

NOVATO SANITARY DISTRICT

Meeting Date: September 16, 2013

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

AGENDA

1. AGENDA APPROVAL:

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

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

3. CONSIDER APPROVAL OF MINUTES OF THE AUGUST 13, 2013 MEETING

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

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

6. RECLAMATION FACILITY REPORT FOR AUGUST 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.

August 13, 2013

A regular meeting of the Wastewater Operations Committee of Novato Sanitary District was held at 2:00 p.m., Tuesday, August 13, 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
Steve Krautheim, Field Services Superintendent
John Bailey, Project Manager, Veolia Water
Julie Swoboda, Administrative Secretary
*(Sandeep Karkal, Deputy Manager-Engineer and
Tim O'Connor, Collections System Supervisor were absent.)*

ALSO PRESENT: Lynda Rodefer, Veolia Water
Brian Exberger, Veolia Water
Bob Guinan, Novato resident
Joe Carlomagno, Novato resident

AGENDA APPROVAL: The agenda was approved as presented.

PUBLIC COMMENT: None.

APPROVAL OF MEETING MINUTES FOR JULY 15, 2013: The July 15, 2013 minutes were approved as written.

WASTEWATER TREATMENT FACILITIES OPERATIONS AND MAINTENANCE REPORT FOR JULY 2013:

- Treatment Plant Performance Report, Maintenance Report and Safety & Training:
John Bailey, Plant Manager, Veolia Water, introduced the new Assistant Plant Manager, Brian Exberger. He stated that Brian comes to Veolia with many years' of experience in the engineering and wastewater operations fields and is a Grade V Operator.

Mr. Bailey gave an overview of the treatment plant operations for the month of July. He stated that there were no permit exceedances, violations or excursions and noted that the treatment facility and the recycled water facility continue to run very well. Mr. Bailey stated that the volume of recycled water produced in July was 18.5 million gallons.

Mr. Bailey reported on the key events at the Novato treatment facility, the Ignacio transfer pump station, the recycled water plant and the sludge lagoons. He stated that Primary Clarifier #2 was drained and cleaned in preparation for recoating as part of the Contract C – WWTP Upgrade project. 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 1,155 days/51,975 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 discussed additional graphs which will now be included in the monthly reports: BOD/TSS Report; Conventional Pollutants Report; and Total Coliform (Reclamation).

- Odor control: Manager-Engineer Beverly James stated that staff continues to work to address issues of concern relating to odor control, noise, and landscaping. The Manager stated that the floating modular covering units for the aeration basins had arrived and were installed on August 7th. She stated that shortly after the units were installed, an unbeneficial bacterial strain developed and the pods were removed pending an evaluation and resolution of the issue.

The Manager stated that clarifier No. 2 had been emptied completely to provide for maintenance and that this has caused some odors.

The Manager stated that Dr. McEwen, Brown and Caldwell, would return in August to evaluate odors. She stated that a meeting with Dr. McEwen and the Lea Drive neighborhood residents would be scheduled in the future.

Novato resident Bob Guinan questioned how the Jerome Meter readings vary between the wastewater treatment plant and the Lea Drive neighborhood. John Bailey, Veolia Water, outlined the meter reading locations and stated that the Jerome meter is specific to only read H₂S compounds. He noted that the readings are consistently recorded at zero at the treatment facility and in the Lea Drive neighborhood.

Mr. Guinan stated that the Lea Drive residents continue to describe a constant "white noise". He discussed the landscaping, stating that he was optimistic in regards to the new vegetation that was planted. Mr. Guinan reported that weeds are encroaching upon the new plantings and noted that maintenance appeared necessary.

Steve Krauthem, Novato Sanitary District, stated that he had spoken to the landscape contractors and that the frequency of weed abatement will be changed to monthly visits. The Manager stated that the intention of the District is to allow the landscaping to return to a natural state with minimal weed abatement after the new plantings are fully established.

COLLECTION SYSTEM OPERATION AND MAINTENANCE REPORT FOR JULY 2013:

The Manager discussed the Collections System Monthly Report for July 2013. She reported that the Collections System crew cleaned a total of 49,204 feet of sewer pipeline and that the department completed 239 maintenance work orders which were

generated in July. She stated that the department's CCTV (closed caption televised) van was in the field for 17 working days and that 30,910 feet of main sewer line was televised.

The Manager stated that there was one sanitary sewer overflow in July. She stated that the event was caused by root intrusion which resulted in a discharge of less than 10 gallons.

RECLAMATION FACILITY REPORT FOR JULY 2013:

Steve Krauthem, Field Service Superintendent, presented the Reclamation Facilities report for July. He stated that the rancher grazed cattle on all three reclamation sites. He gave an overview of repairs of the facilities irrigation valves, actuators and pumps.

Mr. Krauthem stated that approximately 73.19 million gallons of recycled water was used for irrigation in July.

ADJOURNMENT: There being no further business to come before the Committee, the meeting adjourned at 3:15 p.m. The next Wastewater Operations Committee meeting will be held on Monday, September 16 at 2:00 PM.

Respectfully submitted,

Beverly James
Manager-Engineer

Julie Swoboda, Recording



September 12, 2013

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

Subject: Veolia Water Operations Report – August 2013

Dear Ms. James:

We are pleased to provide this updated activity report for August 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
August 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: August 2013:

Reclamation/Storage – Waste Discharge Requirements (WDR)

Parameter	Value		Limit	
	Ave	Max	#1	#2
Flow, MGD (monthly ave/max)	3.96	4.64	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)	9,866	11,151	N/A	N/A
Influent TSS, lb/day (monthly ave/max)	11,849	14,606	N/A	N/A
Effluent BOD ₅ , mg/L (monthly ave/weekly max)	9	12	40	N/A
Effluent TSS, mg/L (monthly ave/weekly max)	<3	<3	N/A	N/A
Effluent BOD ₅ - % Removal, Minimum	97	N/A	N/A	N/A
Effluent TSS - % Removal, Minimum	99	N/A	N/A	N/A
Ammonia, mg/L – (monthly ave/daily max)	<1	<1	N/A	N/A
pH, su (min / max)	6.9	7.0	6.5	8.5
Total Coliform (5 Sample Median) / mpn/100 ml	30	N/A	240	N/A
Total Coliform (maximum) / mpn/100 ml	1,600	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	16.22	N/A
Average Turbidity	NTU	1.6	< 2.0
Turbidity > 5 NTU (in 24 hour)	Minutes	0	72
Minimum CT (disinfection)	ml-min/L	> 450	> 450
Minimum Dissolved Oxygen (DO)	mg/L	5.9	> 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
- Replaced UVT (transmittance) Sample Pump
- Maintenance Truck – replaced master cylinder (brakes)
- Operations truck – replaced water pump
- Performed eight hour plant shut down to accommodate Contract “C” work
- Public tour 8/17/13
- Drained and cleaned Aeration Basin #3
- Replaced engine block heater on Wet Weather Pump #1
- Assembled/Installed/removed Pods – Aeration Basins covers
- Replacement Auger installed on Compactor
- Replaced piping on hypochlorite feed pump
- Repaired #3 water line at Influent wet well

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

- Headworks Channel #2 (Contract “C” Work)
- Primary Clarifier #2 OOS – Preparation for recoating as part of Contract “C”
- GBT Odor Fan #1 OOS - replace bearings/belts

Ignacio Transfer Pump Station

- Routine rounds, readings and maintenance
- Cleared Influent Pump #1 of rags

Equipment Out of Service – Due to Planned Servicing, Maintenance, or Replacement**Recycled Water Plant**

- Performed plant rounds and maintenance
- Produced 16.22 million gallons of recycled water in July
- Installed new relays in air compressor
- Installed bypass airlines for air compressor

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 routine rounds and inspection
- Transfer solids from lagoons to dedicated land disposal (DLD) – Novato Sanitary District Activity

ADMINISTRATION:

- Electronic Self Monitoring Report July submitted on 8/20/13

SAFETY AND TRAINING:

- Monthly plant safety inspections for Novato WWTP and Ignacio Pump Station completed
- Five Minute Tailgate training is held daily with the O&M staff.
- No safety incidents for the month of August 2013
- Accident Free: 6/1/10 – 7/31/13: 1,186 days / 53,370 hours
- Westech Filter (Recycled Water Plant) Training, “hands-on”
- Globally Harmonized System (MSDS)
- Ladder Safety
- SOP Developed: Biosolids Sampling

ODORS:

