

NOVATO SANITARY DISTRICT

Meeting Date: March 24, 2014

The Board of Directors of Novato Sanitary District will hold a regular meeting at 6:00 p.m., Monday, March 24, 2014, at the District Offices, 500 Davidson Street, Novato.

Materials related to items on this agenda are available for public inspection in the District Office, 500 Davidson Street, Novato, during normal business hours. They are also available on the District's website: www.novatosan.com.

AGENDA

- 1. PLEDGE OF ALLEGIANCE:**
- 2. AGENDA APPROVAL:**
- 3. 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 Board at this time as a result of any public comments made.

- 4. REVIEW OF MINUTES:**
 - a. Consider approval of minutes of the March 10, 2014 meeting.
- 5. CONSENT CALENDAR:**

The Manager-Engineer has reviewed the following items. To her knowledge, there is no opposition to the action. The items can be acted on in one consolidated motion as recommended or may be removed from the Consent Calendar and separately considered at the request of any person.

- a. Consider rejection of claim from Ian Tonks, 99 Alconbury Way, in an unspecified amount for cost of repairing damage allegedly caused from work by a District contractor on March 13th and 14th, 2014.
 - b. Approve regular disbursements, payroll, and payroll related disbursements.
 - c. Adopt resolution No. 3068 authorizing acceptance of easement from Habitat for Humanity – Block H, Sweetser Ranch, Fourth Street, Novato.
 - d. Approve designation of surplus equipment.
- 6. WASTEWATER OPERATIONS:**
 - a. Receive Wastewater Operations Committee Report, February 2014.
 - b. Receive report on Collection System of the Future (CSOTF) initiative by Bay Area wastewater collection system agencies.

- c. Receive Sewer System Management Plan (SSMP) 2014 Biennial Audit report.

7. ADMINISTRATION:

- a. Adopt Resolution No. 3069 – Resolution of Appreciation for retiring Manager-Engineer Ms. Beverly B. James.
- b. Appointment of District Secretary-Treasurer.
- c. Update District Policy 3120 (Investment of District Funds).
- d. Adopt Resolution No. 3070 amending the District's 401(a) Plan with Lincoln Life Insurance Company to reflect change of Trustee.

8. NORTH BAY WATER REUSE AUTHORITY (NBWRA)

- a. Review proposed NBWRA budgets and give direction to staff.

9. STAFF REPORTS:

- a. State Revolving Fund Loan program modifications for recycled water.

10. BOARD MEMBER REPORTS:

11. MANAGER'S ANNOUNCEMENTS:

12. ADJOURN:

Next resolution no. 3071

Next regular meeting date: Monday, April 14, 2014, 6:00 PM at the Novato Sanitary District office, 500 Davidson Street, Novato, CA

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.

March 10, 2014

A regular meeting of the Board of Directors of the Novato Sanitary District was held at 6:03 p.m., Monday, March 10, 2014, at the District Office, 500 Davidson Street, Novato.

BOARD MEMBERS PRESENT: President Michael Di Giorgio, Members William C. Long and Jerry Peters. Member Jean Mariani arrived at 6:08 p.m. Member Brant Miller was absent.

STAFF PRESENT: Manager-Engineer-Secretary Beverly B. James, Deputy Manager-Engineer Sandeep Karkal and Administrative Secretary Julie Swoboda.

ALSO PRESENT: John Bailey, Project Manager, Veolia Water

PLEDGE OF ALLEGIANCE:

AGENDA APPROVAL: The agenda was approved as written.

PUBLIC COMMENT: None.

REVIEW OF MINUTES:

Consider approval of minutes of the February 10 and February 24, 2014 meeting.

On motion of Member Peters, seconded by Member Long, and carried unanimously by those members present, the February 10th meeting minutes were approved.

The February 24th meeting meetings were approved by President Di Giorgio and Member Peters. Member Long abstained from approval of the Feb. 24th meeting minutes as he was absent.

CONSENT CALENDAR:

On motion of Member Long, seconded by Member Peters and carried unanimously by those members present, the following Consent Calendar items were approved:

- a. Approval of regular disbursements in the amount of \$410,353.96, project account disbursements in the amount of \$408,855.67, and Board member related disbursements in the amount of \$4,587.50.
- b. Received Accounts Receivable report.
- c. Approved the meeting schedule of: March 24, April 14, May 12, Tuesday, May 27th (May 26 is Memorial Day), June 9, and June 23. Cancel meeting of April 28 (due to CASA Sacramento Legislative & Public Policy Forum).
- d. Received auditor's memorandum of internal control and required communications.

COMMITTEE REPORTS:

- Solid Waste Committee Report. The Manager discussed the Solid Waste Committee meeting which was held on February 25th and she provided the Board with a copy of the Household Hazardous Waste Facility 2014 schedule. She noted that our Spring E-Waste event will be held from April 26 through April 28 at the facility. The Manager discussed the facilities progress of solid waste collection from 2004 when the facility opened through the end of 2013.

President Di Giorgio stated that he was at the meeting and commented on the discussion of complications involved with waste recycling at multi-family unit dwellings.

Member Mariani joined the Board meeting during discussion of this report.

Member Long proposed that Novato Disposal Services enter a float in the annual Novato Fourth of July parade to alert the public to the free curbside bulky waste pickups offered four times/year by Novato Disposal.

ADMINISTRATION:

- Receive report from Adhoc Manager-Engineer Contract Negotiating Committee, and consider approval of Manager-Engineer employment agreement: Member Mariani stated that the Committee met with Deputy Manager-Engineer Sandeep Karkal to review sample employment contracts and compensation comparisons. She stated that the Committee offered, and Mr. Karkal accepted, the terms of the employment agreement, a copy of which was included in the Board packet.

On motion of Member Peters, seconded by Member Long and carried unanimously by those members present, the Board approved the Manager-Engineer employment agreement for Sandeep Karkal, subject to review by District Counsel.

- Approve an Addendum to the Contract Services Agreement to provide temporary laboratory assistance and authorize the Manager-Engineer to execute it: The Deputy Manager-Engineer stated that the District had entered into a sub-contract with Veolia Water to fill a temporary Environmental Services Supervisor position. He noted that the original contract amount of \$27,300 will be depleted at the end of March and requested the Board approve an Addendum for an amount not to exceed \$30,000.

On motion of Member Long, seconded by Member Peters and carried unanimously by those members present, the Board approved an Addendum to the Contract Services Agreement with Veolia Water West Operating Services, Inc. to provide temporary laboratory assistance for an amount not to exceed \$30,000, and authorized the Manager-Engineer to execute the Agreement.

STAFF REPORTS:

- North Bay Water Reuse Authority (NBWRA) update. Beverly gave an update of the NBWRA meeting which was held on February 19th. She stated that NBWRA is wrapping up the Phase 2 scoping study and has prepared a cost budget for Phase 2. She discussed agencies that have withdrawn from the project and the impact that this may have on the remaining agencies. The Manager outlined the three District projects under consideration.

BOARD MEMBER REPORTS:

- North Bay Watershed Association (NBWA) meeting: President Di Giorgio discussed his attendance at the North Bay Watershed Association meeting which was held on March 7th. He stated that the 2014-2015 NBWA budget was discussed and that Chris Choo gave a presentation on the Marin TMDL project in Boyle Park.

- California Association of Sanitation Agencies (CASA) Washington DC conference. Member Long commented on his attendance at the conference. He discussed activities, speakers and meetings he attended with legislators and their staff.

MANAGER'S ANNOUNCEMENTS:

- The Wastewater Operations Committee will meet on Monday, March 17th at 2:00 p.m. at the District office.

- The North Bay Watershed Association will host the conference "Water Resources Management" on Friday, April 11th at the StoneTree Golf club.

- The California Special Districts Association (CSDA) is calling for nominations for Seat C. If any Board members are interested, the Manager should be notified so she can place this item on a future agenda.

- California Association of Sanitation Agencies (CASA) will hold a Legislative and Public Policy Forum in Sacramento on April 28th and 29th. Board members are encouraged to attend.

ADJOURNMENT: There being no further business to come before the Board, President Di Giorgio adjourned the meeting at 7:24 p.m.

Respectfully submitted,

Beverly B. James
Secretary

Julie Swoboda, Recording

NOVATO SANITARY DISTRICT BOARD AGENDA ITEM SUMMARY

TITLE: Consent Calendar: Tonks Claim	MEETING DATE: March 24, 2014 Agenda Item No. 5.a.
RECOMMENDED ACTION: Deny claim	
SUMMARY AND DISCUSSION:	
<p>On March 17, 2014, the District received a claim in an unspecified amount from Mr. Ian Tonks, 99 Alconbury Way, Novato, CA. Mr. Tonks asserts that excavation work performed by a District contractor, Fieldstone Construction Company, (Fieldstone), created reverberations which caused multiple cracks in interior windows, kitchen cabinet surround, and exterior foundation stucco of his home.</p> <p>The District had previously entered into an agreement with Fieldstone on January 31, 2014 for pump station drainage improvements and bypass pipe connections in the areas of East Hamilton, Marin Village, and Bahia Pump Stations. This agreement includes standard indemnification provisions from by the District's insurance carrier, the California Sanitation Risk Management Authority (CSRMA), which require the contractor to indemnify the District.</p> <p>Once a claim is presented, the District may refer it to a claims adjuster from Carl Warren & Company, representing the District's insurance carrier, particularly if the amount claimed is in excess of \$5,000. The adjuster advises the District as to the appropriate response. The purpose of the response is to protect the District and to take advantage of code and case defenses to comply with the Government Code and set the statute of limitations for suit filings. A public entity must act on the claim within 45 days, and provide written notice of the action taken. If a timely claim is rejected, the claimant may file suit for money or damages within six months after the date the notice is delivered or mailed. If the rejection is <u>not</u> properly noticed, however, the deadline for filing suit is extended to two years. A claim rejection restricts the statute of limitations to six months instead of two years.</p> <p>In this instance, District staff recommends procedural denial of the claim from Mr. Tonks and further recommends that the claim be referred to Fieldstone Construction Company.</p>	
ALTERNATIVES: Do not deny the claim.	
BUDGET INFORMATION: N/A	
DEPT. MGR.:	MANAGER:

Novato Sanitary District Operating Check Register

March 24, 2014

Date	Num	Name	Credit
Mar 24, 14			
3/24/2014	56787	Pacific, Gas & Electric	56,409.48
3/24/2014	56789	Real Estate Strategies & Sol...	9,937.50
3/24/2014	56766	E2 Consulting Engineers, Inc	9,344.40
3/24/2014	56790	RMC Water & Environment, L...	5,758.44
3/24/2014	56755	American Express-21007	4,817.95
3/24/2014	56759	Brown & Caldwell, Inc.	4,448.28
3/24/2014	56768	EOA, Inc.	4,340.82
3/24/2014	56796	Unicorn Group	3,969.71
3/24/2014	56756	Aqua Science	2,610.00
3/24/2014	56792	Roy's Sewer Service, Inc.	2,400.00
3/24/2014	56795	U.S. Bank Card (2)(June)	1,984.47
3/24/2014	56772	Graybar	1,600.00
3/24/2014	56785	North Marin Water District Pa...	1,586.00
3/24/2014	56757	Beecher Engineering	1,500.00
3/24/2014	56786	Novato Chamber of Commerce	1,500.00
3/24/2014	56771	Grainger	1,173.67
3/24/2014	56764	Control Systems West, Inc.	1,076.00
3/24/2014	56775	IEDA, INC	1,051.00
3/24/2014	56763	Cintas Corporation	1,027.60
3/24/2014	56784	North Marin Water District - L...	990.00
3/24/2014	56793	Shape Incorporated	984.65
3/24/2014	56788	Rauch Communication Cons...	937.50
3/24/2014	ach	Long, William C.	936.66
3/24/2014	56767	Empire Mini Storage - Novato	840.00
3/24/2014	56770	Frontier Analytical Laboratory...	800.00
3/24/2014	56769	Fisher-Scientific	716.97
3/24/2014	56773	HACH/American Sigma Inc	712.81
3/24/2014	56800	VWR International Inc.	651.22
3/24/2014	56774	Hartill Heavy Haul, Inc.	650.00
3/24/2014	56781	Milanis Autocraft	638.36
3/24/2014	56798	Verizon EQ	602.05
3/24/2014	56777	Labworks Equipment, Inc.	560.12
3/24/2014	56761	Cagwin & Dorward Inc.	435.00
3/24/2014	56794	Staples Business Adv Inc.	383.68
3/24/2014	56758	BoundTree Medical, LLC	378.02
3/24/2014	56754	Able Tire & Brake Inc.	356.64
3/24/2014	56791	Rotary Club of Novato	320.00
3/24/2014	56760	Buck's Saw Service, Inc.	316.09
3/24/2014	56765	CWEAmembers	296.00
3/24/2014	56753	3T Equipment Company Inc.	199.52
3/24/2014	56799	Verizon Wireless-	146.91
3/24/2014	56779	Marin Independent Journal	146.80
3/24/2014	56783	North Marin Water District	129.00
3/24/2014	56762	California Truck Equip. Co. L...	117.18
3/24/2014	56778	Leonardi Automotive & Electr...	93.06
3/24/2014	56780	Meyers, Nave, Riback, Silver ...	86.00
3/24/2014	56776	Kentfield Occupational Med ...	80.00
3/24/2014	56782	North Marin Auto Parts	40.69
3/24/2014	56797	United Parcel Service	10.42
Mar 24, 14			130,090.67

Novato Sanitary District Capital Projects Check Register

March 24, 2014

<u>Date</u>	<u>Num</u>	<u>Name</u>	<u>Credit</u>
Mar 24, 14			
3/24/2014	2668	County of Marin-public works	50,000.00
3/24/2014	2670	RMC Water & Environment, I...	7,592.13
3/24/2014	2667	American Express-21007	2,428.63
3/24/2014	2669	Novato, City	500.00
Mar 24, 14			<u>60,520.76</u>

**Novato Sanitary District
Payroll and Payroll Related Check Register
March 2014**

<u>Date</u>	<u>Description</u>	<u>Amount</u>
03/31/2014	March - Payroll	102,416.35
03/21/2014	March - Retirees Health Benefits	16,193.37
03/21/2014	CalPers Health	30,592.81
03/21/2014	CALPERS Retirement *	4,511.46
03/21/2014	United States Treasury	20,963.66
03/21/2014	CalPers Supplemental Income Plan	2,500.00
03/31/2014	EDD	5,420.90
03/21/2014	Lincoln Financial Group	18,634.21
03/21/2014	Lincoln Financial Group-401a Plan	4,171.30
03/21/2014	Lincoln Financial Group-401a Plan	4,074.87
03/21/2014	CALPERS Retirement	5,696.10
03/21/2014	Local Union 315	480.00
03/21/2014	Operating Engineers Trust	272.72
		<u>215,927.75</u>

* **Note:** Finally able to apply credit of \$16k to our PERS monthly contribution. Credit of \$16k due to change of rate due to pay off of side fund in 2011.

RESOLUTION NO. 3068

**A RESOLUTION AUTHORIZING ACCEPTANCE OF EASEMENT
FROM HABITAT FOR HUMANITY**

BLOCK H, SWEETSER RANCH – FOURTH STREET, NOVATO

NOVATO SANITARY DISTRICT

WHEREAS, a permanent easement is needed for the purpose of constructing, maintaining, servicing and/or replacing sanitary sewer facilities for the parcel listed below;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of Novato Sanitary District that the District shall accept the easement offered to it by the owners of the parcel(s) hereinafter listed:

Assessor's Parcel No.

Property Owner

APN 141-241-29

Habitat for Humanity Greater San Francisco

* * * * *

I hereby certify that the foregoing resolution was duly and regularly passed and adopted by the Board of Directors of Novato Sanitary District, Marin County, California, at a meeting thereof held on the 24th day of March, 2014, by the following vote:

AYES, and in favor thereof, Members: Di Giorgio, Long, Mariani, Miller, Peters
NOES, Members: None
ABSENT, Members: None

President, Board of Directors
Novato Sanitary District

ATTEST:

Secretary

NOVATO SANITARY DISTRICT BOARD AGENDA ITEM SUMMARY

TITLE: Consent Calendar: Surplus Equipment	MEETING DATE: 03/24/2014
	AGENDA ITEM NO.: 5.d.
RECOMMENDED ACTION: Approve designation of surplus equipment.	
SUMMARY AND DISCUSSION: The following equipment is no longer needed at the District: <ul style="list-style-type: none">• MacBook Air 13.3/1.86GHz/2GB/256GB, purchased in 2010• Iphone 5 purchased in 2013	
ALTERNATIVES: N/A	
BUDGET INFORMATION: No budget impact.	
DEPT. MGR. :	MANAGER'S APPROVAL:

NOVATO SANITARY DISTRICT BOARD AGENDA ITEM SUMMARY

TITLE: Wastewater Operations Committee – Meeting Report for February 2014	MEETING DATE: March 24, 2014 AGENDA ITEM NO.: 6.a.
RECOMMENDED ACTION: Information. Receive report.	
SUMMARY AND DISCUSSION: <p>The February 2014 operations reports for the wastewater treatment, collections, and reclamation facilities are attached.</p> <p>Wastewater Treatment Facility</p> <p>The Novato Treatment Plant (NTP) water quality performance was excellent with all parameters well within effluent standards. There were no NPDES violations. The Recycled Water Facility did not produce recycled water in February. Safety performance was excellent with another accident-free month for a total of 1,366 accident-free days at the end of January. Routine maintenance activities were performed at the NTP and the Ignacio Transfer Pump Station (ITPS). The January 2014 Electronic Self-Monitoring Report (e-SMR) was submitted on February 27, 2014.</p> <p>Collection System</p> <p><u>Sewer Mains:</u> A total of 76,221 feet of sewer pipelines were cleaned for the month by District staff. Outside contractors cleaned 1,570 feet of larger diameter (>12-inch) District main line. Staff used the District CCTV truck to televise 21,931 feet of sewer line. Outside contractors televised another 1,570 ft of larger diameter District main.</p> <p><u>Pump Stations:</u> Staff conducted 227 lift station inspections, with 115 inspection visits generated through the JobsCal Plus program.</p> <p><u>Safety:</u> There were no lost time accidents for a total of 393 accident-free days at the end of February.</p> <p><u>Standard and Emergency Operating Procedures (SOPs & EOPs):</u> One (1) SOP and one SOP revision were issued. One EOP is almost complete (except for some minor edits), 11 have had a final review and need some minor edits, and 14 more require edits before staff gives them a final review.</p> <p><u>SSOs:</u> There were no (zero) sanitary sewer overflows (SSOs) in February.</p> <p>Reclamation Facility</p> <p>The rancher cleared two culverts in Site 7. Approximately 66 MG of recycled water was placed in the storage ponds this month for irrigation, no irrigation was performed. The motor was removed for repair from Irrigation Pump No. 2.</p> <p>Odor Control, Noise, and Landscaping</p> <p>The District’s odor control consultant David McEwen of Brown and Caldwell (B&C) made a detailed presentation to Lea Drive neighborhood representatives on February 7, 2014. A copy of his presentation is included in the attached committee agenda package. With the completion of the enclosure around the biofilter fans in December 2013, the noise issue has been abated and will be closed out. Staff continues to work with Cagwin & Dorward (C&D) to monitor landscaping in the northeast corner of the plant property.</p>	
DEPT.MGR.:	MANAGER-ENGINEER:



March 13, 2014

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

Subject: Veolia Water Operations Report – February 2014

Dear Ms. James:

We are pleased to provide this updated activity report for February 2014.

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

Regards,

A handwritten signature in black ink, appearing to read "John Bailey". The signature is fluid and cursive, with the first name "John" and last name "Bailey" clearly distinguishable.

John Bailey
Project Manager

**MONTHLY OPERATIONS REPORT
February 2014**

Prepared for

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

Prepared by

Veolia Water West Operating Services, Inc. (VWWOS)

TABLE OF CONTENTS

TREATMENT PLANT PERFORMANCE SUMMARY	2
OPERATIONS AND MAINTENANCE STATUS / REVIEW	3-4
ADMINISTRATION.....	4
SAFETY AND TRAINING	4
ODORS.....	4
MISCELLANEOUS.....	4

TREATMENT PLANT PERFORMANCE SUMMARY: February 2014:

Bay Discharge – NPDES Limits

Parameter	Value		Limit	
	Ave	Max	#1	#2
Flow, MGD (monthly ave/max)	5.38	11.56	N/A	N/A
Max Peak Hour, MGD – 2/28/14, 0842 Hours	N/A	23	N/A	N/A
Influent BOD ₅ , lb/day (month ave/max)	8,838	11,980	N/A	N/A
Influent TSS, lb/day (monthly ave/max)	11,171	16,898	N/A	N/A
Effluent BOD ₅ , mg/L (monthly ave/weekly max)	10	13	30	45
Effluent TSS, mg/L (monthly ave/weekly max)	<3	5	30	45
Effluent BOD ₅ - % Removal, Minimum	96	N/A	85	N/A
Effluent TSS - % Removal, Minimum	99	N/A	85	N/A
Ammonia, mg/L – (monthly ave/daily max)	1.49	4.50	6	21
pH, su (min / max)	6.8	7.0	6.5	8.5
Enterococcus, mpn (30 day geo mean)	1.6	N/A	35	N/A
Fecal Coliform, mpn (30 day median)	4	N/A	140	N/A
Fecal Coliform, mpn (90 th percentile)	8	N/A	430	N/A
Total Coliform, mpn (5 Sample Median / Max)	30	17	240	10,000
Total Permit Exceedances (NPDES)	0			

NA – Not Applicable

Discussion of Violations / Excursions: NONE

Title 22 - Recycled Water Production and Quality (Off Line)

Description	Units	Value	Limit
Volume Produced	Million Gallons	N/A	N/A
Average Turbidity	NTU	N/A	N/A
Turbidity > 5 NTU (in 24 hour)	Minutes	N/A	N/A
Minimum CT (disinfection)	ml-min/L	N/A	N/A
Minimum Dissolved Oxygen (DO)	mg/L	N/A	N/A
Maximum Total Coliform	mpn/100 ml	N/A	N/A

Total Rainfall. – 6.77 inches

Daily Max 2/26 – 1.67 inches

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

Due to the persistent dry weather pattern leading up to February we transitioned from Bay Discharge to reclamation / storage mode. The Novato Sanitary District secured permission for off season irrigation of pastures in January from the Regional Water Quality Control Board. Within the first two weeks of February we received our first significant rainfall of 2014. On Tuesday February 11th with ample stored water and the likelihood of more rainfall we transitioned back to Bay Discharge.

