

NOVATO SANITARY DISTRICT

Meeting Date: August 17, 2015

The Wastewater Operations Committee of the Novato Sanitary District will hold a meeting at 2:00 PM, Monday, August 17, 2015 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 20, 2015 MEETING

4. WASTEWATER TREATMENT FACILITIES OPERATIONS AND MAINTENANCE REPORT FOR JULY 2015:

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

5. COLLECTION SYSTEM OPERATIONS AND MAINTENANCE REPORT FOR JULY 2015:

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

6. RECLAMATION FACILITY REPORT FOR JULY 2015:

- a. Ranch Operations
- b. Irrigation Parcels
- c. Irrigation Pump Station

7. OTHER ITEMS:

8. 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 20, 2015

A regular meeting of the Wastewater Operations Committee of Novato Sanitary District was held at 2:01 p.m., Monday, July 20, 2015, at the District Office, 500 Davidson Street, Novato.

MEMBERS PRESENT: Committee Member Jerry Peters and Alternate Member Jean Mariani. Committee Member Brant Miller was absent.

STAFF PRESENT: Steve Krautheim, Field Services Manager
John Bailey, Project Manager, Veolia
Julie Swoboda, Administrative Secretary

STAFF ABSENT: Sandeep Karkal, Manager-Engineer

AGENDA APPROVAL: Approved as presented.

PUBLIC COMMENT: None.

APPROVAL OF MEETING MINUTES FOR JUNE 15, 2015: The June 15, 2015 meeting minutes were approved as presented.

WASTEWATER TREATMENT FACILITIES OPERATIONS AND MAINTENANCE REPORT FOR JUNE 2014:

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

Veolia Project Manager John Bailey provided an overview of treatment plant operations for the month of June. He discussed key operations and maintenance events at the Novato facility, the Ignacio Transfer Pump Station, the Recycled Water Plant, and the Sludge Lagoons. He noted that the facility transitioned from Bay discharge to reclamation/storage on June 1st.

The Project Manager reviewed the Laboratory Activities Summary as prepared by Environmental Services Supervisor Liz Falejczyk. He noted that Stephanie Larson, Sonoma County Director and Livestock Range Management Advisor at University of CA Cooperative Extension toured and inspected the reclamation pastureland in preparation for the Irrigated Pasture Report. He stated that Veolia hosted a Comprehensive Ethics and Integrity Training for Environmental Laboratory Professionals presented by Diane Lawver of Quality Assurance Solutions, LLC.

The Project Manager stated that a new Jerome Meter Readings report was provided, as requested at the previous Committee meeting. He outlined the report and stated that no readings were found in the Lea Drive neighborhood with a number greater than 0.001 units. He stated that Veolia will provide additional testing in the neighborhood to gain parameters regarding odor levels. The Project Manager provided additional information regarding the high coliform values for the Recycled Water Facility that were reported at

the June Committee meeting. He stated that the problem appears to be at the clear well, not at the sample location as was previously thought. He noted that Veolia will continue to monitor the situation and will have additional details at the August Committee meeting.

The Project Manager discussed training events completed in June and stated that as of June 30th, Veolia employees have been accident free for a total of 1,862 days. He discussed the training Veolia employees participated in during June. He reviewed the operations and maintenance report and stated that 13.747 MG (million gallons) of recycled water was produced during the month.

- Odor control and landscaping report: The Field Services Manager discussed odor control related activities in June. He stated that monitoring of the media continues in the large odor control bed and that operations staff will be evaluating additional topping off of the media in July. He noted that the landscaping at the District's fence-line on Lea Drive and at the northeast corner area of the treatment facility is being irrigated with recycled water and seems to be responding well during the drought conditions.

COLLECTION SYSTEMS OPERATION AND MAINTENANCE REPORT FOR JUNE 2015:

The Field Services Manager presented the Collection Systems Monthly Report for June 2015. He reported that the Collection Systems crew cleaned a total of 80,131 feet of sewer pipeline and that the department completed 413 maintenance work orders which were generated for June. He stated that the District's CCTV van (Closed Circuit TV) televised 56 line segments for 6,965 feet of production and he noted that three areas were identified as needing spot repairs. He reported on the current Collection System Projects, and stated that staff attended a Confined Space Training. He stated that as of June 30, 2015, the Collections Department and the District have worked accident free for a total of 1,570 days.

The Field Services Manager reported that there were zero sanitary sewer overflows in June.

RECLAMATION FACILITY REPORT FOR JUNE 2015:

The Field Services Manager presented the Reclamation Facilities report for June. He stated that the protective corral fencing panels for the new enclosures around the exposed pull boxes in Site 7 were received and one was installed. He stated that full time irrigation began in June and that the Wildlife Pond Feed line repair was completed and placed back into service. He stated that there were no sludge handling activities in June.

The Field Services Manager stated that approximately 59.2 MG of treated water was used for irrigation in the month of June.

ADJOURNMENT: There being no further business to come before the Committee, the meeting adjourned at 2:36 p.m.

Respectfully submitted,

Steve Krautheim
Field Services Manager

Julie Swoboda, Recording

DRAFT



July 15, 2015

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

Subject: Veolia Water Operations Report – July 2015

Dear Mr. Karkal:

I am pleased to provide the Monthly Operation report for July 2015.

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

Best regards,

A handwritten signature in blue ink, appearing to read "John Bailey". The signature is fluid and cursive, with the first name being more prominent.

John Bailey
Project Manager, Veolia



**MONTHLY OPERATIONS REPORT
July 2015**

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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○ Repair of Ultra Violet Disinfection System (Change-out of Lamps and Ballasts)	
○ Top Off Biofilter Media	
○ Algebra Academy – Lab	
○ Algebra Academy – Plant Tour	
○ Demolition of Old Aeration Basins	
○ Lab & Pretreatment Activities	
• Laboratory Data	
• Recycled Water Report	
• Annual Performance Graphs	
• Process Control Data / Graphs	
• Customer Notifications (Odor)	

TREATMENT PLANT PERFORMANCE SUMMARY: July 2015:

Parameter	Value		Limit	
	Ave	Max	#1	#2
Flow, MGD (monthly ave/max)	3.33	4.22	N/A	N/A
Max Peak Hour, MGD – No Significant Rainfall	N/A	~ 7	N/A	N/A
Influent				
BOD ₅ , lb/day (month ave/max)	8,518	11,490	N/A	N/A
TSS, lb/day (monthly ave/max)	9,773	15,095	N/A	N/A
Effluent				
BOD ₅ , mg/L (monthly ave/weekly max)	9	16	40	N/A
TSS, mg/L (monthly ave/weekly max)	<4	6	N/A	N/A
BOD ₅ - % Removal, Minimum	96	N/A	N/A	N/A
TSS - % Removal, Minimum	99	N/A	N/A	N/A
Ammonia, mg/L – (monthly ave/daily max)	N/A	N/A	N/A	N/A
pH, su (min / max)	6.9	7.0	6.0	9.0
Enterococcus, MPN/100 ml (30 day geo mean)	N/A	N/A	N/A	N/A
Fecal Coliform, MPN/100 ml (30 day median)	N/A	N/A	N/A	N/A
Fecal Coliform, MPN/100 ml (90 th percentile)	N/A	N/A	N/A	N/A
Total Coliform, MPN/100 ml (5 Sample Median/Max)	39	49	240	10,000
Total Permit Exceedances (NPDES)	0			

Title 22 - Recycled Water Production and Quality

Description	Units	Value	Limit
Volume Produced	Million Gallons	8.456	N/A
Average Turbidity	NTU	1.1	2.0
Turbidity > 5 NTU (in 24 hour)	Minutes	0	72
Minimum CT (disinfection)	mg-min/L	>450	450 minimum
Minimum Dissolved Oxygen (DO)	mg/L	7.3	2 mg/L
Maximum Total Coliform	MPN/100 ml	<2	240
Maximum Total Coliform 2 Samples 30 d	MPN/100 ml	<2	23
Total Coliform 7 Sample Median	MPN/100 ml	<2	2.2

Discussion of Violations / Excursions:

Waste Discharge Requirements (WDR) – None

Recycled Water – None

Rainfall. – N/A

SAFETY AND TRAINING:

- Monthly plant safety inspections for Novato WWTP and Ignacio Transfer Pump Station completed
- Five Minute Tailgate training is held daily with all staff.
- No safety incidents for the month of July.
- Accident Free: 6/1/10 – 7/31/15: 1,893 days
- Monthly Safety Topics and Training:
 - Emergency Action Plan Overview
 - Fire Extinguishers

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

- Routine rounds, readings and maintenance
- Hardwired new sampler
- Annual service on emergency generators
- Annual service on wet weather pumps
- Topped off media on all bio-filters (foul air scrubbers)
- Unplugged septage receiving station, grease inadvertently dumped. Waste hauler took responsibility and assisted with cleanup
- Annual forklift service
- Temporary repair to ferric eyewash station
- Repaired #3 waterline behind Primary Clarifier #2
- Repaired piping of High Pressure Water Pump #2

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

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

Ignacio Transfer Pump Station

- Routine rounds, readings and maintenance
- Annual service on emergency generator

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

- None

Recycled Water Plant (RWP)

- Performed plant rounds and maintenance
- Replaced sensor on turbidity analyzers
- Repairs to polymer pump #1

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

- None

Sludge Lagoons

- Performed routine rounds and inspection
- Cleaned sludge lines
- Changed out decant pump return pump

LABORATORY ACTIVITIES SUMMARY:**Irrigation Wet Well Sampling**

Monthly sampling of the irrigation wetwell was performed in July and will continue throughout reclamation / irrigation season. The data collected will be compiled and reported in the 2015 triennial Irrigated Pasture Report.

Wildlife Pond and Reclamation Activities

Samples and weekly/monthly observations at the Wildlife pond were taken according to the WDR (Order No. 92-065). See Wildlife Pond monitoring photos.

Public Education**Algebra Academy**

Liz Falejczyk, Kurt Hawkyard, and Christian Williams participated in the Annual Algebra Academy held at the NSD site on July 27th. Liz, Kurt and Christian invested many hours preparing and it paid off. The lab was laid out in stations depicting processes in a wastewater plant using 1-liter beakers and other lab materials. Kurt Hawkyard demonstrated the analysis of Total Suspended Solids (TSS) using influent (50 mLs) and Effluent (1000 mLs) and the weighing of glass fiber filters before and after filtration and drying. Using the values generated we then calculated the influent and effluent TSS and the percent removal. How dilution works was demonstrated using an indicator, Phenolphthalein, which is a fuchsia color at high pH and a series of volumetric flasks from 10-2000mL which went from dark fuchsia to pale pink. Applying dilutions to plant operations was demonstrated by adding different amounts of polymer to waste activated sludge to determine the proper dilution to achieve effective coagulation. Using a gang mixer (borrowed from NMWD) we were able to provide a dramatic visual demonstration, evidenced by the oohs and aahs of the students. Christian Williams then demonstrated how we use algebra in our operation by calculating cost associated with polymer use on an annual basis

Marin County Fair

Kurt Hawkyard staffed the Public Education booth for the Marin County Wastewater Agencies at the Marin County Fair on July 1 & 2. Adults and Children are encouraged to take environmental quizzes which give us the opportunity to gauge knowledge of wastewater and stormwater issues and engage the public in conversations about those topics. Prizes are awarded for participation.

ADMINISTRATION:

- June Electronic Self-Monitoring Report (SMR) submitted on July 20, 2015
- June Electronic Discharge Monitoring Report (DMR) submitted on July 20, 2015
- June Recycled Water Report submitted on July 20, 2015

ODORS:

- Jerome Meter (H2S) readings performed in neighborhood and within treatment plant.
- All readings in neighborhood were below the detection threshold
- Five contacts all at the West end of Lea Drive. Odors characterized as Headworks and Bio-Filters

MISCELLANEOUS

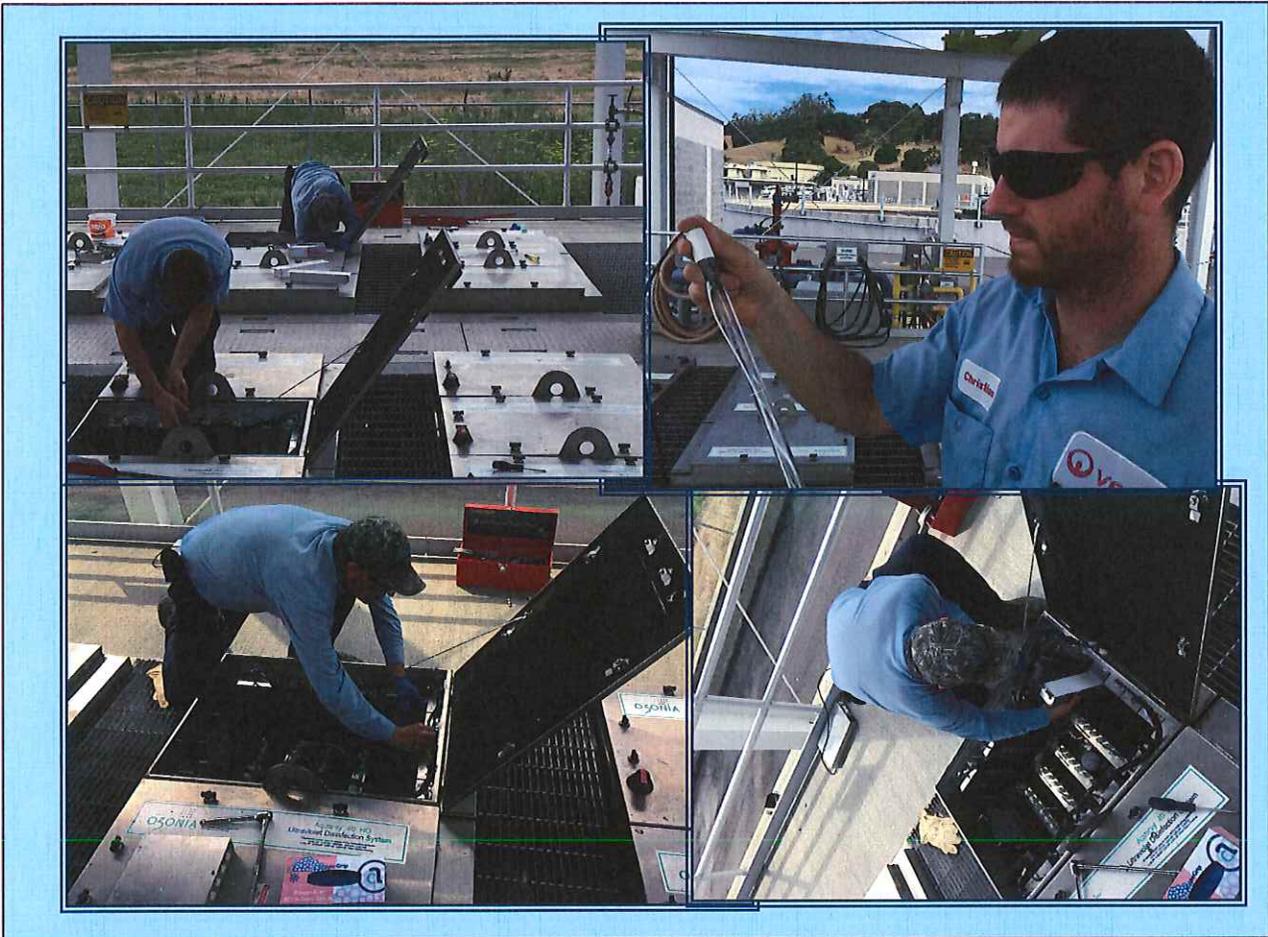
- Process Control Management Plan (PCMP) meetings held weekly.
- Recruitment open for Operator III.
- On July 27th NSD and Veolia hosted the Algebra Academy. Students learned the importance of mathematics in a work environment and how we use algebra and science on a daily basis. Plant tours and “hands-on” laboratory analysis made for an exciting day.