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

MISCELLANEOUS

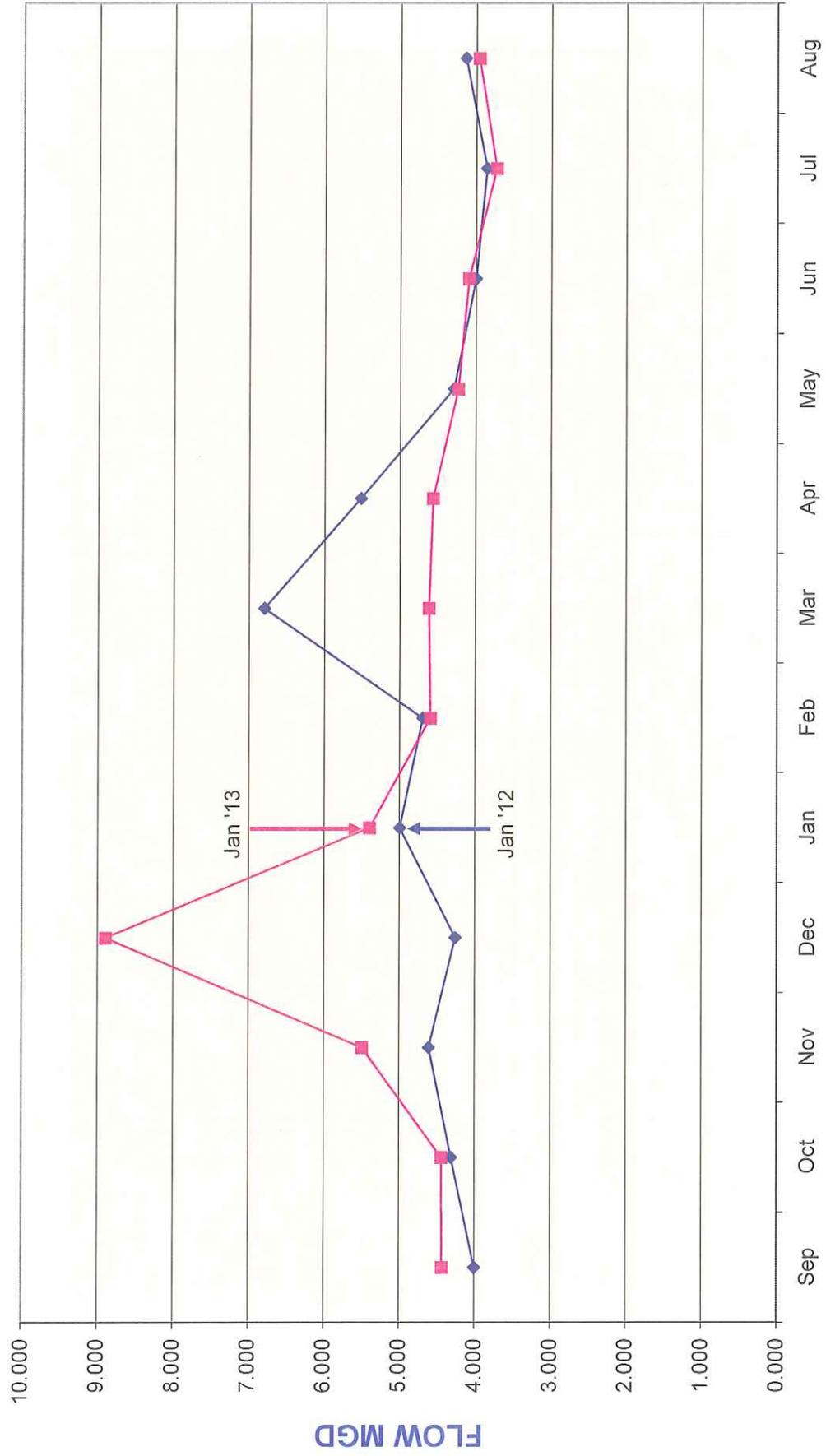
- Process Control Management Plan (PCMP) meetings held regularly
- Brian Exberger – New Assistant Plant Manager

Veolia Support Staff On/Off Site (Various Times)

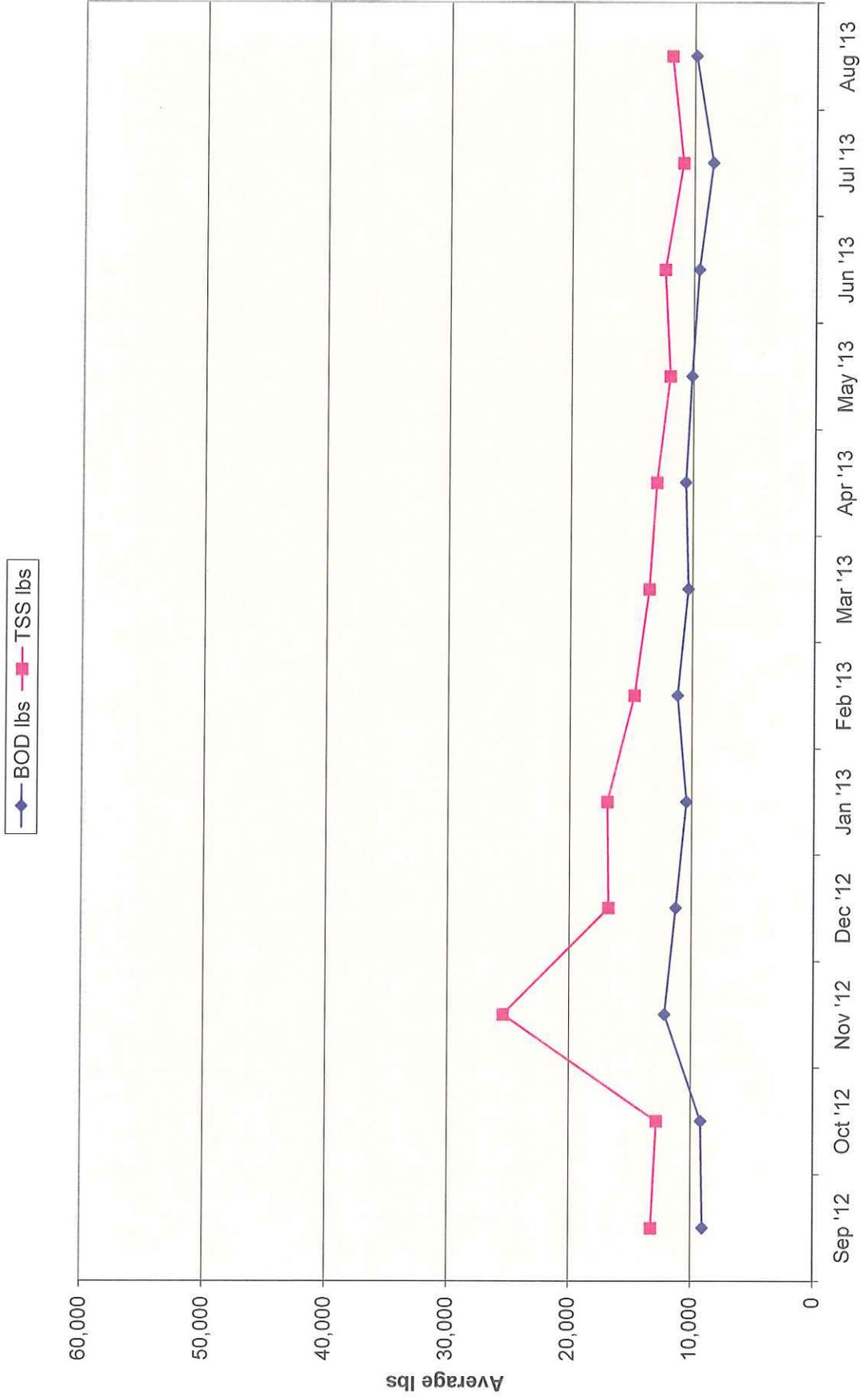
John O’Hare	Technical Support
Chris McAuliffe	District Manager
John Herron	Northern California Area Manager
Bryce Behnke	Technical Support via conference call & web exchange
Jeremiah Danielson	Environmental, Health, and Safety
Mel Demsky	Regional Director of Asset Management
Dan Brown	Asset Manager

