

NOVATO SANITARY DISTRICT

Meeting Date: August 13, 2013

The Wastewater Operations Committee of the Novato Sanitary District will hold a meeting at 2:00 PM, Tuesday, August 13, 2013 at the District offices, 500 Davidson Street, Novato.

AGENDA

1. AGENDA APPROVAL:

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

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

3. CONSIDER APPROVAL OF MINUTES OF THE JULY 15, 2013 MEETING

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

- 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 JULY 2013:

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

6. RECLAMATION FACILITY REPORT FOR JULY 2013

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

7. ADJOURNMENT:

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

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

July 15, 2013

A regular meeting of the Wastewater Operations Committee of Novato Sanitary District was held at 2:00 p.m., Monday, July 15, 2013, at the District Office, 500 Davidson Street, Novato.

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

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

ALSO PRESENT: Lynda Rodefer, Veolia Water

AGENDA APPROVAL: The agenda was approved as presented.

PUBLIC COMMENT: None.

APPROVAL OF MEETING MINUTES FOR JUNE 17, 2013: The June 17, 2013 minutes were approved as written.

WASTEWATER TREATMENT FACILITIES OPERATIONS AND MAINTENANCE REPORT FOR JUNE 2013:

- Treatment Plant Performance Report, Maintenance Report and Safety & Training:
John Bailey, Plant Manager, Veolia Water, reported on the treatment plant performance for the month of June. He stated that there were no permit exceedances, violations or excursions and noted that June flows remain low as a dry weather pattern continues. Mr. Bailey noted a correction to page 2 of the report and pointed out that the volume of recycled water produced was 15.3 million gallons, not 19.52 million gallons as originally written.

Mr. Bailey reported on the key events at the Novato treatment facility, the Ignacio transfer pump station, the recycled water plant and the lagoons. He stated that aeration basin #4 was removed from service, drained and cleaned. Mr. Bailey identified equipment that is/will be out of service due to planned servicing, maintenance or replacement.

Mr. Bailey reported that Veolia employees have been accident free for a total of 1,124 days/51,254 hours. He stated that Jerome Meter (H₂S) readings continue to be taken in the Lea Drive neighborhood and within the treatment facility. He discussed the safety training for the month and reviewed the treatment plant performance graphs.

Mr. Bailey stated that Veolia's Environmental Management Systems (EMS) report will be available for presentation in August. The Manager requested the initial report be given to the Wastewater Operations Committee at their August 13th meeting prior to being presented to the Board of Directors.

- Odor control: Sandeep Karkal, Deputy Manager-Engineer, stated that staff continues to work to address issues of concern relating to odor control, noise, and landscaping. In regards to odor control, the Deputy Manager-Engineer stated that Mr. David McEwen of Brown and Caldwell completed an initial odor sampling in early July and that the results would be available in late July/early August.

The Deputy Manager-Engineer stated that some of the modular covering units for the aeration basins have arrived. He noted that the remainder of the units will arrive in late July and that the installation will be scheduled.

COLLECTION SYSTEM OPERATION AND MAINTENANCE REPORT FOR JUNE 2013:

The Deputy Manager-Engineer discussed the Collections System Monthly Report for June 2013. He reported that the Collections System crew cleaned a total of 66,025 feet of sewer pipeline and that the department completed 267 maintenance work orders which were generated in June. He stated that the department's CCTV (closed caption televised) van was in the field for 15 working days and that 25,938 feet of main sewer line was televised.

The Deputy Manager-Engineer stated that there were two sanitary sewer overflows during June. He stated that the first event was caused by root intrusion which resulted in a discharge of approximately 1,110 gallons. He noted that due to the location of the event, only 9% was recovered. The Deputy Manager-Engineer stated that the second event was a discharge of less than one gallon which was fully contained in the street. He noted that this event was determined to be a "burp" resulting from a partial obstruction in the District force main that cleared itself almost immediately.

The Deputy Manager-Engineer stated that safety performance for the Collections System department was good with a total of 150 accident-free days. He reported that staff issued two Standard Operating Procedure (SOP's) on periodic pump station checks during the month.

RECLAMATION FACILITY REPORT FOR JUNE 2013:

The Deputy Manager-Engineer presented the Reclamation Facilities report for June due to Steve Krauthem's absence. The Deputy Manager-Engineer stated that the rancher has completed harvesting hay on Site 2 and that irrigation was enabled on all sites. He noted that the rancher has moved cattle in to Sites 3 & 7. The Deputy Manager-

Engineer gave an overview of repairs that have been completed to the underground irrigation system and to the sprinkler control actuators.

The Deputy Manager-Engineer stated that approximately 35 million gallons of recycled water was used for irrigation in June.

ADJOURNMENT: There being no further business to come before the Committee, the meeting adjourned at 3:04 p.m. The next Wastewater Operations Committee meeting will be held on Tuesday, August 13th at 2:00 PM.

Respectfully submitted,

Beverly James
Manager-Engineer

Julie Swoboda, Recording

DRAFT



August 8, 2013

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

Subject: Veolia Water Operations Report – July 2013

Dear Ms. James:

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

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
July 2013**

Prepared for

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

Prepared by

Veolia Water West Operating Services, Inc. (VWWOS)

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TREATMENT PLANT PERFORMANCE SUMMARY: July 2013:

Reclamation/Storage – Waste Discharge Requirements (WDR)

Parameter	Value		Limit	
	Ave	Max	#1	#2
Flow, MGD (monthly ave/max)	3.73	4.36	N/A	N/A
Max Peak Hour, MGD – Daily (Dry Weather)	N/A	N/A	N/A	N/A
Influent BOD ₅ , lb/day (month ave/max)	8,341	9,621	N/A	N/A
Influent TSS, lb/day (monthly ave/max)	8,400	12,616	N/A	N/A
Effluent BOD ₅ , mg/L (monthly ave/weekly max)	<6	7	40	N/A
Effluent TSS, mg/L (monthly ave/weekly max)	<3	3	N/A	N/A
Effluent BOD ₅ - % Removal, Minimum	98	N/A	N/A	N/A
Effluent TSS - % Removal, Minimum	99	N/A	N/A	N/A
Ammonia, mg/L – (monthly ave/daily max)	5.4	22	N/A	N/A
pH, su (min / max)	7.0	7.3	6.5	8.5
Total Coliform (5 Sample Median) / mpn/100 ml	23	N/A	240	N/A
Total Coliform (maximum) / mpn/100 ml	30	N/A	10,000	N/A
Total Permit Exceedances (WDR)	0			

NA – Not Applicable

Discussion of Violations / Excursions: NONE

Title 22 - Recycled Water Production and Quality

Description	Units	Value	Limit
Volume Produced	Million Gallons	18.50	N/A
Average Turbidity	NTU	1.3	< 2.0
Turbidity > 5 NTU (in 24 hour)	Minutes	0	65
Minimum CT (disinfection)	ml-min/L	> 450	> 450
Minimum Dissolved Oxygen (DO)	mg/L	7.9	> 1.0
Maximum Total Coliform	mpn/100 ml	< 2	< 2

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

- Routine rounds, readings and maintenance
- Assisted Contractor with bulkhead installation after hours shutdown
- Digested Sludge Pump #2 – cleared blockage
- Repair to Blower #3 – VFD Fan
- Repaired air monitor sensor on sludge building
- Repaired condensate leak on HVAC – Blower Building
- Drained and cleaned out Primary Clarifier #2 for Recoating
- Annual Aeration Basin Mixer Service performed

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

- Headworks Compactor OOS – Auger replacement / Scheduled to ship week of July 15th
- Primary Clarifier #2 OOS – Preparation for recoating as part of Contract “C” – WWTP Upgrade Project
- GBT Odor Fan #1 OOS - replace bearings/belts

Ignacio Transfer Pump Station

- Routine rounds, readings and maintenance
- Installed new cutter cartridge – Grinder
- Cleaned and prepared old cutter cartridge for return to JWC
- Influent Pump #1 – Cleared blockage
- Influent Pump #2 – Cleared blockage

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

- Influent channel grinder (see above)

Recycled Water Plant

- Performed plant rounds and maintenance
- Produced 18.50 million gallons of recycled water in July
- Rebuilt Chlorine Analyzer
- Assisted with RWP Tour

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

- Polymer Pump #1 OOS – New pump on order
- Compressor #2 OOS – warranty issue

Sludge Lagoons

- Performed checks

ADMINISTRATION:

- Electronic Self Monitoring Report June submitted on 7-19-13

SAFETY AND TRAINING:

- Monthly plant safety inspections for Novato WWTF completed
- Five Minute Tailgate training is held daily with the O&M staff.
- No safety incidents for the month of July 2013
- Accident Free: 6/1/10 – 7/31/13: 1,155 days / 51,975 hours
- Emergency Action Plan
- Hot Work
- Reviewed SOP – Draining Pump Station Headworks Force Main

ODORS:

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

MISCELLANEOUS

- Process Control Management Plan (PCMP) meetings held regularly
- Brian Exberger – New Assistant Plant Manager
- Ed Mann Retired

Veolia Support Staff On/Off Site (Various Times)

