District crew members initially discovered the overflow at 11:00 am and cleared the rock/paper blockage at 11:15. District employees inspected the upstream line segments and found them to be surcharged, also due to rock/paper debris. The line segments were cleaned and the problem alleviated. Staff determined the overflow quantity using visual volume estimation techniques accounting for the intermittent quantity discharging from the manhole, and volumetric calculation of sewage residing in the gutter pan. Local resident interviews were conducted to estimate the overall duration for this event. Also, although the resident interviews indicated that the event may have initiated 2-3 days before staff discovered it, staff is confident about the estimated discharge volume, based on the evidence of the discharge being isolated and confined to the gutter pan.

This line segment was last cleaned on May 17, 2013, triggered by a previous discharge. At that time the line segment was on a thirty-six (36) month cleaning frequency. CCTV inspection immediately after the previous discharge event showed no change in the condition of the line segment from the previous CCTV work performed during routine maintenance (minor sags at two locations but otherwise in good condition) so the cleaning frequency was not changed. As a precautionary measure, the cleaning frequency for this line segment has now been moved to a six (6) month cleaning schedule as a result of this event because the stoppage was caused by the same materials as the previous event.

This event was reported into the CIWQS database on 10/29/2014 as a Category III event, SSO Event ID # 810231 and was certified in CIWQS on 11/10/2014, Certification ID # 246527.

