



November 14, 2011

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

Subject: Veolia Water Operations Report – October 2011

Dear Ms. James:

We are pleased to provide this updated activity report for October 2011.

As always, please give me a call at 415-798-6075 should you have any questions.

Regards,

John Bailey
Project Manager

**MONTHLY OPERATIONS REPORT
October 2011**

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:

October 2011:

RECLAMATION – October 1,2,5-17

Parameter	Monthly Performance			
	Value		Limit	
	Ave	Max	#1	#2
Flow, MGD (monthly ave/max/peak #1)	4.343	4.950	N/A	N/A
Influent BOD ₅ , lb/day (month ave/max)	10,836	20,128	N/A	N/A
Influent TSS, lb/day (monthly ave/max)	11,564	14,581	N/A	N/A
Effluent BOD ₅ , mg/L (monthly ave/weekly max)	16	17.5	N/A	N/A
Effluent TSS, mg/L (monthly ave / weekly max)	11	17	40	N/A
Effluent BOD ₅ - % Removal	94		85	N/A
Effluent TSS - % Removal	97		85	N/A
Ammonia mg/L (monthly average/daily max)	3.1	8.1	N/A	N/A
pH, su (min/max) – (reclamation)	6.7	7.0	6.0	9.0
Total Coliform, mpn (5 sample median – reclamation)	11	33	240	10000
Total Permit Exceedances (NPDES)	0			

NA – Not Applicable

BAY DISCHARGE – October 3,4,18-31 (Dry Season Limits Apply)

Parameter	Monthly Performance			
	Value		Limit	
	Ave	Max	#1	#2
Flow, MGD (monthly ave/max)	4.27	5.46	N/A	N/A
Influent BOD ₅ , lb/day (month ave/max)	8,495	9,881	N/A	N/A
Influent TSS, lb/day (monthly ave/max)	11,521	16,784	N/A	N/A
Effluent BOD ₅ , mg/L (monthly ave/weekly max)	12	37	15	30
Effluent TSS, mg/L (monthly ave/weekly max)	8	15	10	20
Effluent BOD ₅ - % Removal	95	N/A	85	N/A
Effluent TSS - % Removal	97	N/A	85	N/A
Ammonia mg/L (monthly average / daily max)	2.6	8.1	6	21
pH, su (min / max)	6.7	7.1	6.5	8.5
Enterococcus, mpn (30 day geo mean)	1.8	N/A	35	N/A
Fecal Coliform, mpn (30 day median)	15	N/A	140	N/A
Fecal Coliform, mpn (90 th percentile)	50	N/A	430	N/A
Chlorine Residual		0.3	0.0	
Total Permit Exceedances (NPDES)	2			

NA – Not Applicable

Discussion of Violations / Excursions:

On October 4th sodium hypochlorite was overfed to the influent junction structure. This in turn resulted in a chlorine residual at our effluent monitoring station and a high effluent BOD.

The cause of overfeed was a preset under tensioning of a back pressure valve on the sodium hypochlorite feed pumps. The back pressure valve prevents product from flowing (siphoning) by gravity through the pump. The feed pumps had previously been used to feed sodium hypochlorite to the No. 3 water system. The No. 3 system operates at a system pressure of 75 psi. This 75 psi system pressure essentially acts as a backpressure on the hypochlorite feed pumps and masked the under-tensioning of the backpressure valve. To address the odor issues, the feed pumps were switched over and used to feed hypochlorite for odor control at the Influent Junction Structure (IJS). The head differential (backpressure) between the (full) sodium hypochlorite tank and the IJS is approximately negative 20 feet, versus the positive 75 psi system backpressure from the No. 3 water system. The lack of backpressure set up a siphon allowing product to flow at a high rate from the hypochlorite tank to the IJS.

A chlorine residual of 0.3 mg/L was measured at our effluent monitoring station. A sample taken downstream at the old dechlorination station in Ignacio showed no chlorine present. Upon discovering the problem all flow was directed to the reclamation ponds and flow to the Bay was halted. It is believed that no chlorine reached the receiving waters.

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

- October 3rd - Initiated Bay Discharge (transitioned from reclamation).
- October 5th - Sodium Hypochlorite overfeed to influent junction structure resulted in NPDES Violations (2), Chlorine Residual and BOD Weekly Average.
- October 5th – Transitioned back to reclamation due to loss of nitrification process.
- October 18th - Resumed Bay Discharge
- 267 Work Orders closed out
- Diablo Boiler installed *blast tube* (burner)
- Replaced gate operator bearing – Reclamation
- Decant Pump repaired by Flygt
- Working on Micro Turbine
- New Emergency Generator Annual Inspection – Outside Contractor
- Flushed Decant Line
- Aeration Basin #4 Back in Service
- HDH Electrical completed installation of uninterruptable power supply (UPS) on

Influent Pump Station level control and Flare

- Telstar – Annual Certification for Flow Meters throughout plant 10/25/11

CONSTRUCTION UPDATE:

- Attended weekly construction meetings
- Diesel Fuel Line Relocation
- UVT Meter returned and installed

ADMINISTRATION:

- Electronic Self Monitoring Report for September 2011, submitted on 10/31/11

SAFETY AND TRAINING:

- Monthly plant safety inspections for Novato WWTF completed on 10/21/11
- Five Minute Tailgate training is held daily with the O&M staff.
- No safety incidents for the month of October 2011
- Accident Free: 6/1/10 – 10/31/11: 516 days / 23,530 hours
- Veolia Compliance Training for each employee completed
- Crane Safety Training – 10/19/11

ODORS:

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

MISCELLANEOUS

- Process Control Management Plan (PCMP) meetings held weekly
- Odor Survey presented to Board 10/10/11
- Joe Nasuta & Art Fagerstrom in – Process Control & Possible Cost Savings
- Attended Leaders of the North Bay Luncheon 10/28/11
- Booth at Senior Health Fair – 10/6/11
- Sponsored/served at monthly Senior Birthday Celebration 10/3/11

SOP Review & Development:

- RAS Pumping Procedure for Bubbler Failure

Veolia Support Staff On/Off Site (Various Times)

John O'Hare Technical Support
Chris McAuliffe District Manager
Art Fagerstrom Technical Support