Veolia Support Staff On/Off Site (Various Times)

John O'Hare	Technical Support
Dave Coffman	Asset Management
Dennis Flosi	Electrical, Instrumentation, & Controls

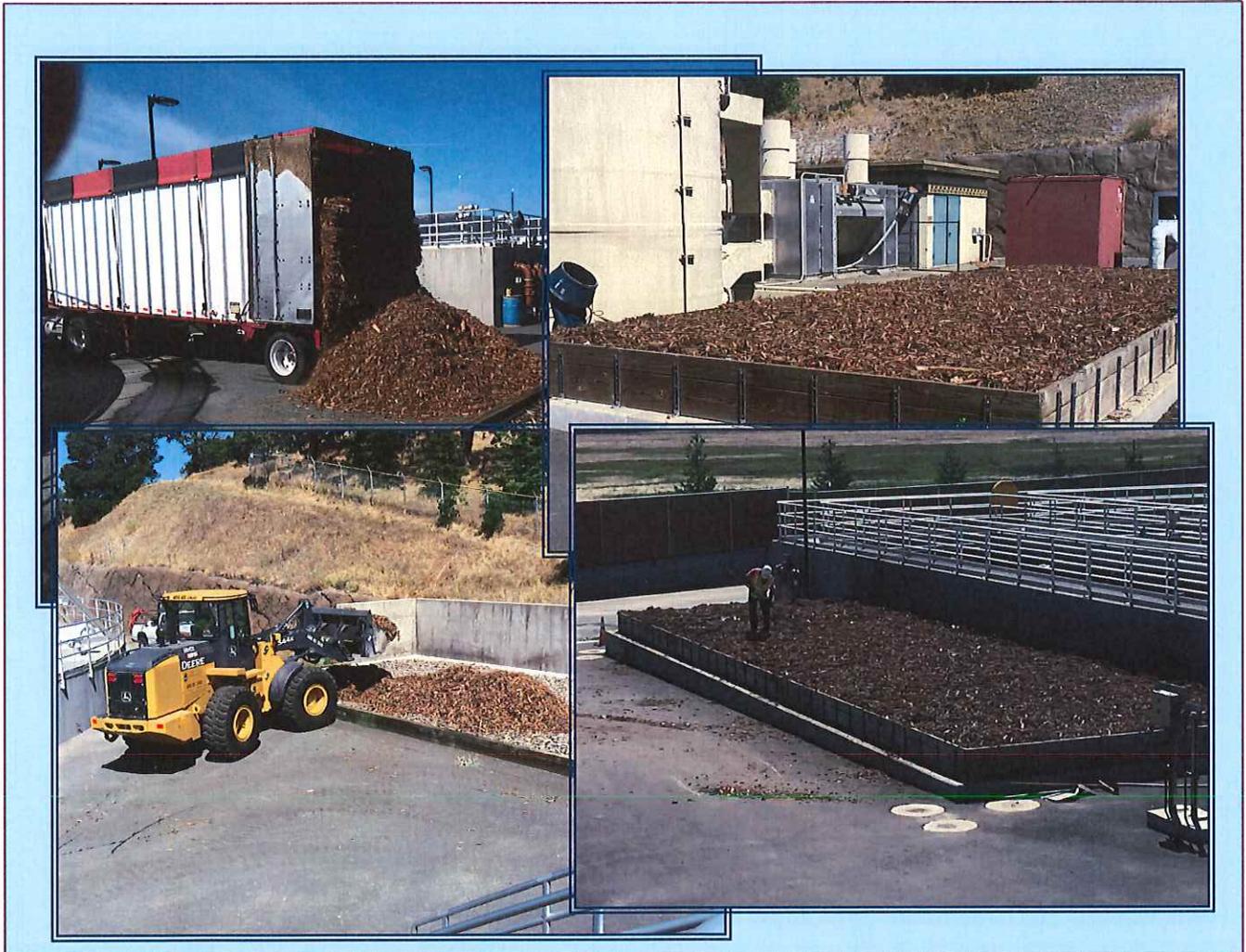


CHANGE OUT LAMPS & BALLAST ON UV DISINFECTION
July 2015





TOPPING OFF BIOFILTER MEDIA
July 2015





ALGEGRA ACADEMY – NORTH BAY LEADERSHIP COUNCIL
July 2015



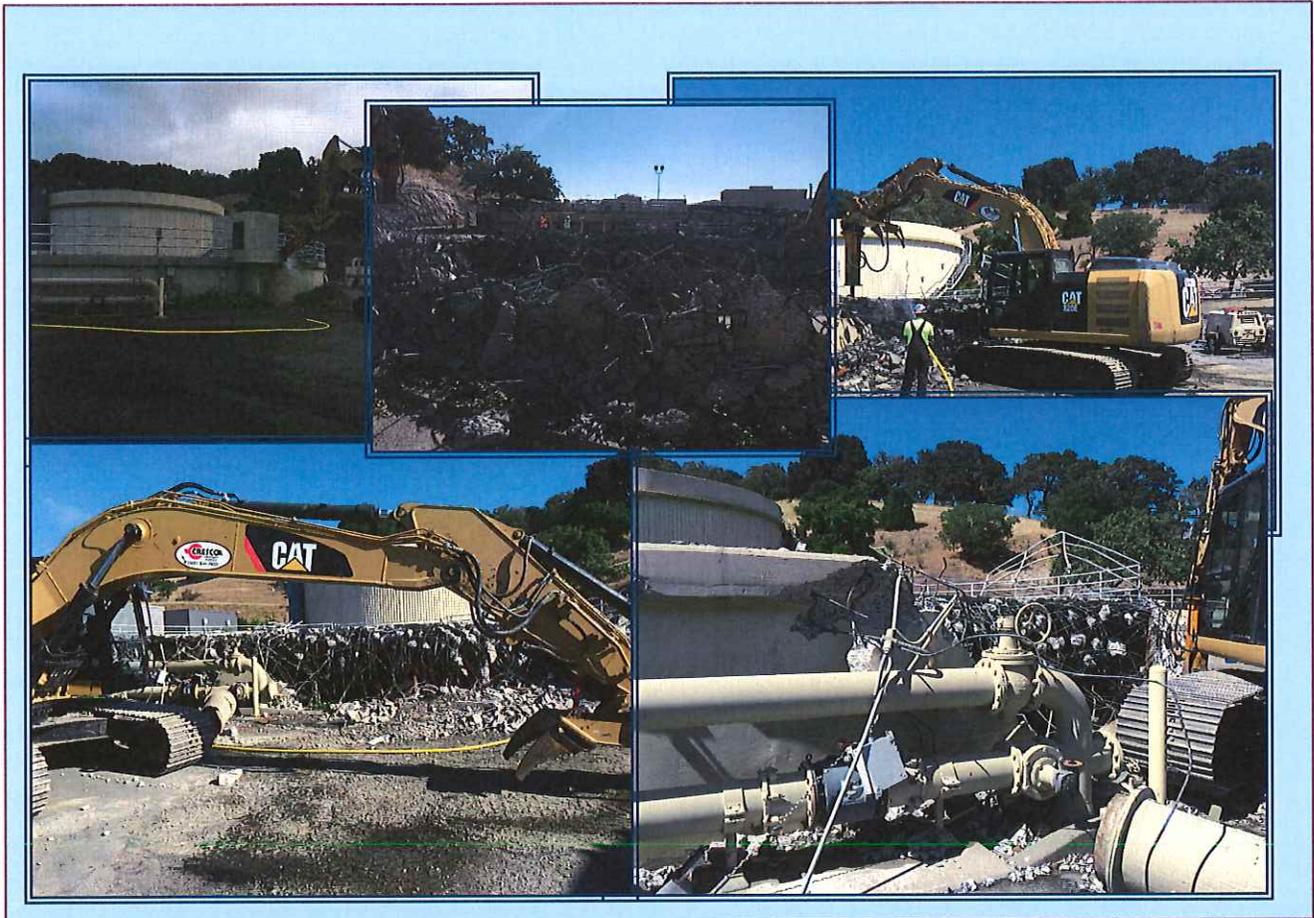


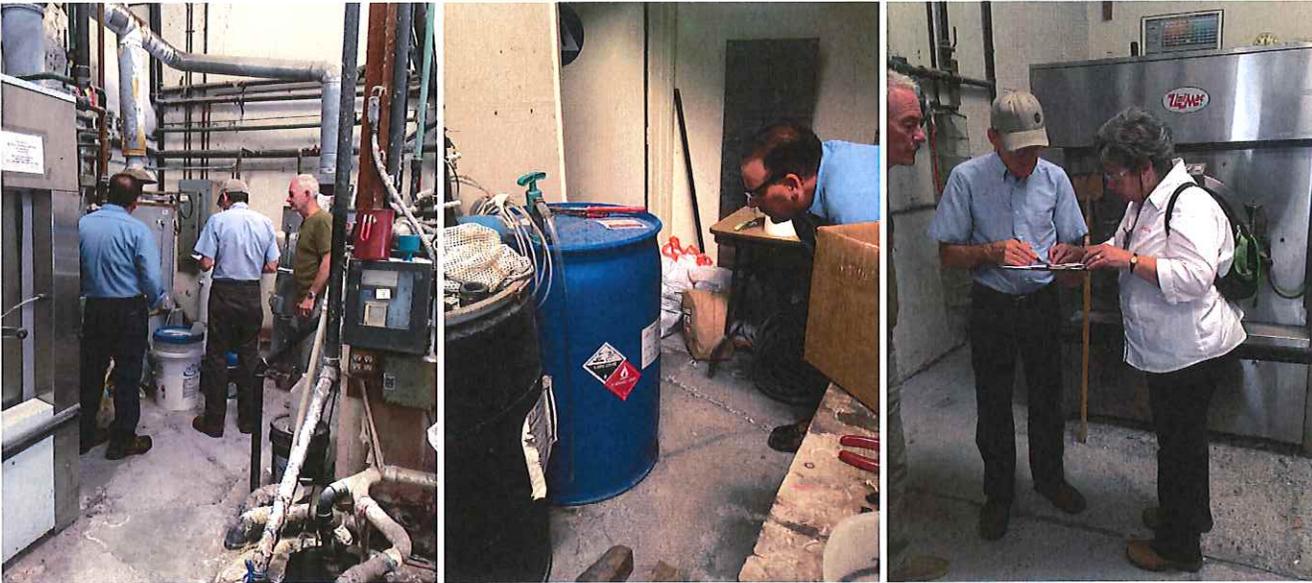
ALGEGRA ACADEMY – NORTH BAY LEADERSHIP COUNCIL
July 2015





DEMOLITION OF OLD AERATION BASINS
July 2015

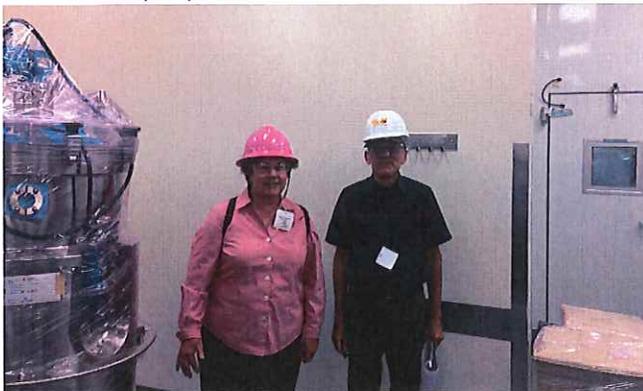




Buck Center 7/14/2015



BioMarin 7/22/2015



Novato Sanitary District
BOD/TSS Report



July, 2015

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			
07/01/15	3.19											
07/02/15	3.06											
07/03/15	3.05											
07/04/15	2.82											
07/05/15	3.06											
07/06/15	3.62											
07/07/15	3.52	276	8,102	276	8,102	19	558	8	235	93.1	97.1	
07/08/15	4.22	271	9,538	297	10,453	9	317	3	106	96.7	99.0	
07/09/15	3.74	259	8,079	296	9,233	19	593	7	218	92.7	97.6	
07/10/15	3.46											
07/11/15	4.00											
07/12/15	3.48	342	9,926	410	11,900	12	348	4	116	96.5	99.0	
07/13/15	2.99	295	7,356	266	6,633	6	150	3	75	98.0	98.9	
07/14/15	3.04											
07/15/15	3.00											
07/16/15	3.45	274	7,884	328	9,438	11	317	5	144	96.0	98.5	
07/17/15	2.81											
07/18/15	3.37											
07/19/15	3.26											
07/20/15	3.39											
07/21/15	4.04	341	11,490	448	15,095	8	270	5	168	97.7	98.9	
07/22/15	3.25	265	7,183	266	7,210	<5	<136	<3	<81	98.1	98.9	
07/23/15	3.36											
07/24/15	3.18	268	7,108	373	9,892	<5	<133	<3	<80	98.1	99.2	
07/25/15	3.41											
07/26/15	3.46											
07/27/15	3.12											
07/28/15	3.14	265		328		5		4				
07/29/15	3.26	327		306		<5		<3				
07/30/15	3.24	309		286		6		<3				
07/31/15	3.23											
Weekly Averages												
07/04/15	Week 1	300	8,475	308	8,694	8	232	4	122			
07/11/15	Week 2	269	8,573	290	9,263	16	489	6	186			
07/18/15	Week 3	304	8,389	335	9,323	10	271	4	112			
07/25/15	Week 4	291	8,593	362	10,732	6	179	4	110			
	Week 5											
Monthly												
Minimum		2.81	259	7,108	266	6,633	<5	<133	<3	75	93	97
Maximum		4.22	342	11,490	448	15,095	19	593	8	235	98	99
Total		103.22										
Average		3.33	291	8,518	323	9,773	<9	<313	<4	<136	96	99