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

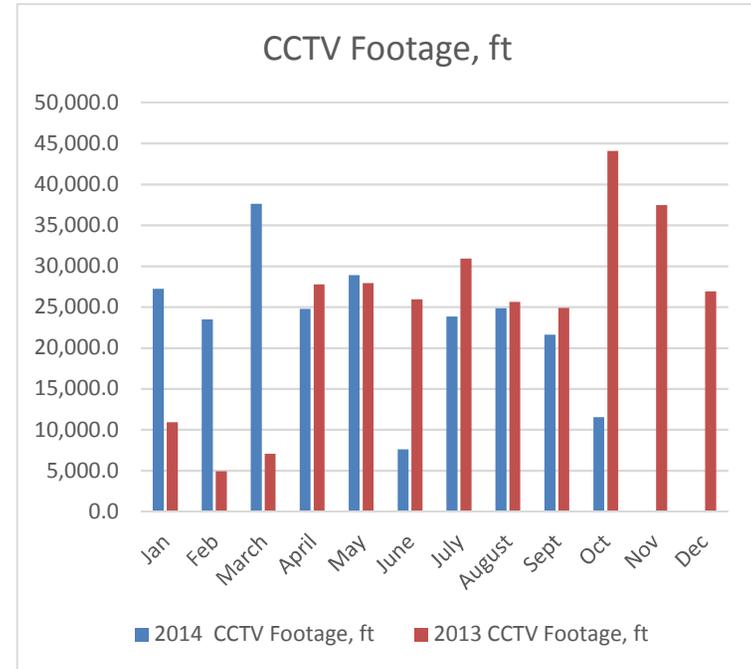
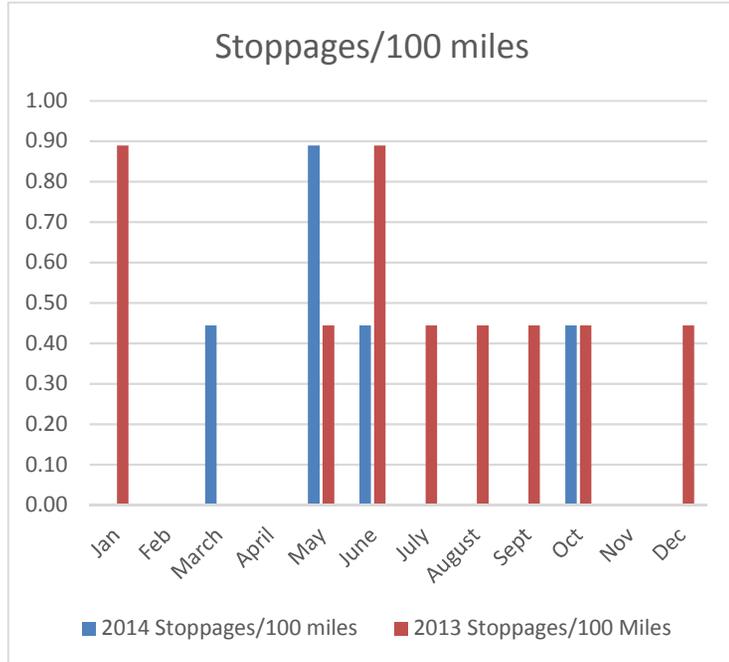
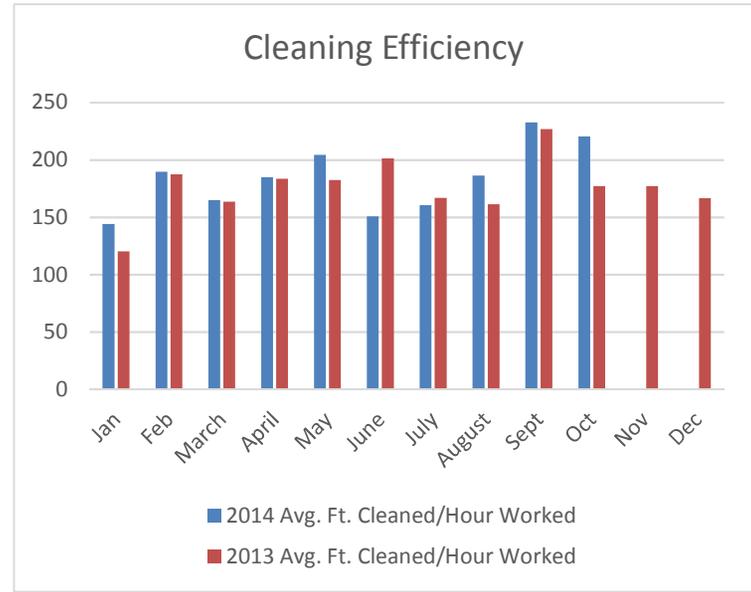
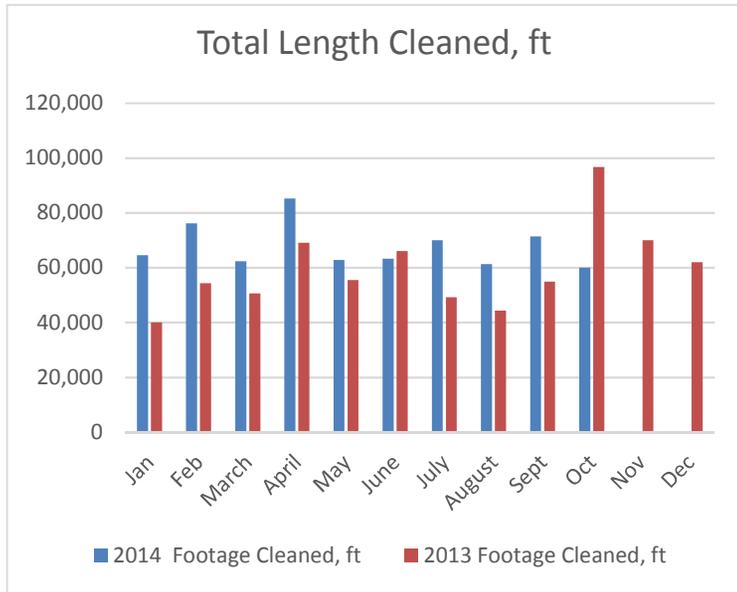
	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total Year to Date	Average Year to Date
A. Employee Hours Worked														
Number of FTEs (main line cleaning), hrs.	2.6	2.5	2.2	2.6	1.8	2.5	2.3	2.0	1.7	1.5			NA	2.2
Number of FTEs (other)	1.7	1.6	2.1	1.8	1.7	2.1	1.9	1.8	1.7	2.1			NA	1.9
Number of FTEs (CCTV)	0.9	0.8	1.0	0.8	0.9	0.2	0.3	0.9	0.6	0.6			NA	0.7
Total, FTEs	5.2	4.9	5.3	5.1	4.4	4.8	4.6	4.7	4.0	4.2			NA	4.7
Regular Time Worked, (main line cleaning), hrs	448	402	378	461	308	420	436	329	307	272				
Regular Time Worked on Other, hrs (1)	294	262	350	313	297	362	358	298	303	391				
Regular Time Worked on CCTV (2)	158	125	172	136	164	38	63	145	110	103				
Total Regular time, worked, hrs	900	789	900	909	768	820	857	772	720	766			8,200	820
Total Vacation/Sick Leave/Holiday, hrs	285	151	101	143	220	195	198	126	294	284			1,997	200
Vacation/Sick Leave/Holiday, FTEs	1.6	0.9	0.6	0.8	1.3	1.2	1.1	0.8	1.7	1.6			11.4	1.1
Overtime Worked on Coll. Sys., hrs	2	8	3	15	0	3	17	1	5	7			61	6
Overtime Worked on Other, hrs (1)	22	17	16	31	35	26	15	17	27	17			223	22
Overtime Worked on CCTV (2)	0	0	0	3	0	0	4	0	0	1			8	1
Total Overtime, hrs	24	25	19	49	35	29	36	18	32	25	NA	NA	291	29
B. Productivity														
1. Line Cleaning														
Rodder Work Orders generated	57	30	24	78	20	72	73	68	29	69			520	52
Rodder 3203 ft. cleaned	10,989	3,337	6,378	11,933	1,388	12,770	9,286	6,005	289	461			62,836	6,284
Rodder - outside services, ft cleaned	0	0	0	0	0	0	0	0	3,494	3,720			7,214	721
Flusher Work Orders generated	351	352	369	532	313	308	333	288	450	525			3,821	382
Truck 3205V ft. cleaned	16,187	16,552	18,158	802	13,575	9,410	17,136	3,441	16,834	205			112,300	11,230
Truck 3206V ft. cleaned	37,342	56,332	37,781	72,511	47,863	41,143	43,561	51,825	54,306	59,316			501,980	50,198