Dan Brown Asset Management
Joe Nasuta Technical Support

WORK ORDER STATISTICS

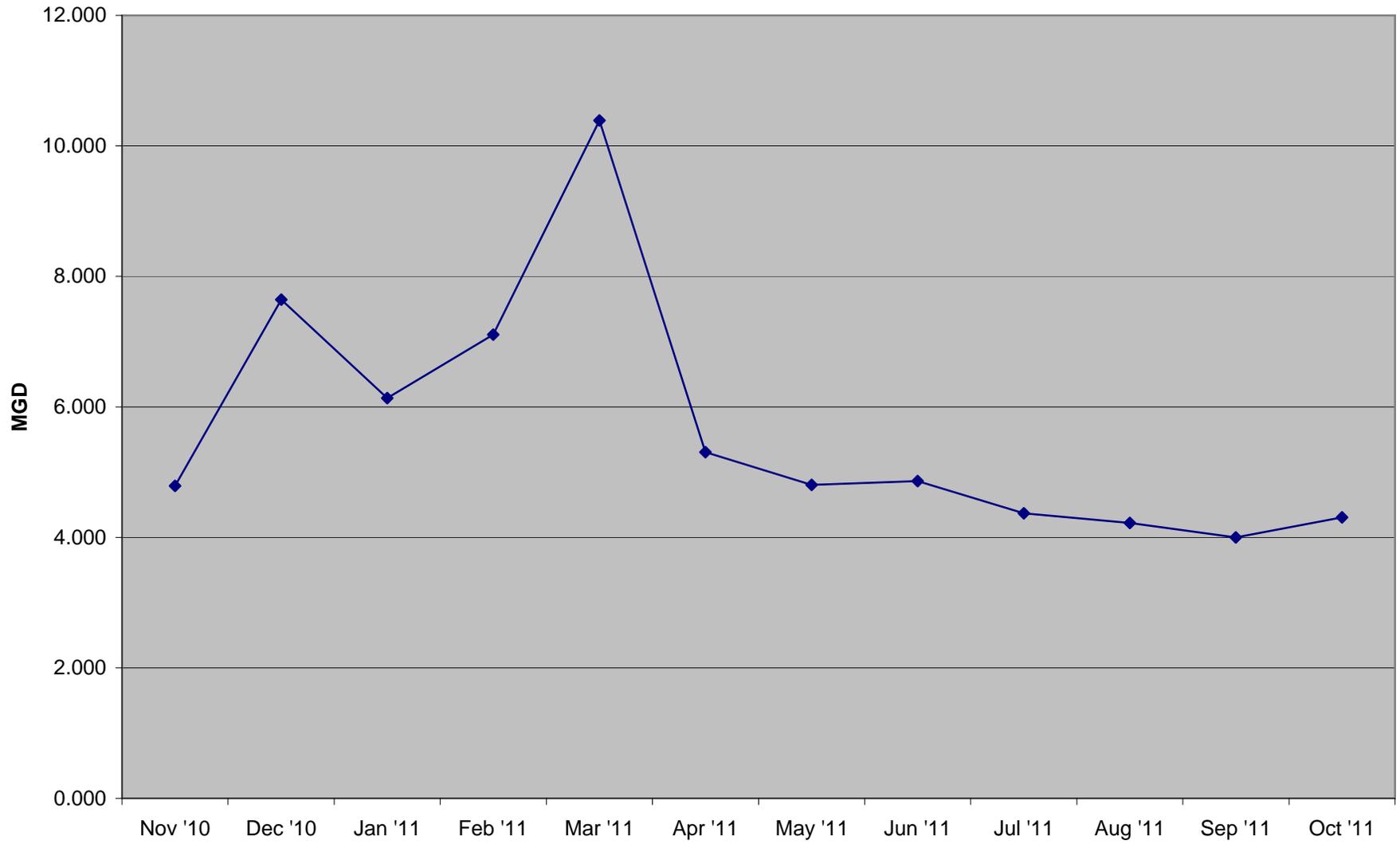
October 1, 2011 - October 31, 2011

	Open Work Orders Due Prior to 10/1/11	Open Work Orders 10/1/11 - 10/31/11	Total Open Work Orders
Preventative	8	271	279
Corrective	3	21	24
Total	11	292	303

	Closed Work Orders 10/1/11 - 10/31/11
Preventative	252
Corrective	15
Total	267

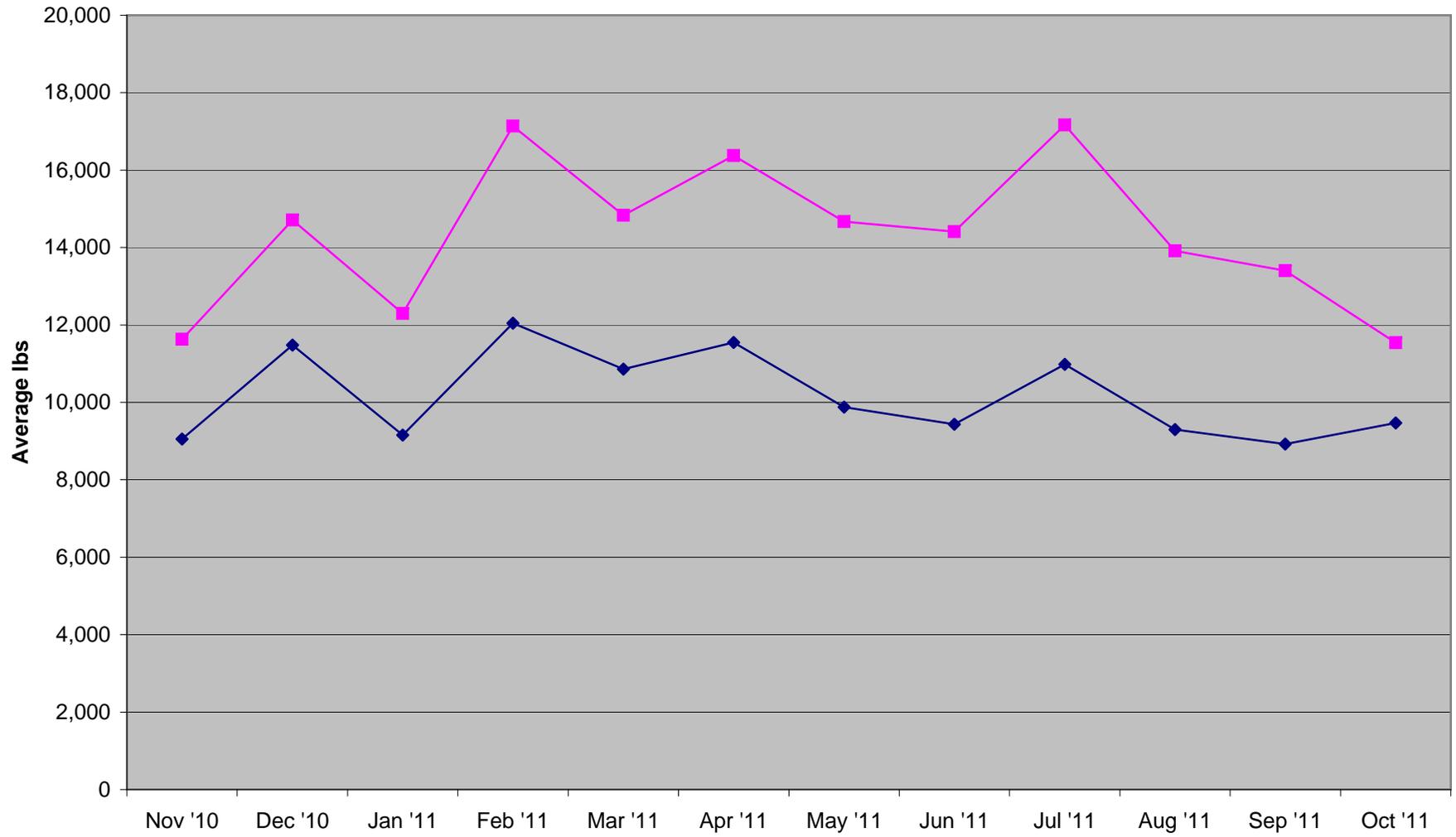
Total Outstanding Work Orders as of November 1, 2011	36
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Plant Flow