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

Novato Sanitary District
BOD/TSS Report



July, 2013

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		
07/01/13	3.93	254	8,325	344	11,275	7	229	3	98	97.2	99.1
07/02/13	3.88										
07/03/13	3.82	302	9,621	396	12,616	<5	<159	<3	<96	98.3	99.2
07/04/13	3.75										
07/05/13	3.72	294	9,121	356	11,045	8	248	<3	<93	97.3	99.2
07/06/13	3.79										
07/07/13	3.98										
07/08/13	3.40	268	7,599	346	9,811	7	198	<3	<85	97.4	99.1
07/09/13	3.50										
07/10/13	3.64	243	7,377	306	9,289	<5	<152	<3	<91	97.9	99.0
07/11/13	3.53										
07/12/13	3.42	282	8,043	436	12,436	<5	<143	<3	<86	98.2	99.3
07/13/13	3.49										
07/14/13	3.53	302	8,891	400	11,776	<5	<147	<3	<88	98.3	99.3
07/15/13	3.54										
07/16/13	3.63	299	9,052	331	10,021	8	242	<3	<91	97.3	99.1
07/17/13	3.63										
07/18/13	3.53	288	8,479	421	12,394	6	177	<3	<88	97.9	99.3
07/19/13	3.47										
07/20/13	3.45										
07/21/13	3.58										
07/22/13	3.81	294	9,342	118	3,749	5	159	<3	<95	98.3	97.5
07/23/13	4.01										
07/24/13	3.89	176	5,710	165	5,353	9	292	<3	<97	94.9	98.2
07/25/13	3.93										
07/26/13	3.86	265	8,531	111	3,573	<5	<161	<3	<97	98.1	97.3
07/27/13	3.84										
07/28/13	4.00										
07/29/13	3.28			130	3,556			<3	<82		97.7
07/30/13	4.36			127	4,618			<3	<109		97.6
07/31/13	4.31			125	4,493			<3	<108		97.6
Weekly Averages											
07/06/13	Week 1	283	4,093	365	5,282	7	96	3	43		
07/13/13	Week 2	264	3,481	363	4,768	6	75	3	40		
07/20/13	Week 3	296	3,995	384	5,170	6	86	3	40		
07/27/13	Week 4	245	3,566	131	1,917	6	93	3	44		
	Week 5										
Monthly											
Minimum	3.28	176	5,710	111	3,556	<5	<65	<3	<37	95	97
Maximum	4.36	302	9,621	436	12,616	9	132	3	<49	98	99
Total	115.50										
Average	3.73	272	8,341	274	8,400	<6	<87	<3	<42	98	99

Novato Sanitary District
Conventional Pollutants Report



July, 2013

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	
07/01/13	3.93	7.0	36			21	7.3	22.00			24.1
07/02/13	3.88	6.8					7.2				24.7
07/03/13	3.82	7.0				4	7.2				23.9
07/04/13	3.75						7.1				24.3
07/05/13	3.72	7.1				30	7.1				23.1
07/06/13	3.79										
07/07/13	3.98										
07/08/13	3.40	7.4	35			30	7.1	1.53			23.3
07/09/13	3.50	7.2					7.0				23.7
07/10/13	3.64	7.2				2	7.0				23.8
07/11/13	3.53	6.7					7.0				23.4
07/12/13	3.42	7.1				4	7.0				23.1
07/13/13	3.49										
07/14/13	3.53					2					
07/15/13	3.54	7.2					7.0				23.4
07/16/13	3.63	7.2	33			22	7.0	0.11			23.1
07/17/13	3.63	7.0					7.0				23.2
07/18/13	3.53	7.1	32			2	7.0	1.29			23.1
07/19/13	3.47						7.0				23.7
07/20/13	3.45										
07/21/13	3.58										
07/22/13	3.81	7.2	31			2	7.0	1.26			23.9
07/23/13	4.01	7.0					7.1				24.0
07/24/13	3.89					2	7.1				23.5
07/25/13	3.93						7.0				23.9
07/26/13	3.86					4	7.0				24.1
07/27/13	3.84										
07/28/13	4.00										
07/29/13	3.28	7.1				2	7.0				23.4
07/30/13	4.36	6.3					7.0				23.1
07/31/13	4.31						7.0				23.5
Monthly											
Minimum	3.28	6.3	31			2	7.0	0.11			23.1
Maximum	4.36	7.4	36			30	7.3	22.00			24.7
Total	115.50										
Average	3.73	7.0	33				7.1	5.24			23.6

TOTAL COLIFORM (RECLAMATION)

Jul-13

(1) 5 Sample Median not to exceed 240 mpn/100 mL

(2) Maximum not to exceed 10,000

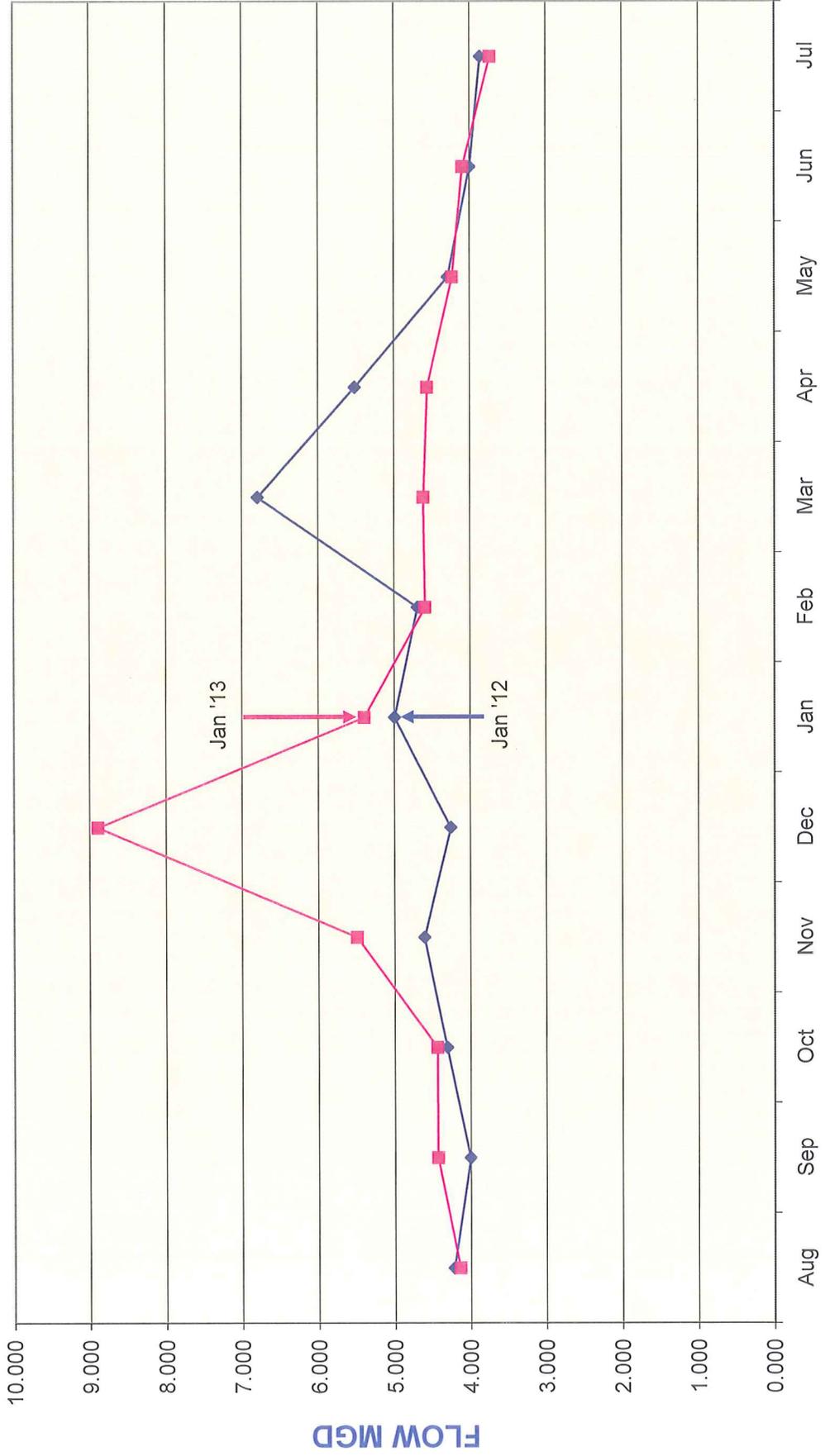
Note (2):