Flusher - outside services, ft. cleaned	2,301	1,570	6,492	11,155	0	0	7,216	1,717	8,585	0			39,036	
Total Footage cleaned(3)	64,518	76,221	62,317	85,246	62,826	63,323	69,983	61,271	71,429	59,982			677,116	67,712
Work Orders completed	408	361	393	580	313	348	371	292	431	382			3,879	388
Work Orders backlog	66	21	0	30	20	32	35	64	48	212			528	53
2. Closed Circuit Television (CCTV)														
Camera Work Orders generated	0	0	0	0	0	0	0	0	0	0			0	
CCTV Truck 3126T, ft. videoed	24,487	21,931	31,116	19,331	27,555	5,560	11,827	19,137	12,090	11,282			184,316	18,432
CCTV (hand cam), ft. videoed	449	0	0	5,428	1,340	2,056	4,802	3,983	946	268			19,272	
CCTV Inspection - outside services, ft. videoed	2,301	1,570	6,492	0	0	0	7,216	1,717	8,585	0			27,881	
Total CCTV footage(3)	27,237	23,501	37,608	24,759	28,895	7,616	23,845	24,837	21,621	11,550	NA	NA	231,469	
C. Sanitary Sewer Overflows (SSOs)														
Minor (Category III)	0	0	1	0	2	1	0	0	0	1			5	NA
Major (Category II)	0	0	0	0	2	1	0	0	0	1			4	NA
Major (Category I)	0	0	0	0	0	0	0	0	0	0			0	NA
Major (Category I)	0	0	1	0	0	0	0	0	0	0			1	NA
Overflow Gallons	0	0	180	0	50	235	0	0	0	5			470	NA
Volume Recovered	0	0	0	0	50	235	0	0	0	5			290	NA
Percent Recovered	NA	NA	0%	NA	100%	100%	NA	NA	NA	100%	NA	NA	62%	NA
D. Service Calls (non-SSO related)														
Service calls, normal hours, #	8	3	5	4	4	3	6	9	5	7			54	5
Normal hours S.C. response time, mins (avg.)	38	19	25	18	14	16	15	16	20	20			201	20
Service Callouts, after hours, #	0	1	1	1	1	1	3	1	0	0			9	1
After Hours S.C. response time, mins (avg.)	0	15	40	42	13	25	34	10	0	0			179	18
E. Benchmarks														
Average Ft. Cleaned/Hour Worked	144	190	165	185	204	151	161	186	233	221	NA	NA	NA	184
Total Stoppages/100 Miles	0.0	0.0	0.4	0.0	0.9	0.4	0.0	0.0	0.0	0.4			2.2	NA
Average spill response time (mins)	0	0	18	0	39	14	0	0	0	0			NA	7
Callouts/100 Miles	0.0	0.4	0.4	0.4	0.4	0.4	1.3	0.4	0.0	0.0			4.0	0.4
Overtime hours/100 Miles	1	4	1	7	0	1	8	0	2	3			27.11	3
Overflow Gallons/100 Miles	0	0	80	0	22	104	0	0	0	2			209	21