Influent Load BOD TSS lbs

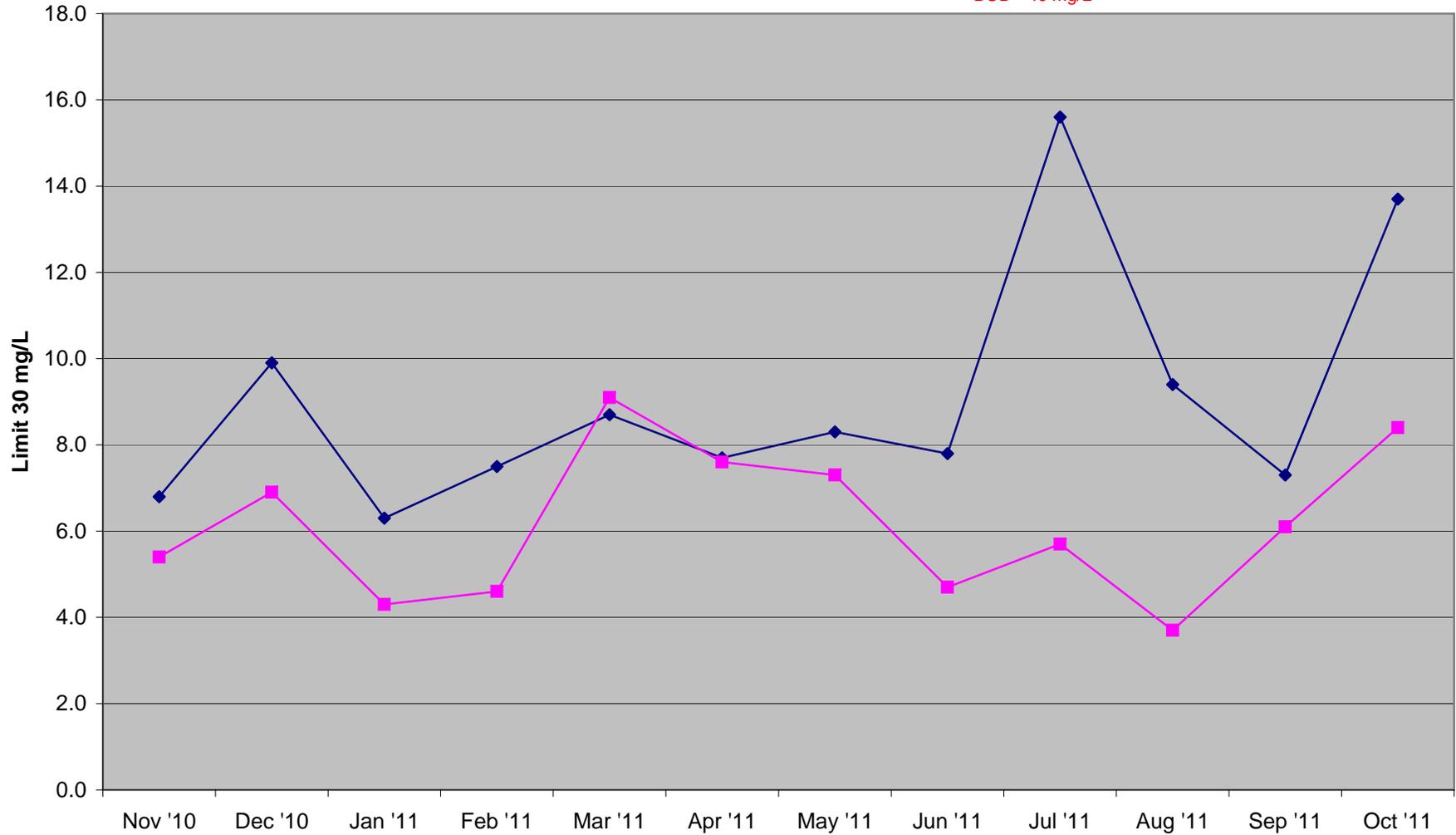
—◆— BOD lbs —■— TSS lbs



Effluent BOD TSS Concentration

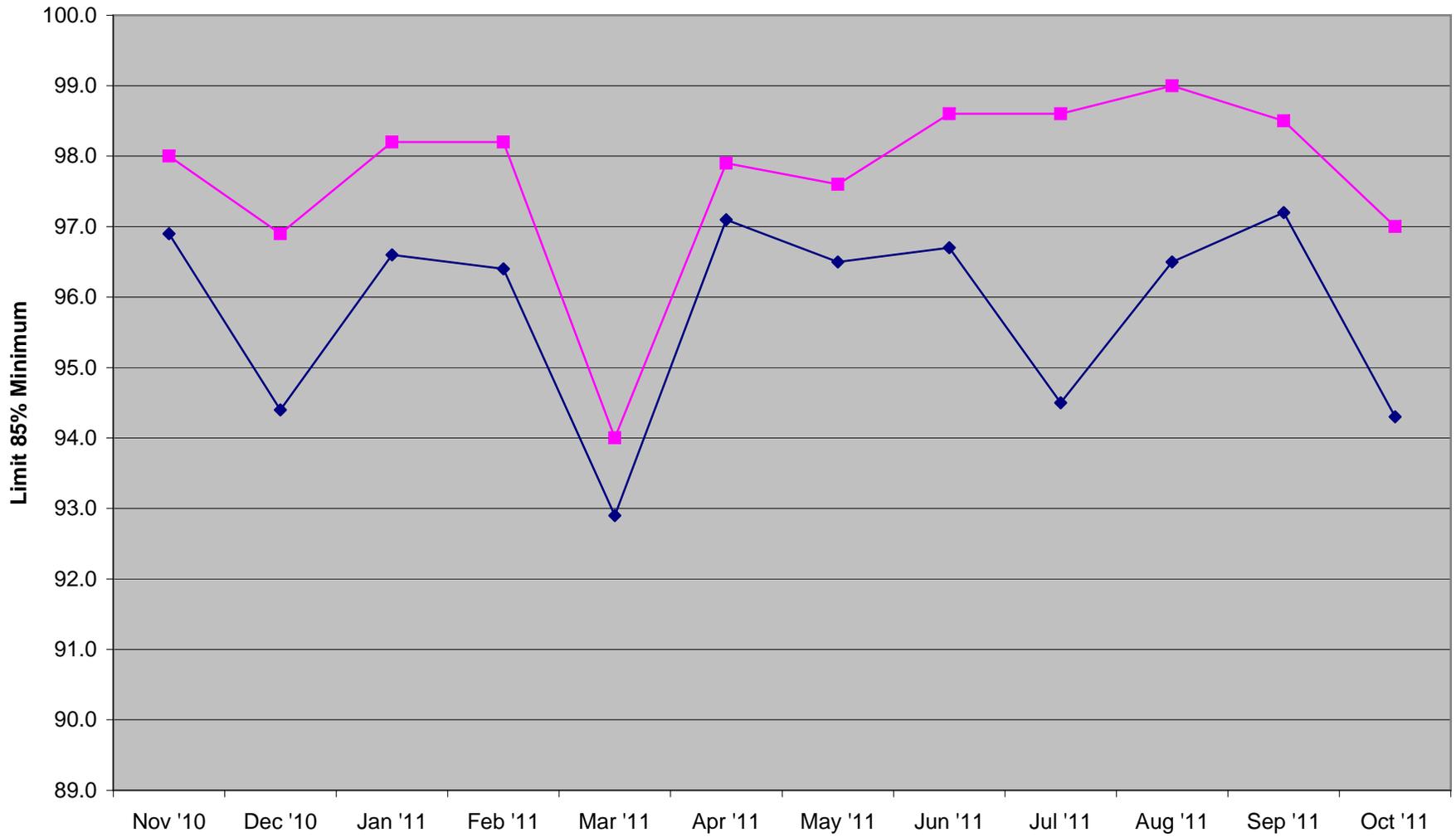
NPDES LIMITS WET SEASON
BOD & TSS - 30 mg/L Monthly Ave, 45 mg/L Weekly Ave
NPDES LIMITS DRY SEASON
BOD - 15 mg/L Monthly Ave, 30 mg/L Weekly Ave
TSS - 10 mg/L Monthly Ave, 20 mg/L Weekly Ave
WDR (Waste Discharge Requirements) RECLAMATION
BOD - 40 mg/L