Maximum must be confirmed by a follow-up sample taken within 24 hours

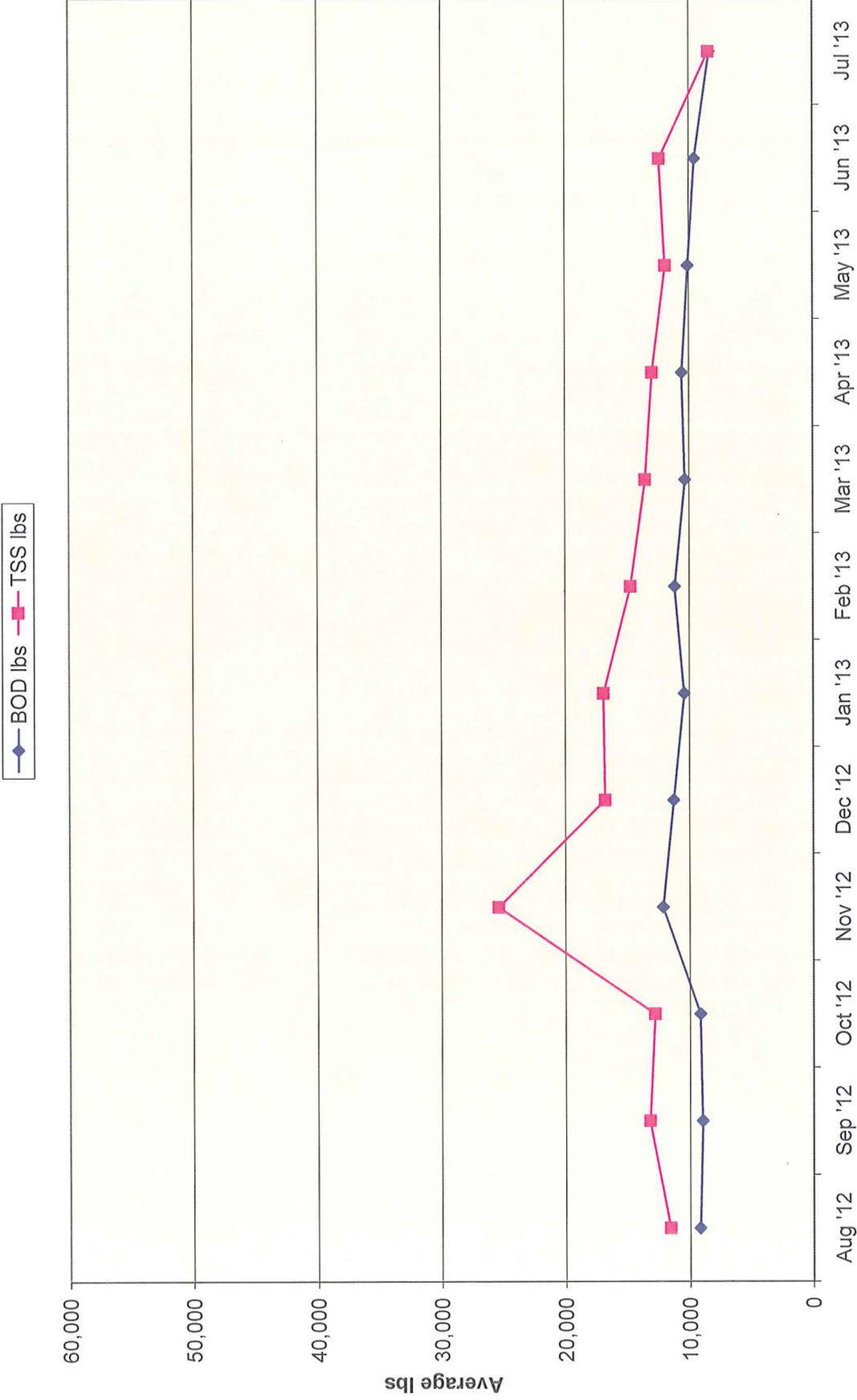
Date	Value	Median
June 21, 2012	50	
June 24, 2012	23	
June 26, 2012	70	
June 28, 2012	2	
July 1, 2013	21	23
July 2, 2013		
July 3, 2013	4	21
July 4, 2013		
July 5, 2013	30	21
July 6, 2013		
July 7, 2013		
July 8, 2013	30	21
July 9, 2013		
July 10, 2013	2	21
July 11, 2013		
July 12, 2013	4	4
July 13, 2013		
July 14, 2013	2	4
July 15, 2013		
July 16, 2013	22	4
July 17, 2013		
July 18, 2013	2	2
July 19, 2013		
July 20, 2013		
July 21, 2013		
July 22, 2013	2	2
July 23, 2013		
July 24, 2013	2	2
July 25, 2013		
July 26, 2013	4	2
July 27, 2013		
July 28, 2013		
July 29, 2013	2	2
July 30, 2013		
Maximum	30	23