Novato Sanitary District
Conventional Pollutants Report



July, 2015

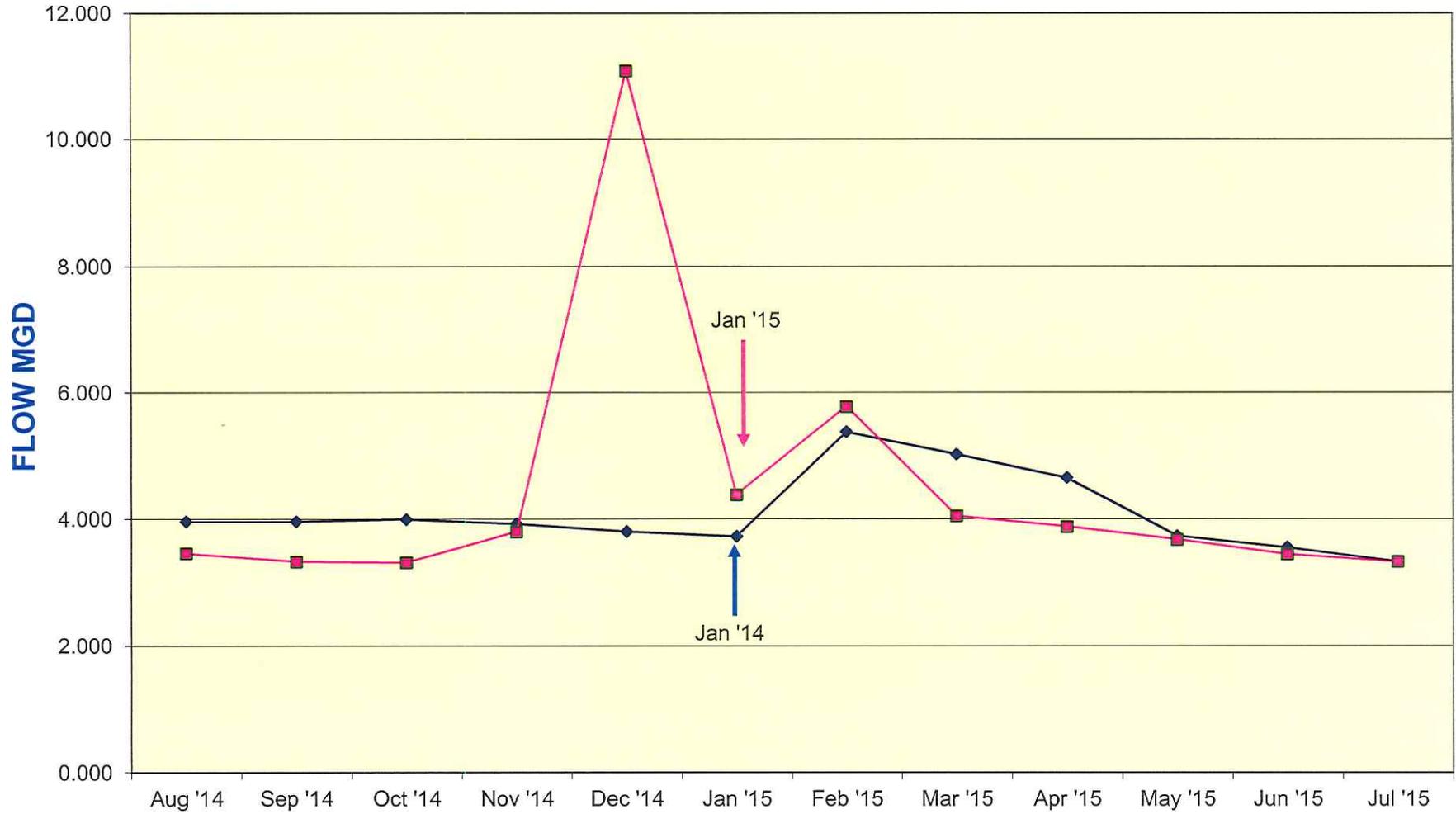
Date	INFLUENT - A001			Effluent - E002							
	Flow Total	pH	Ammonia	Coliform / Bacteria			pH	Ammonia	Unionized Ammonia	Oil & Grease	Temp
				Fecal	Entero	Total					
MGD	su	mg/L	MPN/100 mL			su	mg/L	mg/L		Deg C	
07/01/15	3.19						6.9				24.4
07/02/15	3.06						6.9				24.8
07/03/15	3.05						7.0				24.7
07/04/15	2.82										
07/05/15	3.06										
07/06/15	3.62						6.9				24.1
07/07/15	3.52					17	7.0				24.0
07/08/15	4.22					8	6.9				23.7
07/09/15	3.74					6	6.9				23.5
07/10/15	3.46						6.9				23.7
07/11/15	4.00										
07/12/15	3.48					5					
07/13/15	2.99					8	7.0				24.6
07/14/15	3.04						7.0				24.4
07/15/15	3.00	7.0					7.0				24.6
07/16/15	3.45					23	7.0				24.1
07/17/15	2.81	7.1					7.0				24.4
07/18/15	3.37										
07/19/15	3.26										
07/20/15	3.39	7.0					7.0				25.4
07/21/15	4.04					23	7.0				24.7
07/22/15	3.25					49	7.0				24.4
07/23/15	3.36						7.0				24.3
07/24/15	3.18	7.3				7	7.0				24.2
07/25/15	3.41										
07/26/15	3.46										
07/27/15	3.12						7.0				24.5
07/28/15	3.14					39	6.9				25.0
07/29/15	3.26					33	6.9				25.3
07/30/15	3.24					46	6.9				25.3
07/31/15	3.23						6.9				24.4
Monthly											
Minimum	2.81	7.0				5	6.9				23.5
Maximum	4.22	7.3				49	7.0				25.4
Total	103.22										
Average	3.33	7.1					7.0				24.5

NOVATO SANITARY DISTRICT RECYCLED WATER COMPLIANCE SUMMARY REPORT

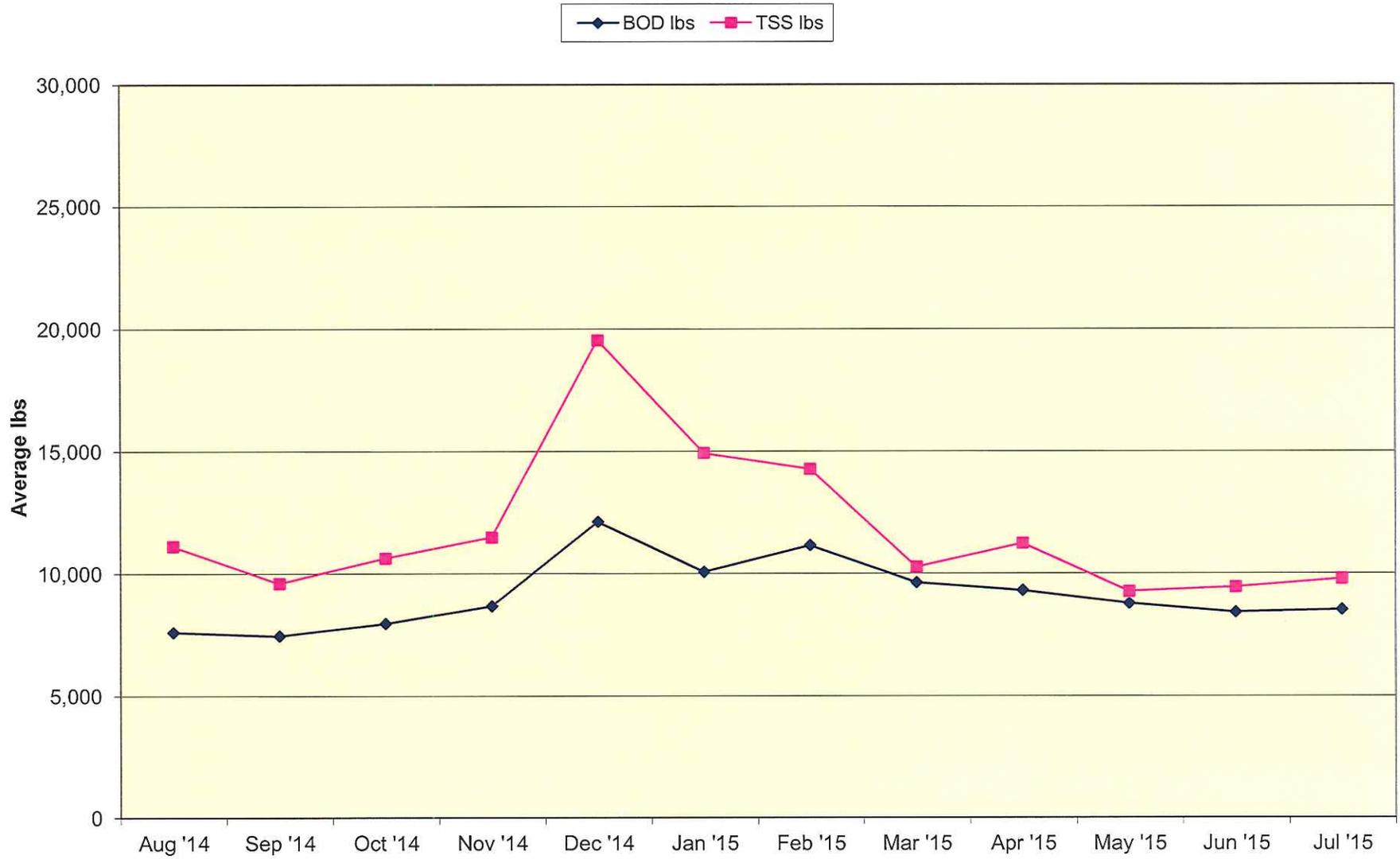
Date	Filter Influent Flow	Recycled Water Flow to Plum St.	Recycled Water Banked	Banked Water To Plum Street Tank	Potable Water To Plum St Tank	Recycled Water Influent Turbidity Max	Recycled Water Influent Turbidity Ave.	Minutes Over 5 NTU Turbidity	Filter Effluent 24 Hr Average Turbidity	Recycled Water Inf Chlorine Dose	Filter Effluent Dissolved Oxygen	Filter Effluent Total Coliform	Chlorint Contact Time
	MGD	MGD	MG	MGD	MGD	NTU	NTU	(m)	NTU	(mg/l)	(mg/l)	MPN/100m	Minutes
7/1/2015	0.720	0.066					3.3	0	1.8		7.3	<2	>450.000
7/2/2015	0.640	0.092					10.4	0	1.6			<2	>450.000
7/3/2015				0.086	0.574							<2	
7/4/2015					0.545								
7/5/2015	0.640	0.571			0.018			0	1.4		7.9	<2	>450.000
7/6/2015	0.750	0.590						0	1.5		7.5	<2	>450.000
7/7/2015	0.720	0.423						0	1.2		7.7	<2	>450.000
7/8/2015	0.660	0.130						0	1.5			<2	>450.000
7/9/2015	0.660	0.182						0	1.6			<2	>450.000
7/10/2015	0.650	0.178						0	1.2			<2	>450.000
7/11/2015	0.650	0.231						0	1.0			<2	>450.000
7/12/2015	0.820	0.831						0	0.9		8.0	<2	>450.000
7/13/2015	0.640	0.241						0	1.1		7.9	<2	>450.000
7/14/2015	0.650	0.037						0	1.1		8.2	<1.8	>450.000
7/15/2015	0.710	0.164					1.8	0	1.1			<2	>450.000
7/16/2015	0.670	0.097					1.8	0	1.0			<2	>450.000
7/17/2015	0.700	0.340					1.6	0	1.0			<2	>450.000
7/18/2015	0.650	0.223					1.6	0	1.1			<2	>450.000
7/19/2015	0.660	0.218					1.9	0	0.9			<2	>450.000
7/20/2015	0.640	0.302					1.6	0	0.8		7.9	<2	>450.000
7/21/2015	0.230	0.061						0	0.7			<2	>450.000
7/22/2015	0.620	0.319					1.7	0	1.0		8.0	<2	>450.000
7/23/2015													
7/24/2015	0.700	0.522					1.2	0	1.0		8.4	<2	>450.000
7/25/2015	0.670	0.464					1.2	0	1.1			<2	>450.000
7/26/2015	0.870	0.794					0.9	0	1.0			<2	>450.000
7/27/2015	0.650	0.234					1.0	0	1.1		7.9	<2	>450.000
7/28/2015	0.660	0.389					1.5	0	1.0		8.0	<2	>450.000
7/29/2015	0.670	0.194					1.7	0	1.0		8.5	<2	>450.000
7/30/2015	0.680	0.244					1.5	0	1.0			<2	>450.000
7/31/2015	0.660	0.319					2.0	0	1.1			<2	>450.000
Total	18.640	8.456		0.086	1.137		36.7	0	31.8		103.2	<52	>12,600.0
Minimum	0.230	0.037		0.086	0.018		0.9	0	0.7		7.3	<2	>450.0
Maximum	0.870	0.831		0.086	0.574		10.4	0	1.8		8.5	<2	>450.0
Average	0.666	0.302		0.086	0.379		2.2	0	1.1		7.9	<2	>450.0
Average	0.666	0.302		0.086	0.379		2.2	0	1.1		7.9	<2	>450.0