◆ BOD ■ TSS

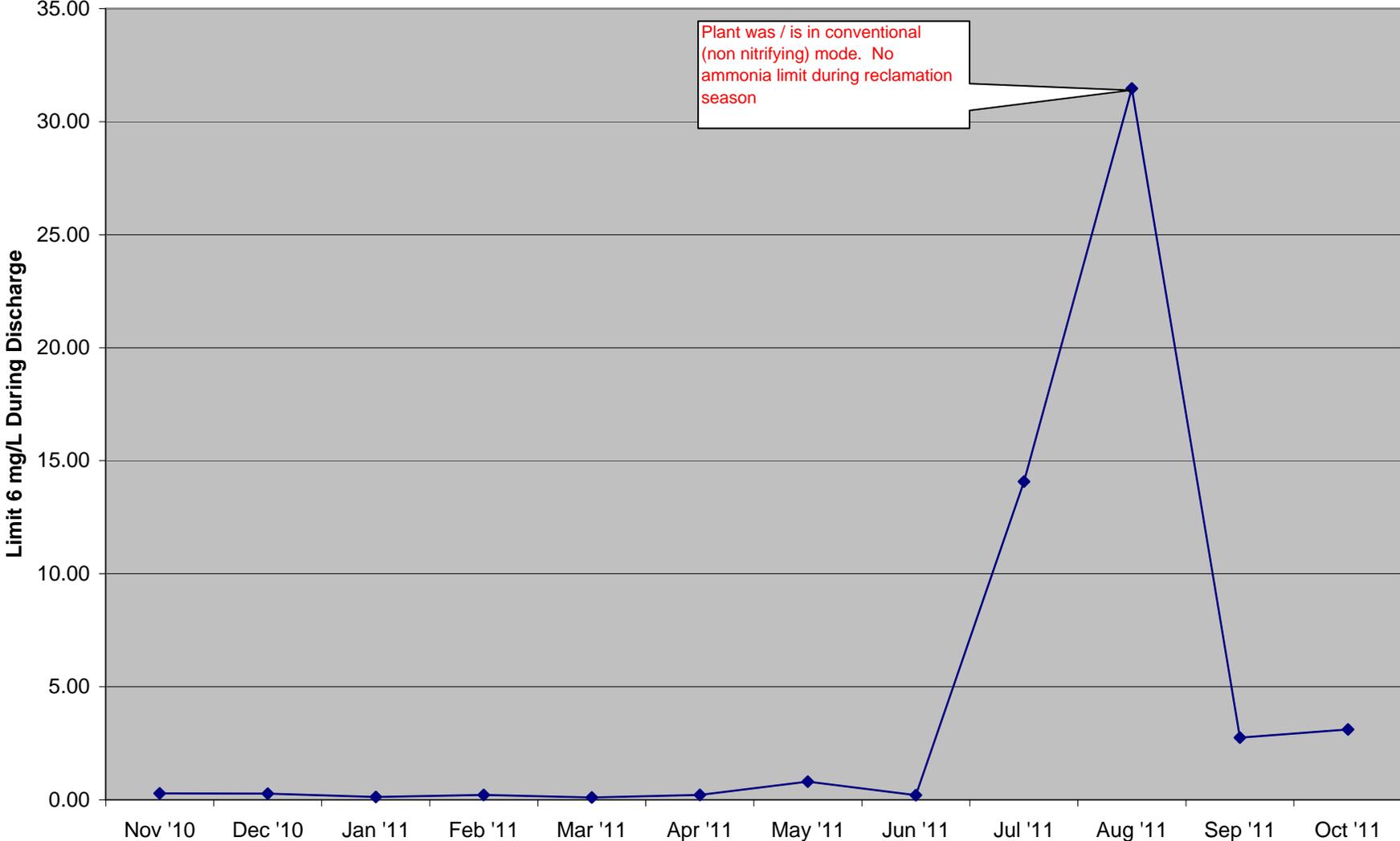


BOD TSS Percent Removal

◆ BOD ■ TSS



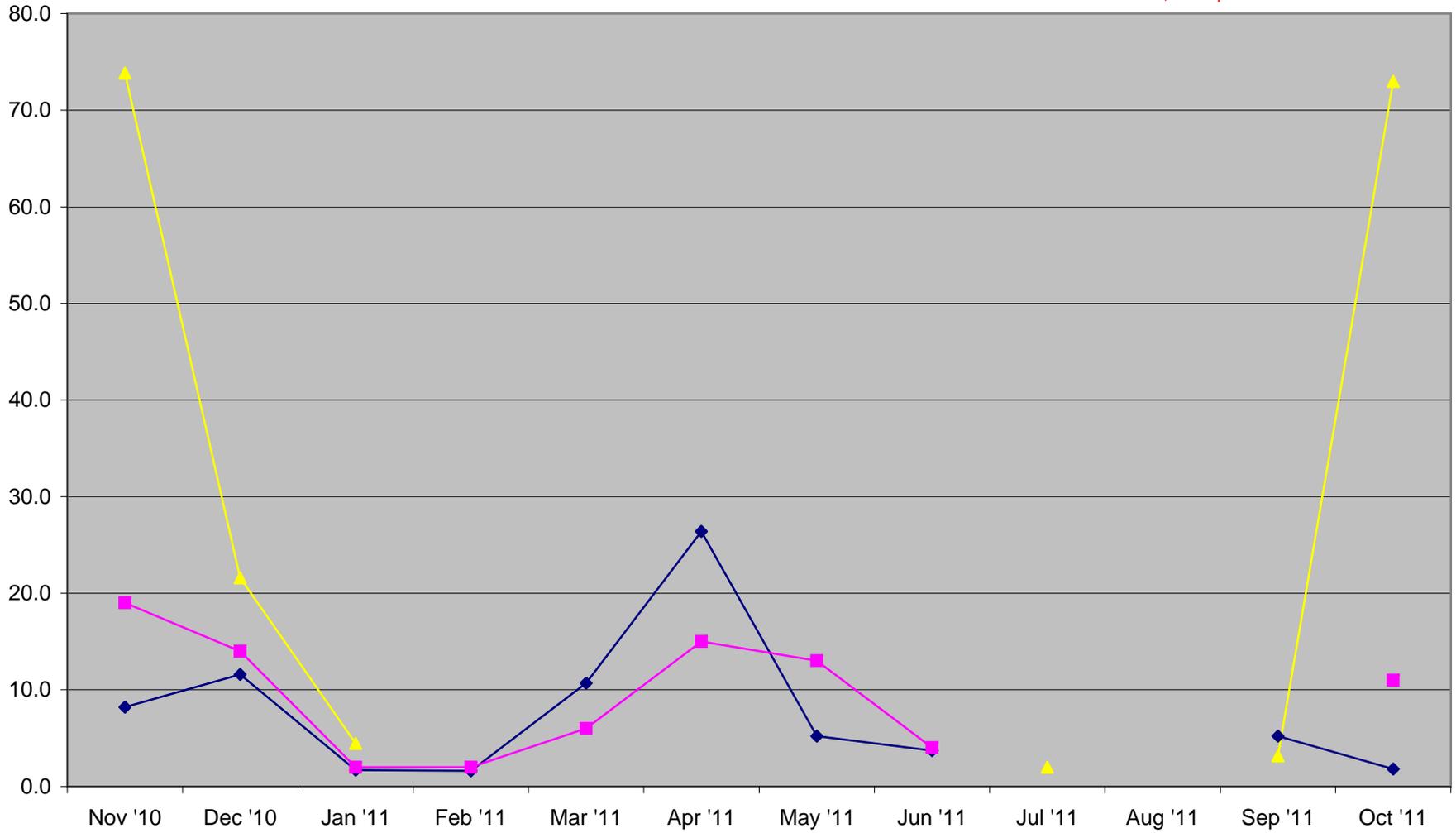
Effluent Ammonia



Disinfection

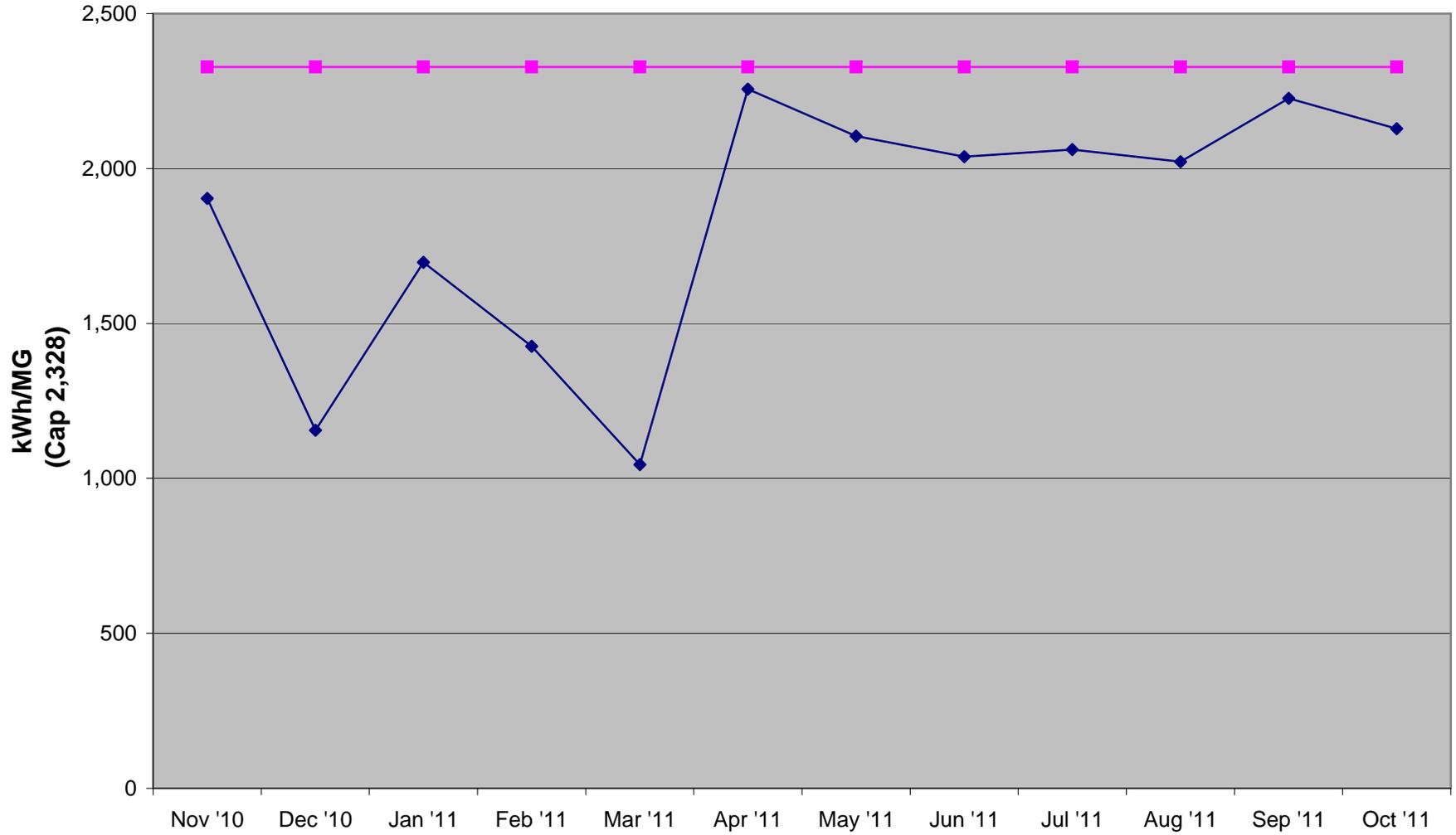
—◆— Entero —■— Fecal —▲— Total

LIMITS - NPDES
Entero 30 day geo mean 35 mpn /100ml
Fecal 140 mpn monthly median
Fecal 430 mpn 90th percentile 30 day
LIMITS - RECLAMATION
Total Coliform 240 mpn 5 sample median
Total Coliform maximum 10,000 mpn/100 ml