FLOW COMPARISON

—◆— 2011/12 —■— 2012/13



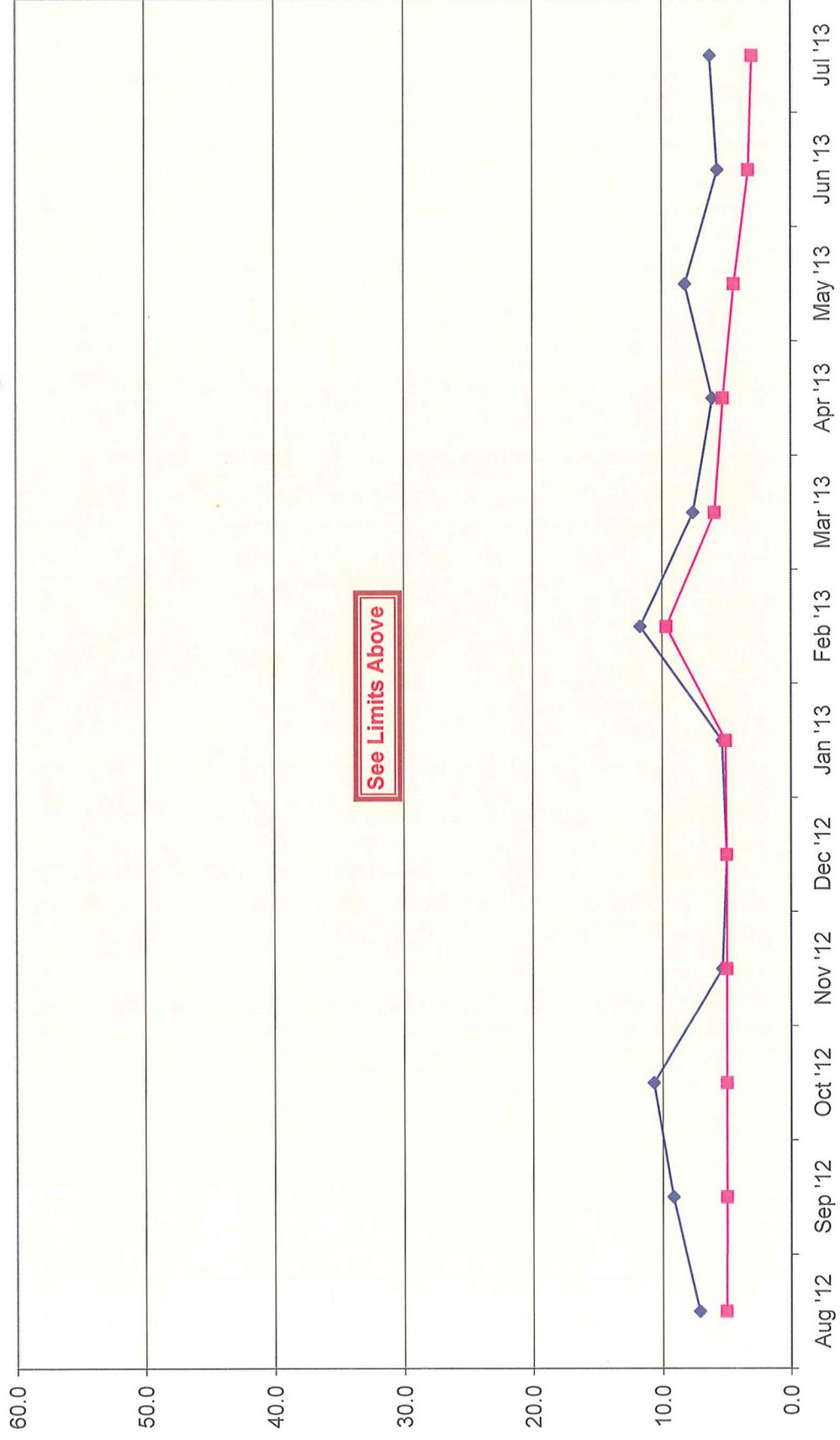
Influent Load BOD / TSS lbs



Effluent BOD / TSS Concentration

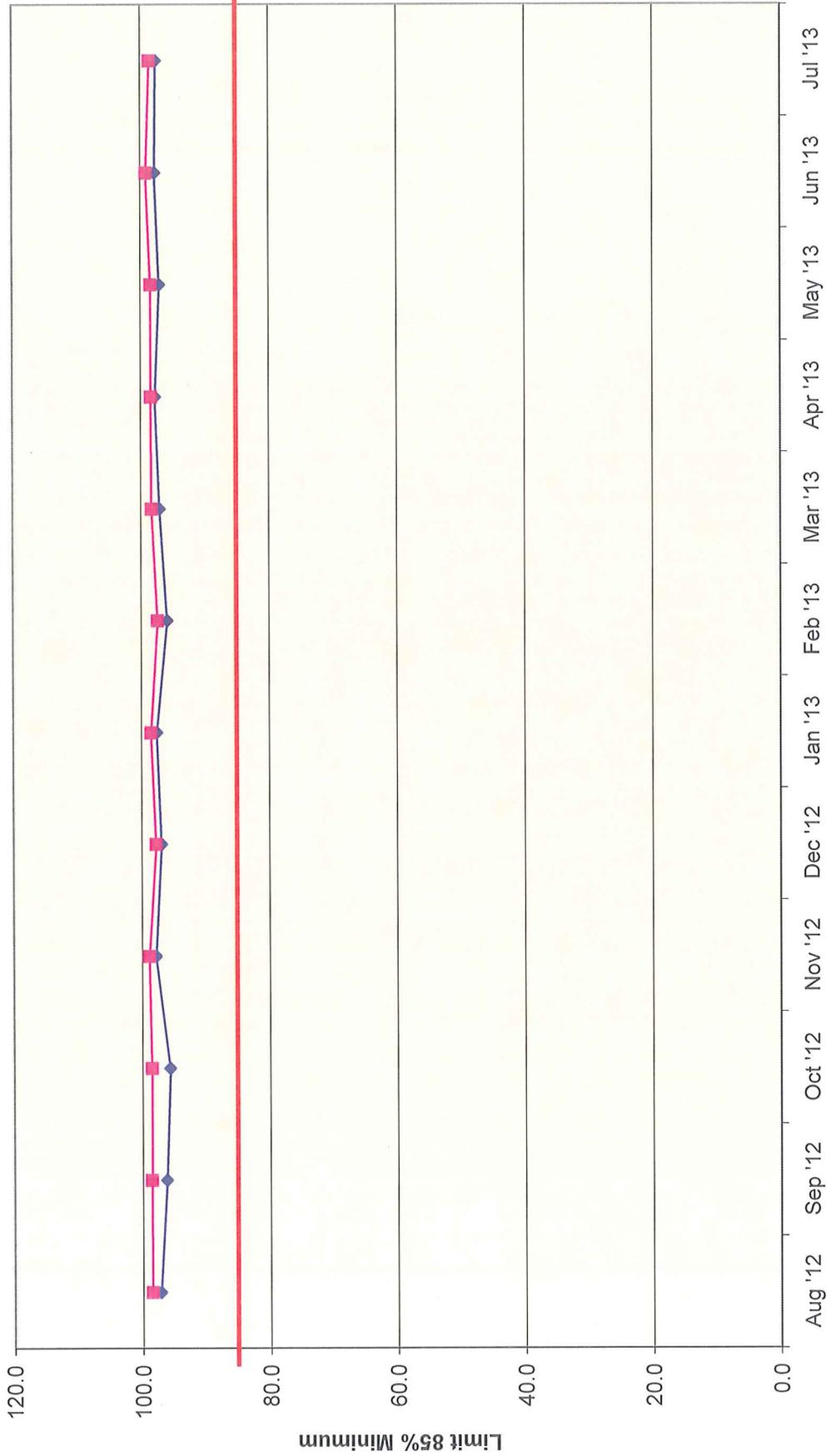
NPDES LIMITS WET SEASON
BOD & TSS - 30 mg/L Monthly Ave, 45 mg/L Weekly Ave
NPDES LIMITS DRY SEASON
BOD - 15 mg/L Monthly Ave, 30 mg/L Weekly Ave
TSS - 10 mg/L Monthly Ave, 20 mg/L Weekly Ave
WDR (Waste Discharge Requirements) RECLAMATION
BOD - 40 mg/L

—◆— BOD —■— TSS



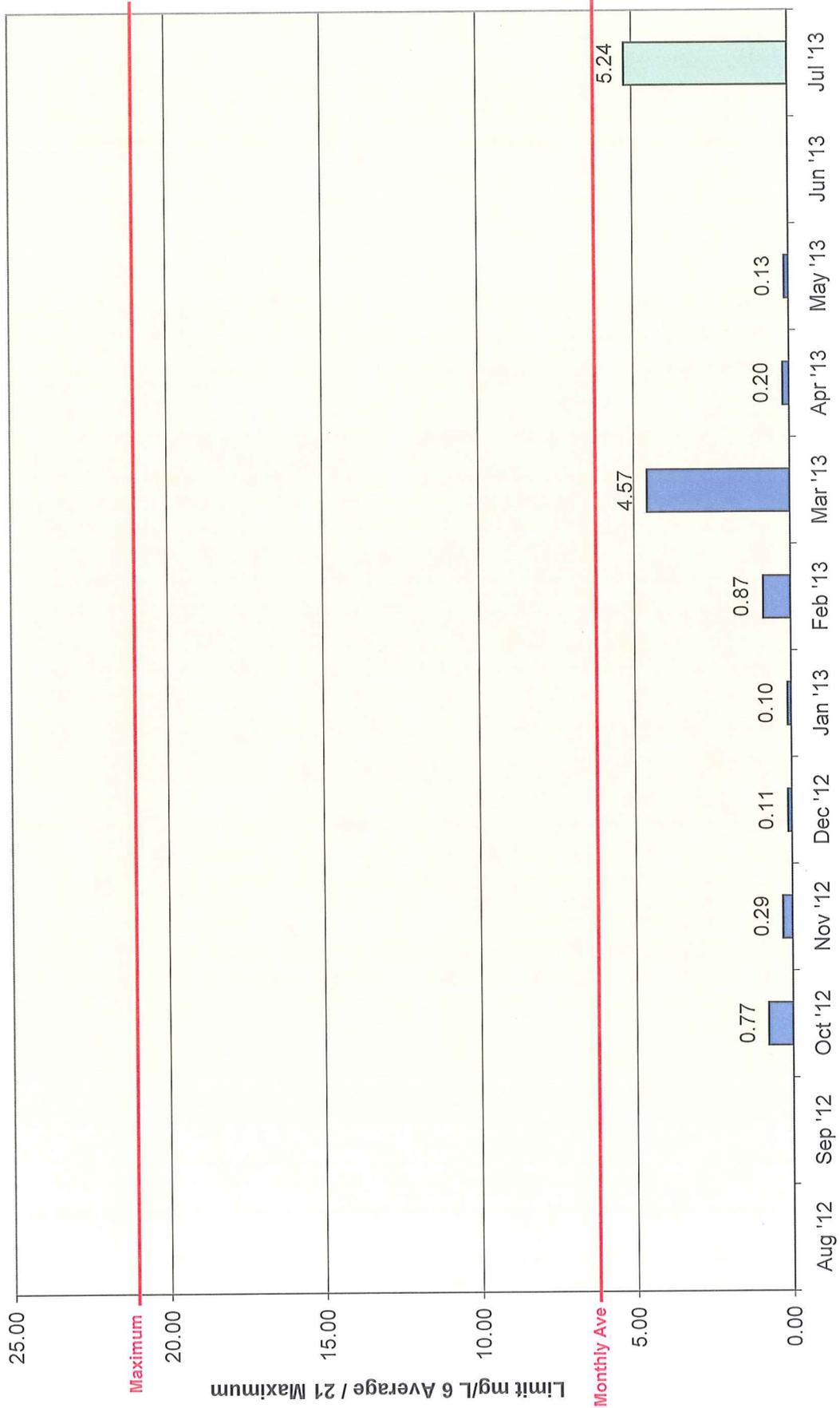
BOD / TSS Percent Removal

—◆— BOD —■— TSS



Effluent Ammonia

No Ammonia Limits During Reclamation.



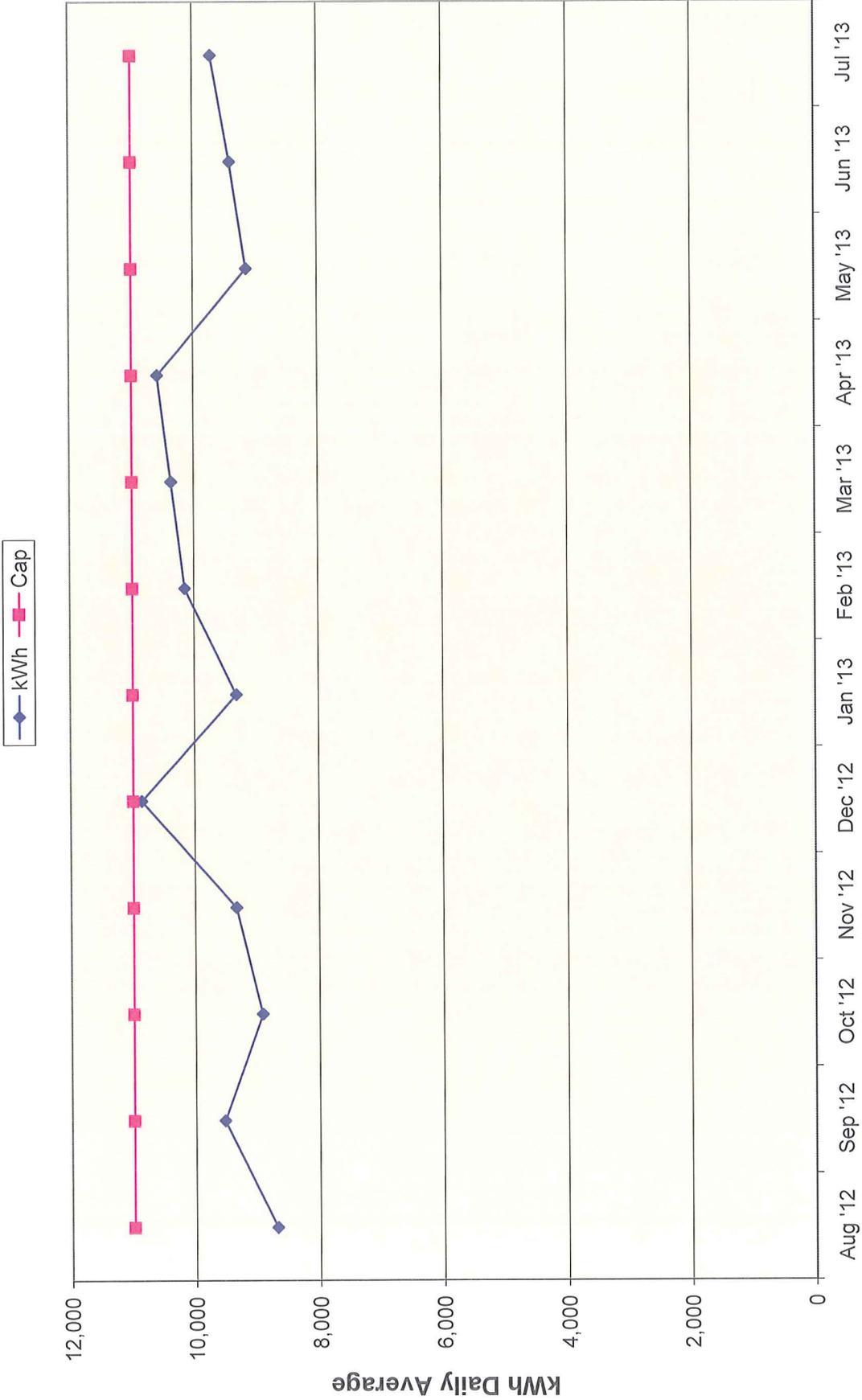
TOTAL COLIFORM LIMITS - WDR
5 Sample Median - 240 mpn /100 ml
Maximum - 10,000 mpn/100 ml