FLOW COMPARISON

—◆— 2011/12 —■— 2012/13

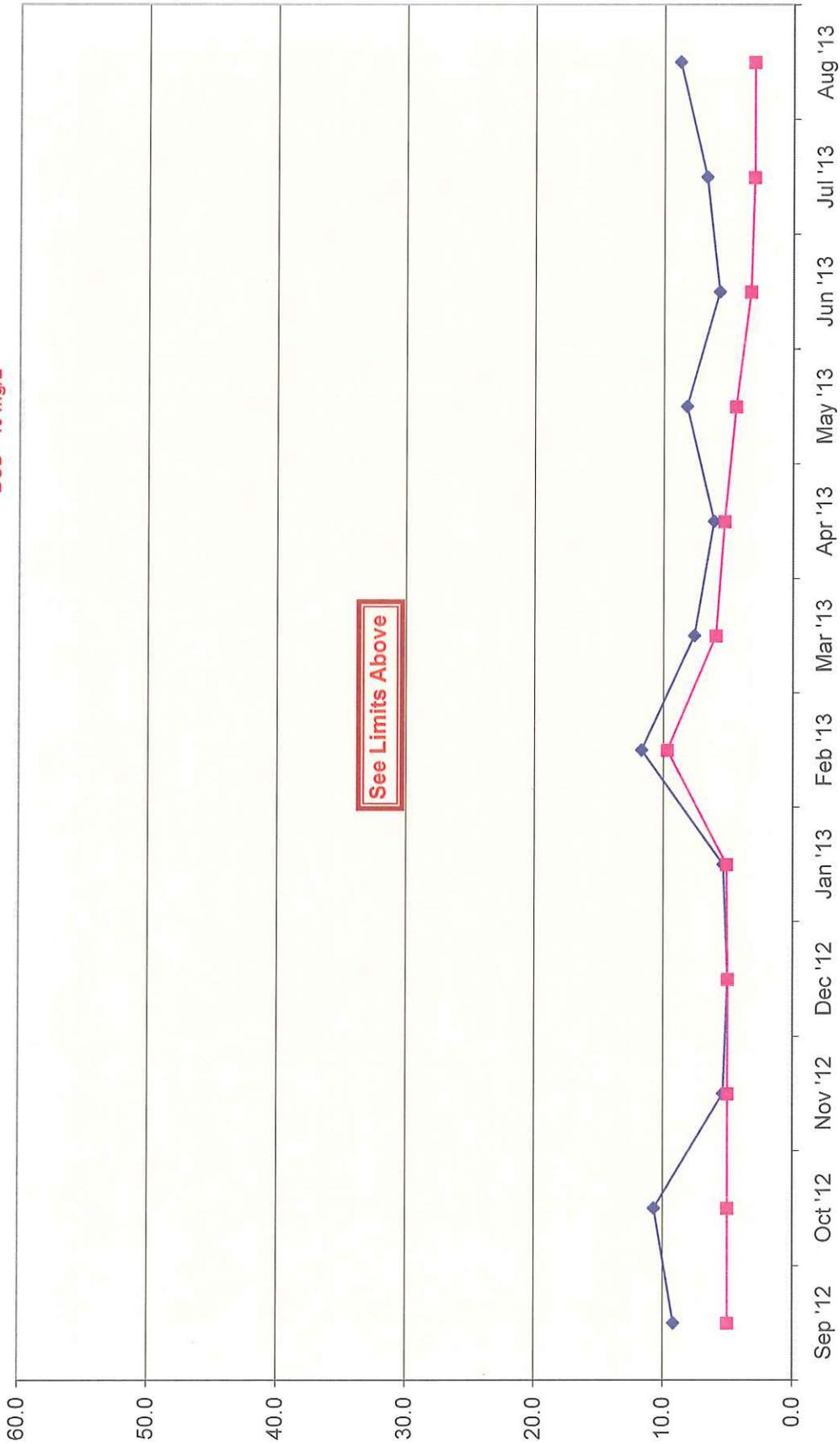
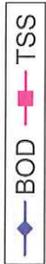