(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



Novato Sanitary District

Pump Station Monthly Report For October 2014 (as of October 31, 2014)

	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total Year to Date	Average Year to Date
Employee Hours Worked	248	212	205	226	251	190	334	304	258	255			2,483	
Number of Employees (FTEs)	1.4	1.1	1.1	1.1	1.3	1.0	1.4	1.5	1.3	1.3				1.2
Regular Time Worked on Pump Sta	231	181	183	194	229	169	255	250	232	230			2,153	
Overtime Worked on Pump Sta	17	31	22	32	22	22	79	54	26	26			330	
After Hours Callouts	1	5	1	5	6	1	11	7	6	4			47	
Average Callout response time (mins)	30	26	25	33	13	22	39	27	26	28			269	27
Work Orders														
Number generated in month	124	115	147	116	130	143	150	122	153	136			1336	
Number closed in month	121	110	142	109	128	139	127	112	147	127				
Backlog	3	5	5	7	2	4	23	10	6	9				

**COLLECTION SYSTEM (Pump Stations)
WORK ORDER STATISTICS
October 1, 2014 - October 31, 2014**

	Open Work Orders Due Prior to 10/1/2014	Open Work Orders 10/1/2014 - 10/31/2014	Total Open Work Orders
Preventive	6	133	133
Corrective	3	3	3
Total	9	136	136

	Closed Work Orders 10/1/2014 - 10/31/2014
Preventive	127
Corrective	0
Total	127

Total Outstanding Work Orders as of 10/31/2014	9
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NOVATO SANITARY DISTRICT
Wastewater Operations Committee Meeting
Reclamation Facilities Report
October 2014

Summary:

The rancher continued to work on routine parcel maintenance. A total of 59.7 MG of recycled water was applied to the irrigation pastures in October. Pump No. 2 at Drainage Pump Station No. 7 was removed for inspection/repair. Work was completed to empty the sludge lagoons, transferring approximately 3.5 MG of sludge into the Dedicated Land Disposal (DLD) site. Also, about 3,930 cubic yards of solids were excavated from the sludge lagoons and spread in the DLD.

Ranch Operations:

The rancher continued to perform annual parcel maintenance, spraying weeds and thistles, and making sprinkler and fence repairs.

Irrigation Parcels:

All Parcels scheduled to irrigate were irrigated this month. The irrigation was turned off for ten days in the middle of the month as sporadic rain events passed through Novato. The irrigation system was disabled at the end of the month due to lack of irrigation water in the storage ponds.

When the irrigation was disabled and the drainage pumps activated, Pump No. 2 at Drainage Pump Station No. 7 sounded rough and was shaking the pump station when tested. Staff shut the pump down and contacted a local pump maintenance vendor to pull the pump for inspection. When the pump was removed from the station the vendor inspected the pump and did not see any obvious causes for the noise or vibration so the pump was taken to their shop for further analysis.

Staff found one failed control board in Site 7, Parcel 1, which was replaced.

Irrigation Pump Station:

Approximately 59.7 MG of recycled water was used for irrigation of the parcels this month.

The Wildlife Pond recirculation system remains out of service due to a leak in the line. Staff will pursue finding the leak when time allows. Recirculation of the water through the Wildlife Pond is not an essential function of the Reclamation Facility.