Novato

- Transitioned from Bay Discharge to Reclamation / Storage mode, 2/1/14
- Routine rounds, readings and maintenance
- Transitioned from Reclamation / Storage Discharge to Bay Discharge mode, 2/11/14
- Gravity Belt Thickener (GBT) Odor Fan #1 - replaced bearings/belts
- Replaced Recycled Water Plant (RWP) Backwash Pumps Breakers
- Wetwell Drain line addition – Distribution Pump RWP
- UV Generator Day Tank Repair - Floats
- Annual Main UPS Battery Check
- Headworks Gate Actuator back from repair and installed
- Replaced tires on Ops Chevy truck
- Annual oil change on PM Dodge Truck
- Replaced bearing on GBT odor fan
- Installed new belt on GBT #2
- Replaced pressure gauge on Primary Clarifier Odor Fan #2
- Replaced UPS batteries on GBT #1 & #2

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

- None

Ignacio Transfer Pump Station

- Routine rounds, readings and maintenance
- Emergency Generator Troubleshoot – overspeed shutdown alarm – repaired
- Replaced Bezel on Operator Interface (touch screen)

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

- Bio-Filter OOS

Recycled Water Plant

- Performed plant rounds and maintenance
- No recycled water production in February

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

- None

Sludge Lagoons

- Performed routine rounds and inspection
- Installed new decant discharge hose

ADMINISTRATION:

- January Electronic Self Monitoring Report submitted on February 27, 2014
- January DMR submitted on February 27, 2014

SAFETY AND TRAINING:

- Monthly plant safety inspections for Novato WWTP and Ignacio Pump Station completed
- Five Minute Tailgate training is held daily with all staff.
- No safety incidents for the month of February 2014
- Accident Free: 6/1/10 – 2/28/14: 1,366 days / 62,290 Hours
- Personal Protective Equipment
- Spill Prevention Counter Measures and Control (SPCC) Plan – Novato
- SPCC Plan - Ignacio

ODORS:

- Jerome Meter (H2S) readings performed in neighborhood and within treatment plant.
- Update meeting held to update neighbors

MISCELLANEOUS

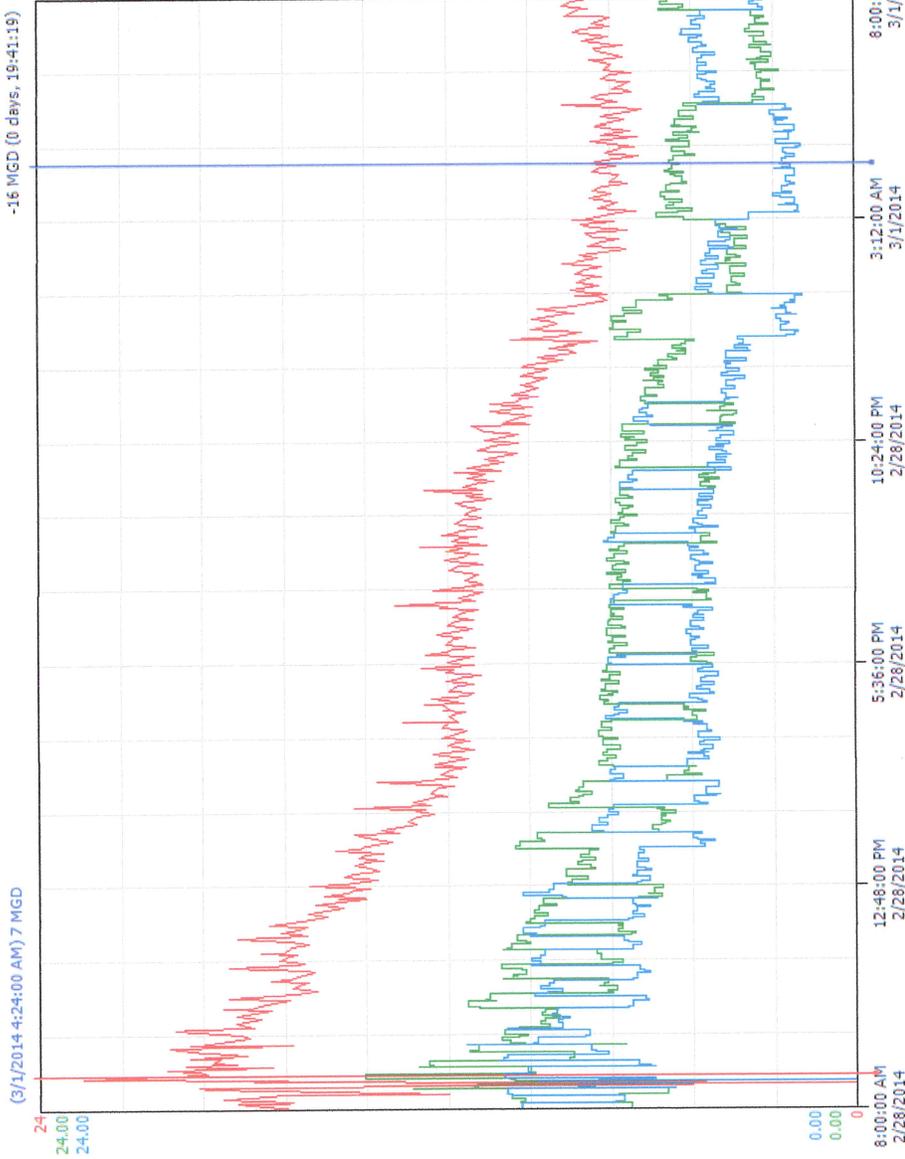
- Process Control Management Plan (PCMP) meetings held weekly.

Veolia Support Staff On/Off Site (Various Times)

John O'Hare	Technical Support
Chris McAuliffe	District Manager
Sachin Chawala	Northern California Area Manager
Bill Thompson	Technical Direction Group Manager
Jeremiah Danielson	Environmental, Health, and Safety
Mel Demsky	Regional Director of Asset Management
Dan Brown	Asset Manager

Flow_Tot

(2/28/2014 8:42:41 AM) 23 MGD



HISTORIAN1:A184_1070_0000_ME_F_AO [BestFit - 00 00:09:26.725]

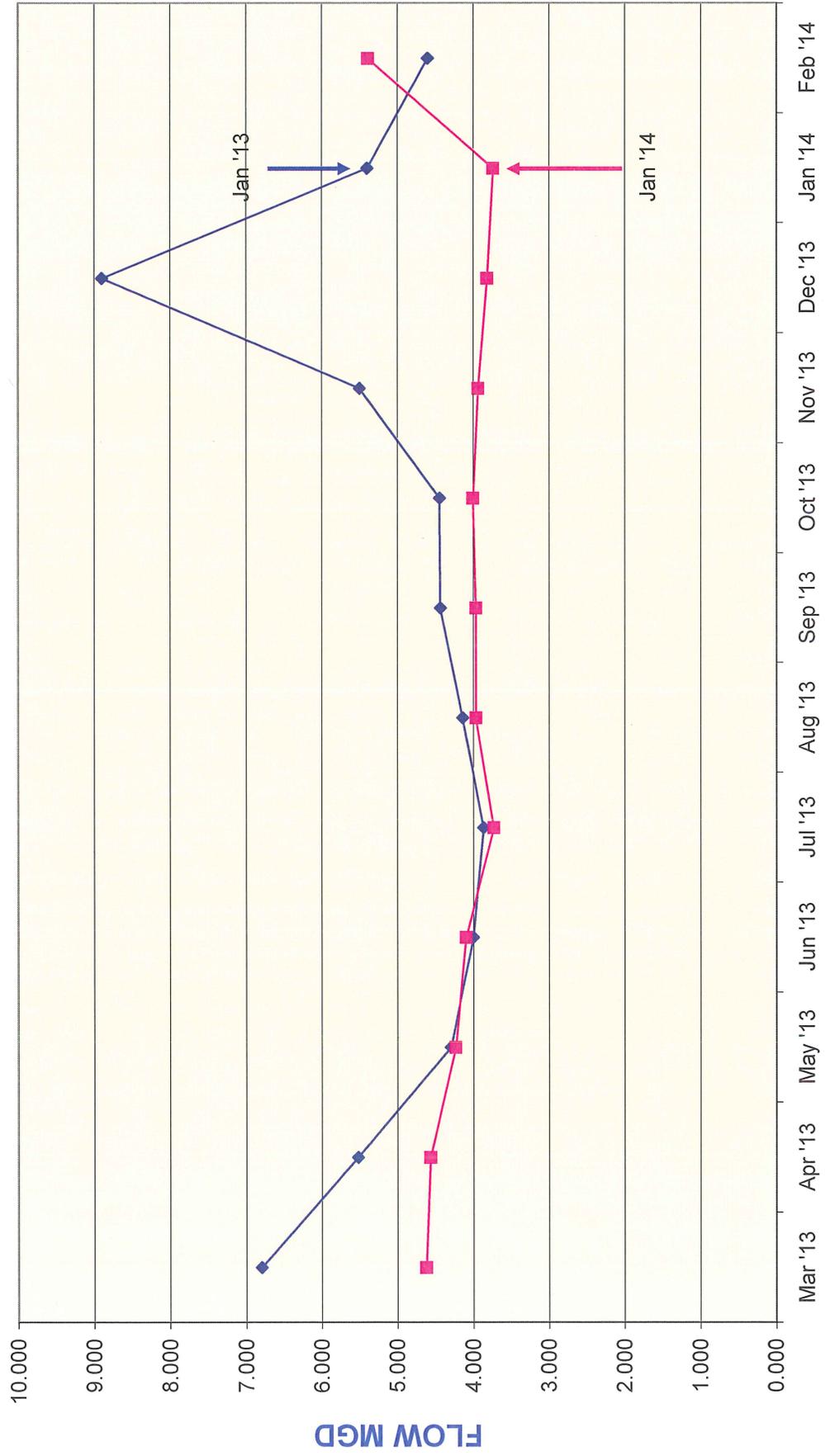
Tag Name	Description	Server	Color	Units	Minimum	Maximum	IO Address	Time Off...
<input checked="" type="checkbox"/> A184_1070...	HdWks-Plant Flow Analog Output	HISTORI...	Red	MGD	0	24	\\SCADASVR1\DA5MBT...	0:00:00...
<input checked="" type="checkbox"/> A184_1071...	HdWks Ch #1-Influent Flow	HISTORI...	Green	MGD	0.00	24.00	\\SCADASVR1\DA5MBT...	0:00:00...
<input checked="" type="checkbox"/> A184_1072...	HdWks Ch #2-Influent Flow	HISTORI...	Blue	MGD	0.00	24.00	\\SCADASVR1\DA5MBT...	0:00:00...