Influent Load BOD / TSS lbs



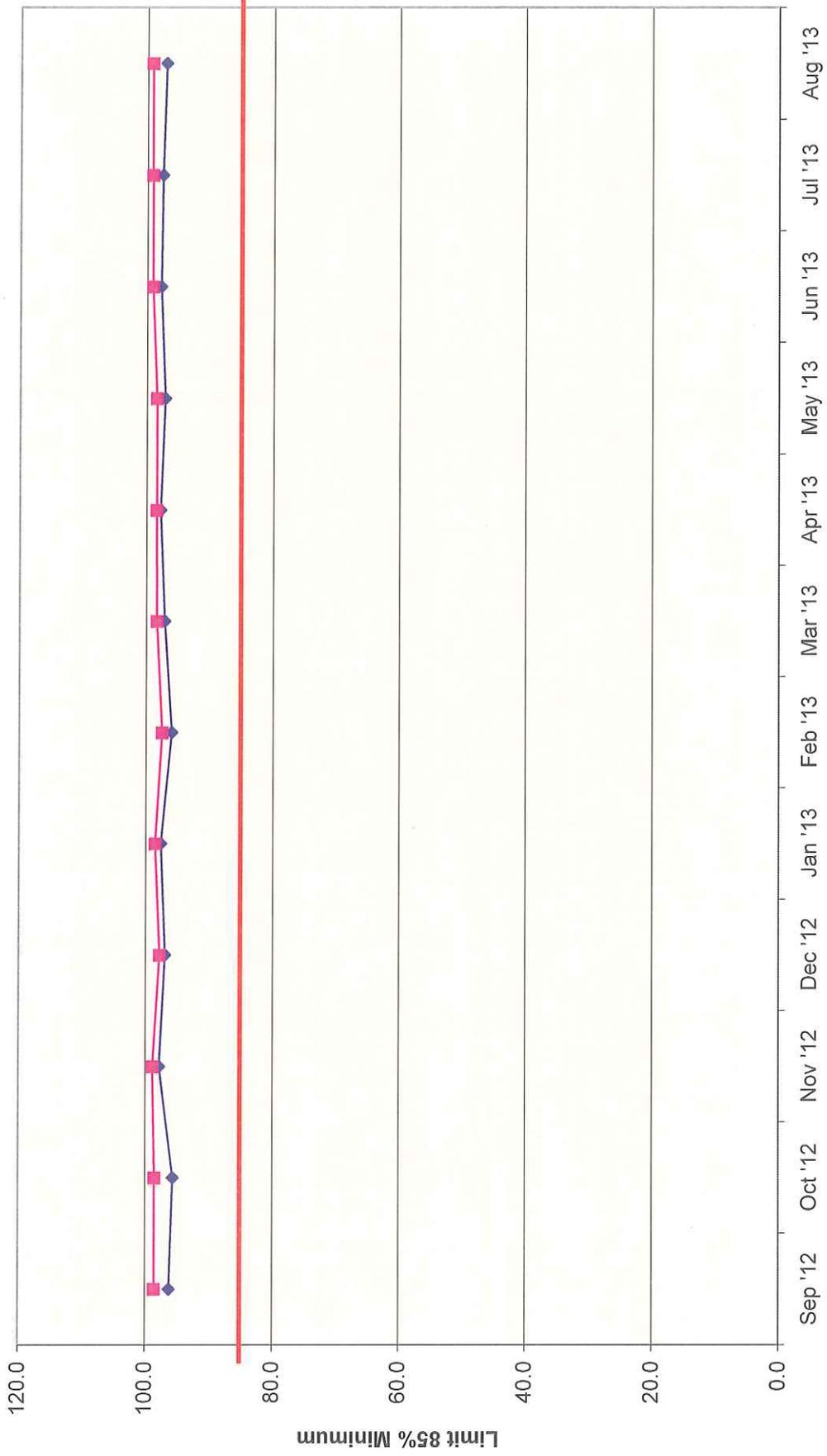
Effluent BOD / TSS Concentration

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 Percent Removal

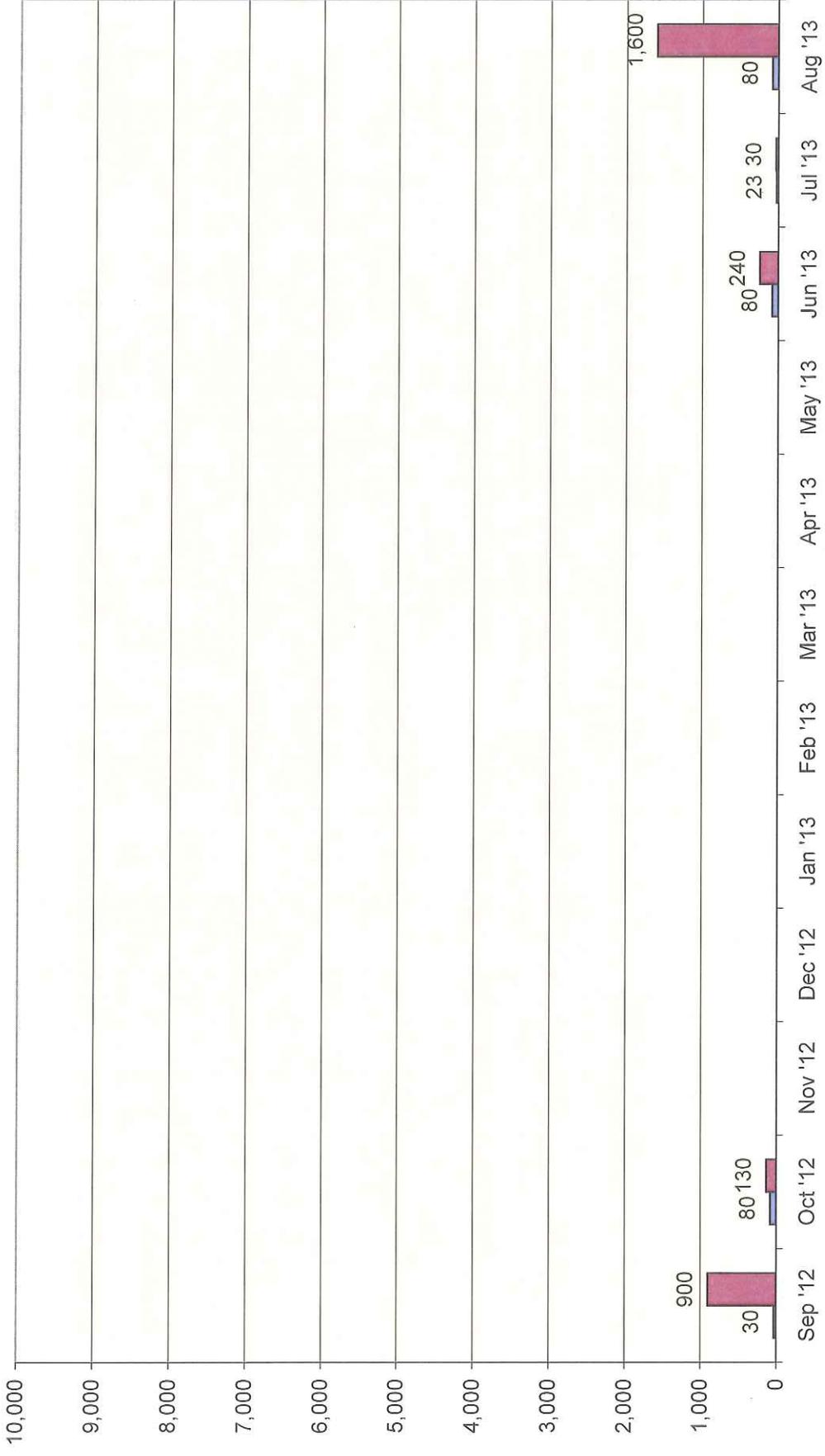
—◆— BOD —■— TSS



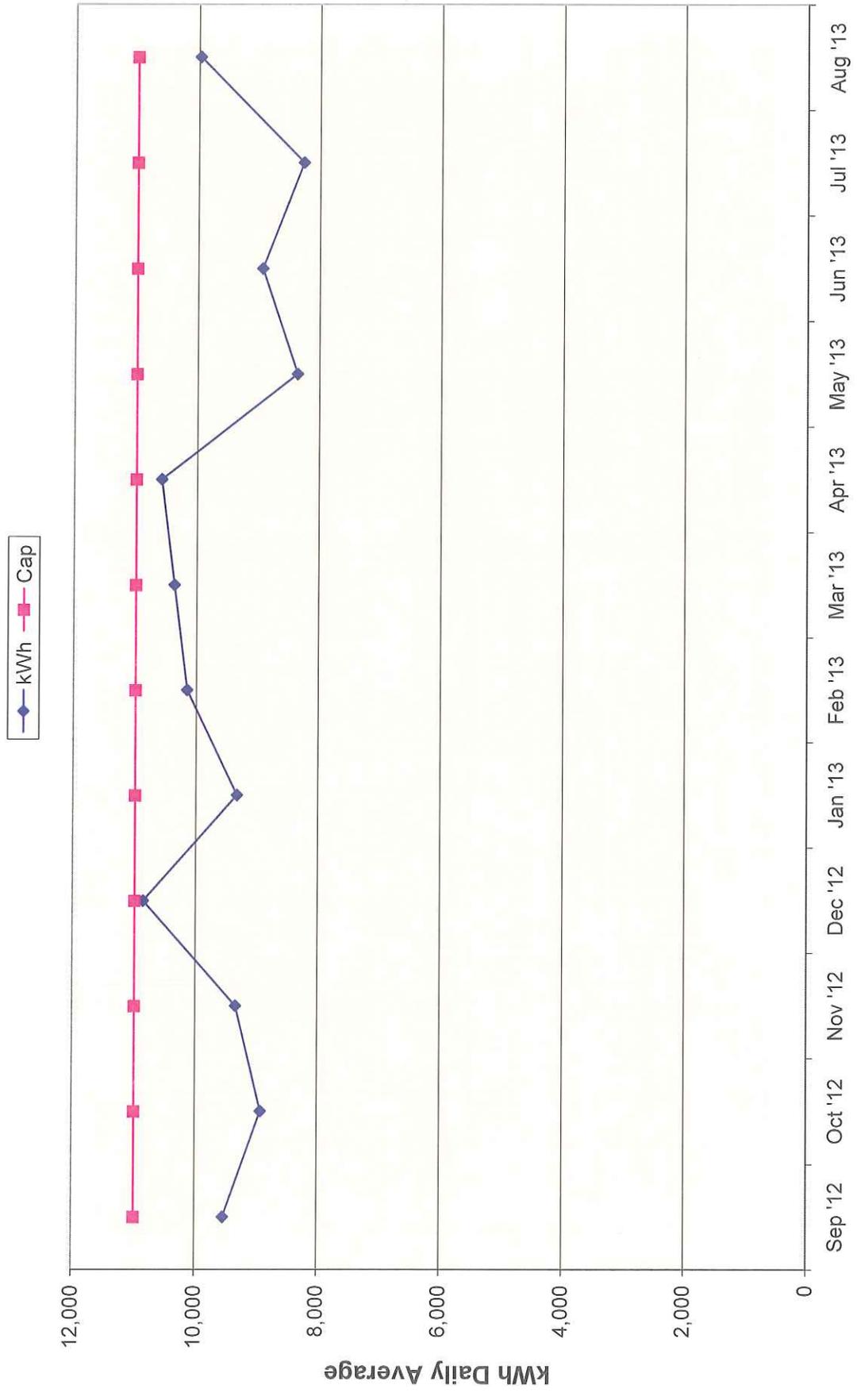
Disinfection

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

■ Median 5
 ■ Maximum

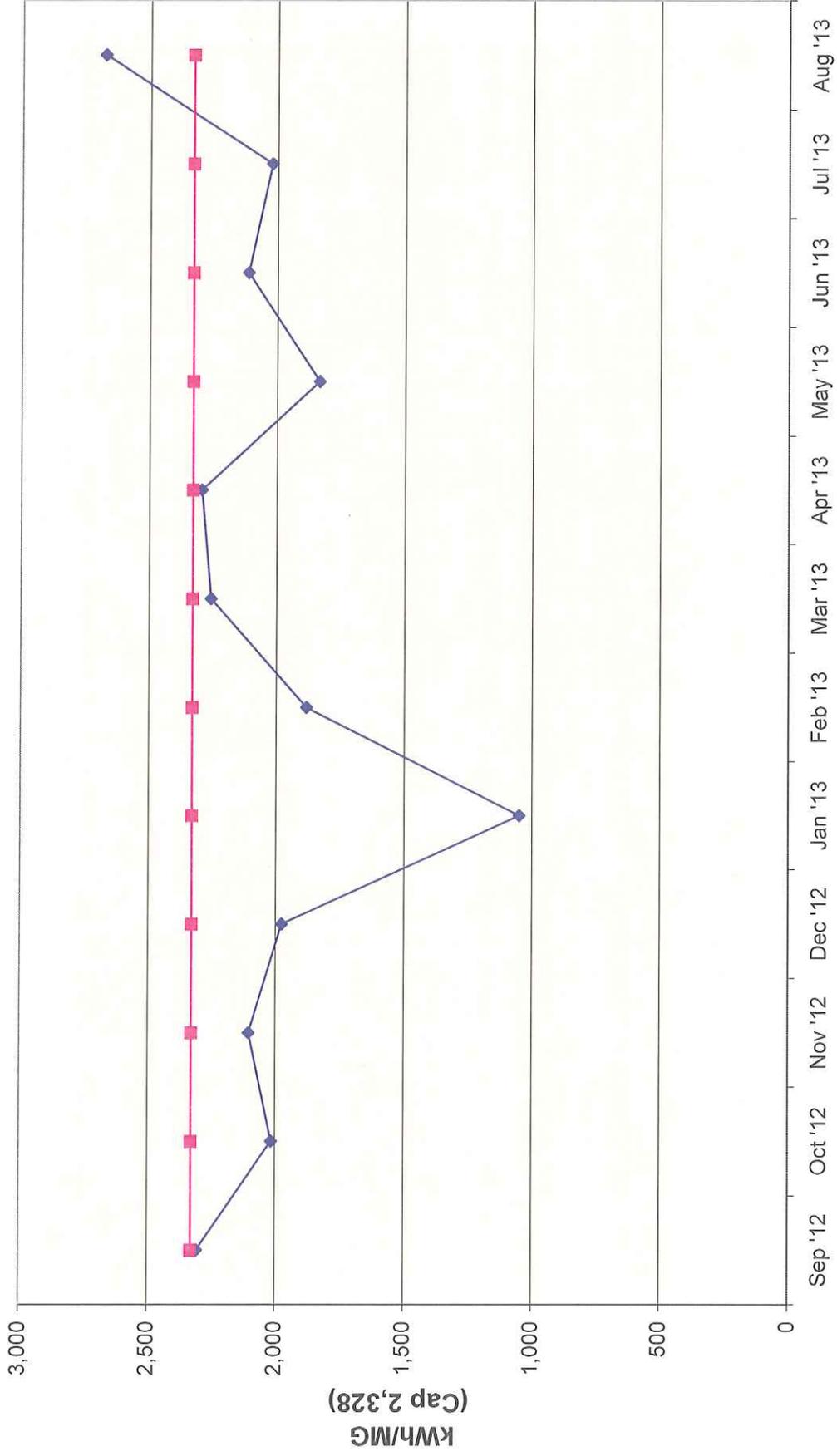


Energy kWh

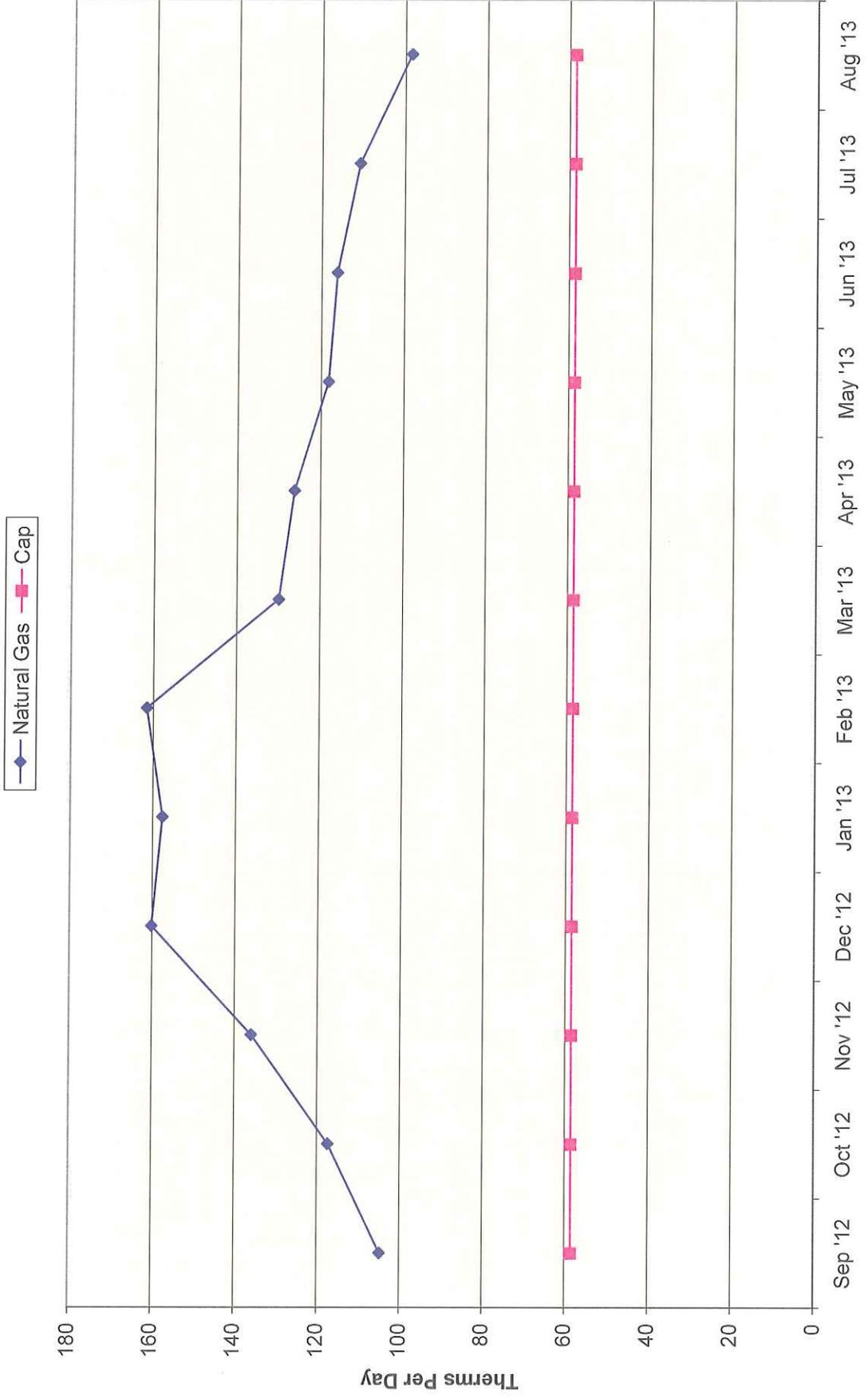


Energy kWh/MG

—◆— kW/MG —■— Cap



Natural Gas Use



Novato Sanitary District
BOD/TSS Report



August, 2013

Date	Flow MGD	Influent				Effluent				BOD % Removal	TSS % Removal
		BOD		TSS		BOD		TSS		PERCENT	PERCENT
		mg/l	lb/d	mg/l	lb/d	mg/l	lb/d	mg/l	lb/d		
08/01/13	4.01										
08/02/13	3.85										
08/03/13	3.85										
08/04/13	3.99										
08/05/13	3.93	319	10,456	324	10,619	9	295	<3	<98	97.2	99.1
08/06/13	4.01										
08/07/13	4.14	295	10,186	390	13,466	18	621	<3	<104	93.9	99.2
08/08/13	4.02										
08/09/13	3.82	350	11,151	376	11,979	<5	<159	<3	<96	98.6	99.2
08/10/13	3.90										
08/11/13	4.15	317	10,972	422	14,606	<5	<173	<3	<104	98.4	99.3
08/12/13	3.87										
08/13/13	4.64	245	9,481	342	13,235	6	232	<3	<116	97.6	99.1
08/14/13	4.07										
08/15/13	3.96	296	9,776	339	11,196	<5	<165	<3	<99	98.3	99.1
08/16/13	3.84										
08/17/13	3.87										
08/18/13	4.04										
08/19/13	3.94	302	9,924	358	11,764	9	296	<3	<99	97.0	99.2
08/20/13	4.04										
08/21/13	3.91	294	9,587	365	11,902	8	261	<3	<98	97.3	99.2
08/22/13	4.12										
08/23/13	3.79	281	8,882	344	10,873	<5	<158	<3	<95	98.2	99.1
08/24/13	3.98										
08/25/13	4.26										
08/26/13	3.81	271	8,611	330	10,486	23	731	<3	<95	91.5	99.1
08/27/13	3.84										
08/28/13	3.74	348	10,855	390	12,165	<5	<156	<3	<94	98.6	99.2
08/29/13	3.93										