FLOW COMPARISON

—◆— 2013 / 14 —■— 2014 / 15



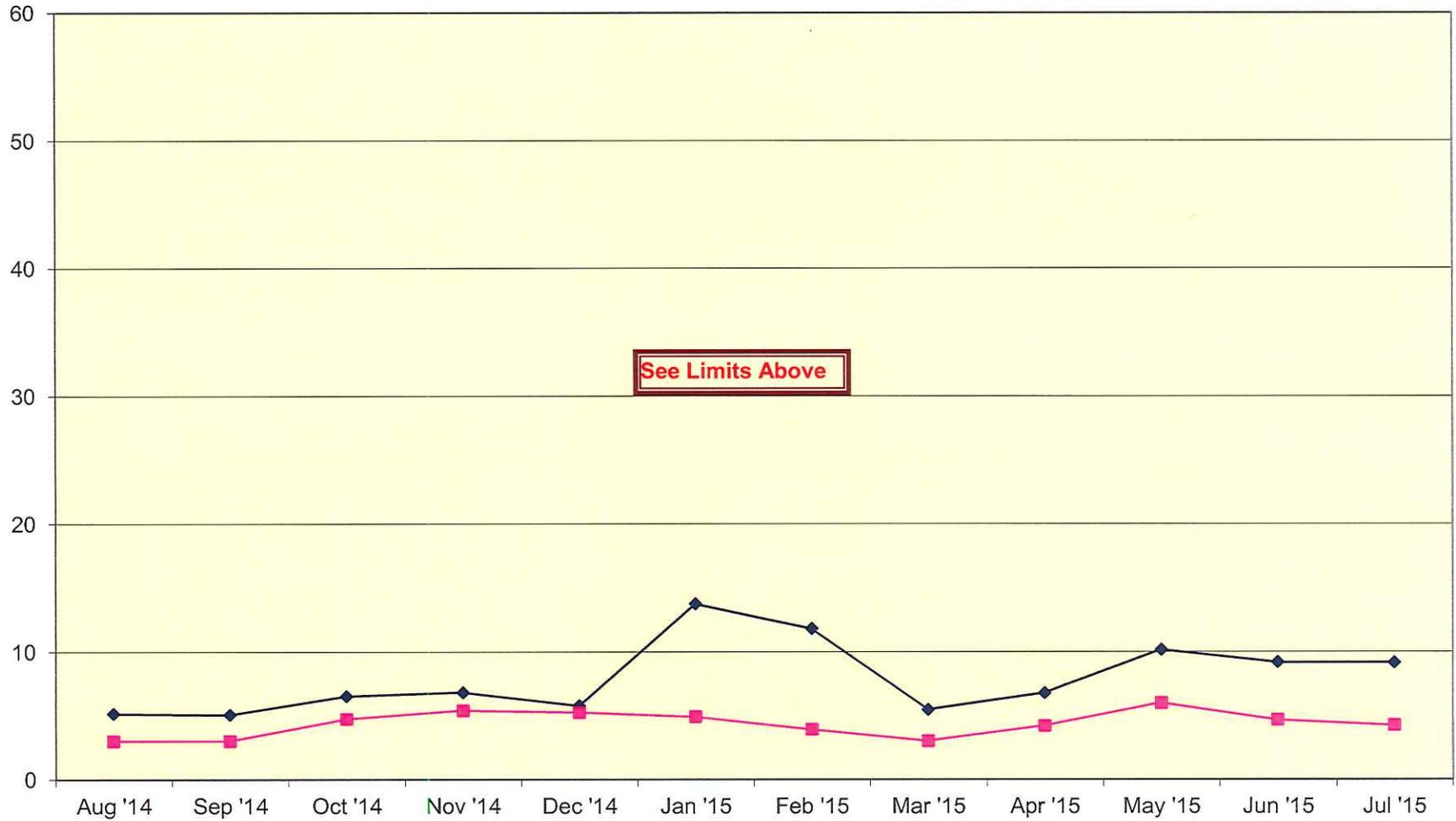
Influent Load BOD / TSS lbs



Effluent BOD / TSS Concentration

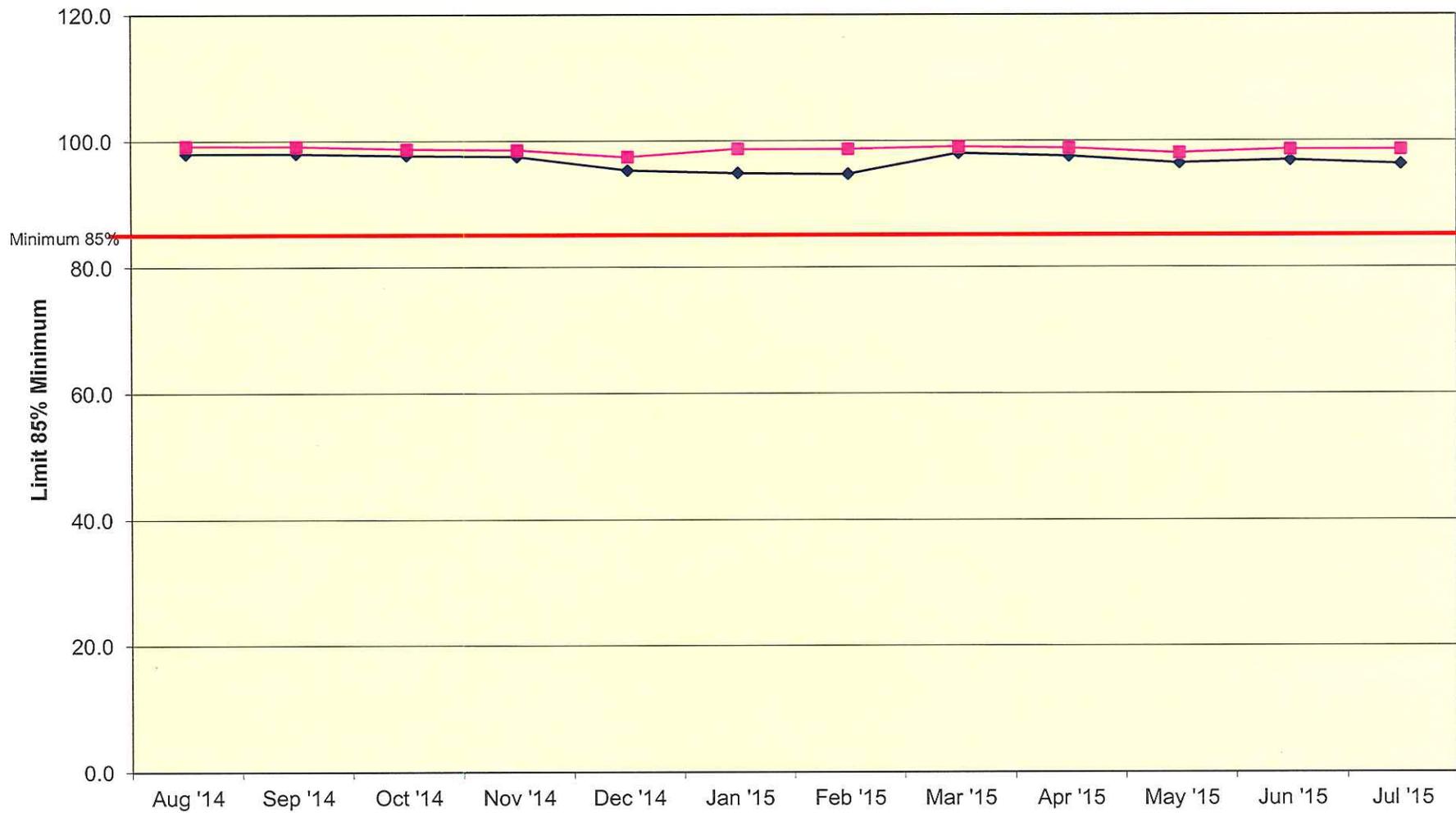
NPDES LIMITS WET SEASON
BOD & TSS - 30 mg/L Monthly Ave, 45 mg/L Weekly Ave
NPDES LIMITS DRY SEASON
BOD - 15 mg/L Monthly Ave, 30 mg/L Weekly Ave
TSS - 10 mg/L Monthly Ave, 20 mg/L Weekly Ave
WDR (Waste Discharge Requirements) RECLAMATION
BOD - 40 mg/L