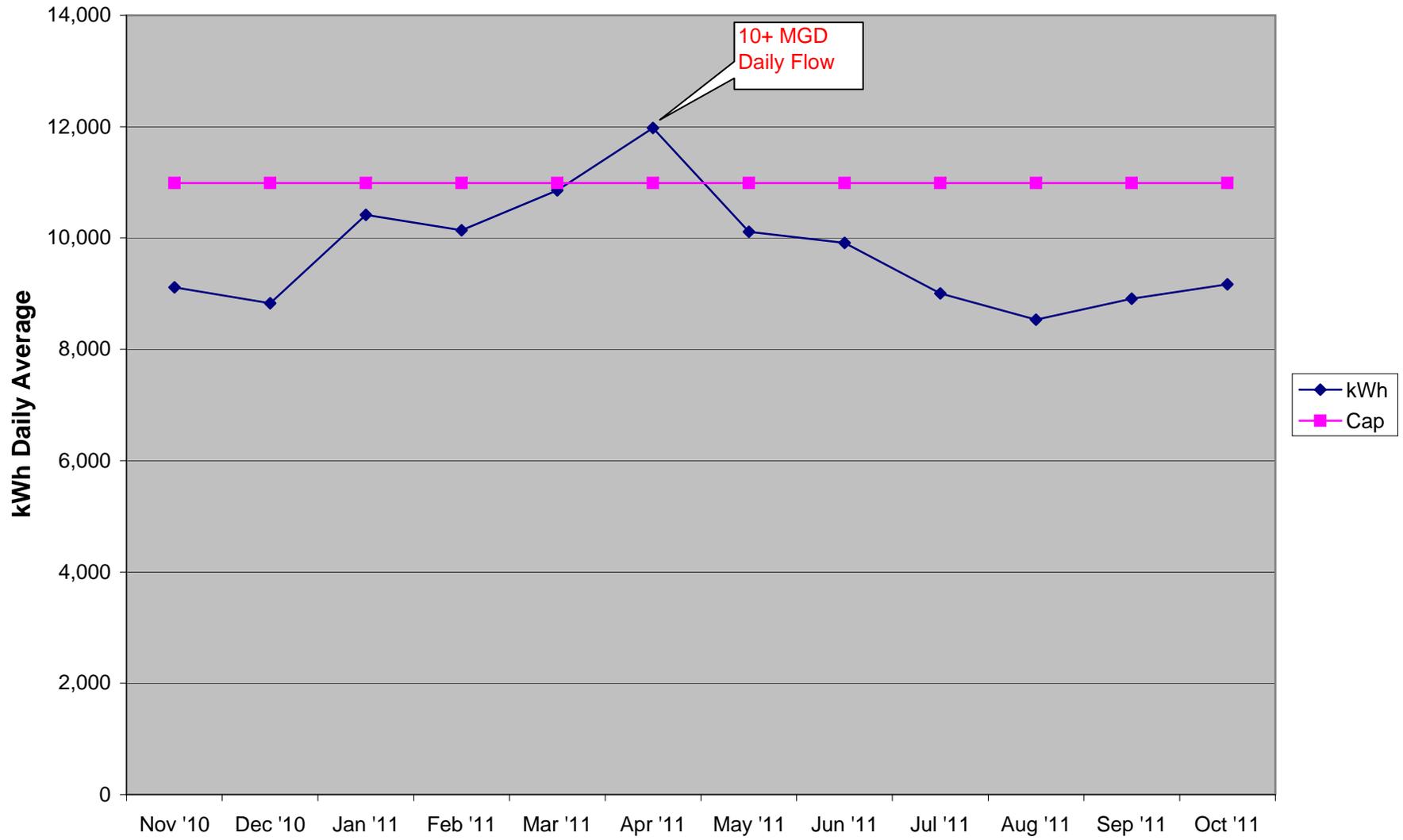


Energy kWh/MG

◆ kW/MG ■ Cap



Energy kWh



October 2011 Odor Complaint Log

#		Date	Method	Customer	Time	Remarks	
1	1	10/1/2011	E-Mail		8:54 AM	Noted Odors starting around 6:00 AM	
2	1	10/1/2011	E-Mail		11:24	Believed smell was related to headworks	
3		10/19/2011	Phone		9:12	Earthy Smell (logged as #4)	
4	1	10/19/2011	E-Mail		9:27 AM	Experienced odors since 8:30 AM	
5	1	10/19/2011	E-Mail		10:15 AM	Noticed Strong Odors outside while working on sprinklers. Related to aeration basins	
6	1	10/23/2011	E-Mail		10:27 AM	Noticed odors since 9:30 AM, related to the aeration basins	
7	1	10/24/2011	E-Mail		9:49 AM	Odors from 7:00 AM	
8	2	10/27/2011	E-Mail		10:44 AM	Noticed odors since Monday in the evenings around 9:00 M to 12:30 AM	
9	2	10/28/2011	E-Mail		11:44PM	Experiencing Odors since mid-morning	
10	1	10/29/2011	E-Mail		11:47 AM	Noticed same odors as B. Guinan on 10-28-2001	
11	3	10/29/2011	E-Mail		4:15 PM	Noted experiencing odors for the past three days.	
12	1	10/29/2011	E-Mail		8:28 PM	Complaint was in reference to the fence	
13		10/30/2011	E-Mail		12:08 AM	Complaint was about odors from the previous day from 6:45 Pm to Midnight	
14		10/30/2011	E-Mail		10:31 AM	Compaint was in reference to the fence as well as odors	
15		10/30/2011	E-Mail		12:25 PM	Reference was in regards to the fence	
16	2	10/31/2011	E-Mail		9:03 AM	Odor complaint for the previous evening	
17	Total Odor Complaints for October 2011						

NOTE: Received calls from BAACMD on 10/19, 10/20, and 10/27

**Novato Sanitary District
Wastewater Operations Committee meeting
Collection System Operations Report
October, 2011**

General:

For the month of October 2011, the Collection System Department spent about 56% of its time on sewer maintenance, and 44% of its time on pump station maintenance. At full strength, the department has eight (8) workers plus the Superintendent for Collections System and Pump Station O&M.