08/30/13	3.71	275	8,509	320	9,901	7	217	<3	<93	97.5	99.1
08/31/13	3.74										
Weekly Averages											
08/03/13	Week 1	236	3,490	338	5,046	8	123	3	45		
08/10/13	Week 2	321	4,807	363	5,453	11	163	3	45		
08/17/13	Week 3	286	4,570	368	5,902	5	86	3	48		
08/24/13	Week 4	292	4,293	356	5,222	7	108	3	44		
08/31/13	Week 5	298	4,230	347	4,922	12	167	3	43		
Monthly											
Minimum	3.71	245	8,509	320	9,901	<5	<71	<3	<42	92	99
Maximum	4.64	350	11,151	422	14,606	23	332	<3	<53	99	99
Total	122.77										
Average	3.96	299	9,866	358	11,849	<9	<131	<3	<45	97	99

Novato Sanitary District
Conventional Pollutants Report



August, 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
08/01/13	4.01	7.1					7.0				23.5
08/02/13	3.85	7.0					7.0				24.1
08/03/13	3.85										
08/04/13	3.99										
08/05/13	3.93	7.2				13	7.0				23.4
08/06/13	4.01						7.0				23.6
08/07/13	4.14	7.2				1,600	7.0				23.6
08/08/13	4.02	7.1					6.9				24.1
08/09/13	3.82	7.0				50	7.0				23.4
08/10/13	3.90										
08/11/13	4.15					80					
08/12/13	3.87	6.7					7.0				23.9
08/13/13	4.64					80	7.0				23.9
08/14/13	4.07	7.2					7.0				24.3
08/15/13	3.96	7.1				13	7.0				23.8
08/16/13	3.84	7.0					7.0				24.7
08/17/13	3.87										
08/18/13	4.04										
08/19/13	3.94	7.0				50	7.0				23.9
08/20/13	4.04	7.2					7.0				24.7
08/21/13	3.91					50	7.0				23.9
08/22/13	4.12						7.0				23.8
08/23/13	3.79	7.2				11	6.9				23.8
08/24/13	3.98										
08/25/13	4.26										
08/26/13	3.81	7.2				27	7.0				24.2
08/27/13	3.84	7.2					7.0				24.6
08/28/13	3.74	7.3				30	7.0				24.2
08/29/13	3.93	7.4					7.0				24.5
08/30/13	3.71					80	7.0				24.6
08/31/13	3.74										
Monthly											
Minimum	3.71	6.7				11	6.9				23.4
Maximum	4.64	7.4				1,600	7.0				24.7
Total	122.77										
Average	3.96	7.1					7.0				24.0