◆ BOD ■ TSS

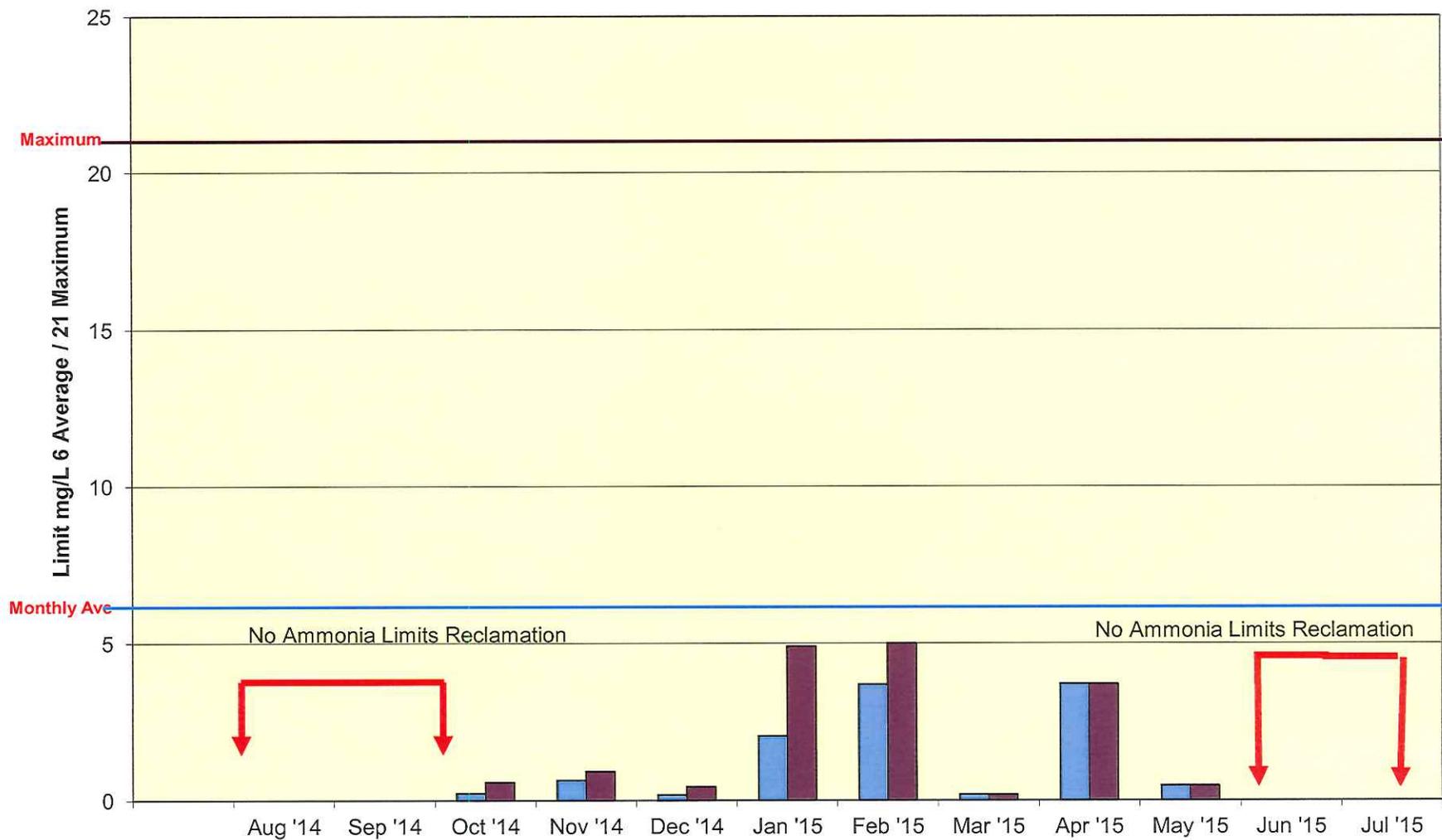


BOD / TSS Percent Removal

—◆— BOD —■— TSS



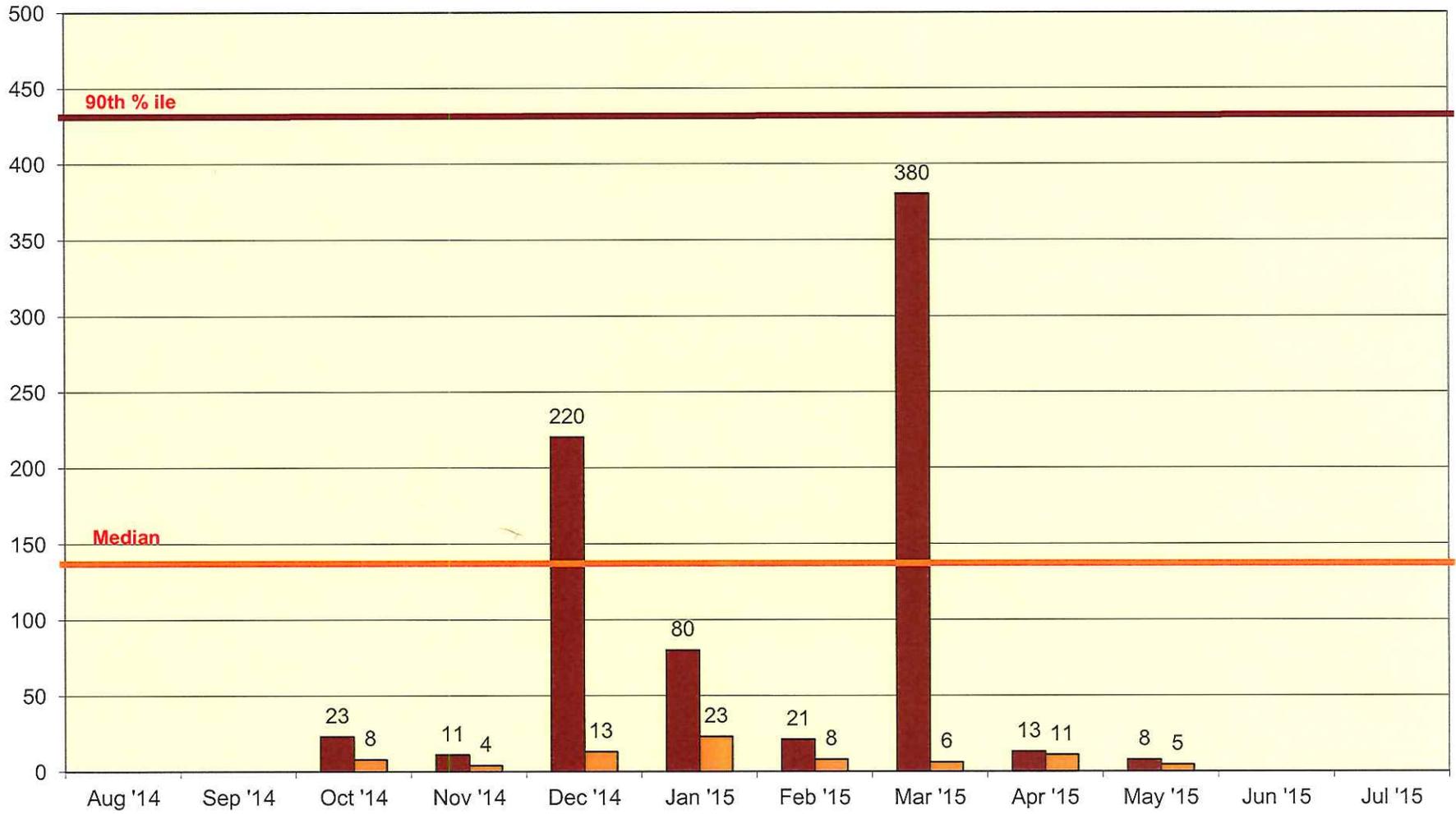
Effluent Ammonia



Disinfection - Fecal Coliform

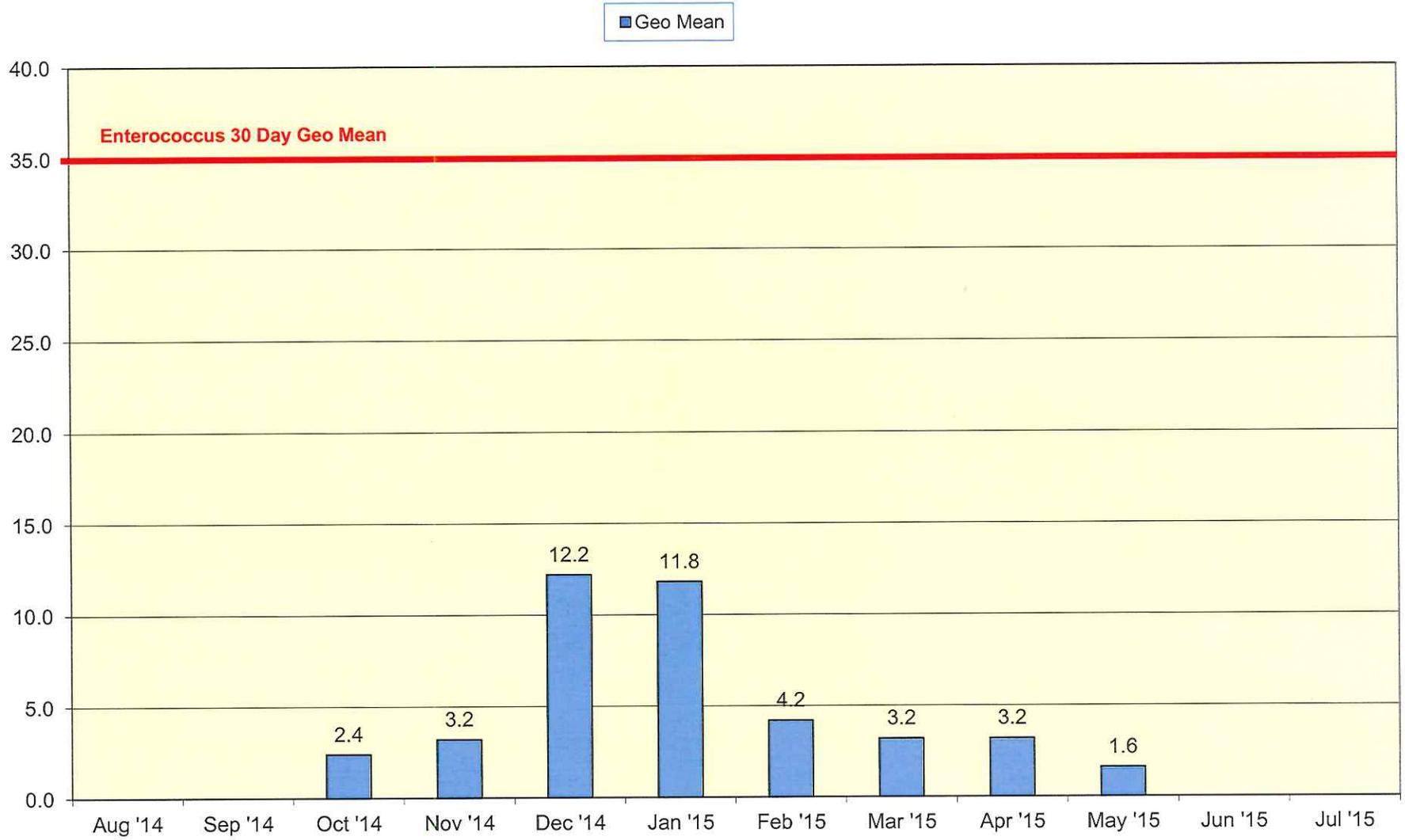
LIMITS - NPDES
Fecal 140 mpn monthly median
Fecal 430 mpn 90th percentile 30 day