Disinfection

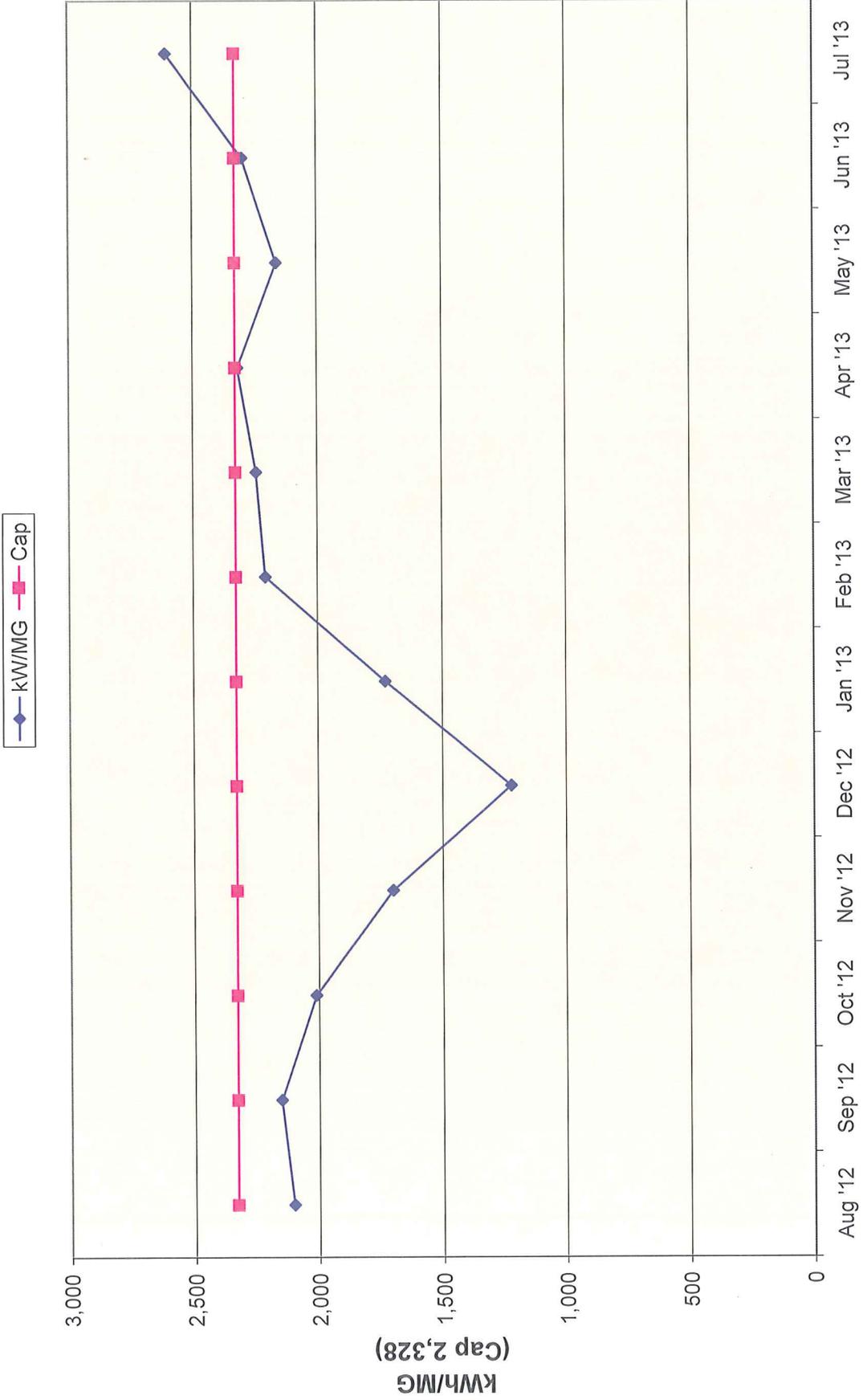
■ Median 5 ■ Maximum



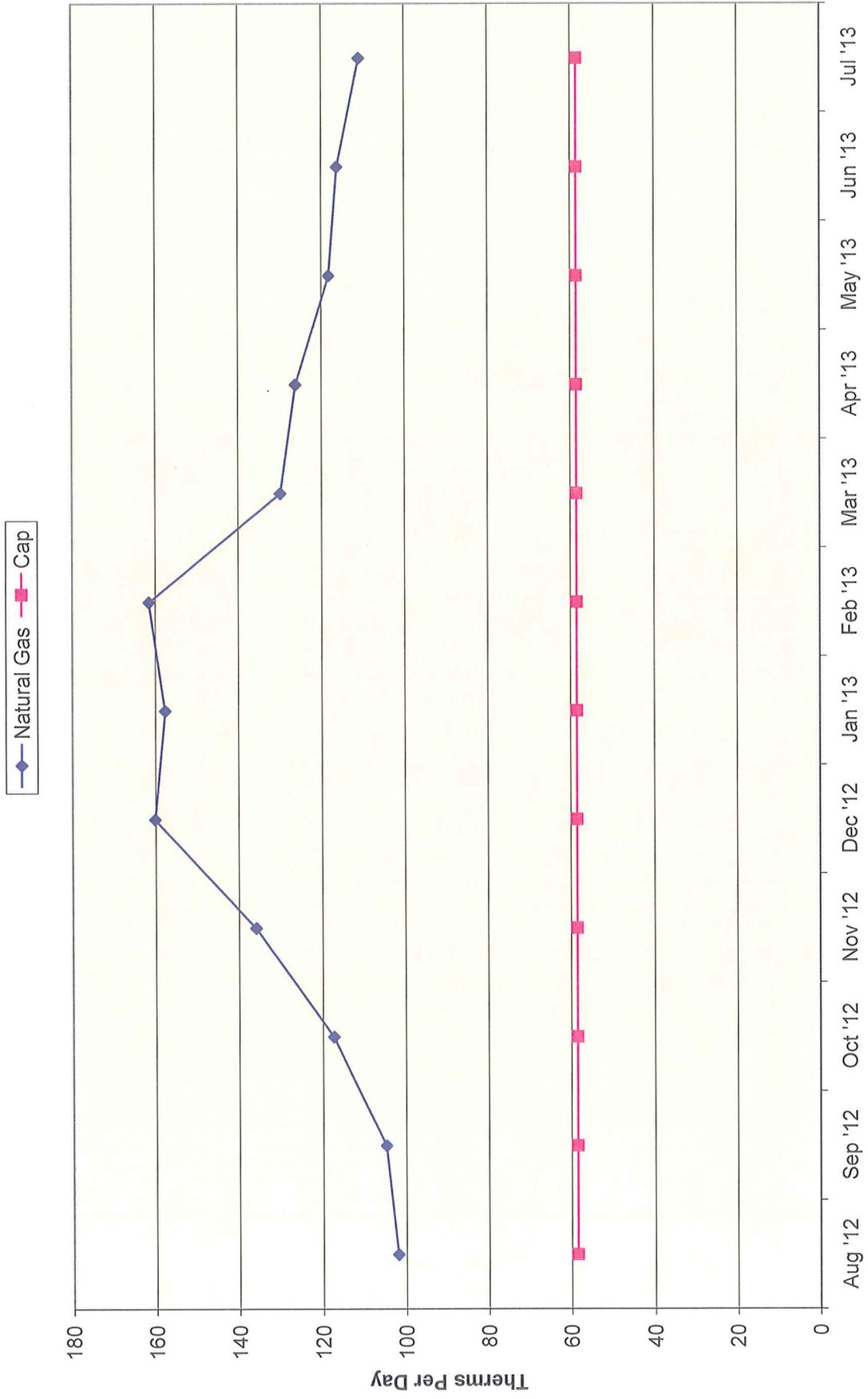
Energy kWh



Energy kWh/MG



Natural Gas Use

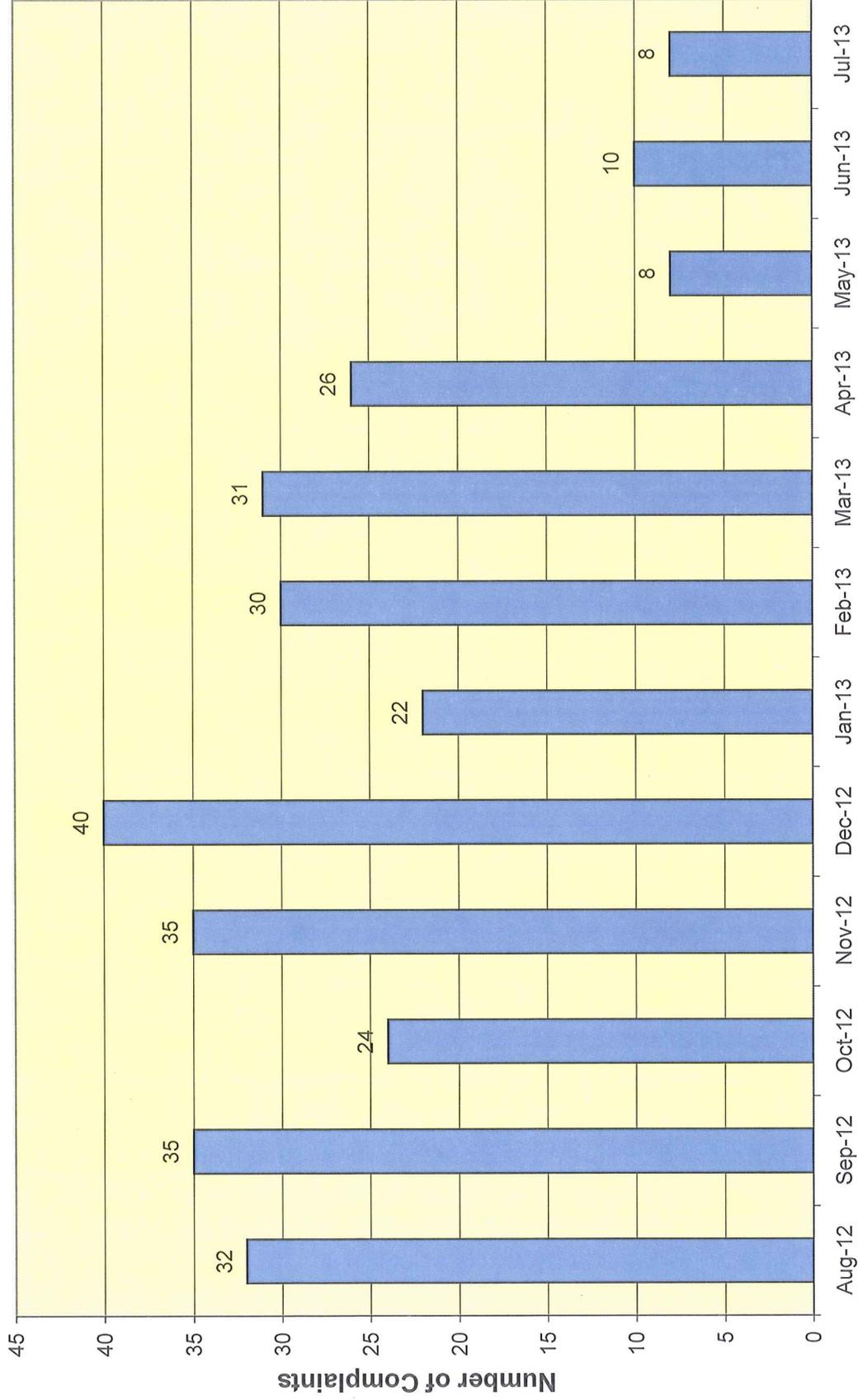


**NOVATO SANITARY DISTRICT
WATER RECLAMATION 2012
COMPLIANCE SUMMARY REPORT**

July	Fil Inf Q	Million Gallons Delivered			Influent Turbidity		Effluent Turbidity		Cl ² Dose mg/L		DO	Coliform	CT
		Rec	Bank	Pot	Max	Ave	Min +5	Ave	Min	Ave	mg/L	mpn	Min
July 1	0.94	0.62		0.00	< 20	NA	0	0.9			8.12	< 2 >	450
July 2	0.92	0.68		0.00	< 20	NA	0	< 2.0			7.99	< 2 >	450
July 3	0.69	0.75	X	0.00	< 20	NA	0	1.0			7.97	< 2 >	450
July 4	0.93	0.73		0.00	< 20	NA	0	1.1				< 2 >	450
July 5	0.93	0.66		0.00	< 20	NA	0	1.0			8.01	< 2 >	450
July 6	0.94	0.73		0.00	< 20	NA	0	1.0				< 2 >	450
July 7	0.80	0.43		0.00	< 20	NA	0	1.1				< 2 >	450
July 8	0.90	0.99	X	0.00	< 20	NA	0	1.1			7.57	< 2 >	450
July 9	0.93	0.74		0.00	< 20	NA	0	1.4			7.84	< 2 >	450
July 10	0.71	0.69		0.00	< 20	NA	0	1.2			7.7	< 2 >	450
July 11	0.60	0.57		0.00	< 20	NA	0	1.4			7.98	< 2 >	450
July 12	0.87	0.69		0.00	< 20	NA	0	1.3				< 2 >	450
July 13	0.94	0.62		0.00	< 20	NA	0	1.2				< 2 >	450
July 14	0.94	0.71		0.00	< 20	NA	0	1.5				< 2 >	450
July 15	0.94	0.59		0.00	< 20	NA	0	1.5			8.31	< 2 >	450
July 16	0.62	0.73	X	0.00	< 20	NA	0	1.7			8.37	< 2 >	450
July 17	0.84	0.69		0.00	< 20	NA	0	1.7			7.91	< 2 >	450
July 18	0.90	0.67		0.00	< 20	NA	0	1.4				< 2 >	450
July 19	0.85	0.68		0.00	< 20	NA	0	1.3				< 2 >	450
July 20	0.94	0.63		0.00	< 20	NA	0	1.1				< 2 >	450
July 21	0.94	0.63		0.00	< 20	NA	0	1.2				< 2 >	450
July 22	0.77	0.69		0.00	< 20	NA	0	0.9			8.33	< 2 >	450
July 23	0.66	0.56	X	0.00	< 20	NA	0	1.0			7.23	< 2 >	450
July 24	0.72	0.74		0.00	< 20	NA	0	1.0			7.56	< 2 >	450
July 25	0.95	0.78		0.00	< 20	NA	0	1.1				< 2 >	450
July 26	0.93	0.33		0.00	< 20	NA	0	1.4				< 2 >	450
July 27	0.03	0.15		0.00	< 20	NA	0	1.3			8.36	< 2 >	450
July 28	0.29	0.17		0.00	< 20	NA	0	1.0				< 2 >	450
July 29	0.31	0.17		0.00	< 20	NA	0	1.2			7.0	< 2 >	450
July 30	0.00	0.20	X	0.00	< 20	NA	0	1.3				< 2 >	450
July 31	0.54	0.48		0.00	< 20	NA	< 65	< 2.0			7.3	< 2 >	450
Total	23.27	18.50		0.00	< 20	NA							
Min	0.00	0.15		0.00	20	NA	< 0.0	< 0.9	0.0	0.0	7.0	< 2 >	450
Max	0.95	0.99		0.00	20	NA	< 65.0	< 2.0	0.0	0.0	8.4	< 2 >	450
Ave	0.75	0.60		0.00	20	NA	< 0.0	< 1.3	#DIV/0!	#DIV/0!	7.9	< 2 >	450
Count	31	31		31	30	NA	30	31	0	0		30	30

July 30 & 31 - preliminary values

Complaints Received



WORK ORDER STATISTICS

June 1, 2013 - June 30, 2013

	Open Work Orders Due Prior to 6/1/13	Open Work Orders 6/1/13 - 6/30/13	Total Open Work Orders
Preventative	13	301	314
Corrective	1	27	28
Total	14	328	342