3/11/2014 11:21:11 AM

\\Scadasvr1\trends\Headworks\Flow_Tot.aaTrend

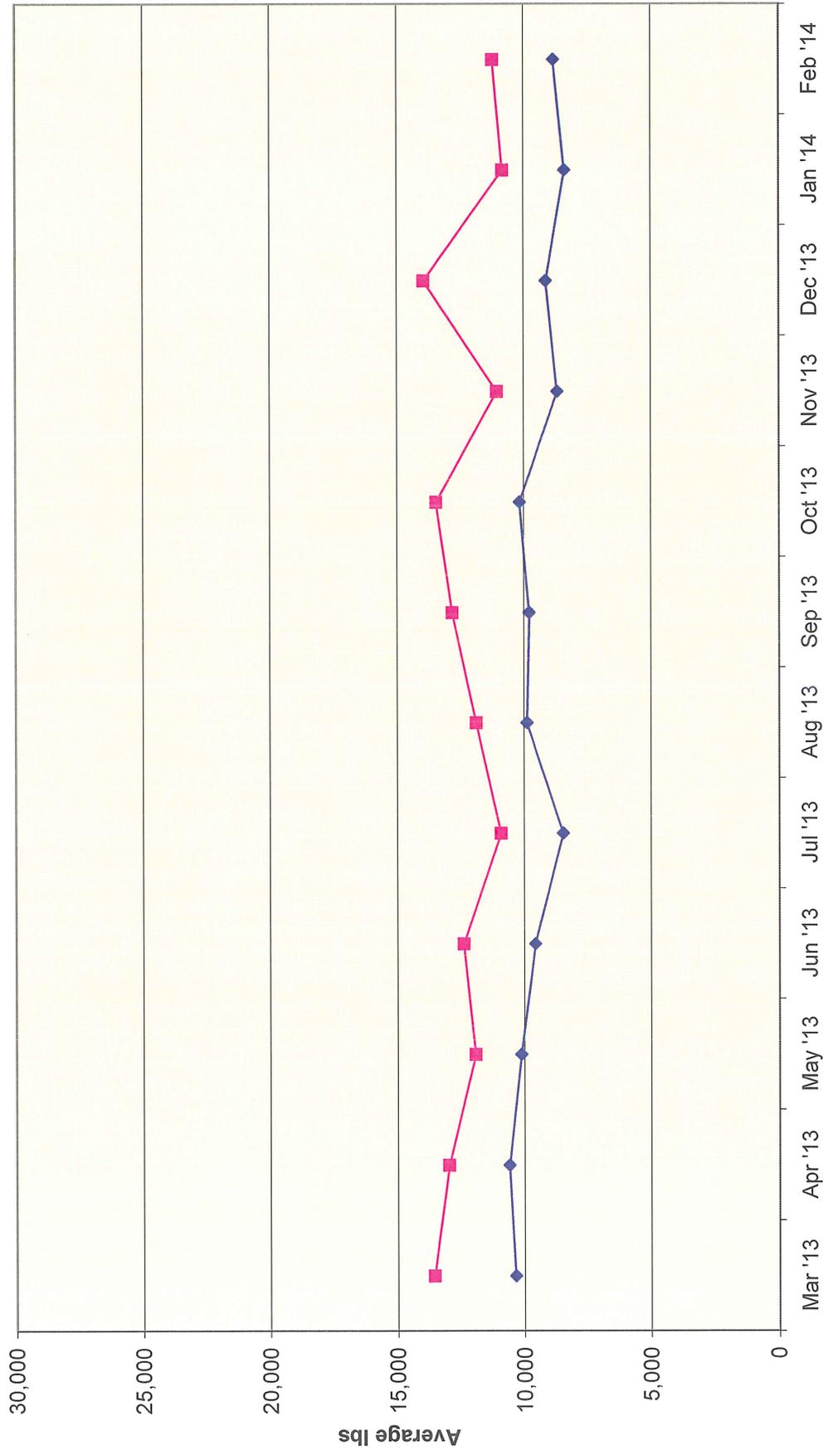
FLOW COMPARISON

—◆— 2012 / 13 —■— 2013 / 14



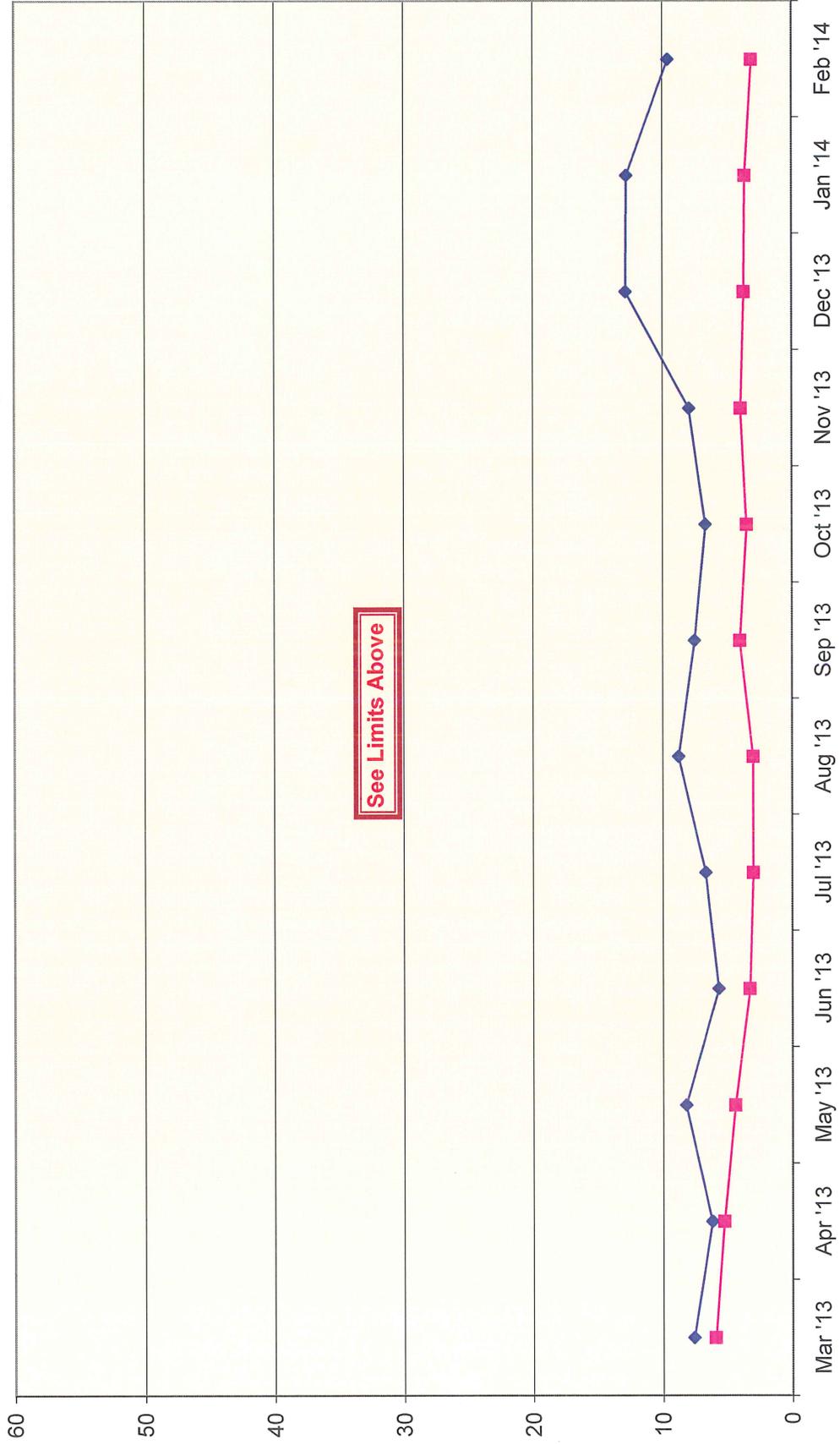
Influent Load BOD / TSS lbs

—◆— BOD lbs —■— TSS lbs



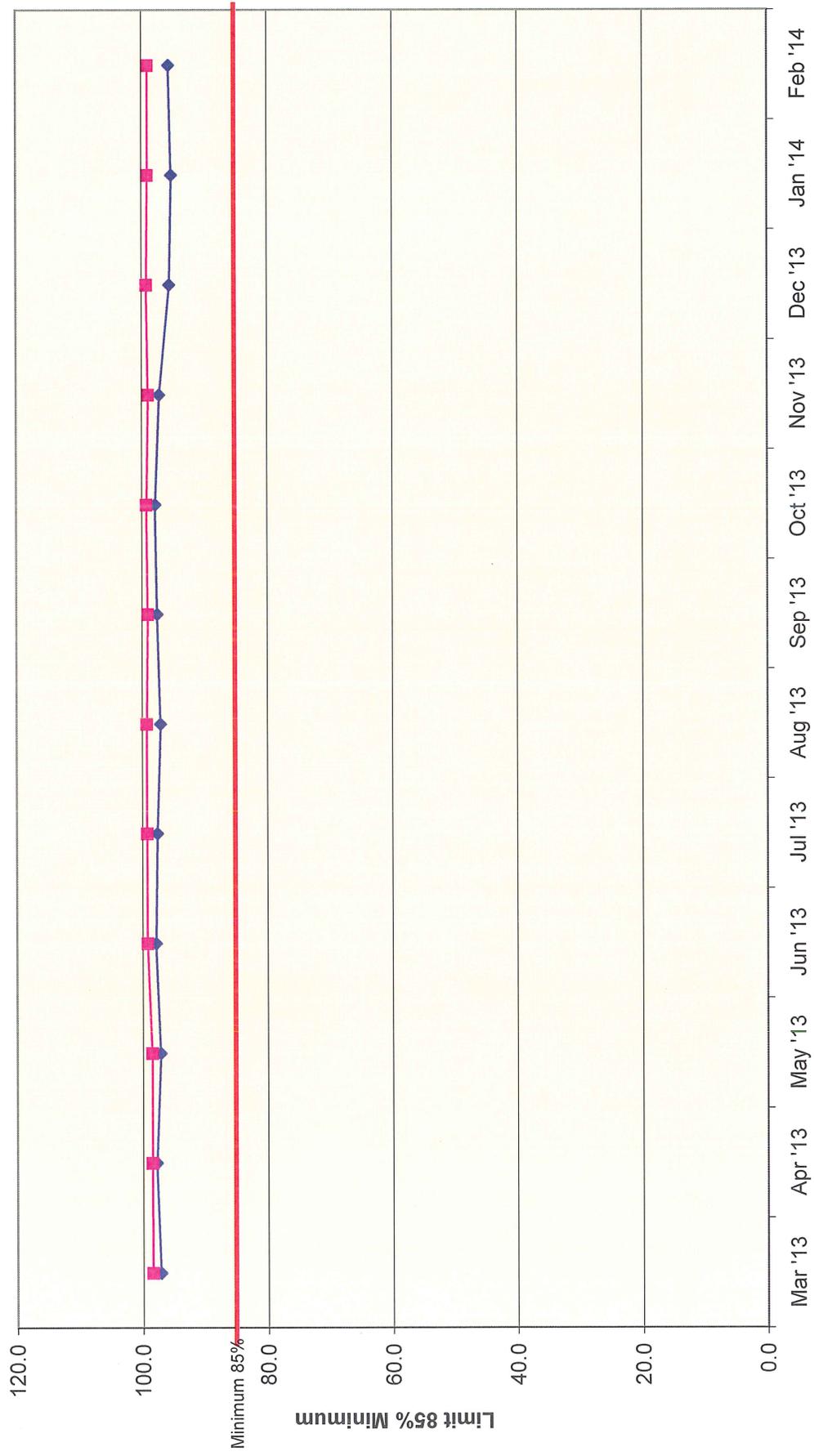
Effluent BOD / TSS Concentration

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

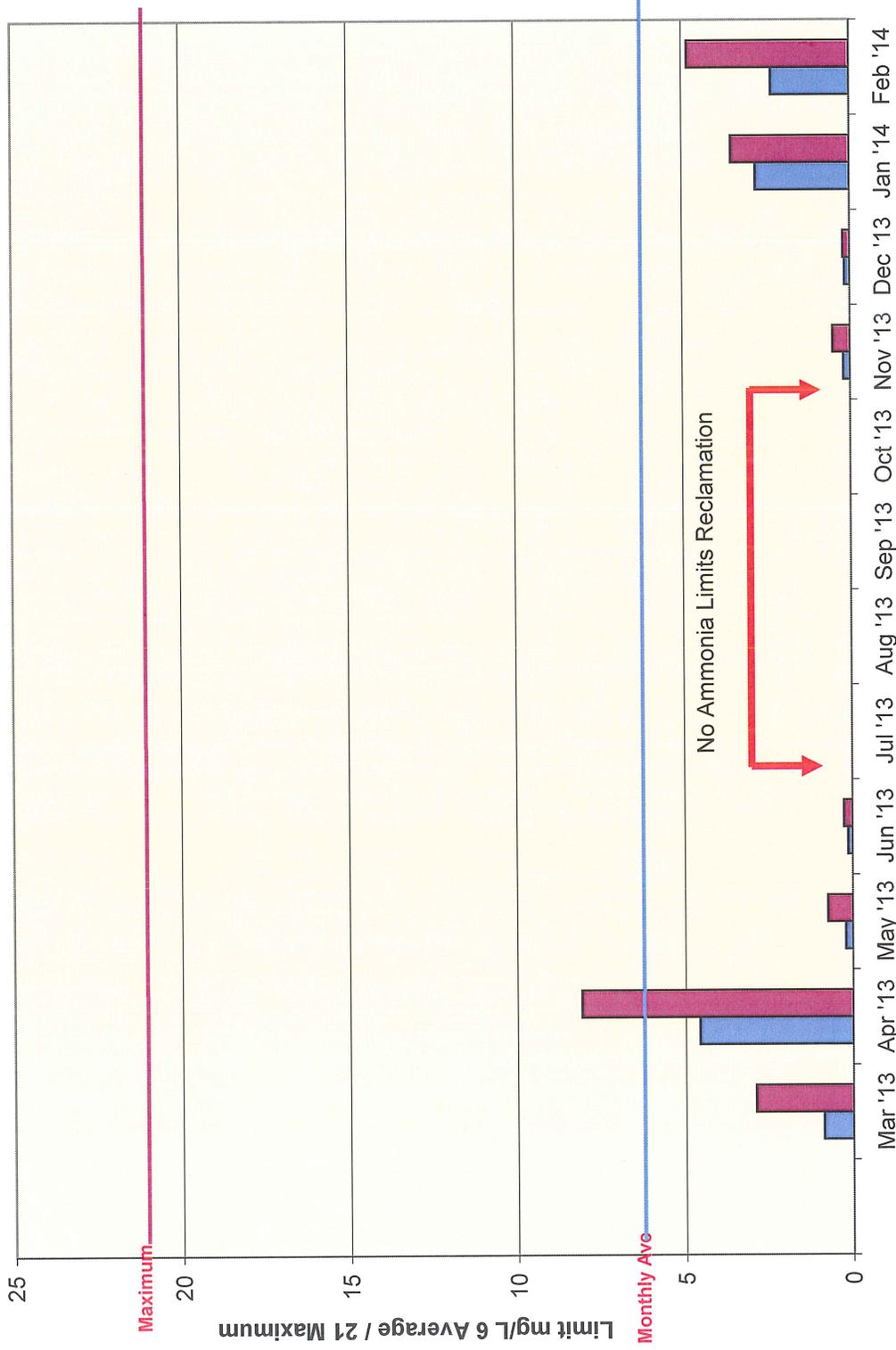


BOD / TSS Percent Removal

—◆— BOD —■— TSS



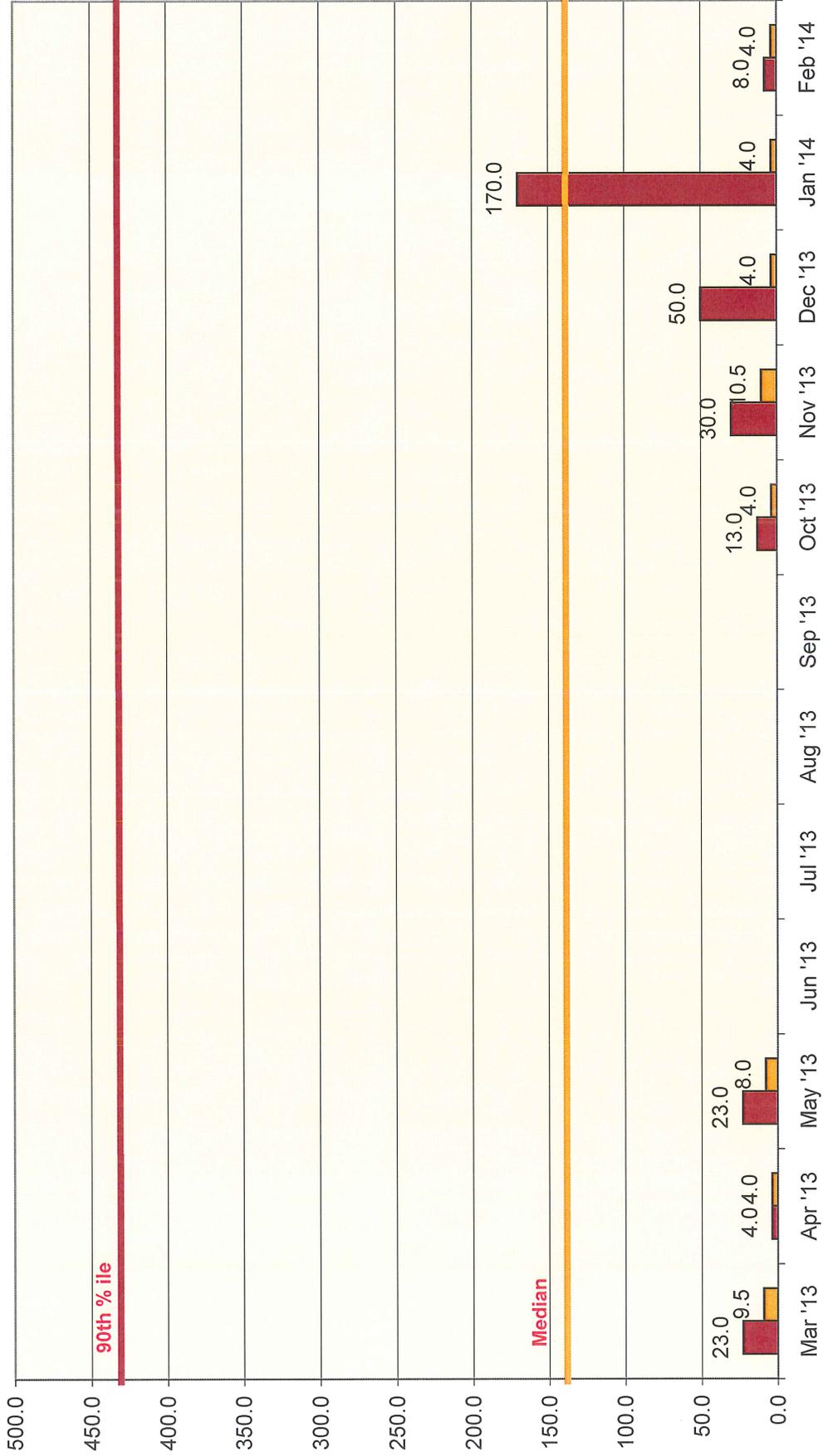
Effluent Ammonia



Disinfection

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

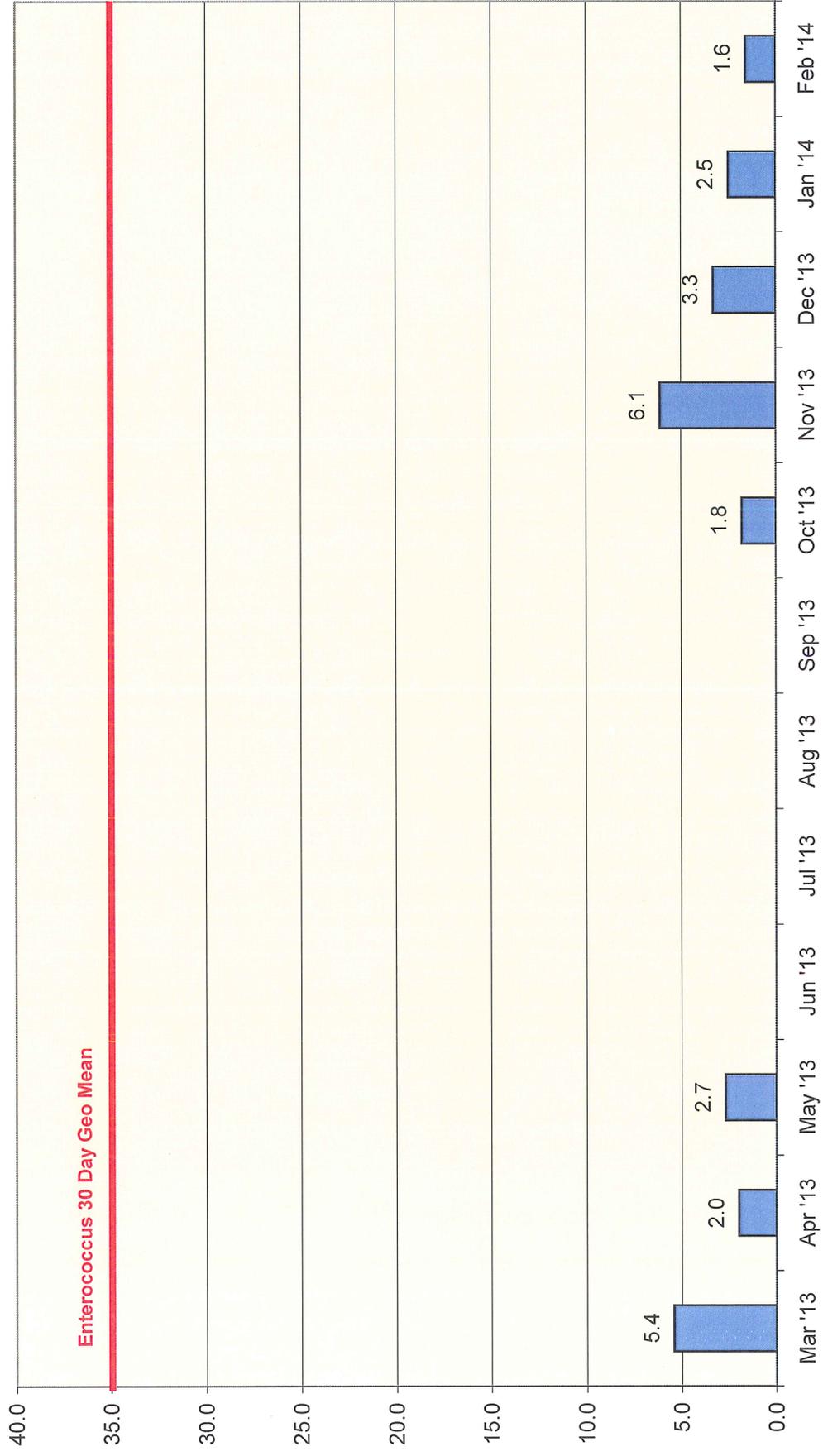
■ 90th % ile ■ 30 day med



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

Disinfection

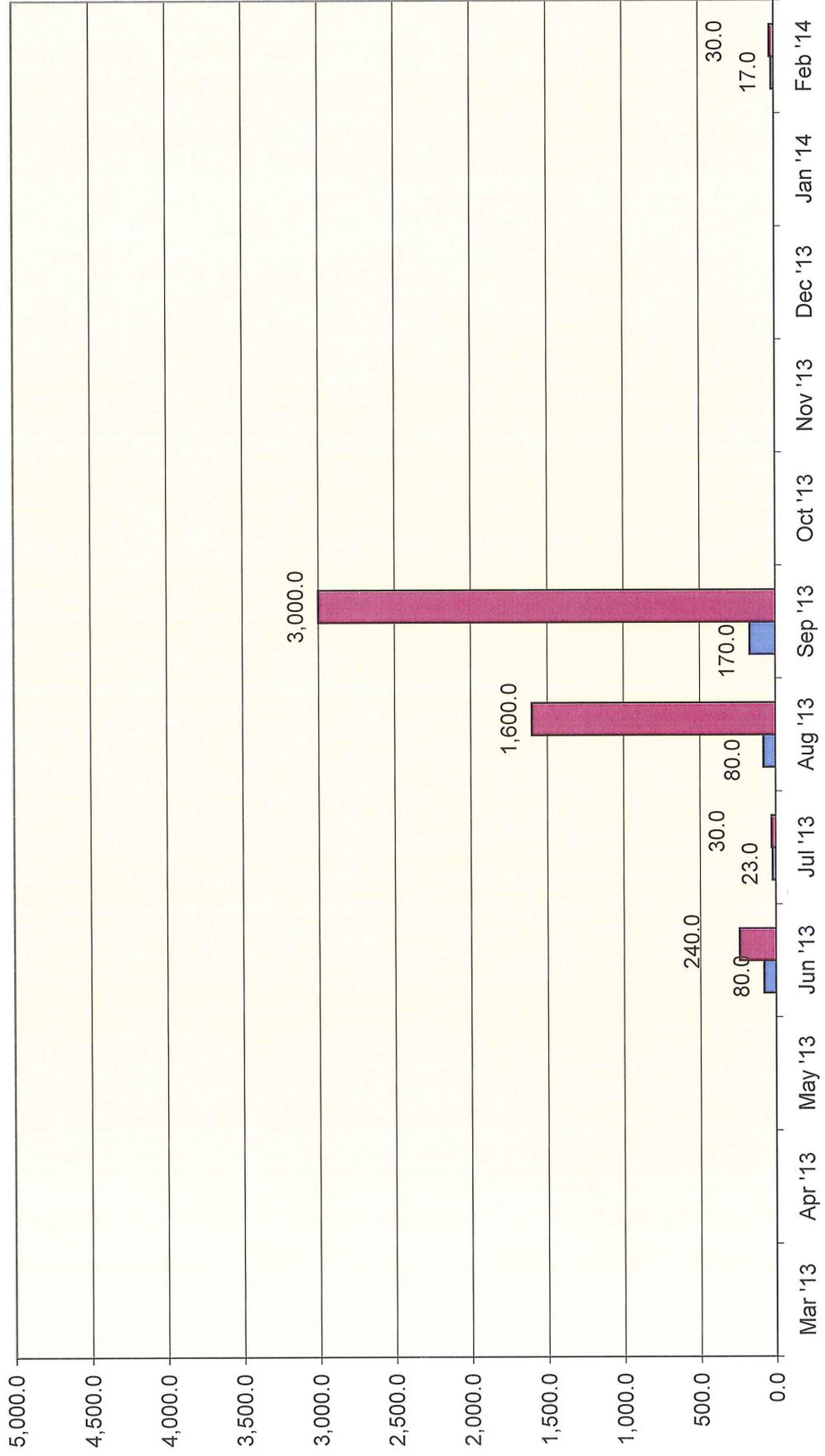
Geo Mean



Disinfection

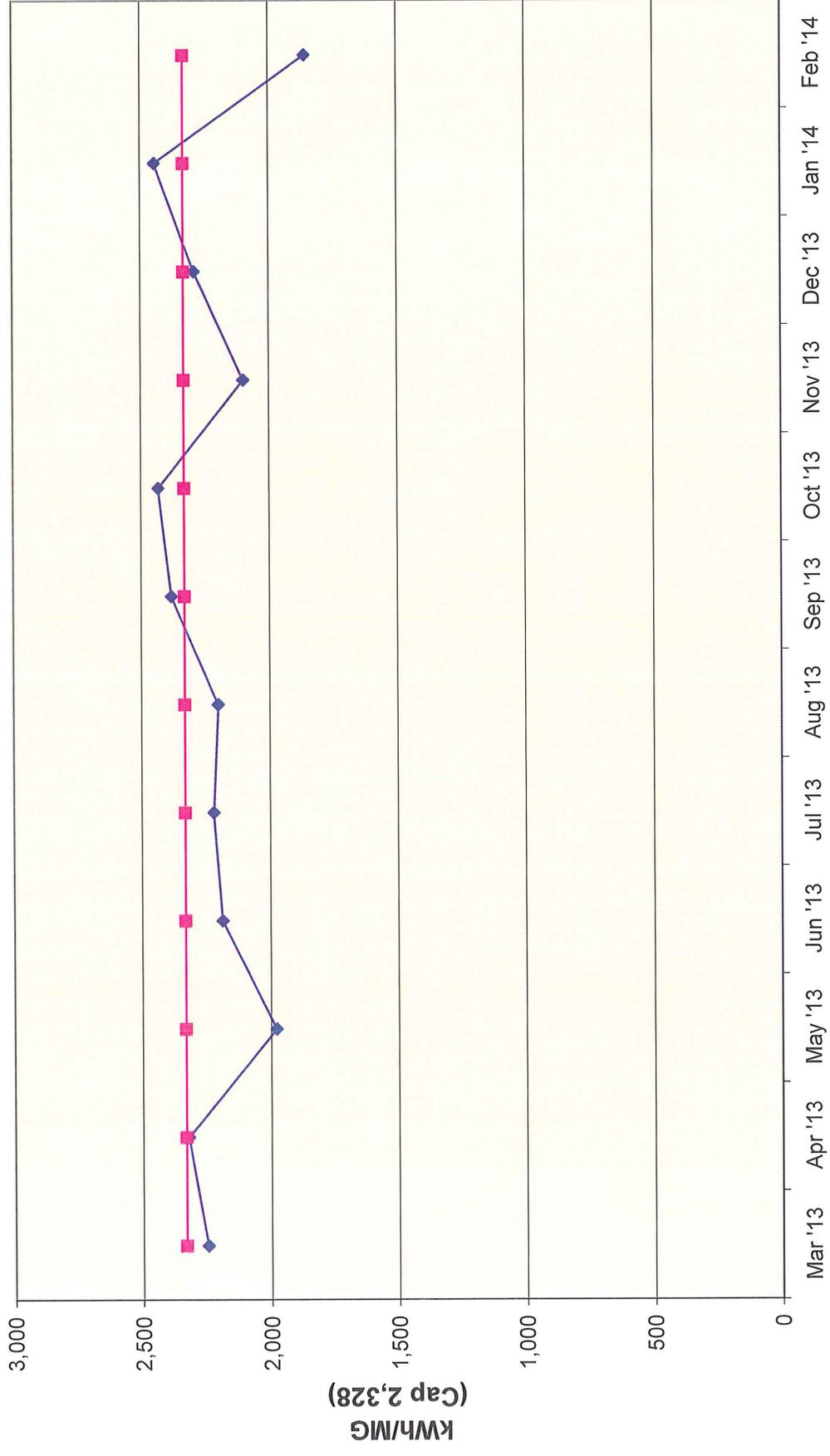
TOTAL COLIFORM LIMITS - WDR
 5 Sample Median - 240 mpn /100 ml
 Maximum - 10,000 mpn/100 ml