**NOVATO SANITARY DISTRICT
WATER RECLAMATION 2013
COMPLIANCE SUMMARY REPORT**

August	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
August 1	0.83	0.63		0.00	< 20	NA	0	1.5			7.47	< 2	> 450
August 2	0.93	0.54		0.21	< 20	NA	0	0.9				< 2	> 450
August 3	0.93	0.57			< 20	NA	0	1.7				< 2	> 450
August 4	0.93	0.81			< 20	NA	0	1.7				< 2	> 450
August 5	0.84	0.57			< 20	NA	0	2.0			5.85		> 450
August 6	0.75	0.50	X		< 20	NA	0	3.7					> 450
August 7	0.73			0.62								< 2	
August 8	0.71			0.08									
August 9	0.71			0.13									
August 10	0.71			0.18									
August 11	0.77			0.22									
August 12	0.68			0.13									
August 13	0.93			0.10									
August 14	0.93	0.77			< 20	NA	0	1.8			7.42	< 2	> 450
August 15	0.93	0.67			< 20	NA	0	1.8			7.66	< 2	> 450
August 16	0.65	0.65	X		< 20	NA	0	1.5			7.69	< 2	> 450
August 17	0.72	0.71	X		< 20	NA	0	1.3				< 2	> 450
August 18	0.73	0.63			< 20	NA	0	1.1					> 450
August 19	0.58	0.56	X		< 20	NA	0	1.2			7.46		> 450
August 20	0.69	0.77	X		< 20	NA	0	1.5					> 450
August 21	0.82	0.68	X		< 20	NA	0	1.8			7.45		> 450
August 22	0.95	0.65	X		< 20	NA	0	1.7			7.57		> 450
August 23	0.72	0.42	X		< 20	NA	0	1.5			7.69		> 450
August 24	0.52	0.14	X		< 20	NA	0	1.3					> 450
August 25	0.30	0.17	X		< 20	NA	0	1.2					> 450
August 26	0.58	0.32	X										
August 27	0.73	3.76	X		< 20	NA	0	1.4			7.45		> 450
August 28	0.88	0.71			< 20	NA	0	1.4			7.48		> 450
August 29	0.72	0.67			< 20	NA	0	1.3			7.6		> 450
August 30	0.71	0.21			< 20	NA	0	1.3					
August 31	0.65	0.11	X										
Total	23.26	16.22	0.00	1.67		NA							
Min	0.30	0.11	0.00	0.00	20	NA	< 0.0	< 0.9	0.0	0.0	5.9	< 2	> 450
Max	0.95	3.76	0.00	0.62	20	NA	< 0.0	< 3.7	0.0	0.0	7.7	< 2	> 450
Ave	0.75	0.68	#DIV/0!	0.19	20	NA	< 0.0	< 1.6	#DIV/0!	#DIV/0!	7.4	< 2	> 450
Count	31	24	0	9	22	NA	22	22	0	0		9	21

Recycled Plant Down - All Water to Plum Street Potable or Banked (Stored)
 If a check (X) appears in the Bank column, water delivered may be exclusively stored (banked) water or a combination banked and produced water.
 August 6th, August 26th, and August 31st all water delivered was banked.

WORK ORDER STATISTICS

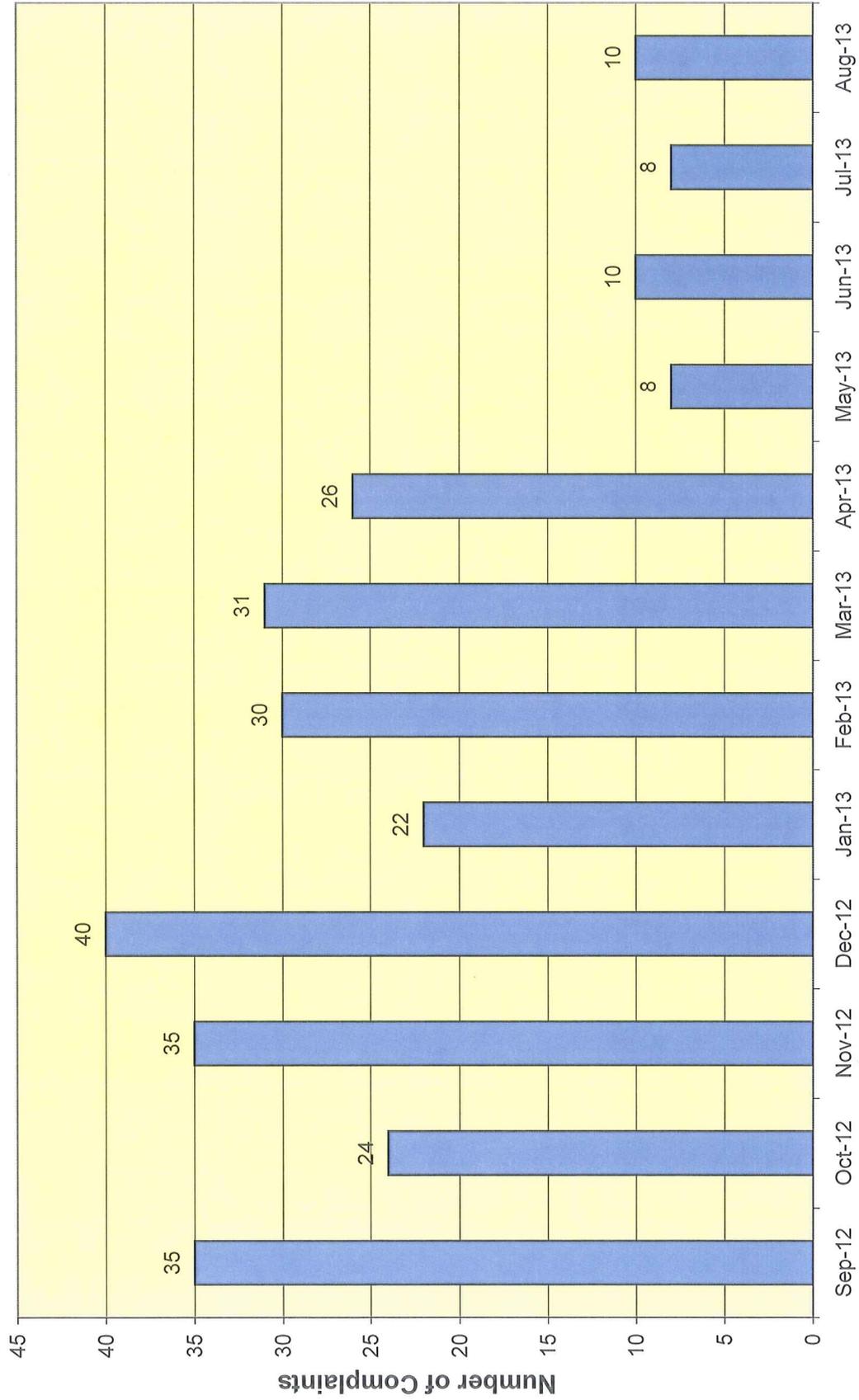
August 1, 2013 - August 31, 2013

	Open Work Orders Due Prior to 8/1/13	Open Work Orders 8/1/13 - 8/30/13	Total Open Work Orders
Preventative	8	357	365
Corrective	0	22	22
Total	8	379	387

	Closed Work Orders 8/1/13 - 8/31/13
Preventative	357
Corrective	21
Total	378

Total Outstanding Work Orders as of September 1, 2013	9
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Complaints Received



NOVATO SANITARY DISTRICT
Wastewater Operations Committee Meeting
Odor Control, Noise, and Landscaping Report
August 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) and 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. Preliminary results from the sampling events became available in August.

Also, the District developed pilot project to cover the anoxic zones of the aeration basins this summer progressed with a completion of equipment delivery from Pi2 Technologies of Montreal, Quebec. As mentioned in earlier reports, these covers consist of floating hexagonal units (Podz) which incorporate a honeycomb design, float on the water surface, and utilize carbon filtering/scrubbing media to remove odors. The Podz were installed as intended in the anoxic zones of the operating aeration basins, and appeared to provide good initial results. However, it was soon discovered that floating scum in the anoxic zones would get trapped in the headspace of the individual Podz units, as well as in the space between the basin walls and the floating mass of the Podz units. It was found that this trapped scum further contributed to the odor problem, and the Podz units were removed from the basins. The manufacturer was contacted and staff is working with them to refine the design and re-installation of the units in the near future.