	Closed Work Orders 6/1/13 - 6/30/13
Preventative	251
Corrective	25
Total	276

Total Outstanding Work Orders as of July 1, 2013	66
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NOVATO SANITARY DISTRICT
Wastewater Operations Committee Meeting
Odor Control, Noise, and Landscaping Report
July 2013

Summary:

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

To demonstrate its commitment, the District has already expended significant amounts beyond the substantial investment for odor control, noise, and landscaping included in the original WWTP Upgrade, Contract B - Novato Treatment Plant (NTP), Project No. 72609. These additional costs have included operational changes and measures related to further noise abatement, visual screening, wind shielding, and daily monitoring.

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

Odor control:

As mentioned in previous reports, the District has contracted with the consulting firm of Brown and Caldwell (B&C) led by their project manager Mr. David McEwen, for a new odor study focusing primarily on the aeration basins as a potential odor source. As part of this study, Mr. McEwen had scheduled an initial sampling event for late June. However, due to unseasonal rains on the day of the sampling event, Mr. McEwen postponed this initial sampling, and performed it after rescheduling it to July.

Also, the District developed pilot project to cover the anoxic zones of the aeration basins this summer progressed with a partial equipment delivery in July from Pi2 Technologies of Montreal, Quebec. Due to US Customs related issues, delivery of the remaining equipment and completion of installation was rescheduled for early August. As mentioned in earlier reports, these covers incorporate a honeycomb design, float on the water surface, and utilize carbon filtering/scrubbing media to remove odors. Further, to investigate the effectiveness of this technology, staff has included provisions in B&C's contract to include efficacy testing of this technology.

Noise:

In July 2013, staff continued to address the low level noise issues raised by some Lea Drive neighbors, related to the fans for the main odor control biofilter in the northwest corner of the Novato plant. These fans currently continue to reside inside a temporary insulated enclosure, and staff continues to evaluate options to provide cost-effective permanent sound attenuating. Current sound measurements at the property line on Lea Drive continue to indicate that the sound levels are those of an "Average Quiet Street" and well below the 60 decibels the Novato General Plan specifies for residential neighborhoods.