5 Sampl Med Monthly Max



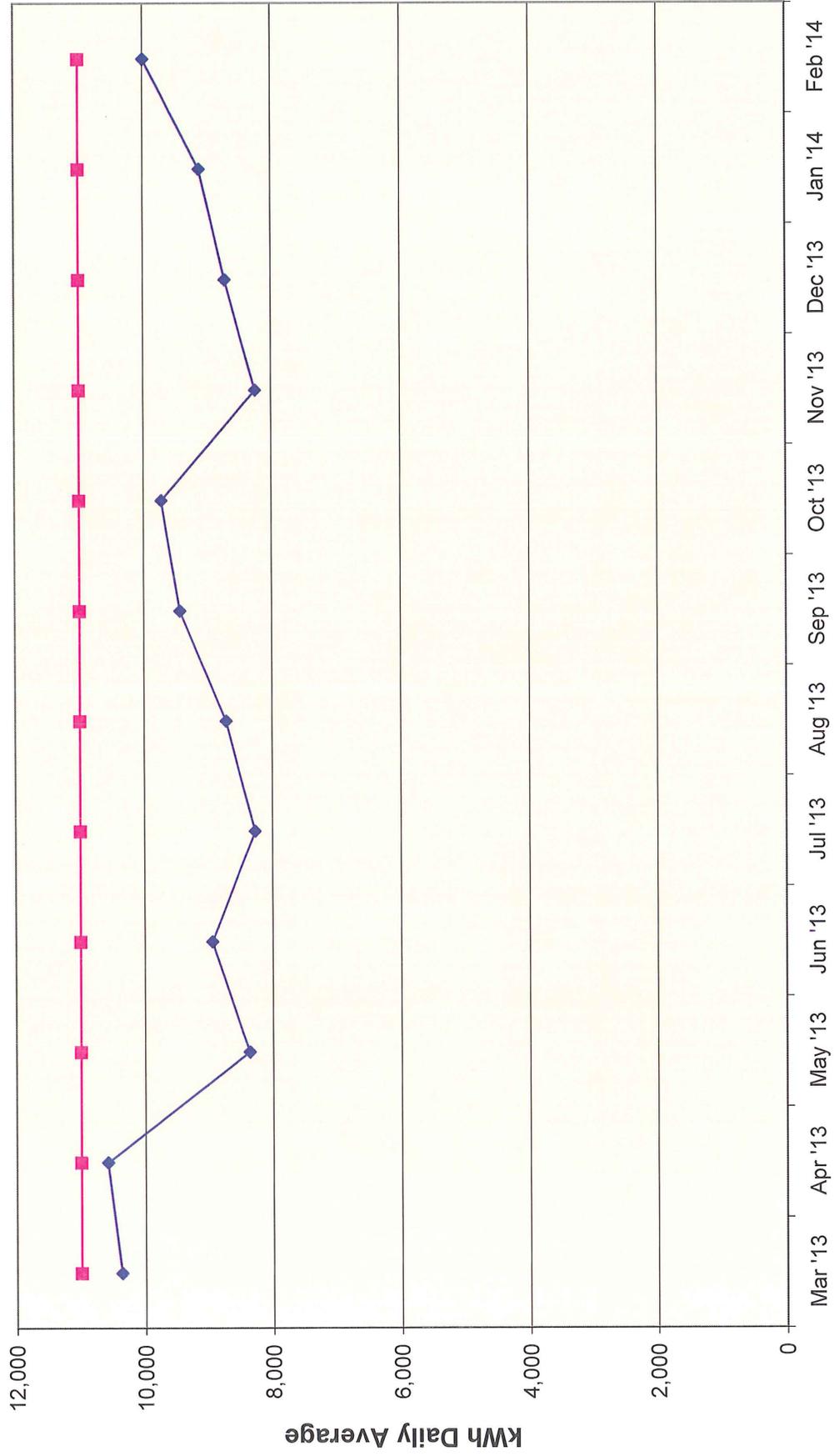
Energy kWh/MG

—◆— kW/MG —■— Cap



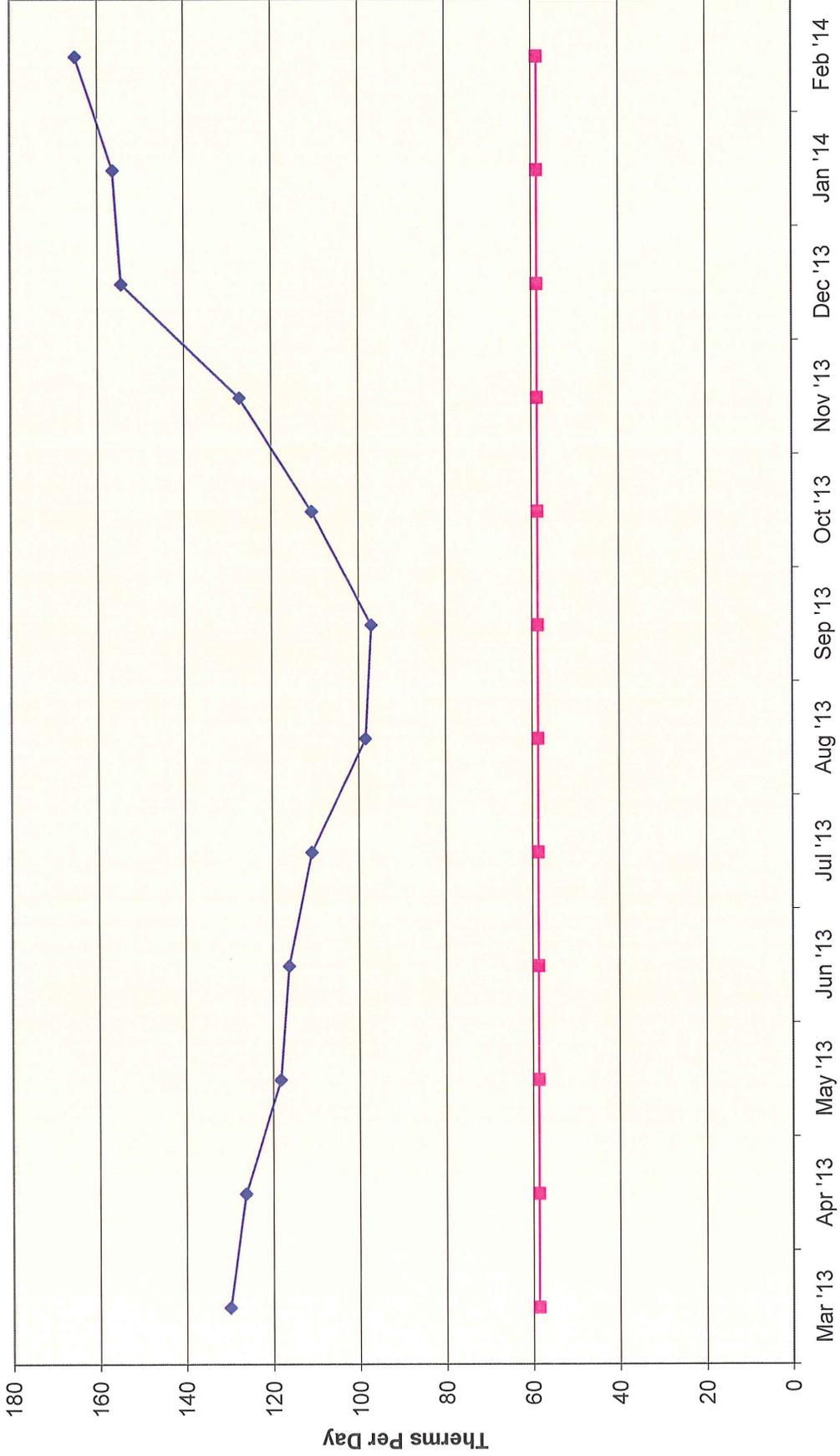
Energy kWh

—◆— kWh —■— Cap



Natural Gas Use

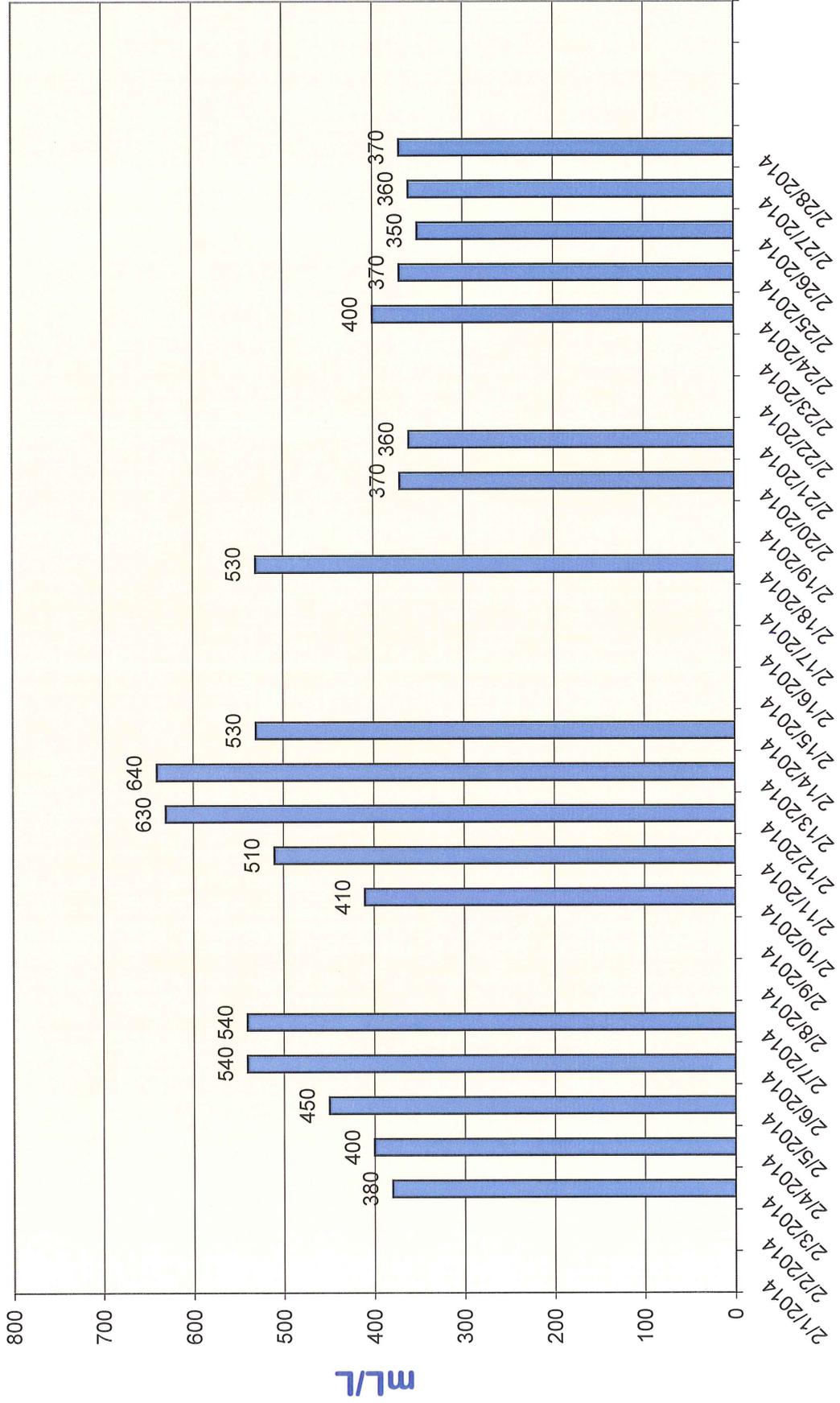
—◆— Natural Gas —■— Cap



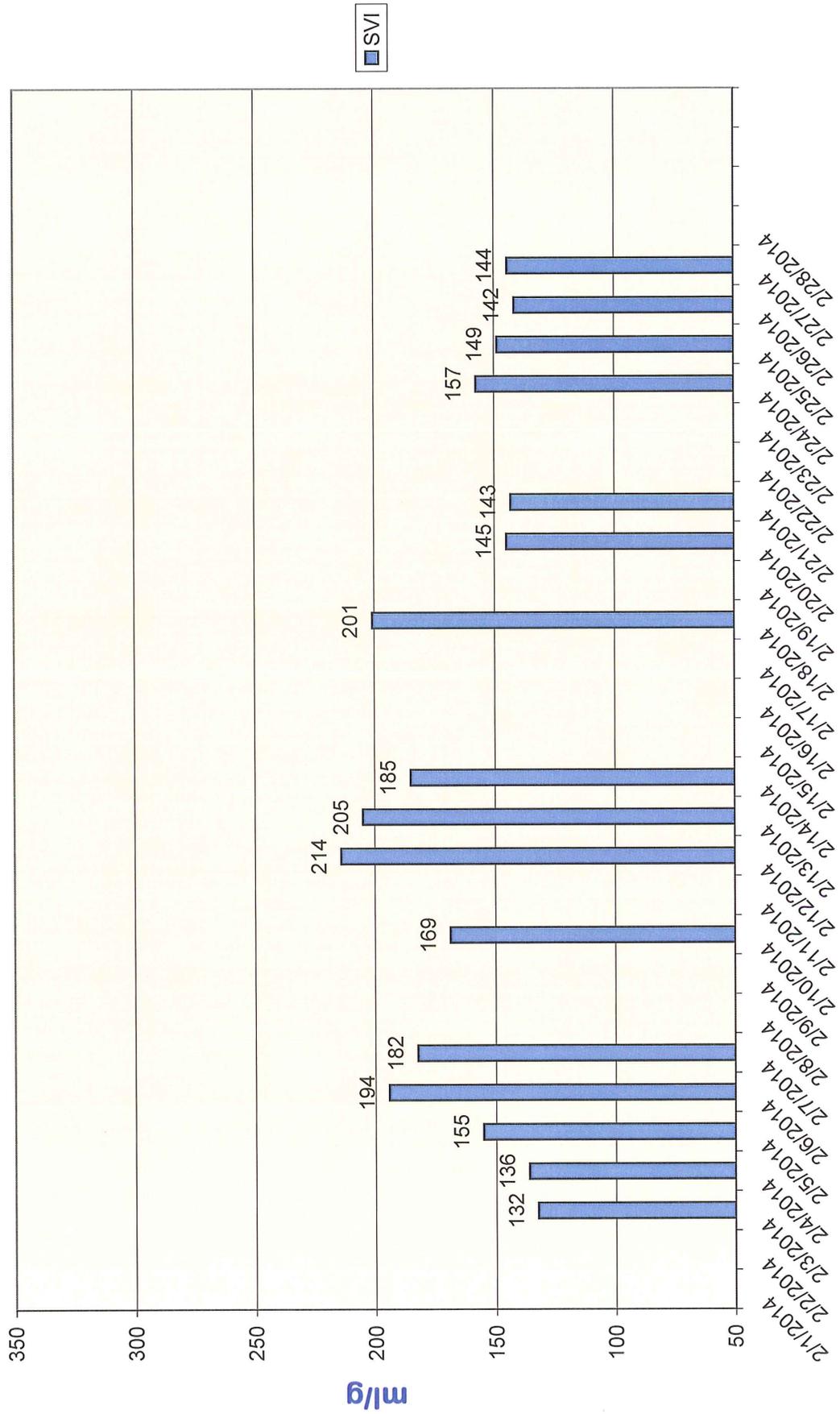
Process Control Data

	Influent Flow	Settleability	MLSS Concentration	MLSS Inventory	F:M Ratio	MCRT	SVI
2/1/2014	3.40						
2/2/2014	3.99						
2/3/2014	3.88	380	2,875	51,207		8.7	132
2/4/2014	3.78	400	2,939	52,356		8.9	136
2/5/2014	4.56	450	2,903	51,706	0.22	9.2	155
2/6/2014	5.34	540	2,783	49,568		7.9	194
2/7/2014	6.46	540	2,965	52,819		7.9	182
2/8/2014	10.29						
2/9/2014	11.43						
2/10/2014	6.26	410	2,436	65,084	0.12	10.4	169
2/11/2014	5.08	510					
2/12/2014	4.57	630	2,947	52,499	0.12	6.8	214
2/13/2014	4.36	640	3,133	55,812		6.7	205
2/14/2014	4.08	530	2,869	51,109		6.1	185
2/15/2014	4.07						
2/16/2014	3.92						
2/17/2014	3.96						
2/18/2014	4.28	530	2,648	47,163		7.3	201
2/19/2014	4.19		2,756	49,087		6.9	
2/20/2014	4.13	370	2,556	45,533		6.7	145
2/21/2014	4.06	360	2,521	44,901		6.8	143
2/22/2014	4.07						
2/23/2014	4.24						
2/24/2014	4.14	400	2,547	45,373		7.5	157
2/25/2014	3.74	370	2,495	44,447		7.1	149
2/26/2014	8.46	350	2,481	44,188		6.2	142
2/27/2014	8.27	360	2,508	44,669		6.5	144
2/28/2014	11.56	370					
Minimum	3.40	350.00	2,435.67	44,188	0.12	6.1	132
Maximum	11.56	640	3,133	65,084	0.22	10.4	214
Total	150.57	8,140	46,358	847,521	0.47	127.7	2,654
Average	5.38	452	2,727	49,854	0.16	7.5	166