Noise:

In August 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. Staff continued to monitor sound levels at the property line on Lea Drive, which continued to indicate that the sound levels are those

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

of an "Average Quiet Street" and well below the 60 decibels the Novato General Plan specifies for residential neighborhoods.

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

Landscaping:

In August 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 July 2013 report, the District 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
August 2013**

General:

For August 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:

- 1.6 FTE field workers for Sewer Maintenance (main line cleaning)
- 1.4 FTE field workers for Pump Station Maintenance
- 1.3 FTE field workers for CCTV work, and
- 1.4 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.
- 1.4 FTE field workers Vacation/Sick Leave/Holiday.

Collection System Maintenance:

Performance metrics for the department are presented in the attached graphs showing the length of line cleaned/month, footage cleaned/hour worked, overflows/month, and the CCTV footage achieved. A total of 44,403 feet of sewer pipelines were cleaned for the month. The footage cleaned per hour is within established parameters for the department but the lines cleaned/month is below the department's production goal. Staff completed 222 maintenance work orders generated by the ICOM3 CMMS system, with 85 outstanding work orders. 51 of the outstanding work orders originate to the mechanical rodding unit which was not in the field primarily due to staff vacations. 34 outstanding work orders originate to the hydro-flushers, and 23 of them were postponed because the main lines had been chemically treated for root abatement in June. These 23 work orders will be completed during the month of September to allow the chemical root treatment to achieve full effectiveness. The remaining 62 outstanding work orders (51 rodding work orders and 11 flusher work orders) will also be completed in September. The CCTV van was in the field for a total of 16 working days during the month of July and the department's CCTV production of 25,628ft for the month is below expected production goals.

As mentioned in prior reports, the department continues to work on monitoring and modifying its work practices, (primarily to better integrate flushing with CCTV work) as part of its continuous improvement practices. As part of its ongoing internal self-evaluation, staff further analyzed the issue of lower production in both cleaning and CCTV work and came up with improved progress monitoring procedures, which are being implemented in September. As these improved procedures gain traction, staff anticipates that it will show improvement in its production goals in the future.

Pump Station Maintenance:

The Collection System Department conducted 262 lift station inspections for the month with 106 of the inspection visits generated through the JobCal Plus CMMS system.

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

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.

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

Both pumps at Bahia #2 pump station were replaced in August due to age and wear. At Bel Marin Keys #5 pump station, pump #3 was taken out of service and sent in for repair due to bearing failure and wear to the impeller and volute. It is anticipated that the pump will be returned to service in September.

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

Pump Station Rehabilitation:

Currently, there is no pump station under construction as part of the District's continuing multi-year Pump Station Rehabilitation Project (Capital Improvement Project No. 72403. Design is proceeding and is almost complete on the next phase (Unit 5), and it is anticipated that staff will be bringing an authorization to bid this phase at a Board meeting in the near future, October or November).

Safety and Training:

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

Specialized training: Collection System staff attended Confined Space Entry Training in August. Staff also conducted training on replacing the continuous rod for the mechanical rodder.

Safety performance: There were no lost time accidents this month for a total of 212 accident-free days.

Standard Operating Procedures (SOPs):

Department staff continued to work on generating new SOPs, and working towards finalizing earlier draft SOPs. Consequently, no new SOPs were issued in August.

Sanitary Sewer Overflows (SSOs):

For the month of August, there was one (1) SSO, as discussed below.

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Wastewater Operations Committee meeting
Collection System Operations Report
August 2013**

No.	Date	Location	Amount, gal	Cause
1	8/10/2013	826 Hayden Ave.	50	Roots/Flushable Wipes

1. SSO at 826 Hayden Ave.: This SSO was a Category II event with the discharge volume of approximately 50 gallons going to open ground and into the street. There was no recovery (0%) for this discharge due to the fact that the discharge either soaked into the ground or evaporated on the street before it could be recovered.

This discharge was determined to be the result of a partial root blockage and flushable wipes in the main line. Volume estimation of the spill footprint, observed water height above the pick-hole times duration and, re-creation of the event by District staff using fresh water to determine the amount that went to the planting area versus water to the street, and reporting party/local resident interviews were all used to estimate the duration and volume of this event.

In accordance with reporting requirements: (a) no two (2) hour 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 December 5, 2012 using a hydro-flusher, and this line segment is on a twelve (12) month cleaning frequency. CCTV inspection immediately after the discharge event showed the line segment to have root intrusion at multiple locations in the main line. The line segment has been moved to a six (6) month cleaning frequency and has been added to the chemical root abatement program until it can be replaced or repaired.

This event was reported into the State's CIWQS database on August 10, 2013 as a Category II event, SSO Event ID # 797734, and was certified in CIWQS on August 26, 2013, Certification ID # 817690.

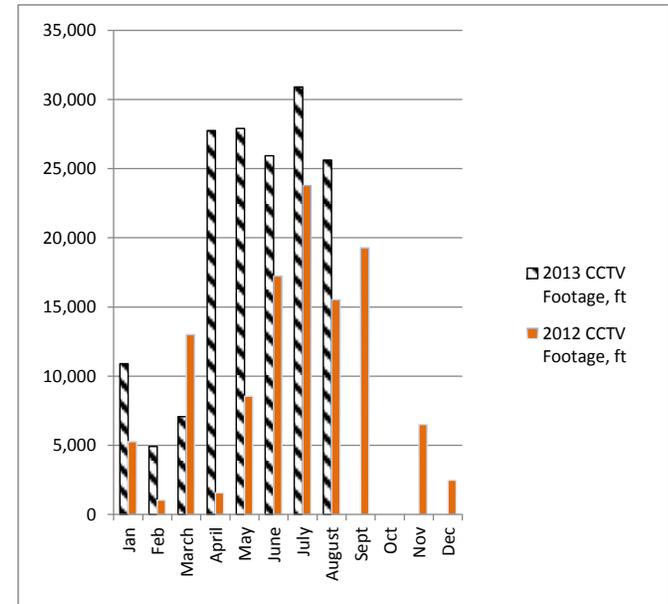
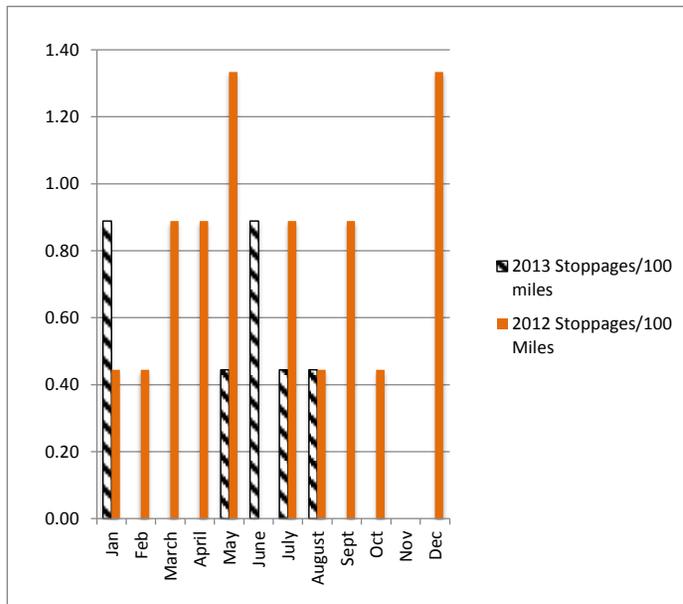
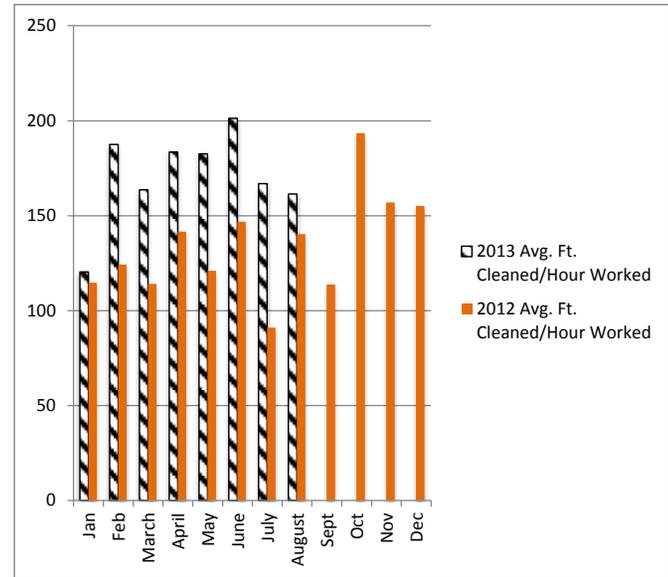
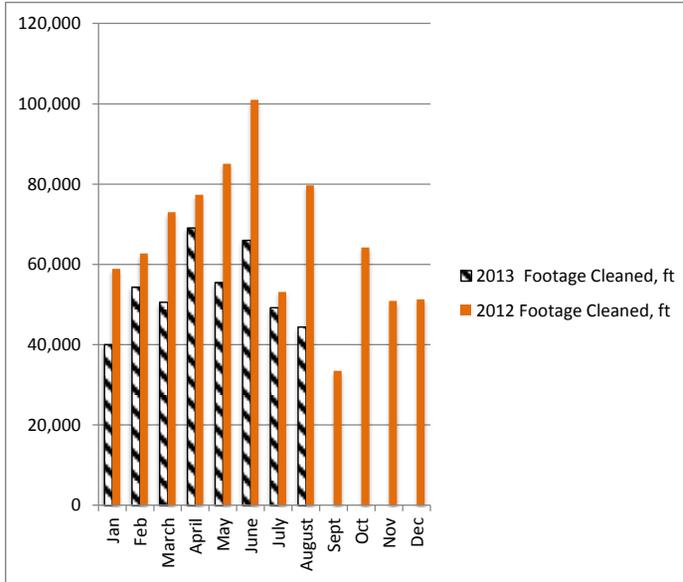
Novato Sanitary District
Collection System Monthly Report For August 2013 (as of August 31, 2013)