■ 90th % ile ■ 30 day med



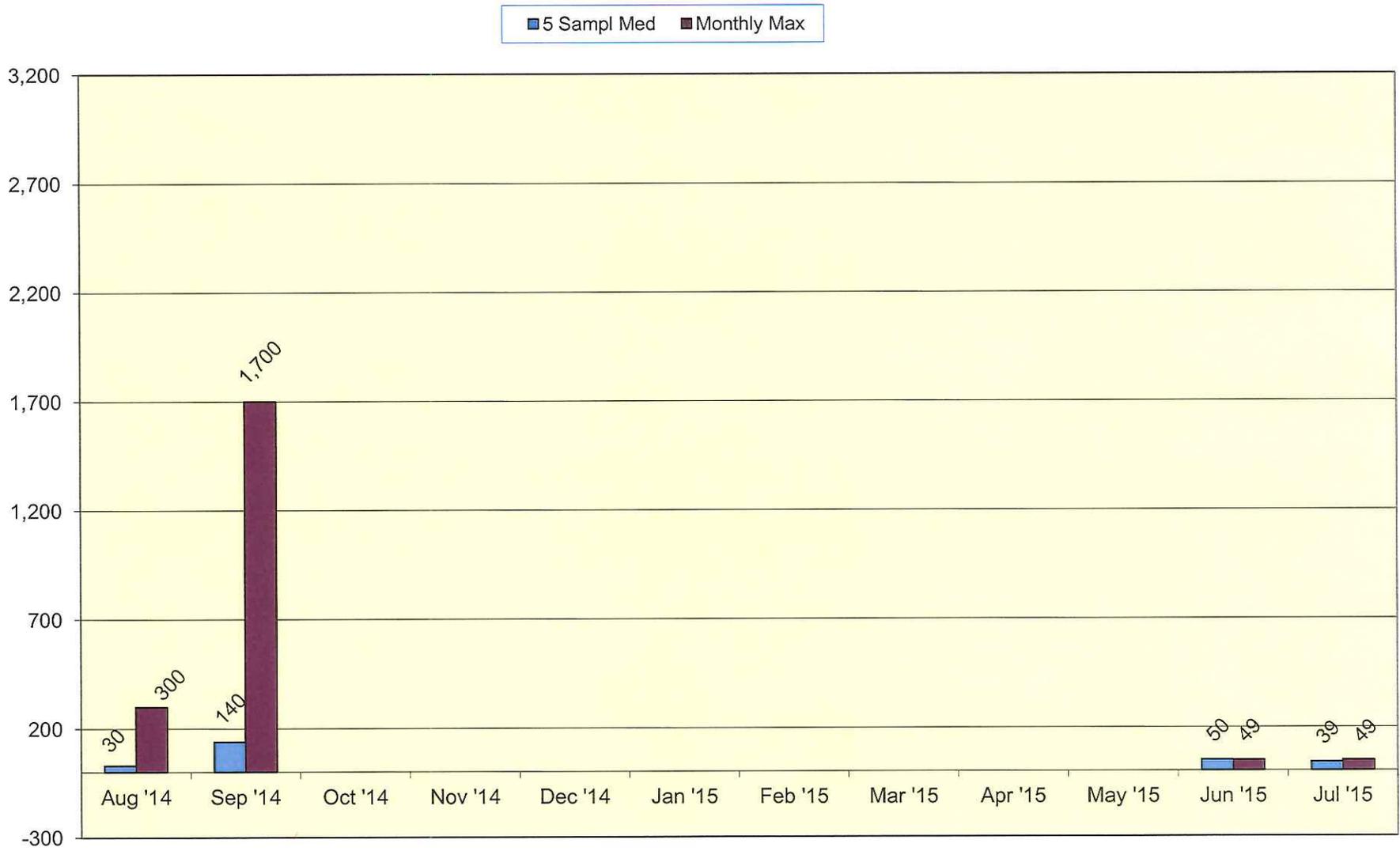
Disinfection - Enterococcus

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

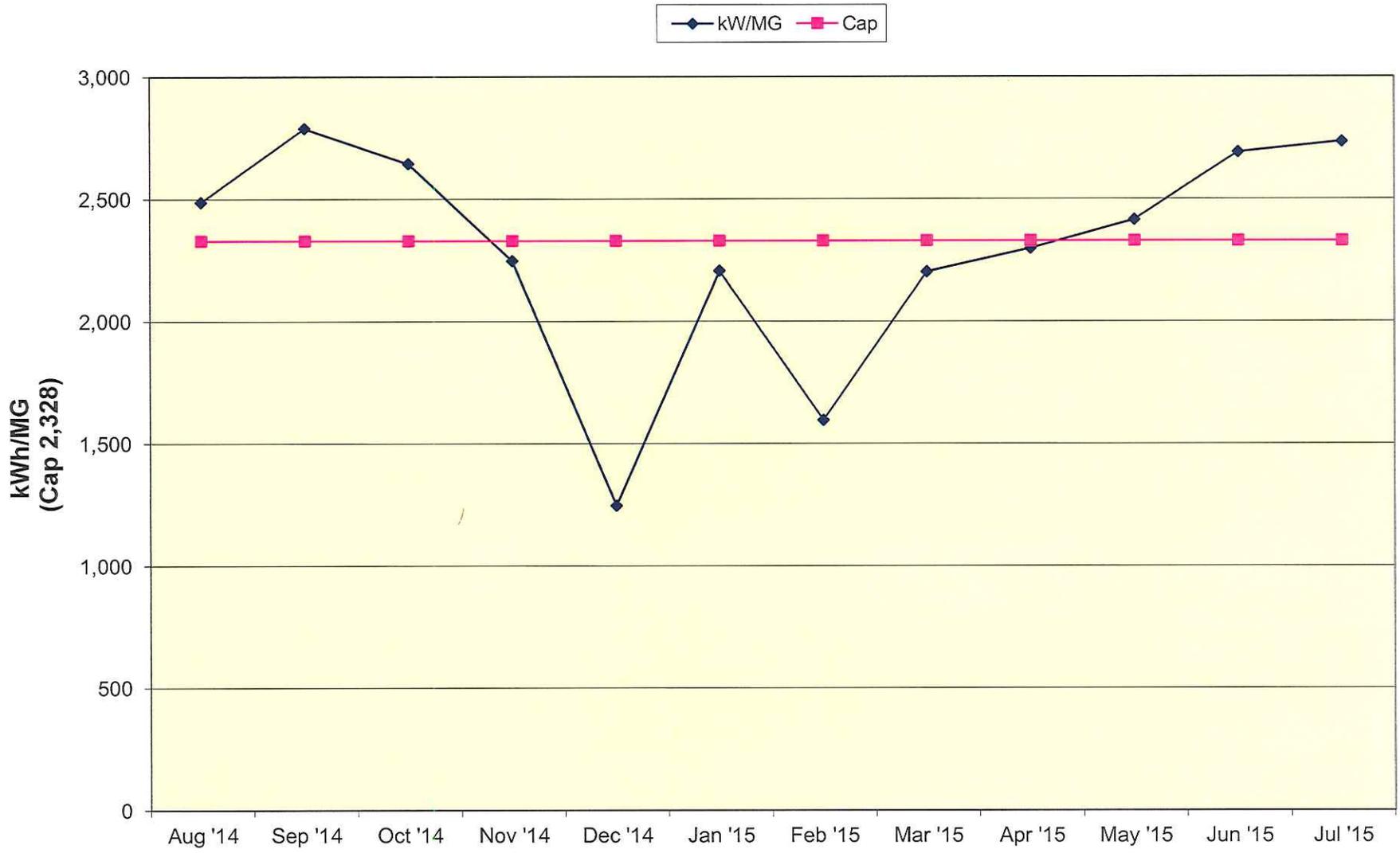


Disinfection - Total Coliform

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

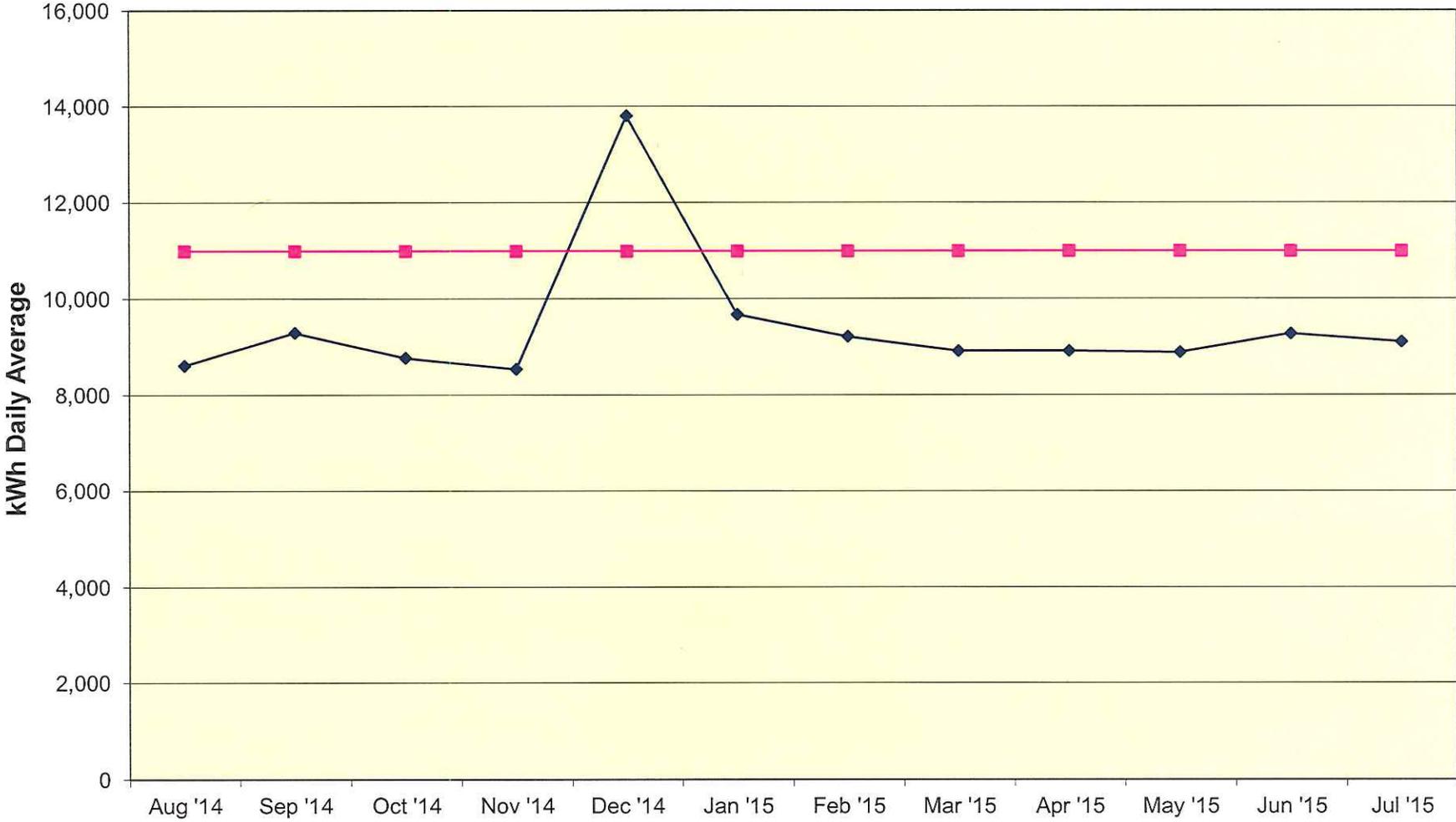


Energy kWh/MG



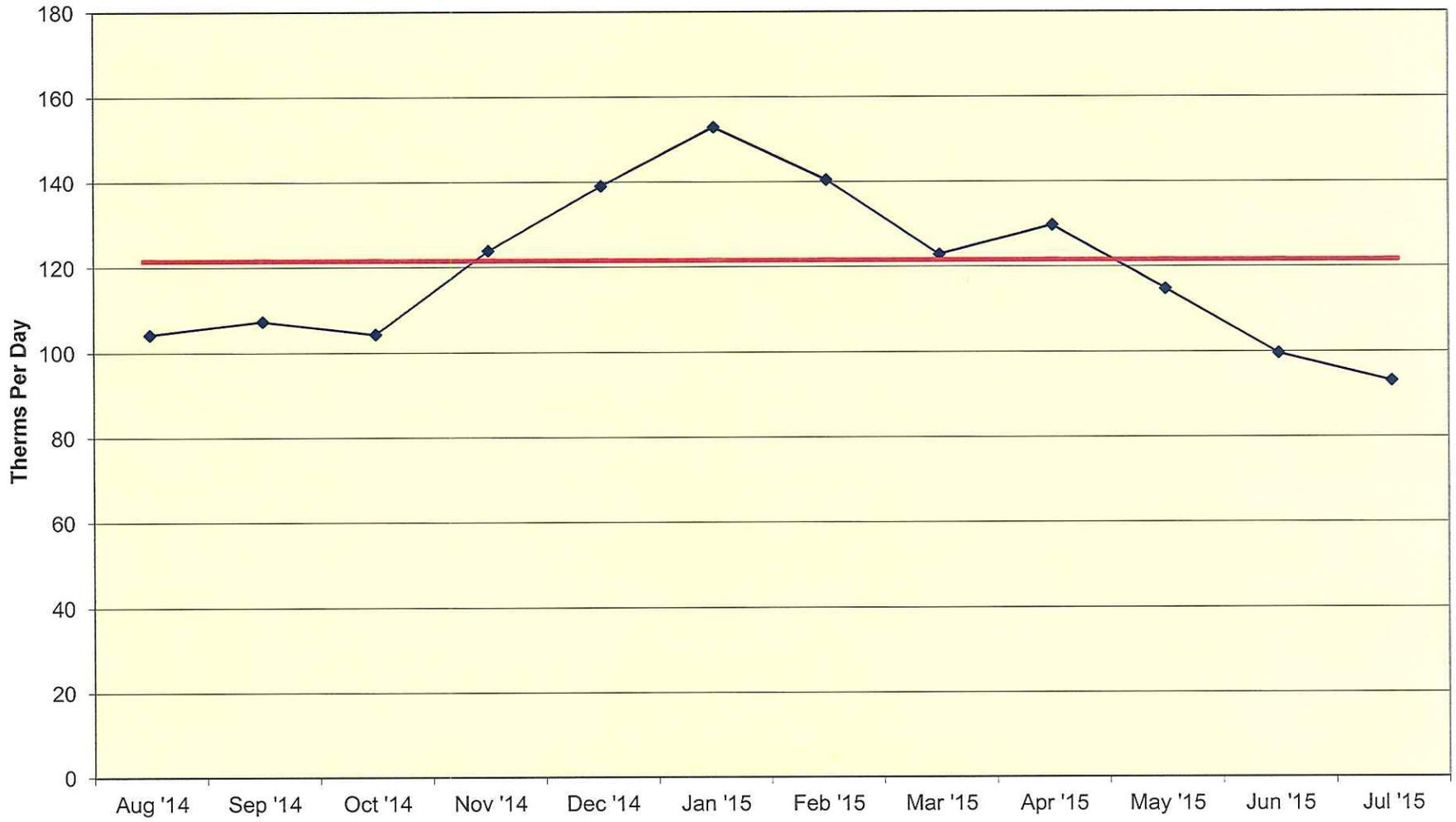
Energy kWh

◆ kWh ■ Cap

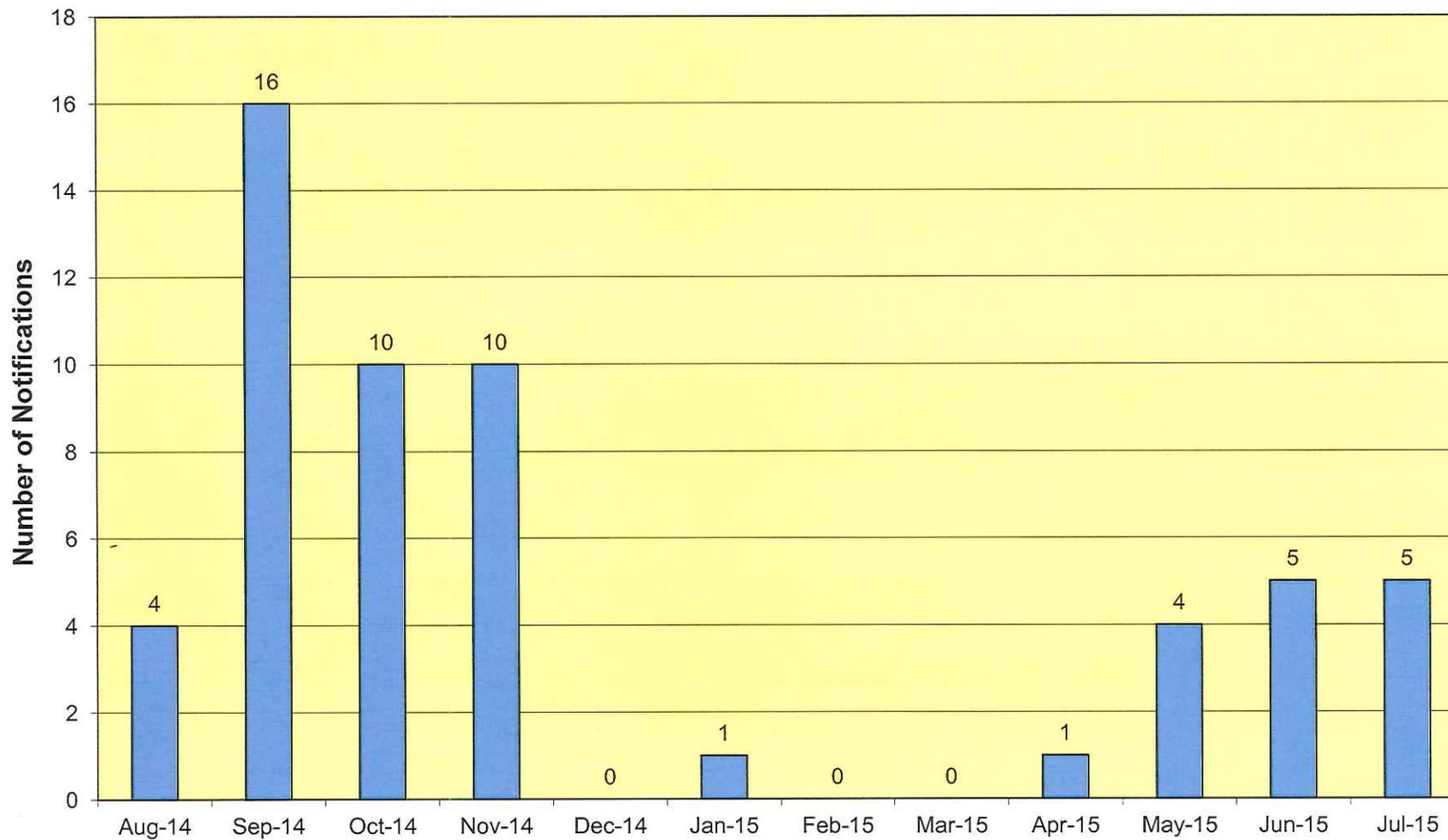


Natural Gas Use

◆ Natural Gas — Cap

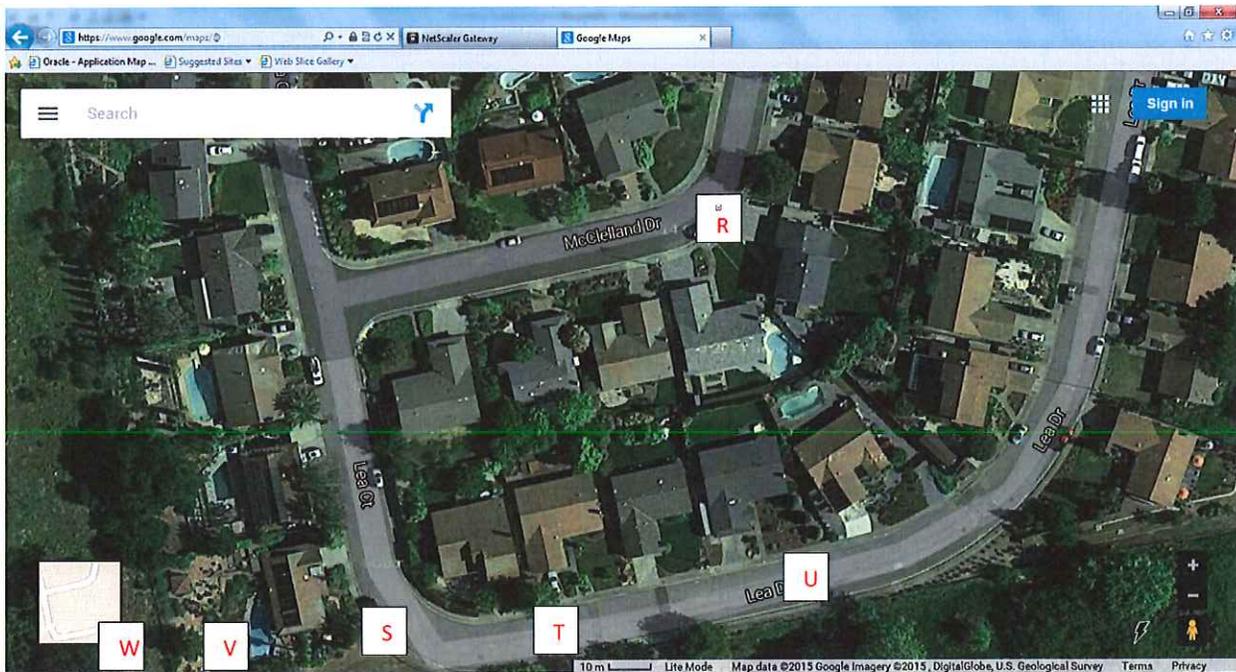
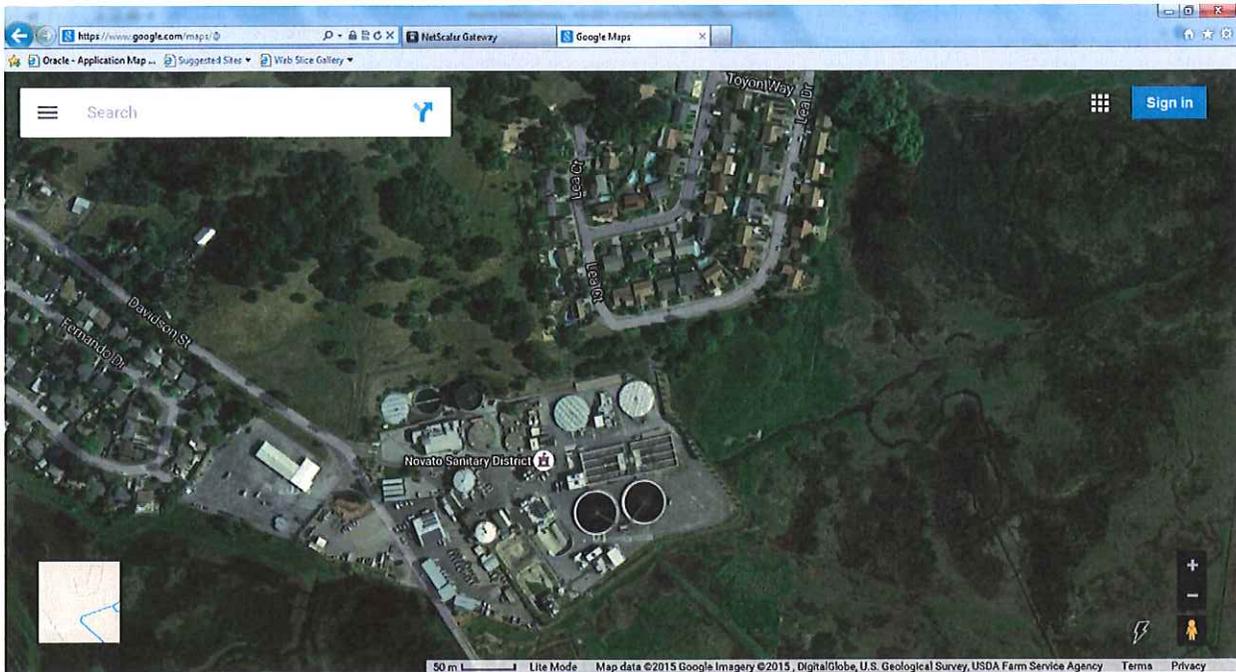