After accounting for vacations, holidays, sick leave, and industrial injury leave, for the month of October, the Collection System had the equivalent of: (a) 3.2 full time field workers plus the Collection System Superintendent for on Sewer Maintenance, and (b) 2.5 full time field workers plus the Collection System Superintendent on Pump Station Maintenance.

Sewer Maintenance:

A total of 63,731 feet of sewer pipelines was cleaned for the month. Staff completed 392 maintenance work orders with 35 outstanding work orders. Both parameters are within currently established production goals for the department. Graphs showing the length of line cleaned/month, footage cleaned/hour worked, along with the overflows/month is attached. Truck 3205 (Hydro-flusher) was sent out to be converted from a mid-mount reel style flusher to a front mount reel towards the end of October to help staff more efficiently meet production standards.

Pump Station Maintenance:

Approximately 312 lift station inspections were conducted for the month of October 2011, with 165 of the visits generated through the JobCal Plus CMMS system. The breakdown of these inspections is as follows: 22 Flygt submersible pump stations, 2 times per month; 9 Gorman/Rupp dry well/wet well stations, 1 entry per month; and 4 main stations that are visited daily. Pump #3 at Olive St pump station was rehabilitated and returned to service, this station now has all 4 pumps online. At Bahia main pump station, the programmable logic controller was replaced in the main control panel and the buss bars for pump #3 control panel were also replaced. At Vintage Oaks I, II and Digital pump stations, the impellers and wear plates were replaced by District staff due to wear.

Pump Station Construction:

As part of the District's continuing multi-year Pump Station Rehabilitation Project (Capital Improvement Project No. 72403), Southgate pump station has been accepted for beneficial occupancy.

Sanitary Sewer Overflows (SSOs):

For the month of October 2011, there were (zero) or no SSO's.

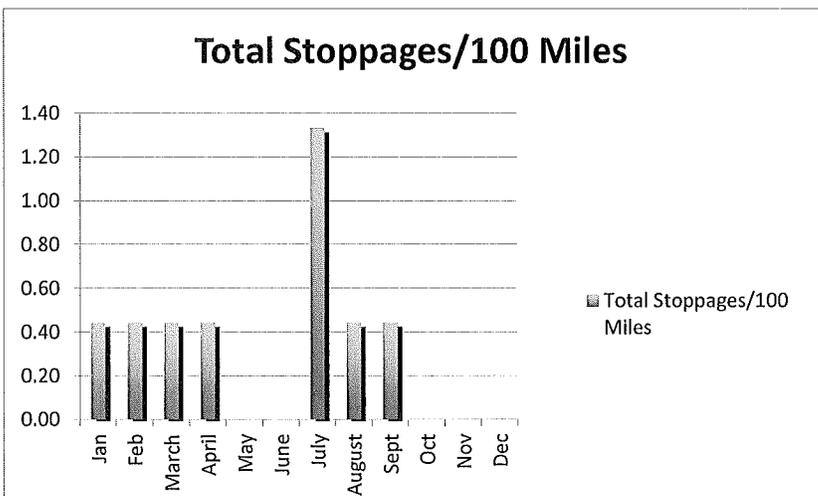
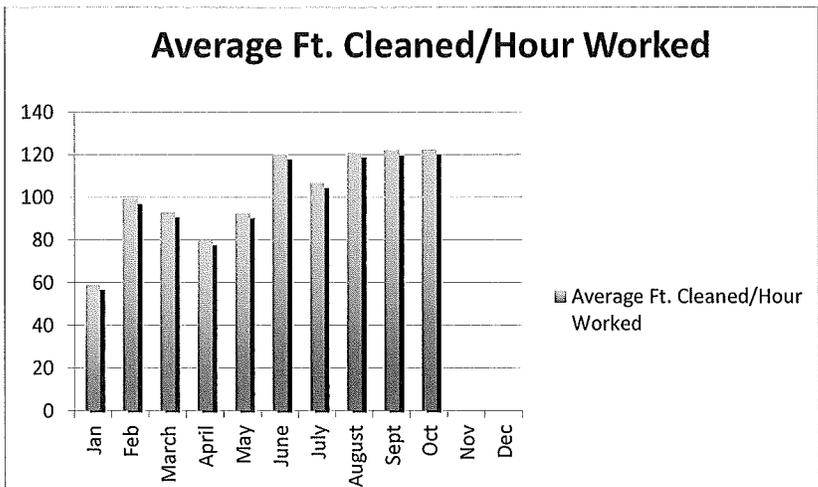
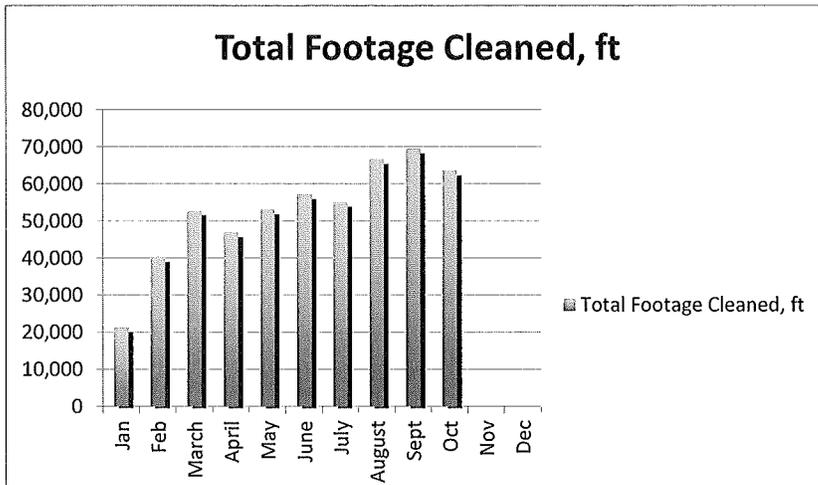
Collection System Operations Report 2011