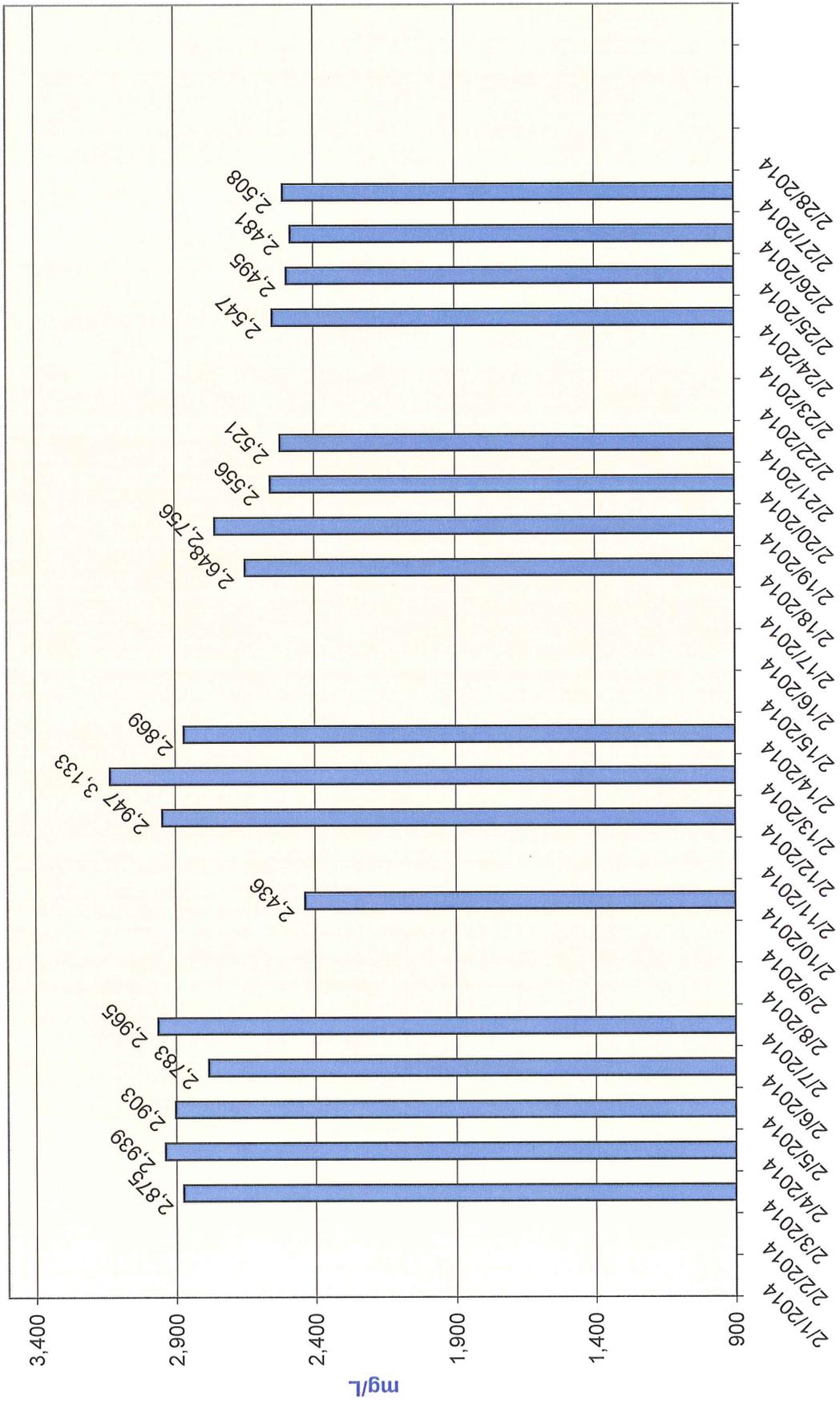
Settleability



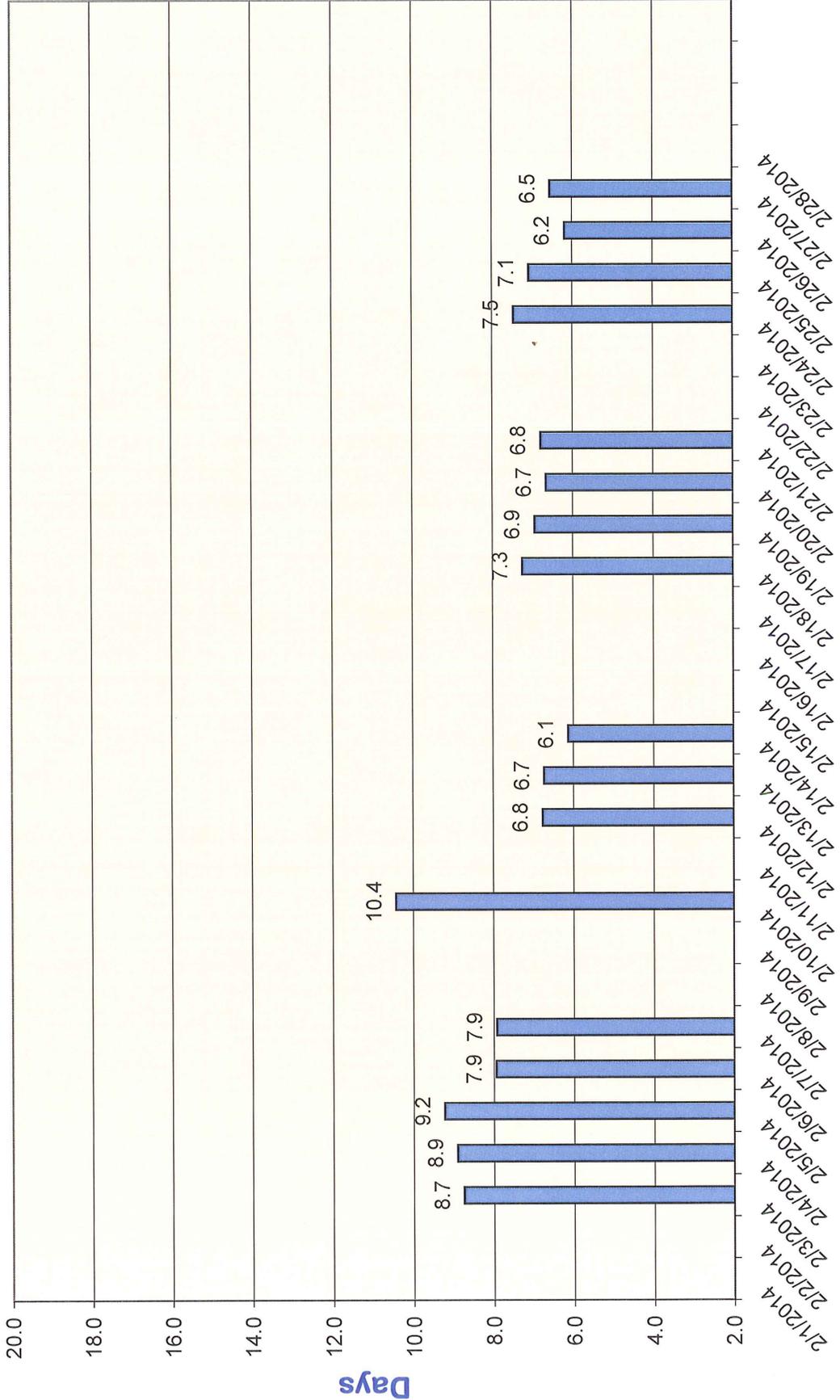
Sludge Volume Index



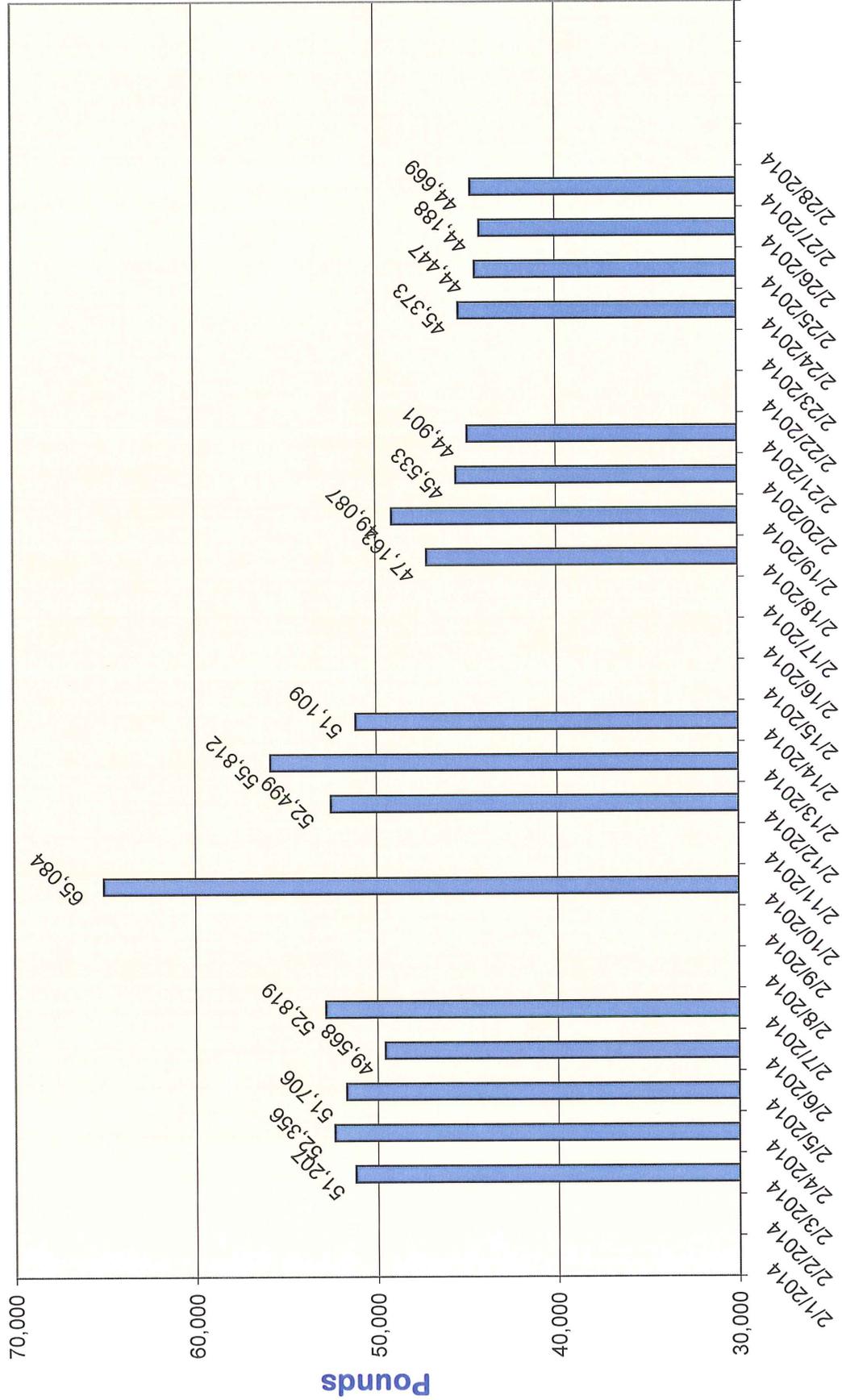
MLSS Concentration



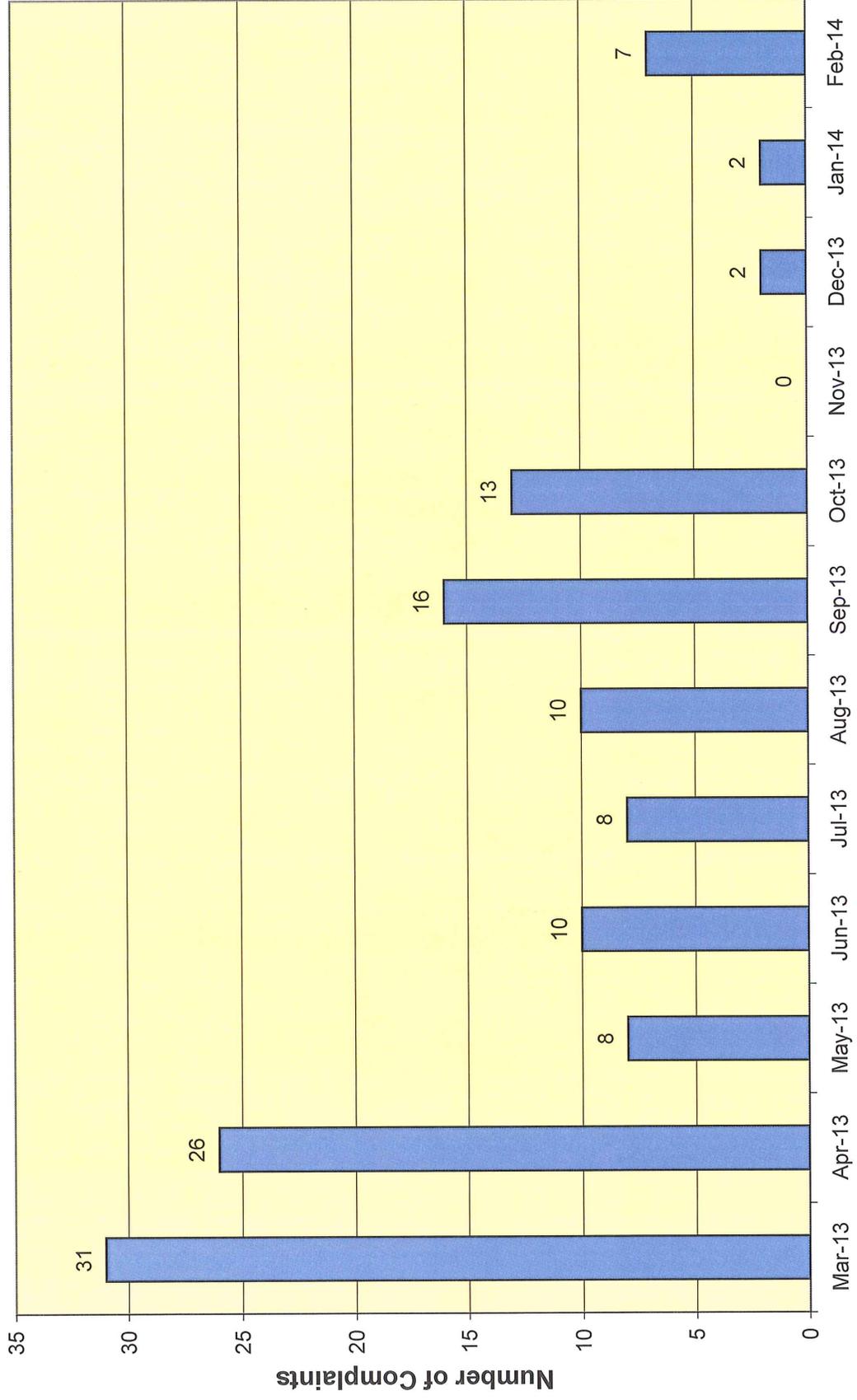
Mean Cell Residence Time



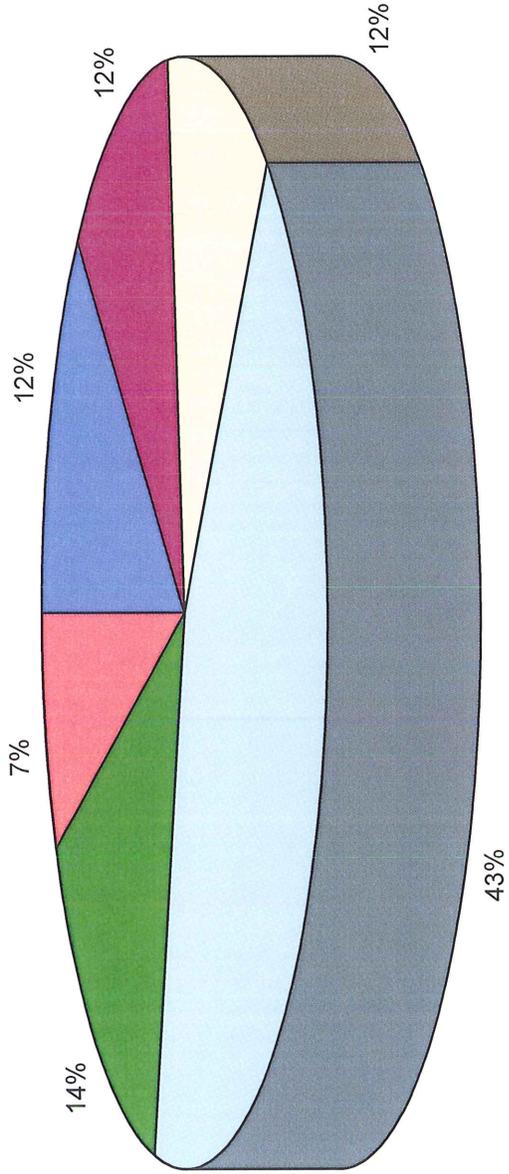
MLSS Inventory



Complaints /Contacts Received



Staffing Breakdown



- Administration
- Supervision
- Operations
- Maintenance
- Sampling / Analysis
- Repair

WORK ORDER STATISTICS

December 1, 2013 - December 31, 2013

	Open Work Orders Due Prior to 2/1/14	Open Work Orders 2/1/14 - 2/28/14	Total Open Work Orders
Preventative	3	352	355
Corrective	1	34	35
Total	4	386	390

	Closed Work Orders 2/1/14 - 2/28/14
Preventative	335
Corrective	26
Total	361

Total Outstanding Work Orders as of March 1, 2014	29
--	-----------

NOVATO SANITARY DISTRICT
Wastewater Operations Committee Meeting
Odor Control, Noise, and Landscaping Report
February 2014

Summary:

Staff and the District's consultant continue 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.

As explained in earlier reports, and 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 odor control measures, noise abatement, visual screening, wind shielding, and daily monitoring. The District has also retained Brown and Caldwell (B&C) and their project manager, Mr. Dave McEwen, to study the issue of potential odor emissions from the aeration basins, and identify any other potential sources not previously considered or overlooked.

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

Odor control:

The District's odor control consultant, Mr. Dave McEwen of Brown and Caldwell (B&C) issued some preliminary recommendations for odor control at the aeration basins. On February 7th, 2014, Mr. McEwen made a detailed presentation to neighborhood representatives Joe Carlomagno and Bob Guinan on his findings, conclusions, and recommendations. A copy of his presentation is attached to this report.

It is anticipated that implementation and further testing of Mr. McEwen's recommendations will occur more fully through March and April, and that he will issue a draft technical memorandum of his work later this spring. Currently, staff has implemented a major recommendation by Mr. McEwen, i.e. conversion of the anoxic zones B and C at the aeration basins to aerobic zones and the results appear to be promising, however, they will have to be validated through further testing.

Noise:

The low level noise concerns of some Lea Drive neighbors, from the fans for the main odor control biofilter, appears to have abated with completion of the construction of the permanent sound reducing enclosure for these fans, which had previously resided inside a temporary insulated enclosure.

Staff feels comfortable with closing out this issue as having being resolved. Therefore, future reports will not include further information on or references to noise issues.

Landscaping:

Staff continued to work with the District's landscaping contractor Cagwin and Dorward (C&D), on the landscaping installed at the District's fence-line on Lea Drive at the

NOVATO SANITARY DISTRICT
Wastewater Operations Committee Meeting
Odor Control, Noise, and Landscaping Report
February 2014

northeast corner area of the NTP. While staff studied concerns from neighborhood representatives on the issue of frost impact to some oleander bushes along the Lea Drive fence-line, from discussion with C&D it appears that the damage was of limited scope, and the oleanders will likely thrive in the future. C&D will continue to provide services on an as-needed and as-requested basis by the District to care for the landscaping in this area through the winter, and the scope of their services will be re-evaluated in the spring.

Novato Sanitary District

Odor Emissions Control Residents Meeting

February 7 | 2014



NE Portion of Plant



What makes a potential source?

- Significant odor emissions
- Sufficient emission surface area
- Minimal vertical air velocity

Aeration Basins

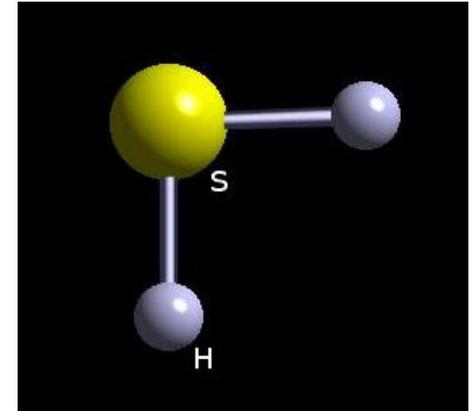


Aeration Basins – Odor Emissions Testing

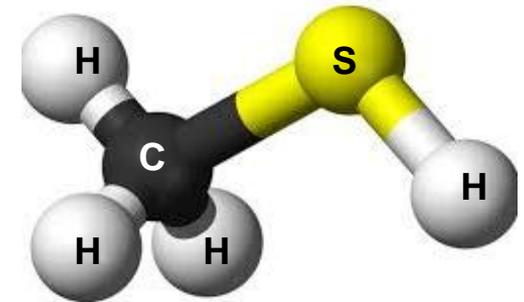


What Compounds Cause Odors?

- Looking for sulfur-containing compounds
- Formed during natural degradation of compounds in wastewater treatment
- Problematic because of their low human detection threshold:
 - Hydrogen Sulfide: 0.5 parts per billion (smells like rotten eggs)
 - Methyl Mercaptan: 1 part per billion (smells like rotten cabbage)



Hydrogen Sulfide (H₂S)



Methyl Mercaptan (CH₃SH)

Odor Emissions Testing Results

Aeration Basin Gas-Phase Odor Emission Testing

Location	Hydrogen Sulfide (ppbv)	Methyl Mercaptan (ppbv)	Odor (D/T)
Anoxic Zone B	7	350	3,900
Anoxic Zone C	170	310	3,400
Aerobic Zone Tank 1	ND	ND	250
Aerobic Zone Tank 2	ND	12	720



Odor Emissions Testing Results

Aeration Basin Gas-Phase Odor Emission Testing

Location	Hydrogen Sulfide (ppbv)	Methyl Mercaptan (ppbv)	Odor (D/T)
Anoxic Zone B	7	350	3,900
Anoxic Zone C	170	310	3,400
Aerobic Zone Tank 1	ND	ND	250
Aerobic Zone Tank 2	ND	12	720

Findings:

- Anoxic zone odor emissions are higher than aerobic zone odor emissions
- There is a strong correlation between methyl mercaptan concentration and odor level

Odor Emissions Testing Results

Aeration Basin Liquid-Phase Odor Compound Testing

Location	Hydrogen Sulfide ($\mu\text{g/L}$)	Methyl Mercaptan ($\mu\text{g/L}$)
Anoxic Zone B	9	260
Anoxic Zone C	34	270
Aerobic Zone Tank 2	40	89
INPUT - Primary Effluent	1,200	130
INPUT - Return Sludge (RAS)	66	190



Odor Emissions Testing Results

Aeration Basin Liquid-Phase Odor Compound Testing

Location	Hydrogen Sulfide ($\mu\text{g/L}$)	Methyl Mercaptan ($\mu\text{g/L}$)
Anoxic Zone B	9	260
Anoxic Zone C	34	270
Aerobic Zone Tank 2	40	89
Primary Effluent	1,200	130
Return Sludge (RAS)	66	190

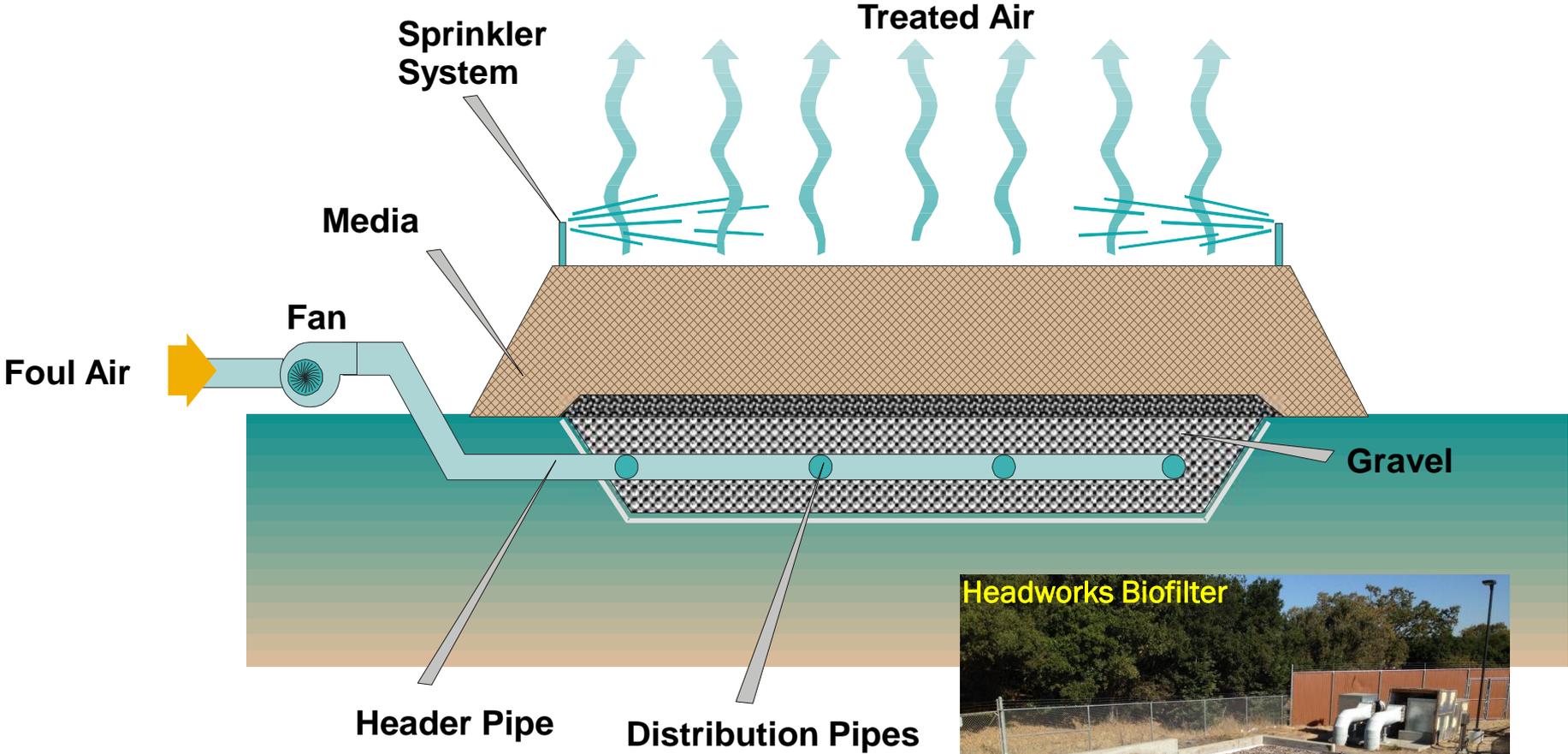
Findings:

- The amount of methyl mercaptan in the wastewater is linked to the amount emitted as a gas
- Methyl mercaptan is input into the aeration basins from upstream processes

Odor Control Plan – Aeration Basins

- Convert uncovered anoxic zones to aerobic zones (turn on air diffusers to inject oxygen):
 - Each aeration basin will operate the way the current aerated portion does
 - Odor emissions for aeration basins will be similar to current aerated portion emissions
- Oxidize the sulfur-containing compounds being emitted by the aeration basins:
- Two possible methods of oxidation:
 - Capture the gas and treat in a separate unit
 - Oxidize in the liquid

Biological Oxidation



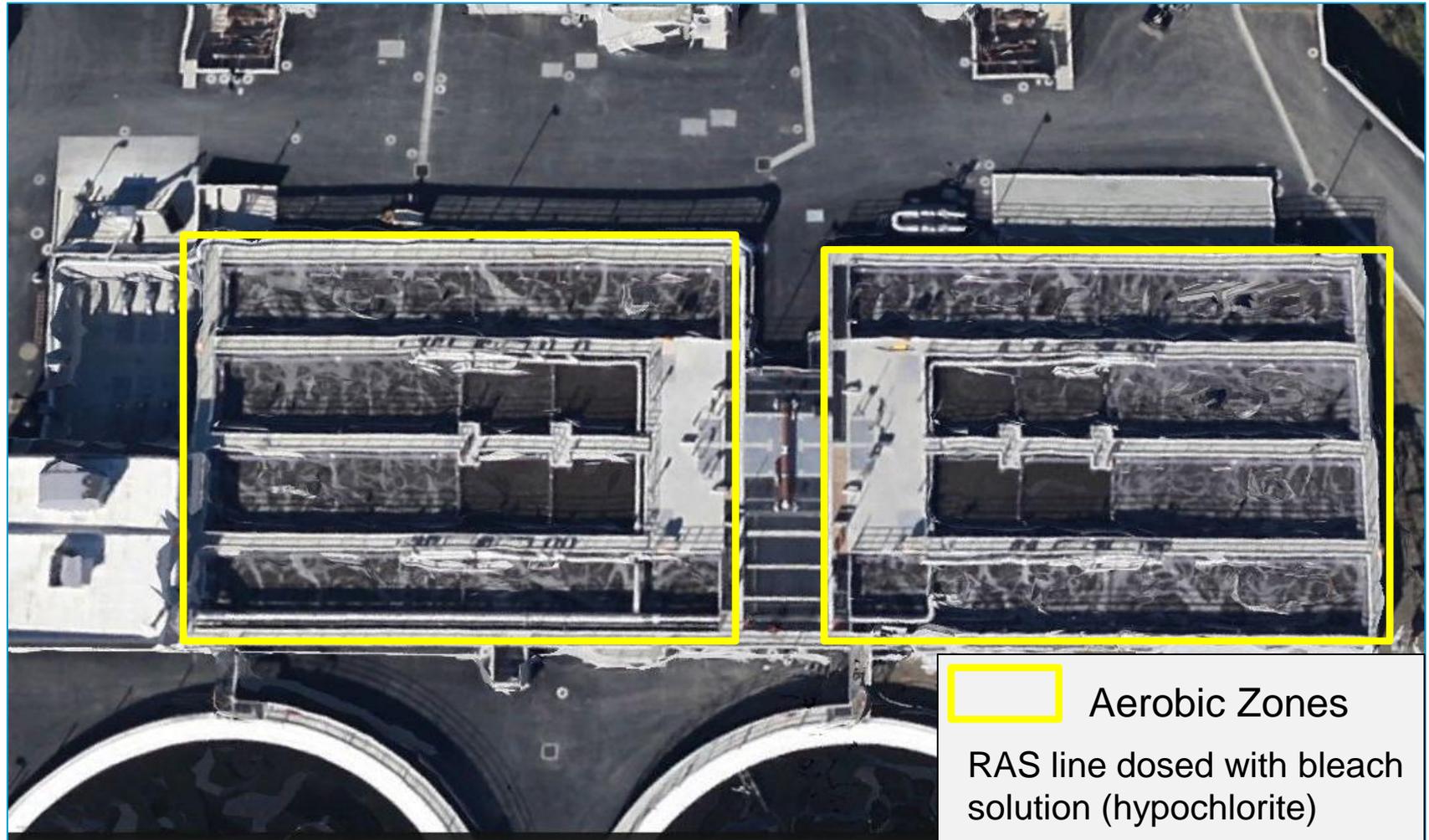
Odorous compounds are converted (oxidized) to non-odorous forms by bacteria growing on media

Chemical Oxidation

- Strong oxidants are added directly into the liquid
 - Bleach – ALREADY ON SITE
 - Peroxide
- Same reaction as gas-phase treatment:
 - Odorous compounds (hydrogen sulfide, methyl mercaptan) are converted to non-odorous forms (sulfate, sulfur)
 - Reduction in concentration in liquid means the compounds are never emitted into the air
- Recommend adding bleach to the RAS return line (into aeration basins)



Aeration Basins - Revised



Conclusions and Path Forward

- Aeration basins are a process of concern due to emissions, size, and proximity to northern fence line
- Anoxic zones within the aeration basins are more odorous than aerated zones
- Link between methyl mercaptan (an organic sulfide) emissions and odor emissions
- NSD will aerate the aeration basin process (no uncovered anoxic zones) to reduce emissions
- Remove remaining organic sulfides through oxidation
 - Preference is to treat the liquid using bleach to oxidize sulfur-containing compounds

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

General:

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

- 2.5 FTE field workers for Sewer Maintenance (main line cleaning)
- 1.1 FTE field workers for Pump Station Maintenance
- 0.8 FTE field workers for CCTV work
- 1.6 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
- 0.9 FTE field workers Vacation/Sick Leave/Holiday.

Collection System Maintenance:

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

Line Cleaning Performance: A total of 76,221 feet of sewer pipelines were cleaned for the month by District staff. Staff completed 361 maintenance work orders generated by the ICOM3 CMMS system, with 21 outstanding work orders. Outside contractors cleaned 1,570 feet of District main line.

Also, staff is working with ICOM/Redzone to correct apparent discrepancies between footages listed in the ICOM3 system and those listed on District maps; therefore the footage listed in the Collection System reports is based off of footage obtained by the field crews during cleaning operations. The field crews measure line segment lengths using a measuring wheel whenever they note a line segment length discrepancy of more than 10 ft between the work order and District maps.

CCTV Performance: The District's CCTV van was in the field for a total of 9 working days and televised 104 line segments for 21,931 feet of CCTV production. A total of 0 ft of main line was inspected w the push camera, and outside contractors televised 1,570 ft. of District main.

CCTV Findings: The February CCTV work indicated five (5) significant defects in District mains televised that will require evaluation to determine if they are eligible candidates for infrastructure repair, or require a change in maintenance frequency/method.

Collection System Projects:

As part of the ongoing Collections System repair projects (Account No. 72803), five drop inlets were installed in manholes on Alameda del Prado and one manhole was raised to grade at 115 Washington Street during the month of February.

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

Pump Station Maintenance:

The Collection System Department conducted 227 lift station inspections for the month with 1115 of the inspection visits generated through the JobCal Plus CMMS system*. There are 5 outstanding work orders for the month of February. The breakdown of the lift station 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 that are visited daily.

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

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

Pump Station Rehabilitation:

Currently, no pump stations under construction as part of the District's continuing multi-year Pump Station Rehabilitation Project (Capital Improvement Project Account No. 72403). The next phase, (Unit 5), includes rehabilitation/reconstruction of the Los Robles and Digital Drive pump stations and construction will likely begin in April 2014.

Safety and Training:

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

Specialized training: Collection System staff attended CPR and 1st Aid training during the month of February.

Safety performance: There were no lost time accidents this month for a total of 393 accident-free days.

Standard Operating Procedures (SOPs):

Department staff continues to work on generating new SOPs, and working towards finalizing earlier draft SOPs. One (1) SOP and one SOP revision were issued in February. Tim O'Connor and Dale Thrasher (Safety Director) are developing a template for energy management SOPs to assist staff with pump removal procedures. Staff also continues to assist the District's consultant DFK Solutions in updating its Sewer System Overflow Emergency Response Plan (OERP).

Emergency Operating Procedures (EOPs) – Pump Stations:

Staff has also been working with DFK Solutions since summer 2013 to generate the 38 Emergency Operating Procedures (EOPs) required for all of the District pump stations. At this time, one EOP is almost complete (except for some minor edits), 11 have had a

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

final review and need some minor edits, and 14 more require edits before staff gives them a final review. The contractor has not yet submitted 12 EOP's for initial staff review. It is anticipated that the EOPs will be in place (along with all relevant training performed) by the end of April 2014.

Sanitary Sewer Overflows (SSOs):

For the month of February, there were no (zero) SSO's.