Complaints / Contacts Received



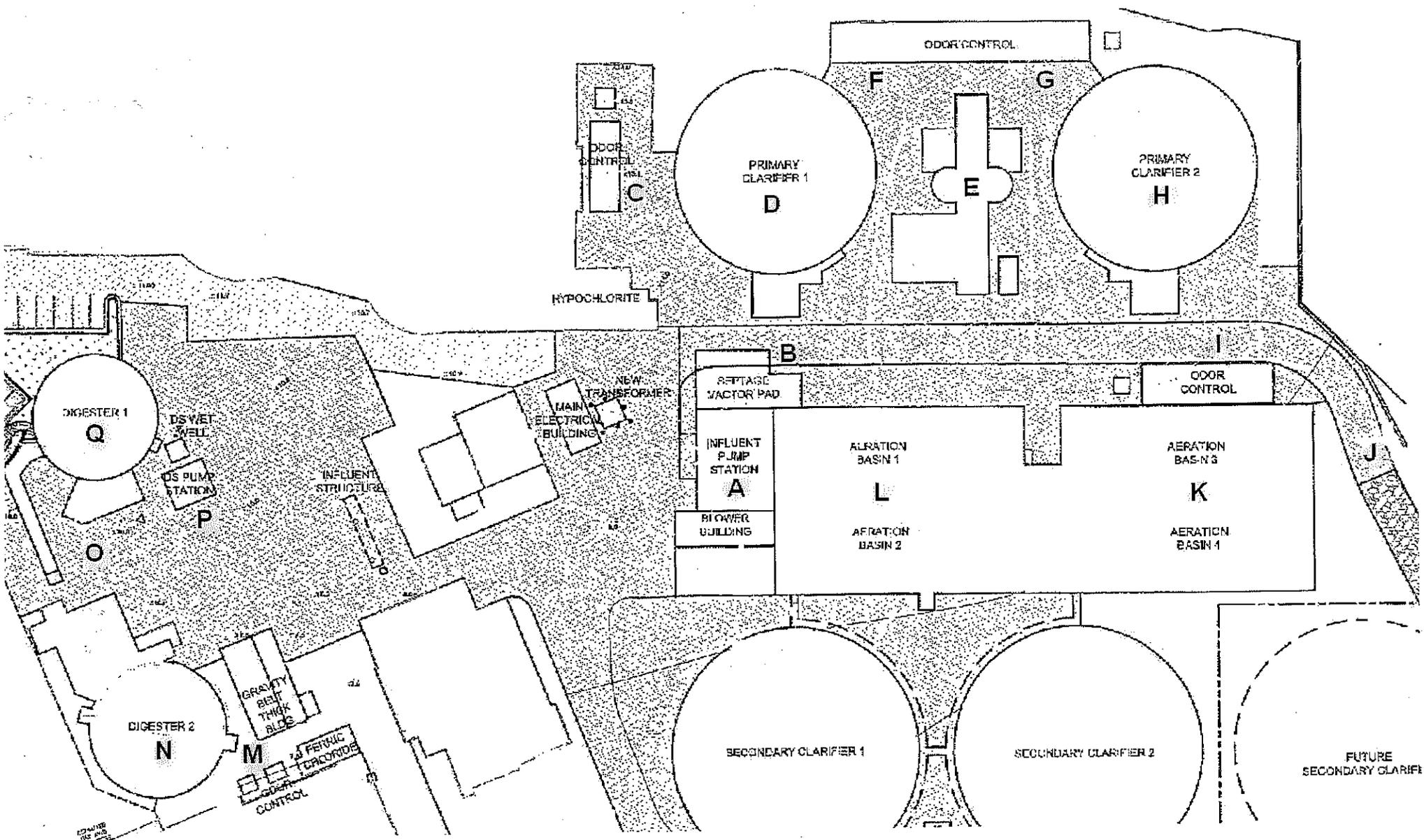
JEROME METER READINGS - JULY 2015

Sample Location	Min	Max	Ave	NOTES / COMMENTS
A: Influent Pump Station	0.000	0.124	0.016	
B: Septage Dumpster	0.000	0.002	0.001	
C: Primary Clarifier #1 Odor Bed	0.000	0.010	0.002	
D: Primary Clarifier #1	0.000	0.002	0.001	
E: Headworks	0.000	0.021	0.005	
F: Primary Clarifier #2 Odor Bed West	0.000	0.150	0.022	
G: Primary Clarifier #2 Odor Bed East	0.000	0.002	0.001	
H: Primary Clarifier #2	0.000	0.001	0.000	
I: Influent Odor Bed	0.000	0.002	0.001	
J: Behind Aeration Basins	0.000	0.002	0.001	
K: Between Aeration Basins 3 & 4	0.000	0.001	0.000	
L: Between Aeration Basins 1 & 2	0.000	0.002	0.000	
M: Digester Odor Bed	0.000	0.001	0.000	
N: Digester #2	0.000	0.000	0.000	
O: Flare Stack	0.000	0.000	0.000	
P: Digested Sludge Transfer Pit	0.000	0.002	0.001	
Q: Digester #1	0.000	0.130	0.017	
R: McLelland	0.000	0.001	0.000	Neighborhood
S: Lea 1	0.000	0.002	0.000	Neighborhood
T: Lea 2	0.000	0.001	0.000	Neighborhood
U: Lea 3	0.000	0.001	0.000	Neighborhood
V: Lea 4	0.000	0.000	0.000	Neighborhood
W: Lea 5	0.000	0.001	0.000	Neighborhood
Primary Clarifier #1 Headspace	0.005	33.000	12.661	Scrubbed Space
Primary Clarifier #2 Headspace	0.002	1.800	0.304	Scrubbed Space



JEROME METER

NEIGHBORHOOD SAMPLE LOCATIONS – LEA AND McCLELLAND.





McClelland Dr

Lea Dr

W

M

S

T

U

© 2010 Google

NOVATO SANITARY DISTRICT
Wastewater Operations Committee Meeting
Odor Control and Landscaping Report
July 2015

1.0 Background

Staff continues to maintain the on-going operation of the odor control facilities; and the landscaping, especially at the fence-line area next to the Lea Drive neighborhood, and at the northeast portion of the Novato Treatment Plant (NTP) site.

As mentioned in prior reports, the District has already invested significant amounts beyond the substantial initial investment for odor control and landscaping from the original WWTP Upgrade Project. These additional costs have included operational changes, measures related to further odor control measures, noise abatement, visual screening, wind shielding, and daily monitoring.

2.0 Odor control

Activities related to maintenance of the odor control facilities in July included:

- Staff continued to monitor media in the large odor control bed between primary clarifiers #1 & #2 which continued to perform satisfactorily. A potential for odor breakthrough was identified in late June, and operations staff arranged for additional topping off of the media for this bed, as well as topping off of all of the other odor beds, in July.
- Liquid phase sulfide sampling and analysis continues and the operations staff continued to provide data the District's odor consultant Dave McEwen of Brown and Caldwell. Additional Jerome meter readings in the neighborhood continued at the Committee's request.
- The Aqua-Fog system continues to be used as needed (another recommendation by Mr. McEwen).
- Pre-chlorination: Sodium hypochlorite continues to be added as an oxidizer on an as-needed basis to the influent flow, with operations staff monitoring performance (also a recommendation by Mr. McEwen).

3.0 Landscaping

The District's landscaping contractor Cagwin and Dorward (C&D) continues to work on an as-needed/as-directed basis on landscaping and vegetation at the District's fence-line on Lea Drive, and at the northeast corner area of the NTP. The redwood trees in the northeast corner of the plant site, and the site vegetation overall seems to be responding to well to the drought conditions, largely likely due to the irrigation with recycled water.

**Novato Sanitary District
Wastewater Operations Committee meeting
Collection System Operations Report
July 2015**

1.0 General:

An equivalent of about six (6) full time employees (FTE) worked in the Collection System Department during the month of July. The breakdown of staff time for the month in terms of equivalent full-time employee hours utilized, works out approximately as follows:

- 2.1 FTE field workers for Sewer Maintenance (main line cleaning)
- 1.3 FTE field workers for Pump Station Maintenance
- 0.2 FTE field workers for Closed Circuit Television (CCTV) work
- 2.4 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, and
- An equivalent of 1.0 FTE field workers were on vacation, sick leave or on Holiday.

2.0 Collection System Maintenance:

Performance metrics for the department are presented in the attached graphs showing the length of line cleaned/month, footage cleaned/hour worked, overflows/month, and the CCTV footage achieved. A brief discussion is also provided below.

Line Cleaning Performance:

A total of 420 work orders were generated for July by the ICOM3 Computerized Maintenance Management System (CMMS). Staff completed 395 work orders leaving 25 work orders outstanding. The 405 maintenance work orders completed in July resulted in 82,722 feet of sewer pipelines cleaned by staff. Of the 15 outstanding work orders, 7 of the work orders are for hydro-flushing and 8 of the work orders are for rodding. The completion of 12 of these work orders was postponed because the line segments were recently root treated. The remaining 3 will be completed in August.



In addition to line cleaning, both flusher trucks were outfitted to accept recycled water for flushing activities (photo at right).

Root Treatment:

With the assistance of District staff, an outside vendor foam-treated 123 line segments totaling 23,974 feet to inhibit root growth in the sewer mains and manholes. The root treatment work is complete for the year.

**Novato Sanitary District
Wastewater Operations Committee meeting
Collection System Operations Report
July 2015**

CCTV Performance:

The District's CCTV van was in the field for five (5) working days inspecting 40 line segments totaling 6,798 feet. Staff also televised 29 line segments totaling 5,303 using the Push Cam. The push cam work was performed in lieu of hand rod work. Visual inspection of a sewer main is much more efficient than hand rod, and the crew can also determine if hand rodding is actually necessary.

CCTV Findings:

- Infrastructure related: The July CCTV did not identify any line segments that will require spot repairs.
- O&M related: The July CCTV work did not identify any areas that require a change in sewer line operations.

3.0 Pump Station Maintenance:

The Collection System Department conducted 360 lift station inspections this month. 236 of the inspection visits were generated through the District's JobsCal Plus CMMS system. There are 9 outstanding work orders for the month, 7 corrective and 2 preventative. A Collection Systems (Pump Stations) Work Order Statistics summary is attached.

In addition to normal maintenance activities, District staff performed the following:

- Assisted an outside vendor who tested and polished, as necessary, diesel fuel in all diesel fueled generators storage tanks.

4.0 Air Relief/Vacuum Valves (ARVs):

Staff completed maintenance inspections on nine (9) air relief/vacuum valves.

5.0 Safety and Training:

General:

Collection System staff attended four safety tailgate meetings.

Specialized training:

- Collection System staff completed the field portion of Confined Space Training (photo at right).
- Collection system staff attended traffic control training.



**Novato Sanitary District
Wastewater Operations Committee meeting
Collection System Operations Report
July 2015**

Safety performance:

There were no lost time accidents this month for a total of 1,601 accident free days since the last lost time accident.

6.0 Minor Projects:

The District replaced a rod inlet casting at 1101 Second Street. This rod hole casting was replaced at the request of the City of Novato in advance of a street resurfacing project, the area around the casting had settled and needed repair. This work was performed under the informal contract provisions of the Uniform Public Construction Cost Accounting Act (UPCCAA) this month.

7.0 Standard Operating Procedures (SOPs):

No new core SOPs were identified, and as development of lower priority SOPs is being balanced against workload priorities, department staff did not generate any new SOPs in July. Also, the recently completed draft Core Competency Checklist continues to be used to track the initial training of a recently hired employee, and lessons learned will be incorporated in the final version, which will be used track the training of all department employees. Staff will also develop a similar draft checklist to use for tracking annual checks of Collections Department employees to determine where annual training is necessary.

8.0 Sanitary Sewer Overflows (SSOs):

There were zero (0) SSO's in July.