	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	1.6					NA	1.8
Number of FTEs (other)	1.9	1.4	2.4	1.5	1.8	1.2	1.8	1.4					NA	1.7
Number of FTEs (CCTV)	0.1	0.3	0.5	1.7	1.1	1.2	1.5	1.3					NA	1.0
Total, FTEs	3.9	3.4	4.7	5.4	4.6	4.3	4.9	4.2					NA	4.4
Regular Time Worked, (main line cleaning), hrs	333	290	309	377	304	328	295	275					2,510	314
Regular Time Worked on Other, hrs ⁽¹⁾	326	249	415	259	308	216	304	235					2,311	289
Regular Time Worked on CCTV ⁽²⁾	20	46	85	300	192	200	258	221					1,321	165
Total Regular time, worked, hrs	678	585	809	935	804	744	857	731					6,142	768
Total Vacation/Sick Leave/Holiday, hrs	204	77	101	114	239	62	191	238					1,225	153
Vacation/Sick Leave/Holiday, FTEs	1.2	0.4	0.6	0.7	1.4	0.4	1.1	1.4					7.1	0.9
Overtime Worked on Coll. Sys., hrs	6	45	5	47	5	1	24	24					157	20
Overtime Worked on Other, hrs ⁽¹⁾	3	19	5	28	12	6	16	17					106	13
Overtime Worked on CCTV ⁽²⁾	1	3	0	0	0	0	2	1					7	1
Total Overtime, hrs	10	67	10	75	17	7	42	42					270	34
Productivity														
Rodder Work Orders Generated, ft	14	0	24	31	83	66	51	51					320	40
Rodder 3203 Ft. Cleaned	3,138	0	3,856	5,490	678	4,371	760	1,842					20,135	2,517
Flusher Work Orders Generated	187	252	290	385	438	361	277	256					2,446	306
Truck 3205V Ft. Cleaned	2,782	5,146	2,755	13,698	15,477	10,186	0	12,537					62,581	7,823
Truck 3206V Ft. Cleaned	34,114	49,225	43,954	49,898	39,332	51,468	48,444	30,024					346,459	43,307
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	25,628	NA	NA	NA	NA	161,037	20,130
Work Orders Completed	201	252	286	374	314	267	239	222					2,155	269
Work Orders backlog	6	0	28	42	207	160	89	85					617	77
Total Footage Cleaned	40,034	54,371	50,565	69,086	55,487	66,025	49,204	44,403	NA	NA	NA	NA	429,175	53,647
Sanitary Sewer Overflows (SSOs)														
Minor (Category II)	0	0	0	0	1	1	1	1					4	NA
Major (Category I)	2	0	0	0	0	1	0	0					3	NA
Overflow Gallons	2,200	0	0	0	158	1,111	10	50					3,529	NA
Volume Recovered	880	0	0	0	158	100	0	0					1,138	NA
Percent Recovered	40%	NA	NA	NA	100%	9%	0%	0%	NA	NA	NA	NA	32%	NA
Service Calls (non-SSO related)														
Service calls, normal hours, #	7	5	7	12	6	6	8	5					56	7
Normal hours S.C. response time, mins (avg.)	12	15	14	18	17	22	19	13					130	16
Service Callouts, after hours, #	1	0	0	1	1	0	1	2					6	1
After Hours S.C. response time, mins (avg.)	23	NA	NA	20	30	0	27	34					134	22
Benchmarks														
Average Ft. Cleaned/Hour Worked	120	187	164	183	183	201	167	161	NA	NA	NA	NA	NA	171
Total Stoppages/100 Miles	0.9	0.0	0.0	0.0	0.4	0.9	0.4	0.4	NA	NA	NA	NA	3.1	NA
Average spill response time (mins)	18	0	0	0	15	19	15	27					NA	12
Callouts/100 Miles	0.4	0.0	0.0	0.4	0.4	0.0	0.4	0.9					2.7	0.3
Overtime hours/100 Miles	3	20	2	21	2	0	11	11					70	9
Overflow Gallons/100 Miles	978	0	0	0	70	494	4	22	NA	NA	NA	NA	1568	196

⁽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 August 2013 (as of August 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	253	224	313	226	256	249	320	301					2,142	
Number of Employees	1.4	1.3	1.8	1.3	1.4	1.4	1.8	1.4						1.5
Regular Time Worked on Pump Sta	185	189	223	182	227	201	273	239					1,719	
Overtime Worked on Pump Sta	69	35	90	44	29	48	47	62					424	
After Hours Callouts	4	3	1	8	1	0	5	5					27	
Average Callout response time (mins)	24	35	20	30	0	0	26	35					170	21
Work Orders														
Number generated in month	107	112	116	124	110	125	134	107					935	
Number closed in month	104	110	116	124	110	123	134	106						
Backlog	3	2	0	0	0	2	0	1						

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

	Open Work Orders Due Prior to 8/1/2013	Open Work Orders 8/1/2013 -8/31/2013	Total Open Work Orders
Preventive	0	107	1
Corrective	0	0	0
Total	0	107	107

	Closed Work Orders 8/1/2013 -8/31/2013
Preventive	106
Corrective	0
Total	106

Total Outstanding Work Orders as of 8/31/2013	1
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NOVATO SANITARY DISTRICT
Wastewater Operations Committee Meeting
Reclamation Facilities Report
August 2013

Summary:

The rancher grazed cattle on all three Sites. Parcel rehabilitation resumed on Parcel 78. The volute for Pump 1 at Drainage Pump Station 7 was removed from the sump. Staff met with the electrical engineering consultant to discuss solutions to the voltage fluctuations for the valve actuator power at the irrigation parcels. Approximately 86 MG of recycled water was used for irrigation this month. The storage ponds are storing approximately 67 MG of recycled water. Sludge disposal operations began this month.

Ranch Operations:

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

Parcel rehabilitation began on the back half of Parcel 78. This parcel has been under rehabilitation for several years now and staff is pushing to complete the rehabilitation this year to get it back into production. After work is completed in Parcel 78 the leveling equipment will be moved to Parcel 38 to complete the rehabilitation work. Parcels 21, 24, 25 & 28 were mowed in preparation for rehabilitation work.

In July, 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. Staff used the services of a contractor to come in and retrieve the volute. The volute was retrieved and the pump repair shop picked up the volute afterwards. Staff has received a quote for repair of the existing pump. Staff is currently requesting quotes from other pump vendors to compare to the repair cost.

Irrigation Parcels:

As previously reported on occasion, the valve actuators for some irrigation zones within the Parcels will not fully open or close and some motors have failed. This month two more actuators failed, located in Zones 331, 731. In addition, a few localized areas were flooded due to valves that would not fully close.

Staff met with the District's electrical consultant who will start looking at methods to remedy the situation. The root cause of the problem is wire size feeding power to the actuators. Solutions may include increasing the wire size, installation of local transformers or installing an actuator that can tolerate the voltage drop.

Irrigation Pump Station:

Approximately 85.81 million gallons of recycled water was used for irrigation in August. The average storage pond staff gauge depth at the beginning of August was 5.2 feet and 5.6 feet at end of August, accumulating approximately 7.6 million gallons. This quantity is calculated using charts from the Reclamation Facilities O&M Manual.

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

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

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. Staff will contact PG&E once again and if no response, request quotes to replace the motor.

Sludge Handling & Disposal:

The sludge handling and disposal contract was awarded this month and work began during the last week of August, beginning to pump sludge out of Lagoon 2. The spoil pile generated with the cleaning for the Ignacio Digester last Fall in Lagoon 5 was removed and spread in the Dedicated Land Disposal (DLD) Area.