Novato Sanitary District
Collection System Monthly Report For February 2014 (as of February 28, 2014)

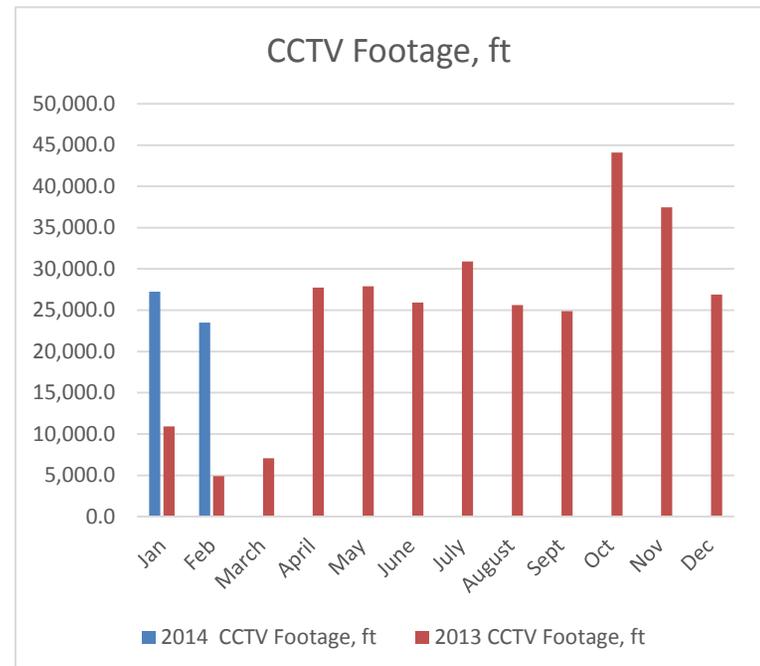
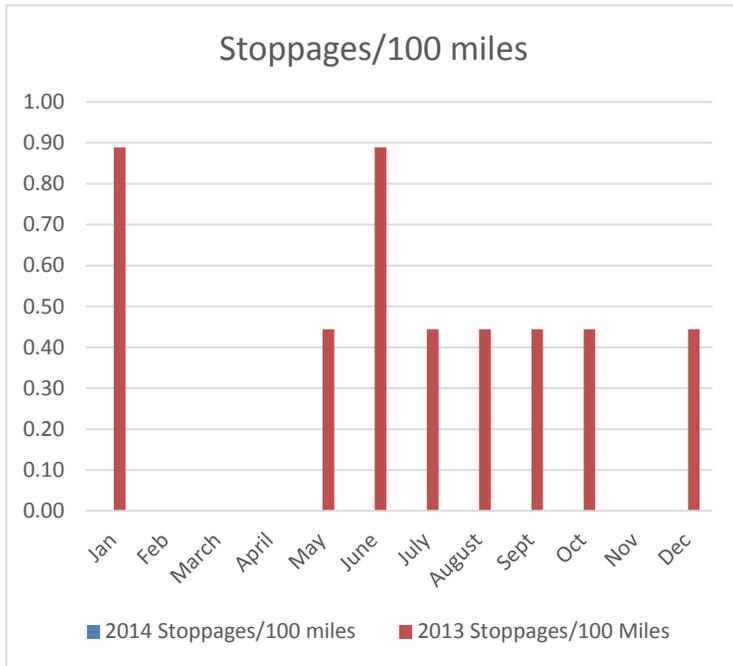
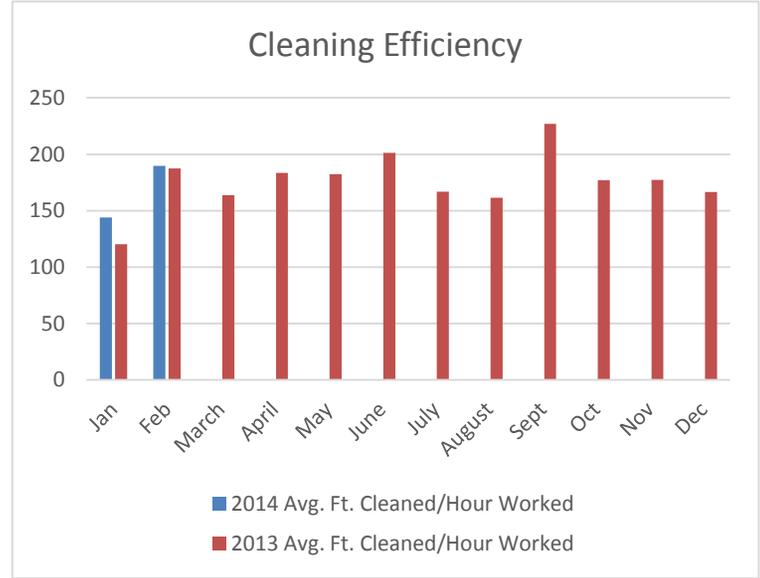
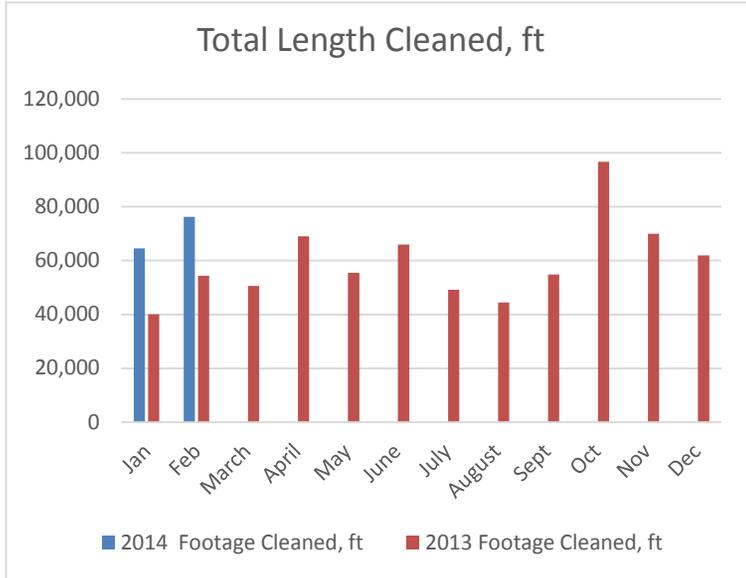
	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total Year to Date	Average Year to Date
A. Employee Hours Worked														
Number of FTEs (main line cleaning), hrs.	2.6	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	0.4
Number of FTEs (other)	1.7	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	0.3
Number of FTEs (CCTV)	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	0.1
Total, FTEs	5.2	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	0.8
Regular Time Worked, (main line cleaning), hrs	448	402												
Regular Time Worked on Other, hrs (1)	294	262												
Regular Time Worked on CCTV (2)	158	125												
Total Regular time, worked, hrs	900	789	0	0	0	0	0	0	0	0	0	0	1,689	141
Total Vacation/Sick Leave/Holiday, hrs	285	151											436	218
Vacation/Sick Leave/Holiday, FTEs	1.6	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.2
Overtime Worked on Coll. Sys., hrs	2	8											10	5
Overtime Worked on Other, hrs (1)	22	17											39	20
Overtime Worked on CCTV (2)	0	0											0	0
Total Overtime, hrs	24	25	0	0	0	0	0	0	0	0	0	0	49	4
B. Productivity														
1. Line Cleaning														
Rodder Work Orders generated	57	30											87	44
Rodder 3203 ft. cleaned	10,989	3,337											14,326	7,163
Rodder - outside services, ft cleaned	0	0											0	0
Flusher Work Orders generated	351	352											703	352
Truck 3205V ft. cleaned	16,187	16,552											32,739	16,370
Truck 3206V ft. cleaned	37,342	56,332											93,674	46,837
Flusher - outside services, ft. cleaned	2,301	1,570											3,871	
Total Footage cleaned(3)	64,518	76,221	0	0	0	0	0	0	0	0	0	0	140,739	11,728
Work Orders completed	408	361											769	385
Work Orders backlog	66	21	0	0	0	0	0	0	0	0	0	0	87	7
2. Closed Circuit Television (CCTV)														
Camera Work Orders generated	0	0	0	0	0	0	0	0	0	0	0	0	0	
CCTV Truck 3126T, ft. videoed	24,487	21,931											46,418	23,209
CCTV (hand cam), ft. videoed	449	0	0	0	0	0	0	0	0	0	0	0	449	
CCTV Inspection - outside services, ft. videoed	2,301	1,570	0	0	0	0	0	0	0	0	0	0	3,871	
Total CCTV footage(3)	27,237	23,501	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	50,738	
C. Sanitary Sewer Overflows (SSOs)														
Minor (Category III)	0	0											0	NA
Major (Category II)	0	0											0	NA
Major (Category I)	0	0											0	NA
Overflow Gallons	0	0											0	NA
Volume Recovered	0	0											0	NA
Percent Recovered	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	#DIV/0!	NA
D. Service Calls (non-SSO related)														
Service calls, normal hours, #	8	3											11	6
Normal hours S.C. response time, mins (avg.)	38	19											57	29
Service Callouts, after hours, #	0	1											1	1
After Hours S.C. response time, mins (avg.)	0	15											15	8
E. Benchmarks														
Average Ft. Cleaned/Hour Worked	144	190	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	167
Total Stoppages/100 Miles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
Average spill response time (mins)	0	0											NA	0
Callouts/100 Miles	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Overtime hours/100 Miles	1	4	0	0	0	0	0	0	0	0	0	0	4.44	0
Overflow Gallons/100 Miles	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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

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

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

Collection System 2013-14 Graphs



**COLLECTION SYSTEM (Pump Stations)
WORK ORDER STATISTICS
February 1, 2014 - February 28, 2014**

	Open Work Orders Due Prior to 2/1/2014	Open Work Orders 2/1/2014 - 2/28/2014	Total Open Work Orders
Preventive	0	114	115
Corrective	0	1	0
Total	0	115	115

	Closed Work Orders 2/1/2014 - 2/28/2014
Preventive	110
Corrective	0
Total	110

Total Outstanding Work Orders as of 2/28/2014	5
--	----------

NOVATO SANITARY DISTRICT
Wastewater Operations Committee Meeting
Reclamation Facilities Report
February 2014

Summary:

The rancher cleared two culverts in Site 7. Approximately 66 MG of recycled water was placed in the storage ponds this month for irrigation, no irrigation was performed. The motor was removed for repair from Irrigation Pump No. 2.

Ranch Operations:

There were no scheduled rancher activities this month.

Staff identified a plugged culvert in Site 7, Parcel 2, which resulted in flooding a portion of Parcel 1 after a substantial rain event. This was reported to the rancher and was cleared to allow the ditch to drain. After a section of the ditch drained another plugged culvert was identified in Parcel 1 which was subsequently cleared to allow Parcel 1 to drain. Culverts can be plugged when cattle enter the ditches to eat water plants or drink water at the ends of the culverts.

Irrigation Parcels:

There were no irrigation parcel activities this month.

Irrigation Pump Station:

Due to the dry conditions, in January, the District was granted permission by the Regional Water Quality Control Board to irrigate the pastures to encourage newly planted seed to sprout and the pasture grass to grow. On February 1st the District began adding treated water to the Irrigation Storage Ponds to use for irrigation. However, when seasonal rains returned on February 11th, the District returned to Bay discharge. During this period of Feb 1st -11th the level of the storage ponds rose from 2.3 feet to 6.0 feet, accumulating approximately 66 MG of recycled water in the storage ponds. There was no irrigation performed this month prior to the return of seasonal rains.

As reported earlier, the motor for Irrigation Pump No. 2 was removed and taken to an outside vendor's shop for analysis and repair when the pump's main breaker and the pump station main breaker tripped for no apparent reason during testing in January. After disassembly and performance of various checks and tests the vendor reported they did not find any abnormalities within the motor. Subsequent shop tests were performed in the presence of District staff and the District's electrical consultant and the motor performed normally. Staff has arranged with the vendor to visit the Irrigation Pump Station to perform various tests and inspections to try and determine what caused the pump's main breaker to trip in addition to determining why the pump station's main breaker tripped last month. This work will be performed next month when the motor is installed on the pump and tested.

Sludge Handling & Disposal:

There were no sludge handling and disposal activities this month.

NOVATO SANITARY DISTRICT BOARD AGENDA ITEM SUMMARY

TITLE: Wastewater Collection System of the Future (CSOTF) – Informational Item	MEETING DATE: March 24, 2014 AGENDA ITEM NO.: 6.b.
RECOMMENDED ACTION: Receive report on Collection System Of The Future (CSOTF) initiative by Bay Area wastewater collection system agencies.	
SUMMARY AND DISCUSSION: <p>The District was contacted by the West Bay Sanitary District (WBSD) and invited to participate in the wastewater Collection System of the Future (CSOTF) initiative that WBSD is initiating. The initiative is modeled after the effort jointly undertaken by the National Association of Clean Water Agencies (NACWA) in collaboration with the Water Environment Federation (WEF), and the WEF Research Foundation (WERF), which recently released the <i>Water Resources Utility of the Future... Blueprint for Action</i>, which offered recommendations for critical actions that are needed for the wastewater industry to transition to a culture of resource recovery.</p> <p>An informational sheet on the CSOTF effort and a copy of the cost sharing agreement developed by WBSD are attached. The total effort is expected to cost about \$60,000 which is anticipated to be spread out over 8 to 10 Participating Agencies, so that the District's cost will be about \$6,000-\$8,000. Staff has recommended that the District participate in this effort, and the proposed cost to the District is within the signing authority of the Manager-Engineer. Therefore, this item is being presented to the Board for informational purposes only.</p>	
ALTERNATIVES: N/A	
BUDGET INFORMATION: No budget impact.	
DEPT. MGR. :	MANAGER'S APPROVAL:



Leaders in Management

Wastewater Collection System of the Future

West Bay Sanitary District, serving Menlo Park, Atherton, Portola Valley, and portions of the surrounding communities, invites you to join us in a series of workshops to discuss and develop a strategy for transitioning to the *Wastewater Collection System of the Future*.

NACWA, in collaboration with WERF and the WEF, recently released the *Water Resources Utility of the Future... Blueprint for Action*, which offered recommendations for critical actions that are needed for the wastewater industry to transition to a culture of resource recovery. Although collection system management is more straightforward, our agencies

are equally impacted by regulations, changes in the workforce, and by our downstream wastewater treatment plants.

In order to prepare for this changing landscape, **we are seeking up to ten progressive Bay Area wastewater agencies** with wastewater collection systems who will join us in approximately 6 workshops over a 12-month period to share information on current staffing, equipment, resources, and practices. The group will map out future collection system needs and challenges, and develop a multi-faceted framework (staff, resources, and funding) that will help each agency proactively transition to the *Wastewater Collection System of the Future*. Project objectives include the following:

- Data gathering and sharing, and informal benchmarking among participating agencies
- Understanding of strengths, challenges, and ways to improve collection system management to meet current needs
- Definition of foreseeable changes in regulations, demographics, and collection system management needs
- A vision for the *Wastewater Collection System of the Future* that best meets the needs of this changing landscape
- A framework that can be used by the agencies to help transition our current organizations to meet these future needs

The final product will be a publication that is suitable for distribution and presentation among the Summit Partners.

Our Industry is Ready!

We have discussed this project concept with the CASA Executive Director, and have received positive feedback. The CASA Executive Director plans to take this project concept to the Clean Water Summit Partners (CASA, CWEA, CVCWA, BACWA, and SCAP) at the end of January for further discussion, and to explore support for the project among the Summit Partners.

We hope that this effort will be the catalyst for similar efforts by the other agencies that form the Summit Partner organizations.

What's Next?

Workshops will be led by Vivian Housen, P.E. and Rita Giacalone, Ph.D, both known by Bay Area wastewater agencies for their ability to help teams find and implement progressive solutions to address complex issues.

Our first opportunity to begin this discussion will be at the CASA winter conference in Indian Wells. **We invite you to join us at the *Collection System of the Future* table at CASA's January 16 roundtable forum.** A Project Kickoff meeting is tentatively scheduled for late January at the West Bay Sanitary District. Subsequent workshops will occur every 6 to 8 weeks, with their locations TBD.

The cost for each agency is expected to be between \$5,000 and \$7,000. This cost will be offset by any funding that may be provided by other sources.

Are you interested?
Please contact Phil Scott at the number below, or Vivian Housen at vhousen@housenassociates.com to let us know!

WASTEWATER COLLECTION SYSTEM OF THE FUTURE

Phil Scott, District Manager
West Bay Sanitary District
500 Laurel Street
Menlo Park, CA 94025

Phone: 650-321-0384

Fax: 650-321-4265

E-mail: psscott@westbaysanitary.org



**COST SHARING AGREEMENT
BETWEEN
WEST BAY SANITARY DISTRICT AND VARIOUS AGENCIES
COLLECTION SYSTEM OF THE FUTURE, TRACK 1**

THIS COST SHARING AGREEMENT (“Agreement”) is entered into this ____ day of _____, 2014, by and between WEST BAY SANITARY DISTRICT (hereinafter referred to as WBSD), and the following agencies: WEST VALLEY SANITATION DISTRICT, CASTRO VALLEY SANITARY DISTRICT, DUBLIN SAN RAMON SANITARY DISTRICT, SANITARY DISTRICT NO. 1 OF MARIN COUNTY, NOVATO SANITARY DISTRICT, ORO LOMA SANITARY DISTRICT, DELTA DIABLO SANITATION DISTRICT, WEST COUNTY SANITARY DISTRICT, UNION SANITARY DISTRICT, AND STEGE SANITARY DISTRICT <<ADD AS APPROPRIATE >>, all parties being legally recognized public agencies within the State of California (hereinafter referred to as Participating Agencies).

RECITALS

WHEREAS, WBSD was established as a Special District in 1902 to provide, among other services, wastewater management services to the then-unincorporated communities of Atherton and Menlo Park, and has expanded to include the City of Menlo Park, Atherton, and Portola Valley, and areas of East Palo Alto, Woodside and unincorporated San Mateo and Santa Clara counties; and

WHEREAS, WBSD has initiated a grassroots effort named the “Collection System of the Future” or “CSOTF”; and

WHEREAS, the Participating Agencies and WBSD comprise Track 1 of the CSOTF effort, and will equally share in the cost of implementing CSOTF Track 1 (“The Project”); and

WHEREAS, WBSD and the Participating Agencies now desire to enter into a cost sharing agreement for WBSD the purposes of The Project.

NOW, THEREFORE, it is agreed as follows:

- 1. Scope of Services.** WBSD shall serve as the lead agency, and shall enter into one or more consultant agreements (“Consultant Agreement”) as required to provide WBSD and the Participating Agencies with the scope of services specified in **Exhibit A**, attached hereto and incorporated herein.

2. Cost Sharing.

(a) WBSD and the Participating Agencies will share equally in the expense of the approved Consultant Agreement(s) for a combined amount not to exceed \$60,000, or \$XXX per participating agency.

(b) Additional costs, including WBSD and Participating Agency staff costs, meeting expenses, and other expenses shall be borne by each respective agency.

3. Method of Payment. Within 30 days of execution of the Consultant Agreement(s), WBSD will submit to each Participating Agency a copy of the executed document(s) and an invoice for payment. Participating Agency will pay the invoiced amount in full within 30 days of receipt of the invoice, up to the maximum amount provided for in Section 2 above.

4. Contract Management.

(a) WBSD will coordinate and manage the Consultant Agreement(s) on behalf of WBSD and the Participating Agencies.

(b) The Scope of Services includes a series of Workshops. Workshop No. 1 will be held at the WBSD office at 500 Laurel Street, Menlo Park, CA. WBSD intends for subsequent Workshop locations to rotate among the various Participating Agency offices. However, if the Participating Agencies prefer, the District will hold one or more subsequent workshops at the WBSD office.

5. California Law. This Agreement is subject to the laws of the United States of America and the laws of the State of California. Any dispute arising out of this Agreement shall be governed by the laws of the State of California.

6. Severability. If any portion of this Agreement is held by a court of competent jurisdiction to be invalid, void, illegal, or unenforceable, the remainder of the provisions shall remain in full force and effect and shall in no way affect, impair, or invalidate any other term, covenant, condition, or provision contained in this Agreement.

7. Entire Agreement. This Agreement contains the entire integrated agreement between WBSD and Participating Agencies and supersedes all prior negotiations, representations and agreements, whether written or oral, with respect to the subject matter herein.

Each of the parties hereto has caused this Agreement to be executed by their officers, duly authorized, the day and year first above written.

WEST BAY SANITARY DISTRICT

PARTICIPATING AGENCY

PARTICIPATING AGENCY

PARTICIPATING AGENCY

PARTICIPATING AGENCY

PARTICIPATING AGENCY

PARTICIPATING AGENCY

PARTICIPATING AGENCY

NOVATO SANITARY DISTRICT BOARD AGENDA ITEM SUMMARY

TITLE: Sewer System Management Plan (SSMP) 2014 Biennial Audit – Informational Item	MEETING DATE: March 24, 2014 AGENDA ITEM NO.: 6.c.
RECOMMENDED ACTION: Receive Sewer System Management Plan (SSMP) 2014 Biennial Audit report.	
SUMMARY AND DISCUSSION: <p>The State Water Resources Control Board (SWRCB) Order No. 2006-0003-DWQ, also called Sanitary Sewer Overflows General Waste Discharge Requirements (or SSO-GWDR) requires the District to conduct periodic internal audits of its Sewer System management Plan (SSMP).</p> <p>These audits are to be appropriate to the size of its system and the number of SSOs, and focus on evaluating the effectiveness of the SSMP and the District’s compliance with the SSMP requirements. At a minimum, the audits are required every two years and a report has to be prepared and kept on file.</p> <p>Staff has prepared the 2014 Biennial Audit of the District’s SSMP. A copy of the audit report is attached.</p>	
ALTERNATIVES: N/A	
BUDGET INFORMATION: No budget impact.	
DEPT. MGR. :	MANAGER’S APPROVAL:



Novato Sanitary District

Sewer System Management Plan (SSMP) – 2014 BIENNIAL AUDIT

March 2014

NOVATO SANITARY DISTRICT

2014 BIENNIAL SSMP AUDIT

March 2014

Table of Contents

1	Introduction.....	1
2	Regulatory Requirements for SSMP Audits.....	1
3	2014 Biennial SSMP Audit.....	1
4	SSMP Effectiveness.....	2
5	SSMP Compliance.....	3

List of Figures

Figure 1: CY2012 & CY 2013 – SSMP Effectiveness, Total Footage Cleaned, ft.....	4
Figure 2: CY2012 & CY2013 – SSMP Effectiveness, Average Ft. Cleaned/Hour Worked....	4
Figure 3(a) & 3(b): SSMP Effectiveness, Annual Productivity Comparisons.....	6

List of Tables

Table 1: Number of SSOs, CY 2009-13.....	5
Table 2: Volume of SSOs – CY 2009-13.....	5
Table 3: Causes of SSOs - CY 2009-13.....	5
Table 4: Collection System Projects, FY11-12 and FY12-13 - Construction Costs.....	6

Appendices

Appendix A: December 2013 and December 2012 District Board of Directors Wastewater Operations Committee reports (Collection System related portions only)

Appendix B: 2014 Biennial SSMP Audit Checklist

NOVATO SANITARY DISTRICT

2014 BIENNIAL SSMP AUDIT

March 2014

List of Abbreviations

BACWA	Bay Area Clean Water Agencies
CY	Calendar Year
FY	Fiscal Year
NSD, District	Novato Sanitary District
GWDR	General Waste Discharge Requirement
SFRWQCB	San Francisco Regional Water Quality Control Board
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
SWRCB	State Water Resources Control Board

2014 BIENNIAL SSMP AUDIT

1. Introduction

The purpose of the Sewer System Management Plan (SSMP) Audit is to evaluate the effectiveness of Novato Sanitary District's (NSD or District) SSMP and to identify deficiencies, if any, and steps to correct them. The audit is prepared pursuant to the requirements included in the State Water Resources Control Board Order No. 2006-0003-DWQ (also called General Waste Discharge Requirements, or GWDR),

A summary of compliance with the SWRCB Order is presented in check list form as Appendix A of this document.