Sludge Handling & Disposal:

Custom Tractor Service (CTS) of Petaluma completed pumping sludge out of the sludge lagoons and into the DLD area. Approximately 0.9 MG of sludge was pumped out of Lagoons 1 & 3 this month bringing the total amount of sludge pumped from the lagoons to the DLD to 3.5 MG this year. CTS also removed the heavier, bottom solids from all of the lagoons with an excavator. Approximately 3,930 cubic yards of solids was excavated out of the sludge lagoons and spread in the DLD.

NOVATO SANITARY DISTRICT
Reclamation Facility - Monthly Statistics for Calendar Year 2014, as of October 2014

	January	February	March	April	May	June	July	August	September	October	November	December	Total Year to Date	Annualized Monthly Average
Irrigation Pump Station														
Plant flow to ponds (MG)	0	59.39	0	0	0	90.36	103.36	89.67	89.11	0			431.89	35.99
Irrigation (MG)	17.87	0	7.0	0	15.57	65.36	63.45	88.19	37.77	59.7			354.91	29.58
Irrigation Pump 1 Hours	29.3	0	13.5	0	27.5	107.8	106.8	127.4	77.2	158.7			648.2	54.02
Irrigation Pump 2 Hours	0	0	2.9	0	35.3	106.6	103.8	126.7	84.4	561.1			1020.8	85.07
Irrigation Pump 3 Hours	31.4	0	14.4	0	25.9	133.1	103.2	120.3	0.3	0			428.6	35.72
Washdown Water Pump Hours	0	0	0	0	0	0	0	0	0	0			0	0.00
Wildlife Feed Pump Hours	0	0	0	0	352.9	747.6	212.4	0	0	0			1312.9	109.41
Water Circulated through Wildlife Pond (MG)	0	0	0	0	22.23	47.10	13.38	0	0	0	0	0	82.7127	6.89
Strainer No. 1 Hours	-	-	0.9	0	10.9	44.1	37.2	43.5	23.6	36.8			197	16.42
Strainer No. 2 Hours	-	-	1	0	10.8	43.9	38.2	47.7	20.9	37.3			199.8	16.65
Pond 1 Gauge @ Beginning of Month	3.3	2.4	6.1	5.2	5.2	3.9	4.4	5.3	4.2	7				
Pond 1 Gauge @ End of Month	2.4	6.1	5.2	5.2	3.9	4.4	5.3	4.2	7	3.2				
Pond 1 Gallons Stored @ End of Month(MG)	15.2	45.8	37.6	37.6	27.2	31.2	38.4	29.6	53	21.6				
Pond 2 Gauge @ Beginning of Month	3.3	2.2	6.1	5.2	5.2	4	4.4	5.4	4.3	7				
Pond 2 Gauge @ End of Month	2.2	6.1	5.2	5.2	4	4.4	5.4	4.3	7	3.3				
Pond 2 Gallons Stored @ End of Month(MG)	17	58	49	49	36	40	51	39	68	28.6				
Total Irrigation Water Stored	32.2	103.8	86.6	86.6	63.2	71.2	89.4	68.6	121	50.2	0	0		
Drainage Pump Station No. 3														
Drainage Pump No. 1 Hours	0	0	0	0	0	0	0	0	16.9	0				
Drainage Pump No. 2 Hours	0	0	14	0	0	0	0	0	0	2.9				
Drainage Pump No. 3 Hours	0.7	134.5	0	31.1	0.8	0	0	0	0	0				
Total Gallons Stormwater Pumped (MG)	0.21	40.35	4.2	9.33	0.24	0	0	0	5.07	0.87	0	0	60.27	5.02
Drainage Pump Station No. 7														
Drainage Pump No. 1 Hours	0	24.2	13.2	3.9	0	0	0	0	0.6	4				
Drainage Pump No. 2 Hours	0	106.6	48.8	9.5	0	0	0	0	0.4	0.1				
Drainage Pump No. 3 Hours	0	1.7	0.9	0	0	0	0	0	0.3	1.1				
Total Gallons Stormwater Pumped (MG)	0	59.63	28.31	6.03	0	0	0	0	0.585	2.34	0	0	96.885	8.07