Novato Sanitary District

Collection System Monthly Report For 2011

	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total Year to Date	Average Year to Date
	Employee Hours Worked	394	418	612	588	628	507	545	571	610	562	0	0	
Number of Employees	2.2	2.4	3.5	3.3	3.5	2.9	3.1	3.2	3.4	3.2	0.0	0.0		
Regular Time Worked on Coll. Sys.	363	407	568	554	574	476	516	553	570	521			5,102	
Regular Time Worked on Other	42	59	53	18	91	129	133	242	122	114			1,003	
Vacation/Sick Leave/Holiday	628	448	312	295	315	319	225	179	210	173			3,104	
Overtime Worked on Coll. Sys.	31	11	44	34	54	31	29	18	40	41			333	
Overtime Worked on Other	1	27	5	0	0	5	0	37	1	3			78	
After Hours Callouts	1	1	1	0	0	0	1	0	0	0			4	
Service calls, normal hours	10	1	7	4	7	3	4	6	5	4			51	
Average S.C. response time (mins)	19	10	30	19	22	20	22	18	21	26			207	21
Productivity														
Rodder Work Orders Generated, ft	8	43	29	8	80	50	59	10	10	12			51,972	5,197
Rodder 3203 Ft. Cleaned	1,383	7,810	3,200	2,074	12,075	10,712	10,996	624	963	2,135				
Flusher Work Orders Generated, ft	103	155	247	231	210	245	214	324	414	380			133,506	13,351
Truck 3205V Ft. Cleaned	8,643	0	11,741	13,603	146	8,507	10,162	26,612	23,026	31,066			340,744	34,074
Truck 3205V Ft. Cleaned	11,231	32,463	37,597	31,294	40,889	37,750	33,742	38,616	45,632	30,530				
Camera Work Orders Generated, ft	0	0	0	0	0	0	1	0	0	0				
Camera Ft. Videoed	111	0	583	0	3,750	0	189	0	0	0			4,522	502
Work Orders Completed	5	1	14	7	25	3	17	8	4	35			119	12
Work Orders backlog	21,360	40,428	52,785	46,972	53,110	57,214	55,114	66,852	69,621	63,731			527,187	43,932
Stoppages														
Minor	1	1	1	1	0	0	3	1	1	0			9	
Major	0	1	0	1	0	0	2	0	1	0			5	
Overflow Gallons	2,500	53	1,610	60	0	0	989	79	600	0			5,891	
Volume Recovered	0	0	1,208	0	0	0	43	79	600	0			1,930	
Percent Recovered	0%	0%	75%	0%	NA	NA	4%	100%	100%	NA			33%	
Benchmarks														
Average Ft. Cleaned/Hour Worked	59	99	93	80	93	120	107	121	122	122			NA	NA
Total Stoppages/100 Miles	0.4	0.4	0.4	0.4	0.0	0.0	1.3	0.4	0.4	0.0			0.0	0.0
Average spill response time (mins)	38	20	12	10	0	0	11	11	25	0			4.0	
Callouts/100 Miles	0.4	0.4	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0			1.8	
Overtime hours/100 Miles	14	5	20	15	24	14	13	8	18	18			1	
Overflow Gallons/100 Miles	1111	24	716	27	0	0	440	35	267	0			2618	

Collection System Operations Graphs 2011



Pump Station Monthly Report 2011

Novato Sanitary District
Pump Station Monthly Report For 2011

	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total Year to Date	Average Year to Date
Employee Hours Worked	312	396	470	345	306	442	397	342	355	434	0	0		
Number of Employees	1.8	2.2	2.7	1.9	1.7	2.5	2.2	1.9	2.0	2.5	0.0	0.0		1.8
Regular Time Worked on Pump Sta	271	356	412	293	261	393	325	298	305	373			3,287	
Overtime Worked on Pump Sta	41	40	58	52	45	49	72	44	50	61			512	
After Hours Callouts	3	6	8	1	9	11	16	6	9	11			80	
Average Callout response time (mins)	0	0	18	15	20	20	23	30	23	26				18
Work Orders														
Number generated in month	NA	NA	38	92	102	113	80	88	94	165				
Number closed in month	NA	NA	38	87	99	113	79	84	90	157				
Backlog	NA	NA	NA	5	3	0	1	4	4	8				

NOVATO SANITARY DISTRICT
Wastewater Operations Committee Meeting
Reclamation Facilities Report
October, 2011

Summary:

Ranching operations this month were normal with nothing significant to report. Sprinkler repairs are continuing on the Parcels being rehabilitated. Irrigation operations were stopped during the first part of the month due to rain. Irrigation Pump No. 2 is still out of service and staff is researching to see if it would be more cost effective over the long term to purchase a new pump rather than to repair the damaged pump. Sludge disposal to the Dedicated Land Disposal was completed this month. Telescoping valves on Lagoons No. 1 & 2 were unplugged and Lagoon 1 was placed into service.

Rancher Operations:

The rancher focused on tending to his cattle and working on minor sprinkler system and freshwater system repairs and replacing failed sprinkler heads. Most of the operations at this point are considered normal, moving cattle every few days as scheduled. The rancher began sorting cattle to prepare for moving off of the Reclamation Facility for the winter. The rancher completed trucking off all hay stacks from all sites this month.

Parcel 5 in Site 2 was seeded with pasture mix, ring rolled and added to the irrigation schedule. All sprinkler heads have been replaced as needed to allow full coverage of the parcel. Parcel 8 in Site 3 was mowed, disked, chiseled, seeded with rye and ring rolled. The contractor began leveling Parcel 4 in Site 3 in preparation for pasture mix seeding. Parcel 8 in Site 7 was disked under in preparation for rye seed mix.

A large fresh water leak was discovered on Site 7 and will require replacing 1300 feet of 2" water main between the entrance gate to Site 7 and the "tee" between Parcels 3 & 4 along the main road. The entire run is being replaced because it is a thin wall PVC pipe that has reached the end of its service life. The leak between the two connection points is between 4 & 8 feet deep and cannot be pinpointed.

Irrigation Systems:

The control system is up and running on all sites and only a few parcels are not in irrigation mode due to local control issues or parcel rehabilitation work. Irrigation times are being scaled back due to the cool weather and shortening daylight hours.

Currently, Parcels 4 & 8 in Site 3 are disabled because they are under rehabilitation. Parcel 6 in Site 3 is disabled due to large leaks in the distribution piping for the irrigation system. One zone in each of Parcel 7 & 8 in Site 2, one zone in each of Parcels 1, 2, 3 & 7 of Site 3 and one zone in Parcel 3 in Site 7 are disabled due to control system or actuator issues. All other Parcels are functioning normally.

NOVATO SANITARY DISTRICT
Wastewater Operations Committee Meeting
Reclamation Facilities Report
October, 2011

Irrigation Pump Station:

Pump 2 is still out of service and at the shop for repairs. Staff is checking to see if it will be more cost-effective to purchase a new pump.

For the month of October, approximately 56.65 MG of recycled water was utilized for irrigation. This amount is considerably lower than the previous months because irrigation was stopped during the first part of the month due to rain.

Sludge Handling & Disposal:

The District's contractor completed pumping sludge out the sludge lagoons this month. 900,000 gallons were pumped out of Lagoon No. 3 and 1,125,000 gallons were pumped out of Lagoon No. 4. The total amount of sludge pumped out of the sludge lagoons this year is 3,622,000 gallons.

The telescoping valves in Lagoons 1 & 2 were cleared this month and are free flowing. The center drain between the sludge lagoons was flushed clean also. The newly fabricated baffles for the telescoping valves have been placed on the telescoping valves for Lagoons 1 & 5. The stem for the telescoping valve in Lagoon 2 was received as well as the new actuator for the telescoping valve on Lagoon 1. The new actuator ordered for the valve was incorrect and we are waiting for the new one to arrive. The actuator for the telescoping valve on Lagoon 2 was moved to Lagoon 1 so Lagoon 1 could be placed into service. The stem and actuator for Lagoon 2 will be installed before placing the lagoon back into service.