Novato Sanitary District
Collection System Monthly Report For July 2015 (as of July 31, 2015)

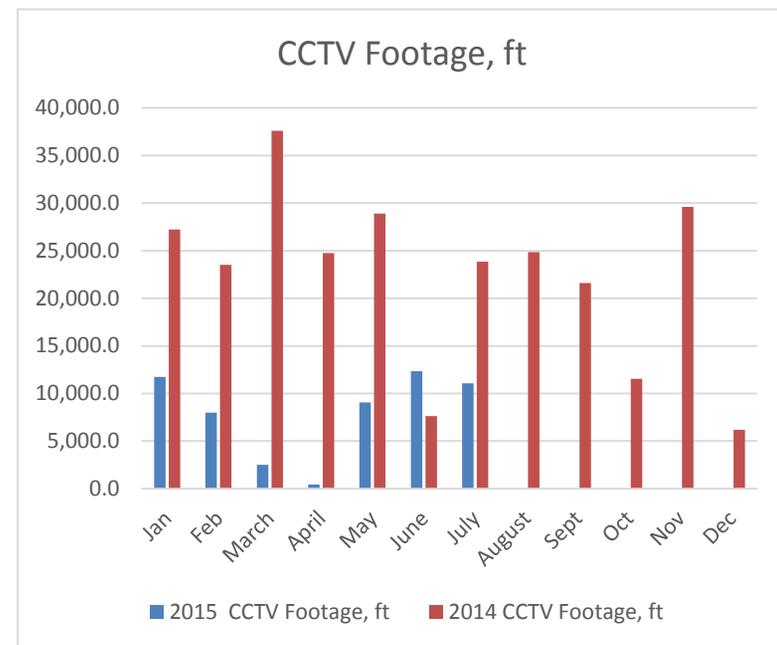
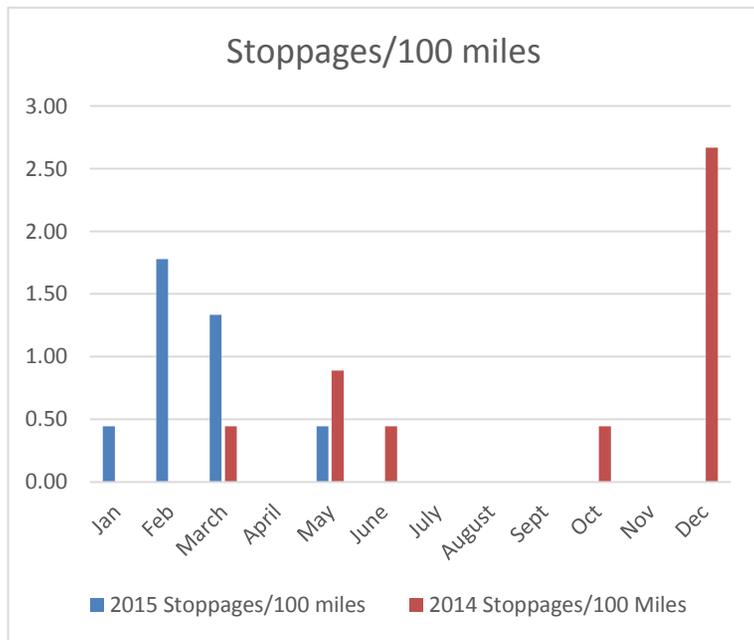
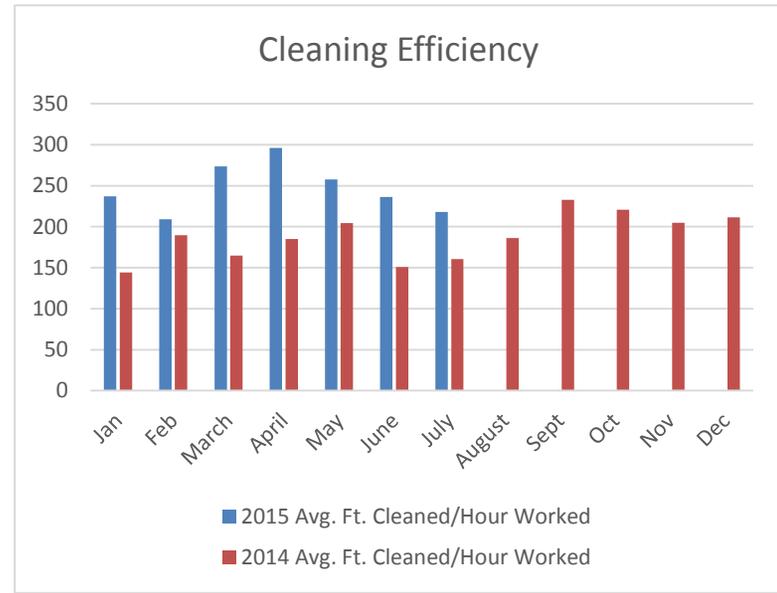
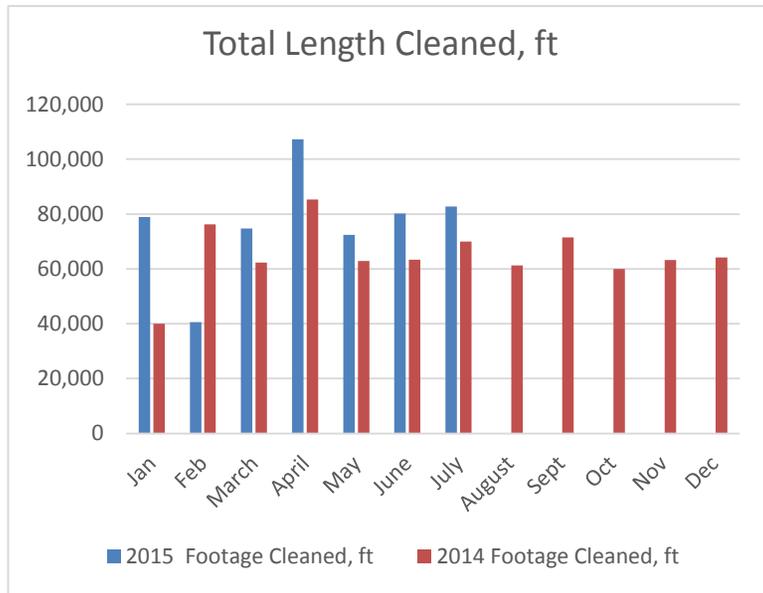
	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total Year to Date	Average Year to Date
A. Employee Hours Worked														
Number of FTEs (main line cleaning), hrs.	1.9	1.2	1.5	2.2	1.7	1.9	2.1	0.0	0.0	0.0	0.0	0.0	NA	1.0
Number of FTEs (other)	1.6	2.1	1.8	2.0	1.9	2.1	2.4	0.0	0.0	0.0	0.0	0.0	NA	1.2
Number of FTEs (CCTV)	0.1	0.2	0.0	0.0	0.4	0.4	0.2	0.0	0.0	0.0	0.0	0.0	NA	0.1
Total, FTEs	3.6	3.5	3.4	4.2	4.0	4.5	4.7	0.0	0.0	0.0	0.0	0.0	NA	2.3
Regular Time Worked, (main line cleaning), hrs	333	194	273	363	281	339	380							
Regular Time Worked on Other, hrs (1)	281	329	320	341	312	382	433							
Regular Time Worked on CCTV (2)	15	36	4	0	71	72	45							
Total Regular time, worked, hrs	628	559	597	703	663	793	857	0	0	0	0	0	4,798	400
Total Vacation/Sick Leave/Holiday, hrs	403	356	271	277	307	239	181						2,031	290
Vacation/Sick Leave/Holiday, FTEs	2.3	2.2	1.5	1.6	1.8	1.3	1.0	0.0	0.0	0.0	0.0	0.0	11.8	1.0
Overtime Worked on Coll. Sys., hrs	3	0	16	3	7	4	6						38	5
Overtime Worked on Other, hrs (1)	14	45	31	19	15	29	39						191	27
Overtime Worked on CCTV (2)	0	0	0	0	4	0	0						4	1
Total Overtime, hrs	17	45	46	22	25	33	45	NA	NA	NA	NA	NA	232	33
B. Productivity														
1. Line Cleaning														
Rodder Work Orders generated	90	31	42	23	11	46	69						312	45
Rodder 3208 ft. cleaned	15,611	6,776	7,657	3,885	2,857	8,033	12,373						57,192	8,170
Rodder - outside services, ft cleaned	0	0	0	0	0	0	0						0	0
Flusher Work Orders generated	340	183	388	543	455	396	351						2,656	379
Truck 3205V ft. cleaned	107	4,165	2,352	22,584	18,806	1,100	4,618						53,732	7,676
Truck 3206V ft. cleaned	63,145	29,612	64,665	80,792	50,753	70,998	65,731						425,696	60,814
Flusher - outside services, ft. cleaned	1,349	553	0	127	0	0	0						2,029	
Total Footage cleaned(3)	78,863	40,553	74,674	107,261	72,416	80,131	82,722	NA	NA	NA	NA	NA	536,620	76,660
Work Orders completed	416	198	397	551	449	413	405						2,829	404
Work Orders backlog	14	16	33	15	17	29	15	NA	NA	NA	NA	NA	139	20
2. Closed Circuit Television (CCTV)														
Camera Work Orders generated	0	0	0	0	0	0	0						0	
CCTV Truck 3126T, ft. videoed	3,998	6,622	1,795	303	7,211	7,037	6,793						33,759	4,823
CCTV (hand cam), ft. videoed	6,378	806	706	0	1,842	5,303	4,279						19,314	
CCTV Inspection - outside services, ft. videoed	1,349	553	0	127	0	0	0						2,029	
Total CCTV footage(3)	11,725	7,981	2,501	430	9,053	12,340	11,072	NA	NA	NA	NA	NA	55,102	
C. Sanitary Sewer Overflows (SSOs)														
Minor (Category III)	1	4	3	0	1	0	0						9	NA
Major (Category II)	0	0	0	0	0	0	0						4	NA
Major (Category I)	0	3	2	0	0	0	0						0	NA
Overflow Gallons	126	2,419	1,603	0	5	0	0						4,153	NA
Volume Recovered	0	0	98	0	0	0	0						98	NA
Percent Recovered	0%	0%	6%	NA	0%	NA	NA	NA	NA	NA	NA	NA	2%	NA
D. Service Calls (non-SSO related)														
Service calls, normal hours, #	10	11	7	2	5	6	6						47	7
Normal hours S.C. response time, mins (avg.)	22	20	15	10	25	45	24						161	23
Service Callouts, after hours, #	1	1	1	1	1	1	0						6	1
After Hours S.C. response time, mins (avg.)	33	35	40	7	40	45	0						200	29
E. Benchmarks														
Average Ft. Cleaned/Hour Worked	237	209	274	296	258	236	218	NA	NA	NA	NA	NA	NA	247
Total Stoppages/100 Miles	0.4	1.8	1.3	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	NA
Average spill response time (mins)	28	5	22	0	55	0	0						NA	16
Callouts/100 Miles	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.2
Overtime hours/100 Miles	1	0	7	1	3	2	3	0	0	0	0	0	16.67	1
Overflow Gallons/100 Miles	55	1052	697	0	2	0	0	0	0	0	0	-	1,806	150

(1) This category includes time spent on: Data input, Training, Service Calls, Overflow Response, as well as any other activity that does not directly relate to main line cleaning or CCTV work.

(2) This category separates time spent on CCTV from other Collection System maintenance activities.

(3) Does not include outside services (tracked separately)

Collection System 2014-15 Graphs



**COLLECTION SYSTEM (Pump Stations)
WORK ORDER STATISTICS
July 1, 2015 - July 31, 2015**

	Open Work Orders Due Prior to 7/1/2015	Open Work Orders 7/1/2015 - 7/31/2015	Total Open Work Orders
Preventive	2	236	238
Corrective	7	0	7
Total	9	236	245

	Closed Work Orders 7/1/2015 - 7/31/2015
Preventive	236
Corrective	0
Total	236

Total Outstanding Work Orders as of 7/31/2015	9
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NOVATO SANITARY DISTRICT
Wastewater Operations Committee Meeting
Reclamation Facilities Report
July 2015

1.0 Summary:

The rancher tended to his cattle this month treating them for flies to prevent the spread of pink eye. Parcels were irrigated on all Site without any reportable issues. The Wildlife Pond level was raised to 6 feet. The sump pump in the Dedicated Land Disposal Area was replaced.

2.0 Ranch Operations:

The rancher spent most of his time tending to the cattle on site. They treated the cattle for flies to prevent the spread of pink eye. The rancher also culled out the young cows to send them to market. Cattle was moved into Site 2 this month.

3.0 Irrigation Parcels:

District staff continued to check the control system at each site to make sure they are functioning as expected. Irrigation times were shortened on all Sites to balance storage pond levels.

4.0 Irrigation Pump Station:

The Wildlife Pond was raised to 6 feet this month as recommended in the Reclamation Operations & Maintenance Manual. This action is recommended to limit the amount of vegetation growing in the bottom of the pond.

Approximately 91.6 MG of treated water was used for irrigation this month.



5.0 Sludge Handling & Disposal:

There was no sludge handling activity this month. The sump pump in the Dedicated Land Disposal Area (DLD) was replaced, the pump had failed late last month. This pump is used to pump accumulated rainwater out of the DLD.

NOVATO SANITARY DISTRICT
Reclamation Facility - Monthly Statistics for Calendar Year 2015, as of July, 2015

	January	February	March	April	May	June	July	August	September	October	November	December	Total Year to Date	Annualized Monthly Average
Irrigation Pump Station														
Plant flow to ponds (MG)		0	0	0	0	90.64	88.64						179.3	14.94
Irrigation (MG)		0	0	0.0	0.09	7.86	59.2	91.59					158.7	13.23
Irrigation Pump 1 Hours				0.3	17.2	100.2	125.6						243.3	20.28
Irrigation Pump 2 Hours				0.1	16.7	102.4	121.1						240.3	20.03
Irrigation Pump 3 Hours				0.1	15.2	99.6	127.9						242.8	20.23
Washdown Water Pump Hours				0	0	0	0						-	0.00
Wildlife Feed Pump Hours			331.5	51.6	0	626.8	740.5						1,750.4	145.87
Water Circulated through Wildlife Pond (MG)	0	0	20.88	3.25	0	39	47	0	0	0	0	0	110.3	9.19
Strainer No. 1 Hours				0.2	6.3	38	45.9						90.4	7.53
Strainer No. 2 Hours				0	6.3	39.8	45.9						92.0	7.67
Pond 1 Gauge @ Beginning of Month	5.4	5.4	5.6	5.4	5.4	4.9	5.3							
Pond 1 Gauge @ End of Month	5.4	5.6	5.4	5.4	4.9	5.3	3.6							
Pond 1 Gallons Stored @ End of Month(MG)	39.2	41	39.2	39.2	35.2	38.4	24.8							
Pond 2 Gauge @ Beginning of Month	5.5	5.5	5.7	5.5	5.5	5	5.5							
Pond 2 Gauge @ End of Month	5.5	5.7	5.5	5.5	5	5.5	3.7							
Pond 2 Gallons Stored @ End of Month(MG)	52	54	52	52	47	52	33							
Total Irrigation Water Stored	91.2	95	91.2	91.2	82.2	90.4	57.8	0	0	0	0	0		
Drainage Pump Station No. 3														
Drainage Pump No. 1 Hours	0	133.1	2.4	1.2	0	0	0							
Drainage Pump No. 2 Hours	0	0	2.1	0.1	0	0	0							
Drainage Pump No. 3 Hours	100.3	127.1	0.6	2.7	0	0	0							
Total Gallons Stormwater Pumped (MG)	30.09	78.06	1.53	1.2	0	0	0	0	0	0	0	0	110.88	9.24
Drainage Pump Station No. 7														
Drainage Pump No. 1 Hours	331.6	46.2	13.3	0.2	0.1	0	0							
Drainage Pump No. 2 Hours	0	0	0	0	0	0	0							
Drainage Pump No. 3 Hours	0	1.5	2.7	7.5	0.1	0	0							
Total Gallons Stormwater Pumped (MG)	149.22	21	7	3.47	0.09	0	0	0	0	0	0	0	181.44	15.12