The District has budgeted for soundproofing of these fans in its FY2013-14 preliminary budget, and is evaluating alternative designs.

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

Landscaping:

In July 2013, staff worked with its landscaping contractor Cagwin and Dorward (C&A), Novato, CA, to care for the attributes of the landscaping installed at the District's fence-line on Lea Drive at the northeast corner area of the NTP. As mentioned in the June 2013 report, the District has completed landscaping upgrades to replace plants that to replace plants that died and augment the current visual screening on the open corridor at a cost of about \$19,000. The District also negotiated and executed a maintenance contract with C&A for C&A to provide periodic maintenance services to this landscaping, including weed control and irrigation systems.

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

General:

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

- 1.7 FTE field workers for Sewer Maintenance (main line cleaning)
- 1.8 FTE field workers for Pump Station Maintenance
- 1.5 FTE field workers for CCTV work, and
- 1.8 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.

Collection System Maintenance:

A total of 49,204 feet of sewer pipelines were cleaned for the month. The footage cleaned per hour and line cleaned/month are within established parameters for the department. Graphs showing the length of line cleaned/month, footage cleaned/hour worked, along with the overflows/month are attached. Staff completed 239 maintenance work orders generated by the ICOM3 CMMS system, with 89 outstanding work orders. 51 of the outstanding work orders originate to the mechanical rodding unit which was non-operational in July due to mechanical and safety related issues. 38 outstanding work orders originate to the hydro-flushers, and 23 of them were post-phoned because the main lines had been chemically treated for root abatement in June. These 23 work orders will be completed in late August or early September to allow the chemical root treatment to achieve full effectiveness. The CCTV van was in the field for a total of 17 working days during the month of July and the department's CCTV production of 30,910ft for the month is below expected production goals.

Both issues, i.e. the outstanding cleaning work orders being higher than normal and the CCTV production are primarily due to: the mechanical rodding unit being out of service due to mechanical and safety issues, and the continuing implementation of modified work practices to better integrate flushing with CCTV work as part of the department's continuous improvement practices. These issues are being addressed and resolved, and staff anticipates catching up to its production goals in the future.

Pump Station Maintenance:

The Collection System Department conducted 289 lift station inspections for the month with 134 of the inspection visits generated through the JobCal Plus CMMS system.

The breakdown of these 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 and the Irrigation pump station, that are visited daily.

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

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

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:

There are no pump stations currently under construction as part of the District's continuing multi-year Pump Station Rehabilitation Project (Capital Improvement Project No. 72403).

Safety and Training:

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

Specialized training: Collection System staff attended Traffic Control and Flagging, USA Procedures and SSMP training in July. Aaron Hendricks and Bob Stiles attended Injury and Illness Prevention Program, Material Safety Data, Lock Out/Tag Out and Energized Electrical Work training.

Safety performance: There were no lost time accidents this month for a total of 181 accident-free days.

Standard Operating Procedures (SOPs):

In July, Collection System staff issued two (2) SOP's (Periodic Pump Station Checks).

Sanitary Sewer Overflows (SSOs):

For the month of July, there was one (1) SSO.

No.	Date	Location	Amount, gal	Cause
1	7/7/2013	21 Jennifer Ln.	<10	Roots

1. SSO at 21 Jennifer Ln.: This SSO was a Category II event with the discharge volume of approximately 10 gallons going to open ground. There was no recovery (0%) for this discharge as the event was not witnessed by District staff and there was no evidence of the discharge when our employees arrived on site. This discharge was reported to the District by a neighborhood resident.

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

This discharge was determined to be the result of a partial root blockage in the main line and a root mass pushed into the District mainline by a plumbing contractor. The duration of this discharge was determined using residential and reporting party interviews. The discharge volume was estimated based on the eyewitness account of the resident who reported the problem.

In accordance with reporting requirements: (a) no report was required to either the California Emergency Management Agency (CalEMA) or Marin County Environmental Health Services (MCEHS) as this was a low volume Category II event, and (b) as detailed below, the discharge was reported to the State CIWQS system.

In terms of cleaning history, the affected line segment was last cleaned on schedule on November 16, 2011 using a hydro-flusher, and this line segment is on a thirty-six (36) month cleaning frequency. CCTV inspection immediately after the discharge event showed moderate root intrusion at one point in this line segment. No changes to the cleaning schedule will be made as a result of this event. The roots were removed from the main line and a repair request was generated to repair the damaged section of pipe.

This event was reported into the State's CIWQS database on August 8, 2013 as a Category II event, SSO Event ID # 797666 and was certified in CIWQS on August 8, 2013, Certification ID # 571594.

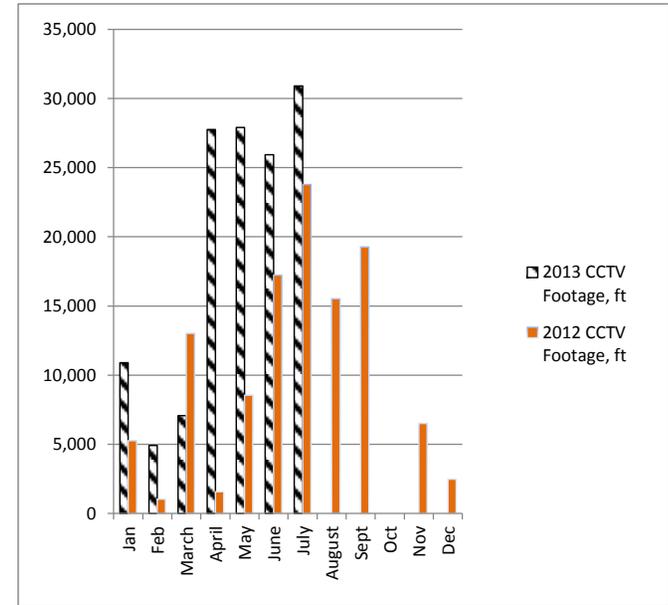
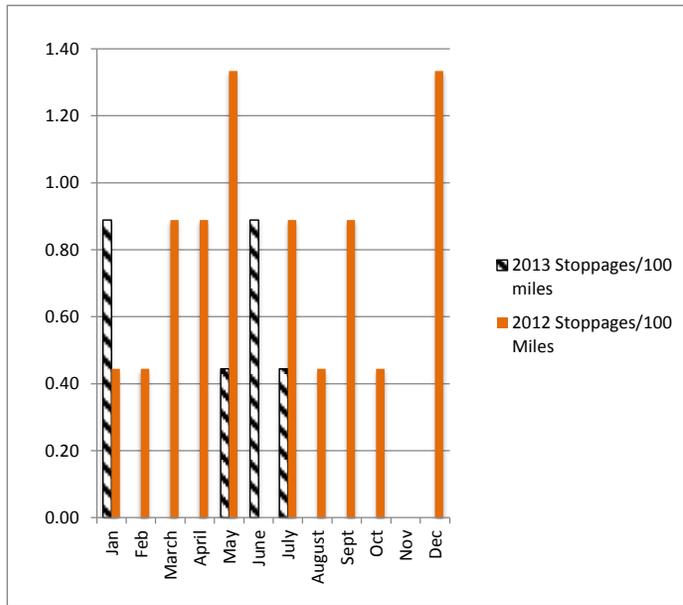
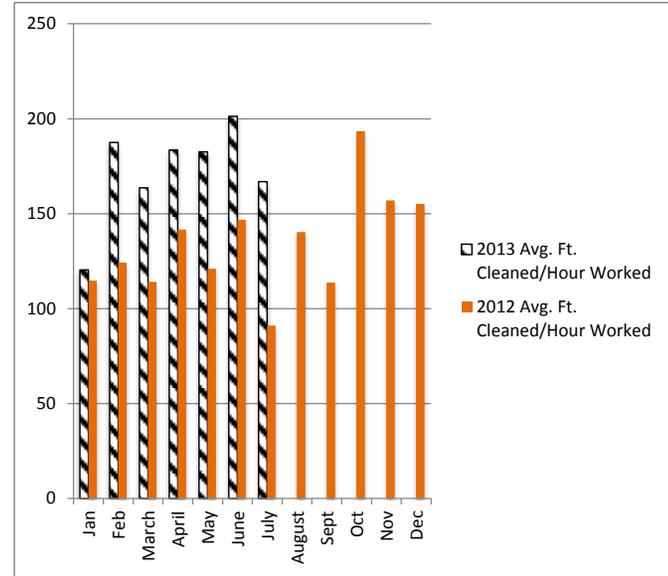
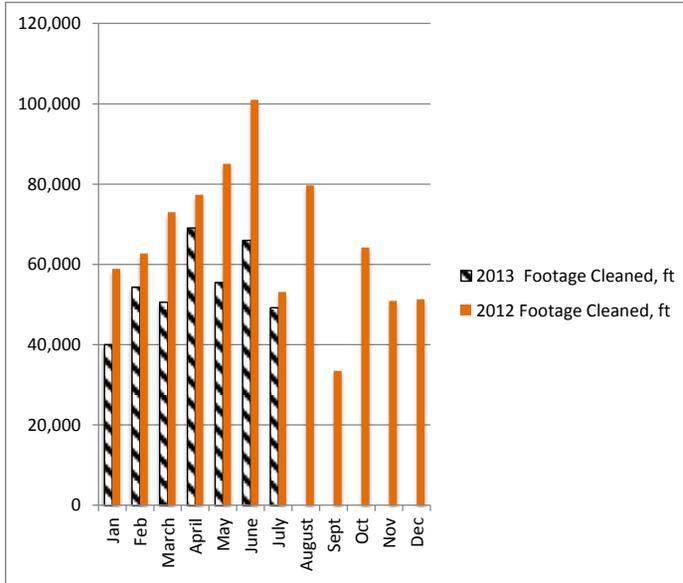
Novato Sanitary District
Collection System Monthly Report For July 2013 (as of July 31, 2013)