2. Regulatory Requirements for SSMP Audits

The summarized requirements for SSMP Audits element of the SSMP are:

SFRWQCB Requirement:

Previously, through the requirements of its Sewer System Management Plan Development Guide, dated July 2005, the SFRWQCB used to require the District to conduct an annual audit of its SSMP. This annual audit was to include any deficiencies and steps to correct them (if applicable), appropriate to the size of the District's system and the number of its overflows. The annual audit was then to be submitted as a report, along with the District's annual SSO report, by March 15th of the following year.

However, consistent with SFRWQB's letter dated October 3, 2012 and titled "Discontinuation of Requirements for Annual Reports of Sanitary Sewer Overflows (SSOs), and Annual Sewer System Management Plan (SSMP) Audits", the District is not required to submit an annual audit report, and will prepare a biennial report as discussed herein.

SWRCB Requirement:

The SWRCB's SSMP audit requirements mandate that the District shall conduct periodic internal audits, appropriate to the size of its system and the number of SSOs. At a minimum, these audits must occur every two years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the District's compliance with the SSMP requirements, including identification of any deficiencies in the SSMP and steps to correct them.

3. 2014 Biennial SSMP Audit

The District conducts periodic audits of its SSMP consistent with regulatory requirements. The goal of the audit is to determine whether the SSMP complies with current requirements of the GWDR, whether the SSMP reflects current practices, and whether the SSMP is effective in controlling SSOs.

Program effectiveness is evaluated by a review of performance indicators and discussion of SSMP and sewer system improvements. An Audit Checklist developed by the Bay Area Clean Water Agencies (BACWA) is also used as part of this evaluation.

4. SSMP Effectiveness

Performance

Performance Indicators:

Performance indicators, collected as part of Element IX (Monitoring, Measurement, and Program Modifications) are reviewed to identify patterns and areas needing improvement. Performance indicators for the two years CY2012 and CY13 are presented in Figures 1 and 2, and SSMP effectiveness as a function of SSMP implementation are summarized in Tables 1, 2, and 3, and Figures 3(a) and 3(b).

Performance Metrics:

In terms of performance metrics, the total footage of sewer mains cleaned on a monthly basis in CY2012 and CY2013 is presented in Figure 1, while monthly productivity in terms of average length (feet) of sewer line cleaned per hour is presented in Figure 2.

Program Effectiveness:

In terms of program effectiveness, a history of SSOs is shown in Table 1, SSOs by volume history are shown in Table 2, and SSOs by cause are shown in Table 3, for Calendar Years (CY) 2009 through 2013.

From Table 1, it can be seen that the number of SSOs in 2011 was reduced by half from the previous two years, increased slightly in 2012, and then decreased significantly in 2013. SSO volumes (see Table 2) also generally declined over the period, with CY2013 exhibiting the lowest SSO volume.

As shown in Table 3, the most significant decrease in SSOs by cause was among those caused by roots. Also notably, the number of grease related events has declined significantly to where there were no grease related overflows in 2013.

Productivity Comparisons:

Productivity comparisons since the implementation of the SSMP in 2008, are tracked annually. The data is presented graphically in Figures 3(a) and 3(b), and indicate significant productivity gains and overall effectiveness over the period.

SSMP Effectiveness Reporting:

In 2009, the District Board of Directors formalized the reporting of the Collection Systems department's performance through its Wastewater Operations Committee (Committee). The Committee meets regularly on the third Monday of each month, and receives a detailed report

from staff on Collection Systems operations and maintenance activities (including SSMP effectiveness tracking) for the preceding month. The Committee then reports out to the full Board through a separate Committee report, at a regularly scheduled bimonthly Board meeting, typically the fourth Monday of the month.

Copies of the monthly reports for December 2012 and December 2013 are provided in Appendix A for sample purposes. As can be seen from these reports, they also provide tracking information on a monthly basis for performance indicators and metrics for the entire year, as well as comparative information for these parameters against the prior year. In addition to sewer main maintenance, the reports also provide information relating to sewer pump station operations and maintenance and include similar performance indicators and metrics, and present similar effectiveness tracking.

Program and System Improvements

The District has a well-funded Capital Improvements Program (CIP) that addresses identified capacity and condition related improvements to its collection system, a summary of which is available through the District's Annual Budget document on its web-site.

The District also completed an independent third party review and limited update of its 2008 Collection System Master Plan (CSMP). A further comprehensive revision of the CSMP is tentatively being planned for Fiscal Year (FY) 2014-15, following an ongoing analysis of the information presented by the 2011-12 review and update.

In addition, as shown in Table 4, the District constructed almost \$4.9 million in collection system and pump station improvement and repair projects which ranged from small spot repairs all the way to major sewer main replacements and pump station reconstructions.

5. SSMP Compliance

The District uses an Audit Checklist that was originally developed by the Bay Area Clean Water Agencies (BACWA), to evaluate its compliance with State GWDR requirements for SSMPs. The audit checklist indicates whether each SSMP element is compliant, describes recent revisions or updates and recommends future actions to maintain effective SSMP elements that reflect current District practices. The Audit Checklist, completed for the two years CY 2012 and CY 2013, is included in **Appendix A**.

Figure 1: CY 2012 & CY 2013 - Total Footage Cleaned, ft

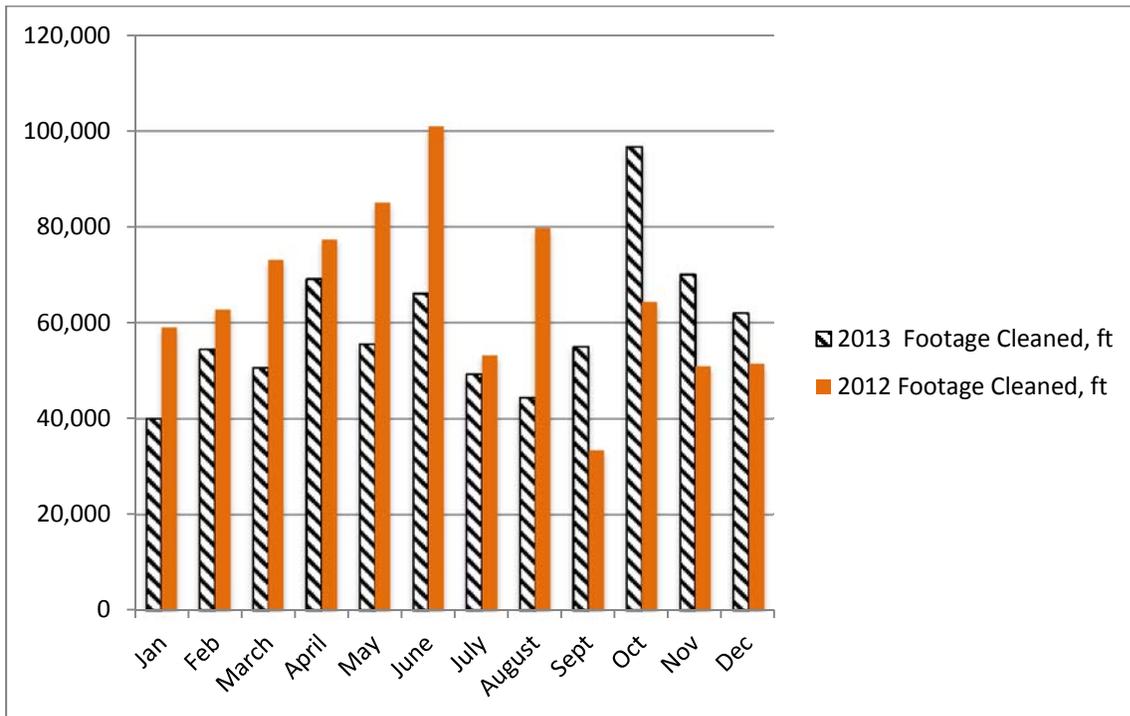


Figure 2: CY 2012 & CY 2013 - Average Ft. Cleaned/Hour Worked

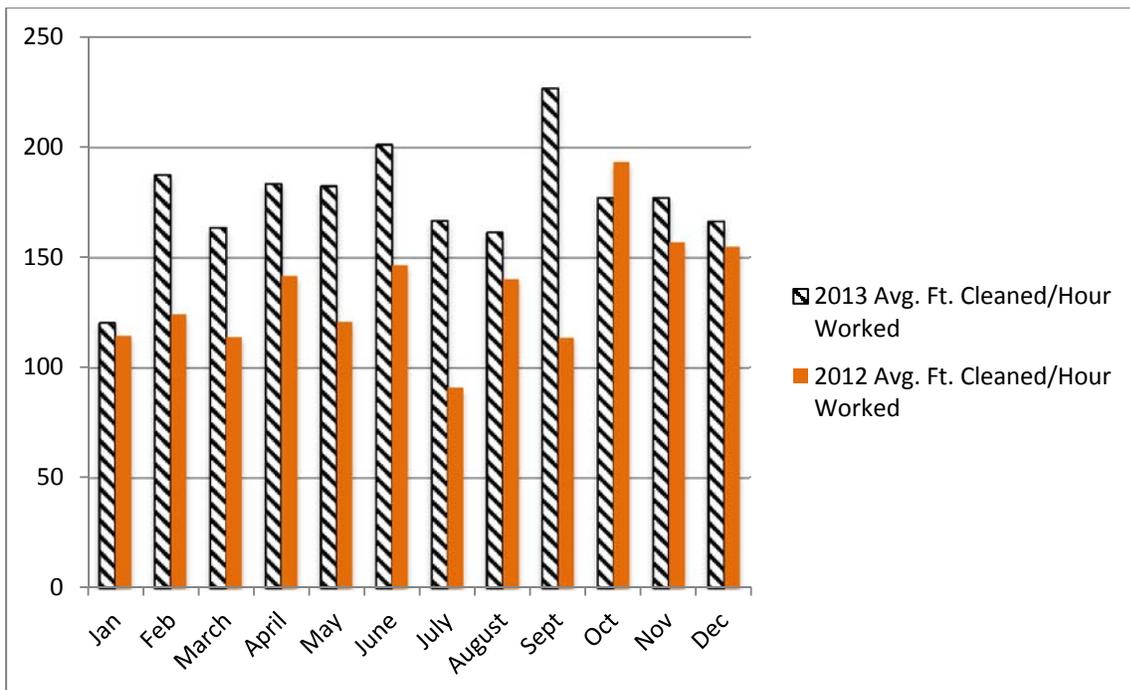


Table 1. Number of SSOs, CY 2009-13

Size of SSO (gallons)	Number				
	2013	2012	2011	2010	2009
Greater than or equal to 1,000	5	5	4	8	3
From 100 to 999	2	4	4	9	9
From 1 to 99	3	9	6	11	16
Total	10	18	14	28*	28

*does not include one private lateral overflow of 8,836 gal caused by a District contractor

Table 2: Volume of SSOs – CY 2009-13

	Volume (gallons)				
	2013	2012	2011	2010	2009
Total volume contained and returned to sewer system for treatment	2,113	4,468	3,506	11,007	11,348
Total volume reaching waters of the State	8,921	12,077	18,157	40,866	3,175
Total volume not contained but not reaching waters of State (everything else)	281	8,247	53	10,458	2,036
Total	11,315	24,792	21,663	62,331	16,559

Table 3: Causes of SSOs - CY 2009-13

Cause of SSO	Number				
	2013	2012	2011	2010	2009
Blockage:					
Roots	6	12	5	13	17
Grease	--	1	5	6	6
Debris	1	--	--	2	1
Debris from Laterals	1	1	2	--	--
Pipe failure	1	--	--	--	--
Vandalism	--	--	1	--	--
Multiple Causes	--	--	--	--	--
Subtotal for Blockage	9	14	13	21	24
Infrastructure Failure	--	--	--	--	1
Cleaning Operations	--	--	--	--	1
Contractor Error	--	2	1	4*	--
By-Pass Pump Failure	--	--	--	1	--
Flow Capacity Deficiency	--	--	--	2	--
Natural Disaster	--	--	--	--	--
Operator Error	1	2	--	1	1
Construction damage	--	--	--	--	1
Cause Unknown	--	--	--	--	--
Total	10	18	14	29	28

*includes one private lateral overflow of 8,836 gal caused by a District contractor

Figure 3(a): SSMP Effectiveness – Annual Productivity Comparisons

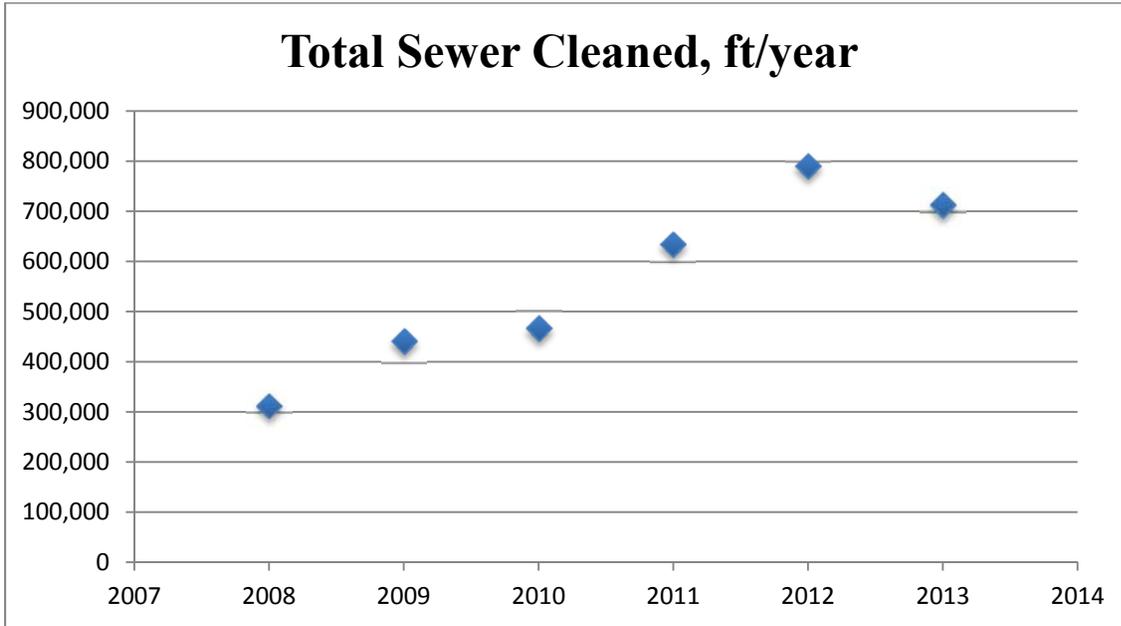


Figure 3(b): SSMP Effectiveness – Annual Productivity Comparisons

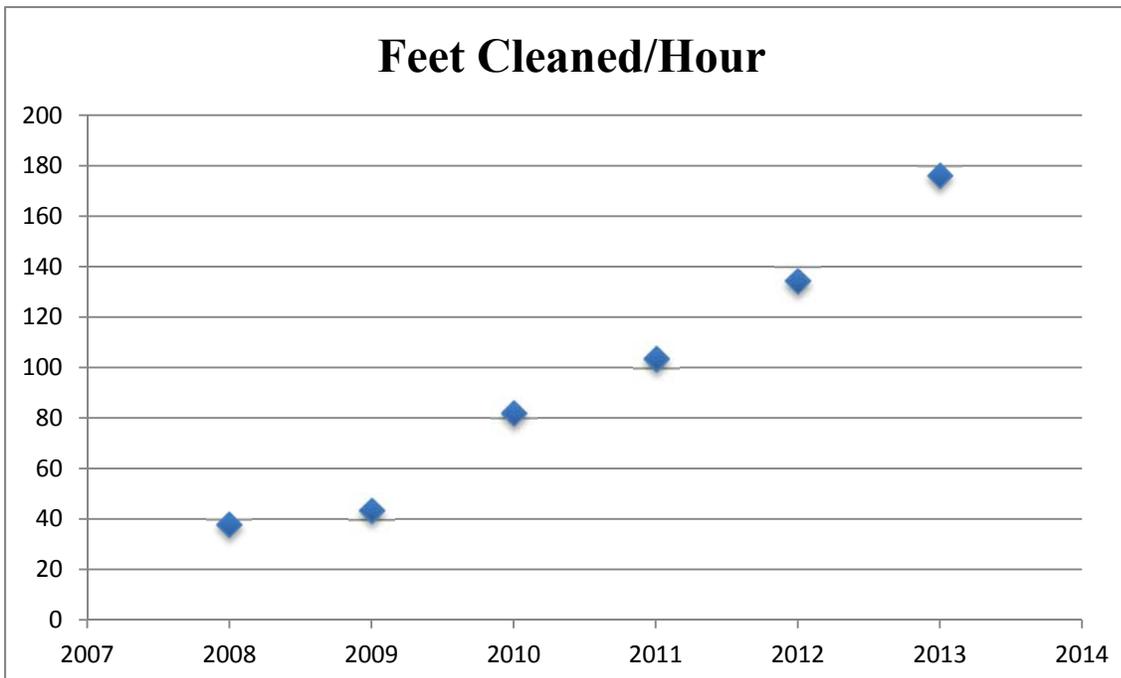


Table 4: Collection System Projects, FY11-12 & FY12-13 - Construction Costs

Project Name	Project Description	Lineal Feet	Costs
Pump Station Rehabilitation Project - Unit 3	Reconstruct Bayside, Southgate & Western Oaks Pump Stations	NA	\$1,247,501
Annual Collection System Repairs, #72803-11-05	Repair sewer main on Alameda del Prado at Alameda del Prado	40 LF	\$21,304
Michele Circle Sewer Project	Install relief sewer to prevent SSO's	479 LF	\$122,568
Galli Drive Sewer Project (Phase G)	Replace existing sewer main and laterals	1,308 LF	\$482,494
Sewer Replacement Project Group 1(multiple locations) Project No. 72803-11-04	Eucalyptus Avenue, San Marin Drive & Raposa Vista repairs	20 LF 6" 99 LF 8"	\$84,332
Sewer Replacement Project Group 2 (multiple locations) #72803-11-06	Margory Court, Clausing Drive, Capilano Drive (2), Buchanan St., etc.	NA	\$83,536
Simmons Lane Sewer Repair Project	Repair sewer main in Simmons Lane and install relief sewer at intersection with San Marin Drive	70 LF	\$34,544
Hill Road Sewer Rehabilitation Project	Rehabilitate (pipe-burst) existing sewer main	300 LF	\$66,441
Center Road & Kristy Court Sewer Project	Replace existing sewer mains ranging in size from 8" to 18"	1,450 LF	\$805,678
Pump Station Rehabilitation Project - Unit 4	Reconstruct Bel Marin Keys 9 & 10, and Hanger Avenue Pump Stations	NA	\$1,601,060
Other Sewer Repair Projects	Spot repairs, repair replace/rod inlets, sewer main sections, manholes, etc.	NA	\$322,655
Totals			\$4,872,113

**Appendix A: December 2012 and December 2013 District
Board of Directors Wastewater Operations Committee
Reports (Collection System related portions only)**

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

General:

The breakdown of Collection System department staff time for December 2013, in terms of equivalent full-time employee (FTE) hours utilized, works out approximately as follows:

- 2.1 FTE field workers for Sewer Maintenance (main line cleaning)
- 1.5 FTE field workers for Pump Station Maintenance
- 1.0 FTE field workers for CCTV work
- 1.6 FTE field workers for time spent on data input, training, service calls, overflow response, or any other activity that does not directly relate to main line cleaning, CCTV work or pump station maintenance, and
- 1.9 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 61,944 feet of sewer pipelines were cleaned for the month by District staff. Staff completed 325 maintenance work orders generated by the ICOM3 CMMS system, with 50 outstanding work orders. The need to clean in front of the CCTV camera crew and staffing issues due to the holiday season were the cause of the outstanding work orders. A discrepancy between the footage listed in the ICOM3 system and that listed on the District maps have been identified, therefore the footage listed in the Collection System reports is based off of footage obtained by the field crews during cleaning operations. The field crews are measuring line segment lengths using a measuring wheel whenever they note a line segment length discrepancy of more than ten feet between the work order and District maps.

The District's CCTV van was in the field for a total of 15 working days and televised 142 line segments; the CCTV production was 26,910 ft. for the month. There was no push camera work performed during December.

Pump Station Maintenance:

The Collection System Department conducted 277 lift station inspections for the month with 153 of the inspection visits generated through the JobCal Plus CMMS system*. There are 10 outstanding work orders for the month of December. Three work orders are related to Reclamation maintenance, and the remaining 7 work orders are for pump station maintenance activities that were not completed in December.

The breakdown of the lift station 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 that are visited daily.

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

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

At Marin Village pump station, pump #1 was taken out of service and sent in for repair due to failed bearings, and returned to service. Staff worked with Control Systems West to repair wet well floats at BMK 5 and 7. Staff also worked with Industrial Electric to repair emergency generators at Marin Village and E. Hamilton pump stations.

***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. The next phase, (Unit 5), includes rehabilitation/reconstruction of the Los Robles and Digital Drive pump stations and will likely begin construction in early 2014.

Safety and Training:

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

Specialized training: Collection System staff attended Hazardous Chemical Communication training during the month of December.

Safety performance: There were no lost time accidents this month for a total of 334 accident-free days.

Standard Operating Procedures (SOPs):

Department staff continues to work on generating new SOPs; assisting DFK Solutions in updating the Emergency Overflow Response Plan and working towards finalizing earlier draft SOPs. No (0) SOPs were issued in December.

Sanitary Sewer Overflows (SSOs):

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

No.	Date	Location	Amount, gal	Cause
1	12/14/2013	6 Fleetwood Ct	6,000	Roots

1. SSO at 6 Fleetwood Ct.: This SSO was a Category I event with the discharge volume of approximately 6,000 gallons going to a storm drain and Vineyard Creek.

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

There was partial recovery (3%) for this discharge due to the fact that part the discharge was retrieved from a storm drain catch basin and the gutter pan.

This discharge was determined to be the result of a partial root blockage in the main line. Volume estimation using the San Diego Picture Method times duration, winter water usage rates times duration, volumetric calculation of the water in the gutter pan, and reporting party/local resident interviews were all used to estimate the duration, volume, and recovery for this event.

The District initially received this report at 10:01. Marin County Dispatch/Armando Alegria of Marin County Environmental Health Services (MCEHS) was notified of this event at 11:24 and CAL-EMA was notified at 11:31 meeting the 2 hour reporting requirements for a Category I event.

Under the direction of Armando Alegria and Rebecca Ng, MCEHS, Vineyard Creek was posted with 5 warning signs on the day of the event. Due to the possible impact of this discharge on Vineyard Creek, the District's sampling protocol was implemented on Monday, 12/16/2013, and samples were taken 50 feet upstream of Point of Entry (POE), at POE, and at 100 feet downstream of POE, as required by MCEHS. Water sampling results were found to be acceptable by MCEHS and sampling was halted on December 24, 2013. Public Notification signage remained in place until December 30, 2013 when they were removed with the approval of Armando Alegria, MCEHS.

The overflow line segment had been chemically root treated on 6/22/2013 due to root intrusion as part of the District's Chemical Root Abatement Program. It was last cleaned using the hydro-flusher on 9/20/2013 and is on a 12 month cleaning frequency for the hydroflusher. The line segment has been added to the rodder schedule, also on a 12 month frequency coordinated 6 months apart so that the line is cleaned twice a year.

This event was reported into the CIWQS database on 12/18/2013 as a Category I event, SSO Event ID #801856 and was certified in CIWQS on 12/20/2013, Certification ID # 710085.