	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total Year to Date	Average Year to Date
Employee Hours Worked														
Number of FTEs (main line cleaning), hrs.	1.9	1.7	1.8	2.2	1.8	1.9	1.7						NA	1.8
Number of FTEs (other)	1.9	1.4	2.4	1.5	1.8	1.2	1.8						NA	1.7
Number of FTEs (CCTV)	0.1	0.3	0.5	1.7	1.1	1.2	1.5						NA	0.9
Total, FTEs	3.9	3.4	4.7	5.4	4.6	4.3	4.9						NA	4.5
Regular Time Worked, (main line cleaning), hrs	333	290	309	377	304	328	295						2,235	319
Regular Time Worked on Other, hrs ⁽¹⁾	326	249	415	259	308	216	304						2,076	297
Regular Time Worked on CCTV ⁽²⁾	20	46	85	300	192	200	258						1,100	157
Total Regular time, worked, hrs	678	585	809	935	804	744	857						5,411	773
Total Vacation/Sick Leave/Holiday, hrs	204	77	101	114	239	62	191						987	141
Vacation/Sick Leave/Holiday, FTEs	1.2	0.4	0.6	0.7	1.4	0.4	1.1						5.7	0.8
Overtime Worked on Coll. Sys., hrs	6	45	5	47	5	1	24						133	19
Overtime Worked on Other, hrs ⁽¹⁾	3	19	5	28	12	6	16						89	13
Overtime Worked on CCTV ⁽²⁾	1	3	0	0	0	0	2						6	1
Total Overtime, hrs	10	67	10	75	17	7	42						228	33
Productivity														
Rodder Work Orders Generated, ft	14	0	24	31	83	66	51						269	38
Rodder 3203 Ft. Cleaned	3,138	0	3,856	5,490	678	4,371	760						18,293	2,613
Flusher Work Orders Generated	187	252	290	385	438	361	277						2,190	313
Truck 3205V Ft. Cleaned	2,782	5,146	2,755	13,698	15,477	10,186	0						50,044	7,149
Truck 3206V Ft. Cleaned	34,114	49,225	43,954	49,898	39,332	51,468	48,444						316,435	45,205
Camera Work Orders Generated	0	0	0	0	0	0	0						0	0
Camera Ft. Videoed	10,905	4,912	7,075	27,756	27,913	25,938	30,910	NA	NA	NA	NA	NA	135,409	19,344
Work Orders Completed	201	252	286	374	314	267	239						1,933	276
Work Orders backlog	6	0	28	42	207	160	89						532	76
Total Footage Cleaned	40,034	54,371	50,565	69,086	55,487	66,025	49,204	NA	NA	NA	NA	NA	384,772	54,967
Sanitary Sewer Overflows (SSOs)														
Minor (Category II)	0	0	0	0	1	1	1						3	NA
Major (Category I)	2	0	0	0	0	1	0						3	NA
Overflow Gallons	2,200	0	0	0	158	1,111	10						3,479	NA
Volume Recovered	880	0	0	0	158	100	0						1,138	NA
Percent Recovered	40%	NA	NA	NA	100%	9%	0%	NA	NA	NA	NA	NA	33%	NA
Service Calls (non-SSO related)														
Service calls, normal hours, #	7	5	7	12	6	6	8						51	7
Normal hours S.C. response time, mins (avg.)	12	15	14	18	17	22	19						117	17
Service Callouts, after hours, #	1	0	0	1	1	0	1						4	1
After Hours S.C. response time, mins (avg.)	23	NA	NA	20	30	0	27						100	20
Benchmarks														
Average Ft. Cleaned/Hour Worked	120	187	164	183	183	201	167	NA	NA	NA	NA	NA	NA	172
Total Stoppages/100 Miles	0.9	0.0	0.0	0.0	0.4	0.9	0.4	NA	NA	NA	NA	NA	2.7	NA
Average spill response time (mins)	18	0	0	0	15	19	15						NA	10
Callouts/100 Miles	0.4	0.0	0.0	0.4	0.4	0.0	0.4						1.8	0.3
Overtime hours/100 Miles	3	20	2	21	2	0	11						59	8
Overflow Gallons/100 Miles	978	0	0	0	70	494	4	NA	NA	NA	NA	NA	1546	221

⁽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.

Collection System 2012-13 Graphs



Novato Sanitary District

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

	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total Year to Date	Average Year to Date
Employee Hours Worked	253	224	313	226	256	249	320						1,841	
Number of Employees	1.4	1.3	1.8	1.3	1.4	1.4	1.8						1,480	1.5
Regular Time Worked on Pump Sta	185	189	223	182	227	201	273						362	
Overtime Worked on Pump Sta	69	35	90	44	29	48	47						22	
After Hours Callouts	4	3	1	8	1	0	5						135	19
Average Callout response time (mins)	24	35	20	30	0	0	26							
Work Orders														
Number generated in month	107	112	116	124	110	125	134						828	
Number closed in month	104	110	116	124	110	123	134							
Backlog	3	2	0	0	0	2	0							

**COLLECTION SYSTEM (Pump Stations)
WORK ORDER STATISTICS
July 1, 2013 - July 31, 2013**

	Open Work Orders Due Prior to 7/1/2013	Open Work Orders 7/1/2013 -7/31/2013	Total Open Work Orders
Preventive	2	134	2
Corrective	0	0	0
Total	0	134	134

	Closed Work Orders 7/1/2013 -7/31/2013
Preventive	134
Corrective	0
Total	134

Total Outstanding Work Orders as of 7/31/2013	0
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NOVATO SANITARY DISTRICT
Wastewater Operations Committee Meeting
Reclamation Facilities Report
July 2013

Summary:

The rancher grazed cattle on all three Sites. Irrigation controls were tested on a weekly basis. Problematic irrigation valve actuators were troubleshot and the problem may be power fluctuations during operation. Pump 1 at Drainage Pump Station 7 was removed, revealing that the pump volute had fallen off. Approximately 73 MG of recycled water was used for irrigation this month. The storage ponds are storing approximately 59 MG of recycled water. A leak on the top of Irrigation Pump No. 1 was repaired. The DLD continued to further dry in preparation for sludge application.

Ranch Operations:

The rancher grazed cattle on all Sites, with nothing significant to report.

Pump No. 1 at Drainage Pump Station No. 7 was removed for inspection and upon removal it was discovered that the volute was missing from the bottom of the pump. In addition, rope and debris was found in the pump hindering its operation. The pump was taken to the vendor's shop where it will be further inspected and a quote prepared for repair. Staff will attempt to retrieve the volute from the sump without dewatering the sump. It may be necessary to dewater the sump to retrieve the volute; the volute must be removed from the bottom of the sump because it may interfere with the installation of the repaired pump when it is returned.

Irrigation Parcels:

Staff continued to test the irrigation control systems on a weekly basis to insure that no problems exist in the control systems and parcels are not getting over-irrigated.

Representatives for the irrigation valves and actuators were on site this month to assist staff with troubleshooting the problems with the actuators in Site 2 & 3. On occasion, the actuators will not fully open or close and some motors have failed. During the troubleshooting process it was discovered that when the valves are called to open or close there is a significant drop in the voltage which causes the valve to stop working on occasion. This may be why the motors are failing also. This problem is occurring at locations that are at the furthest distance from the power supply.

The supplier & factory representatives recommended installing another actuator that can tolerate the voltage drop. Staff will look at all the options before making a decision on how to resolve the problem.

Irrigation Pump Station:

Approximately 73.19 million gallons of recycled water was used for irrigation in July. The average storage pond staff gauge depth at the beginning of July was 5.0 feet and 5.2 feet at end of July, accumulating approximately 2.8 million gallons. This quantity is calculated using charts from the Reclamation Facilities O&M Manual. The level of the Wildlife Pond was raised from four feet to six feet as recommended in the Reclamation Facilities O&M Manual.

**NOVATO SANITARY DISTRICT
Wastewater Operations Committee Meeting
Reclamation Facilities Report
July 2013**

As previously reported, staff is re-evaluating the replacement/repair of Irrigation Pump No. 2. Staff contacted PG&E to inquire about rebate programs for replacing the pump with a more efficient motor. PG&E requested run time data and staff forwarded this information to PG&E in early June. Staff met with a PG&E representative this month and inquired about the rebate program. The representative said he would check on it and staff had not heard back from the representative.

In June, Irrigation Pump No. 1 began leaking at the top of the pump around where the shaft comes out of the pump and up to the motor. Further investigation determined that the leak was due to a failing gasket between the top of the pump body and the flange for the mechanical seal. The leak is only a nuisance and will not harm the pump. This leak was repaired this month.

Sludge Handling & Disposal:

There were no reclamation area related sludge handling and disposal activities in July. The Dedicated Land Disposal (DLD) surface continues to dry so it can be worked to prepare it for sludge application.