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

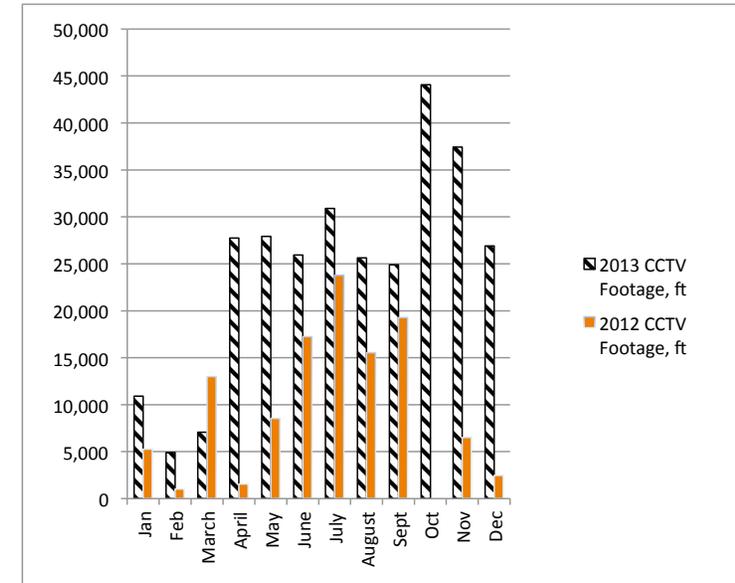
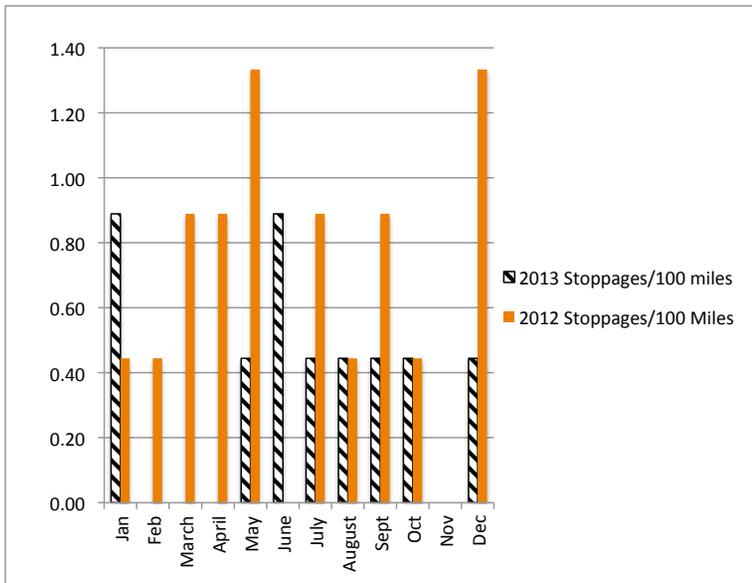
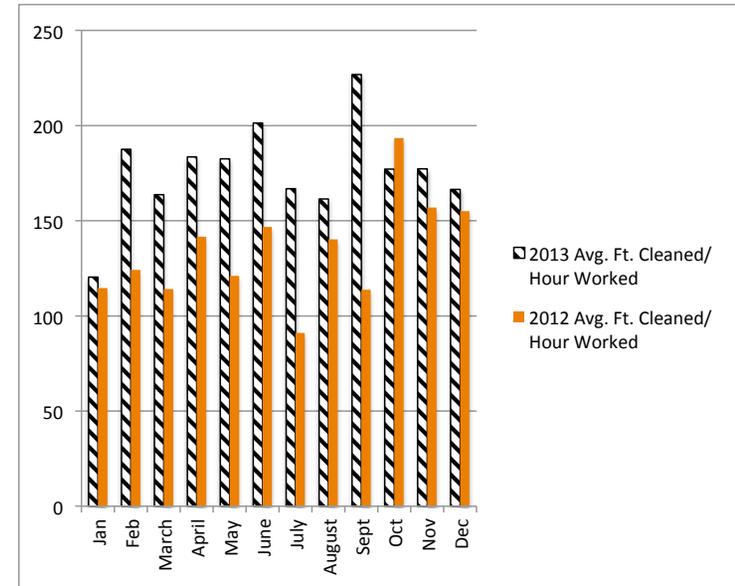
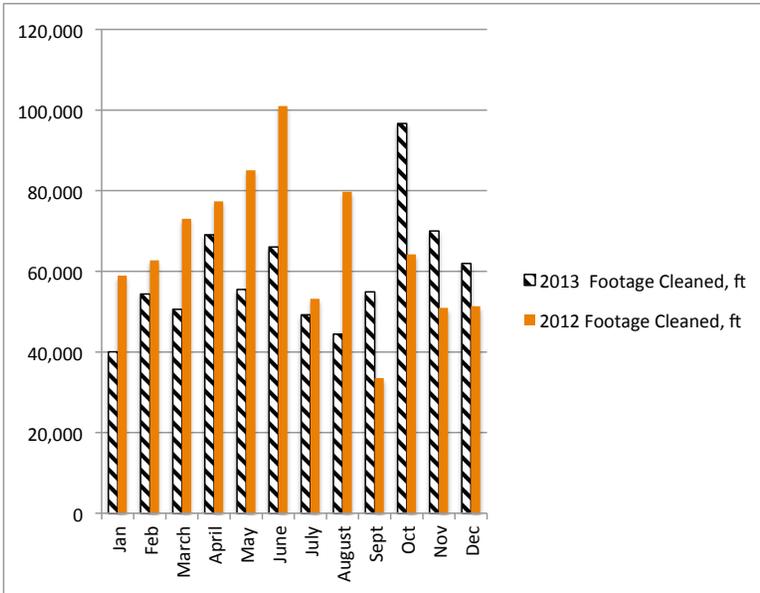
	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total Year to Date	Average Year to Date
A. Employee Hours Worked														
Number of FTEs (main line cleaning), hrs.	1.9	1.7	1.8	2.2	1.8	1.9	1.7	1.6	1.4	3.1	2.3	2.1	NA	2.0
Number of FTEs (other)	1.9	1.4	2.4	1.5	1.8	1.2	1.8	1.4	2.1	2.1	1.5	1.6	NA	1.7
Number of FTEs (CCTV)	0.1	0.3	0.5	1.7	1.1	1.2	1.5	1.3	1.2	1.2	1.1	1.0	NA	1.0
Total, FTEs	3.9	3.4	4.7	5.4	4.6	4.3	4.9	4.2	4.7	6.4	4.9	4.7	NA	4.7
Regular Time Worked, (main line cleaning), hrs	333	290	309	377	304	328	295	275	242	546	395	372	4,065	339
Regular Time Worked on Other, hrs ⁽¹⁾	326	249	415	259	308	216	304	235	363	369	264	275	3,581	298
Regular Time Worked on CCTV ⁽²⁾	20	46	85	300	192	200	258	221	206	203	191	174	2,094	175
Total Regular time, worked, hrs	678	585	809	935	804	744	857	731	811	1,118	849	821	9,740	812
Total Vacation/Sick Leave/Holiday, hrs	204	77	101	114	239	62	191	238	174	128	307	336	2,170	181
Vacation/Sick Leave/Holiday, FTEs	1.2	0.4	0.6	0.7	1.4	0.4	1.1	1.4	1.0	0.7	1.8	1.9	12.5	1.0
Overtime Worked on Coll. Sys., hrs	6	45	5	47	5	1	24	24	33	31	4	4	228	19
Overtime Worked on Other, hrs ⁽¹⁾	3	19	5	28	12	6	16	17	27	50	28	19	229	19
Overtime Worked on CCTV ⁽²⁾	1	3	0	0	0	0	2	1	2	3	0	0	12	1
Total Overtime, hrs	10	67	10	75	17	7	42	42	62	83	31	23	469	39
B. Productivity														
1. Line Cleaning														
Rodder Work Orders generated	14	0	24	31	83	66	51	51	51	121	74	38	604	50
Rodder 3203 ft. cleaned	3,138	0	3,856	5,490	678	4,371	760	1,842	1,214	10,325	12,709	2,802	47,185	3,932
Rodder - outside services, ft cleaned	0	0	0	0	0	0	0	0	0	8,333	0	0	8,333	694
Flusher Work Orders generated	187	252	290	385	438	361	277	256	340	440	294	337	3,857	321
Truck 3205V ft. cleaned	2,782	5,146	2,755	13,698	15,477	10,186	0	12,537	0	14,307	8,000	18,679	103,567	8,631
Truck 3206V ft. cleaned	34,114	49,225	43,954	49,898	39,332	51,468	48,444	30,024	53,692	72,072	49,299	40,463	561,985	46,832
Flusher - outside services, ft. cleaned	0	0	0	0	0	0	0	0	0	3,260	0	0	3,260	0
Total Footage cleaned ⁽³⁾	40,034	54,371	50,565	69,086	55,487	66,025	49,204	44,403	54,906	96,704	70,008	61,944	712,737	59,395
Work Orders completed	201	252	286	374	314	267	239	222	281	548	331	325	3,640	303
Work Orders backlog	6	0	28	42	207	160	89	85	110	13	37	50	827	69
2. Closed Circuit Television (CCTV)														
Camera Work Orders generated	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CCTV Truck 3126T, ft. videoed	10,905	4,912	7,075	27,756	27,913	25,938	30,910	25,628	24,900	37,429	31,620	26,910	281,896	23,491
CCTV (hand cam), ft. videoed	0	0	0	0	0	0	0	0	0	6,654	5,823	0	12,477	0
CCTV Inspection - outside services, ft. videoed	0	0	0	0	0	0	0	0	0	3,260	0	0	3,260	0
Total CCTV footage ⁽³⁾	10,905	4,912	7,075	27,756	27,913	25,938	30,910	25,628	24,900	44,083	37,443	26,910	294,373	23,491
C. Sanitary Sewer Overflows (SSOs)														
Minor (Category III)	2	0	0	0	1	2	1	1	1	1	0	1	10	NA
Major (Category II)	0	0	0	0	0	0	0	0	0	0	0	0	0	NA
Major (Category I)	2	0	0	0	0	1	0	0	1	1	0	1	6	NA
Overflow Gallons	2,200	0	0	0	158	1,111	10	50	312	1,474	0	6,000	11,315	NA
Volume Recovered	880	0	0	0	158	100	0	0	117	673	0	173	2,101	NA
Percent Recovered	40%	NA	NA	NA	100%	9%	0%	0%	38%	46%	NA	3%	19%	NA
D. Service Calls (non-SSO related)														
Service calls, normal hours, #	7	5	7	12	6	6	8	5	8	9	8	7	88	7
Normal hours S.C. response time, mins (avg.)	12	15	14	18	17	22	19	13	23	15	18	14	200	17
Service Callouts, aftr hours, #	1	0	0	1	1	0	1	2	1	3	0	3	13	1
After Hours S.C. response time, mins (avg.)	23	NA	NA	20	30	0	27	34	30	28	0	25	217	22
E. Benchmarks														
Average Ft. Cleaned/Hour Worked	120	187	164	183	183	201	167	161	227	177	177	167	NA	176
Total Stoppages/100 Miles	0.9	0.0	0.0	0.0	0.4	0.9	0.4	0.4	0.4	0.4	0.0	0.4	4.4	NA
Average spill response time (mins)	18	0	0	0	15	19	15	27	7	41	0	34	NA	15
Callouts/100 Miles	0.4	0.0	0.0	0.4	0.4	0.0	0.4	0.9	0.4	1.3	0.0	1.3	5.8	0.5
Overtime hours/100 Miles	3	20	2	21	2	0	11	11	15	14	2	2	101	8
Overflow Gallons/100 Miles	978	0	0	0	70	494	4	22	139	655	0	2667	5029	419

⁽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 2012-13 Graphs



Novato Sanitary District

Pump Station Monthly Report For December 2013 (as of December 31, 2013)

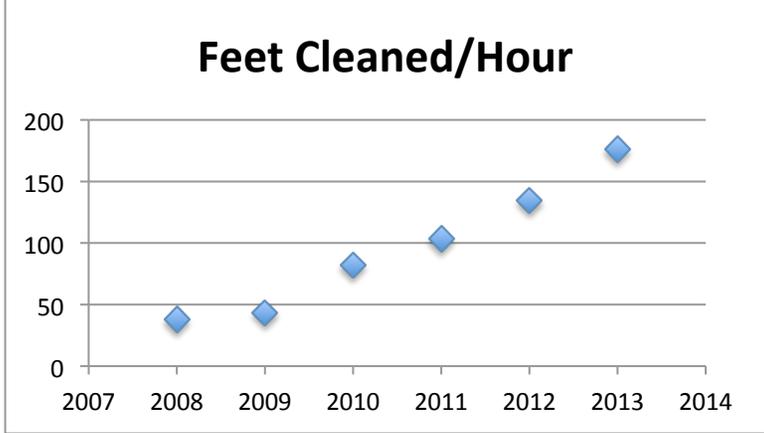
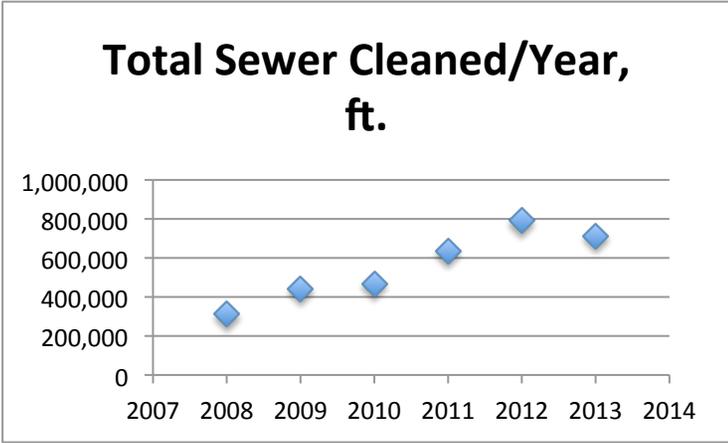
	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total Year to Date	Average Year to Date
Employee Hours Worked	253	224	313	226	256	249	320	301	236	266	205	284	3,133	
Number of Employees	1.4	1.3	1.8	1.3	1.4	1.4	1.8	1.4	1.2	1.4	0.9	1.4		1.4
Regular Time Worked on Pump Sta	185	189	223	182	227	201	273	239	201	246	161	245	2,571	
Overtime Worked on Pump Sta	69	35	90	44	29	48	47	62	35	20	45	39	562	
After Hours Callouts	4	3	1	8	1	0	5	5	2	0	9	3	41	
Average Callout response time (mins)	24	35	20	30	0	0	26	35	30	0	35	30	265	22
Work Orders														
Number generated in month	107	112	116	124	110	125	134	107	126	122	128	163	1474	
Number closed in month	104	110	116	124	110	123	134	106	126	122	101	153		
Backlog	3	2	0	0	0	2	0	1	0	0	27	10		

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

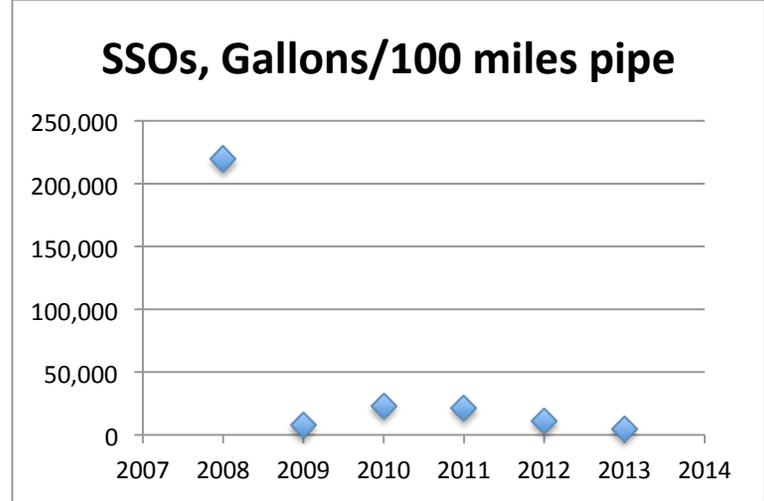
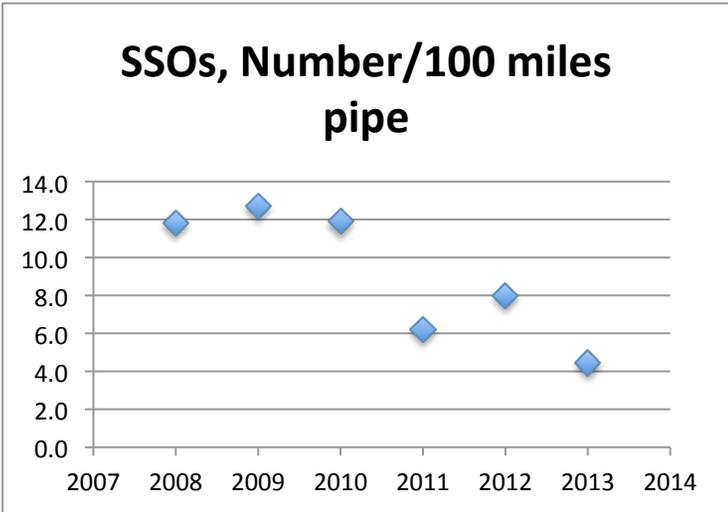
	Open Work Orders Due Prior to 12/1/2013	Open Work Orders 12/1/2013 - 12/31/2013	Total Open Work Orders
Preventive	6	157	159
Corrective	0	0	0
Total	6	157	163

	Closed Work Orders 12/1/2013 - 12/31/2013
Preventive	153
Corrective	0
Total	153

Total Outstanding Work Orders as of 12/31/2013	10
---	-----------



je



Collection System Multi-year Trends 2008-2013

**Novato Sanitary District
Wastewater Operations Committee meeting
Collection System Operations Report
December 2012**

General:

For December 2012, 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:

- 2.1 FTE field workers for Sewer Maintenance (main line cleaning)
- 1.6 FTE field workers for Pump Station Maintenance
- 0.3 FTE field workers for CCTV work, and
- 1.3 FTE field workers for time spent on data input, training, service calls, overflow response, or any other activity that does not directly relate to main line cleaning, CCTV work or pump station maintenance.

Collection System Maintenance:

A total of 51,331 feet of sewer pipelines were cleaned for the month. Staff completed 257 maintenance work orders generated by the ICOMMM3 CMMS system, with 13 outstanding work orders. The footage cleaned per hour, line cleaned/month, and outstanding work orders are within established parameters for the department. Graphs showing the length of line cleaned/month, footage cleaned/hour worked, along with the overflows/month are attached.

There were two significant storm events in December and the Collection system staff prepared extensively to meet them; examples of preparations included: staging generators at critical pump stations, checking trailer mounted generators and pumps to ensure proper operation, siting large-diameter hoses at critical locations for ease of access, and inspecting and/or cleaning known problem areas prior to the storm. These preparations also meant that staff efforts were directed away from normal maintenance for the better part of a week. These efforts were similar to those that were taken in November in preparation for these events.

The CCTV van was not operational for the majority of the month of December due to multiple mechanical/electrical problems with the unit. Due to these problems, the department's CCTV production for the month was below normal production goals.

Pump Station Maintenance:

The Collection System Department conducted 278 lift station inspections for the month of December, 2012, with 154 of the inspection visits generated through the JobCal Plus CMMS system.

The breakdown of these inspections is as follows: 22 Flygt submersible pump stations, 1 time per month, 7 Gorman/Rupp dry well/wet well stations, 1 entry per month, and 4

**Novato Sanitary District
Wastewater Operations Committee meeting
Collection System Operations Report
December 2012**

main stations that are visited daily. The number 2 pump at Marin Village was removed for inspection in December and is currently being repaired by Shape Inc.

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

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

Pump Station Rehabilitation:

As part of the District's continuing multi-year Pump Station Rehabilitation Project (Capital Improvement Project No. 72403), construction started on BMK 10 pump station on December 10th, and control of that station along with the Hangar Ave pump station is the responsibility of the contractor, W.R. Forde, until the project is complete.

Safety and Training:

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

Specialized training: No specialized training was conducted for the month of December.

Safety performance: Was excellent with no lost time accidents for a total of 655 accident-free days at the end of December 2012.

Standard Operating Procedures:

Due to the Holiday vacation schedule, SSO's, and storm events that occurred during the month of December the Collection System staff was unable to release the projected SOPs in draft format this month.

Sanitary Sewer Overflows (SSOs):

For the month of December 2012, there were three (3) SSO's.

No.	Date	Location	Amount, gal	Cause
1	12/10/2012	974 Bel Marin Keys Blvd.	81	Contractor Error*
2	12/19/2012	1227 Ridgeview Ct.	204	Root Intrusion
3	12/22/2012	451 Alameda del Prado	3,150	Root Intrusion

*pending further review.

**Novato Sanitary District
Wastewater Operations Committee meeting
Collection System Operations Report
December 2012**

SSO at 974 Bel Marin Keys Blvd: This SSO was a Category II event with the discharge volume fully contained in the street and gutter pan and 100 % recovery achieved by Collection System staff.

The discharge occurred when the contractor working on the pump station rehabilitation project (discussed above), W.R. Forde, was clearing the sewage out of the force main discharging from the BMK 10 pump station prior to taking control of the pump station for rehabilitation. The contractor used a combination of high pressure forced air and fresh water to clear the force main, with the combined mixture to be discharged at a downstream outfall manhole. Contractor personnel assumed a different manhole as the outfall manhole during this process, and did not discover the error until the task of clearing the force main had started. This incorrect assumption (and lack of monitoring of the correct manhole) resulted in the discharge of approximately 81 gallons of sewage to the street and gutter pan. The cause of this discharge was classified as contractor error, pending further review of any information to be provided by the contractor.

SSO at 1227 Ridgeview Ct: This SSO was a Category I event with the discharge volume entering the storm drain system, and from there into an unnamed creek feeding Scottsdale Pond. There was no recovery (0%) for this discharge due to the location of this discharge. This discharge was reported to the District by field crew from the North Marin Water District (NMWD).

This discharge was determined to be the result of a root blockage in the District main. The duration of this discharge was determined using residential and reporting party interviews. The volume of this event was estimated using a combination of: (a) the San Diego picture method, and (b) a chart from the NSD Overflow Response Plan that provides an estimate of the discharge vs. the observed height of the discharge above the pick-hole.

Cal EMA and Marin County Environmental Health Services (MCEHS) were notified within two (2) hours of District staff being notified of the discharge. Public Notification signs were posted (8 signs) in the unnamed creek at the direction of David Smail, MCEHS from 12/19/2012 to 12/24/2012. Due to the volume and location of this discharge and lack of acceptable sampling sites, no sampling was required by MCEHS.

This line segment had been on 24-month cleaning frequency, and was last cleaned on schedule on 5/4/2011 using the continuous rodder and as an ad hoc work order on 7/15/2011, using a hydro-flusher. The line segment was found to have heavy root intrusion during the rodder cleaning, and was made a candidate for rehabilitation at that time. This segment is currently scheduled for rehabilitation in FY12-13.

This SSO event was reported into the CIWQS database on 12/19/12 as a Category I event, SSO Event ID #789198 and was certified in CIWQS on 12/24/2012, Certification ID #999929.

**Novato Sanitary District
Wastewater Operations Committee meeting
Collection System Operations Report
December 2012**

SSO at 451 Alameda del Prado: This SSO was a Category I event with the discharge volume entering the storm drain system and from there into Arroyo de San Jose. There was no recovery (0%) for this discharge due to the severe storm event that was in progress when the discharge occurred.

This discharge was determined to be the result of a root blockage in the District main. The duration of this discharge was determined using reporting party interview. The volume of this event was estimated using a combination of: (a) the San Diego picture method, and (b) a chart from the NSD Overflow Response Plan that provides an estimate of the discharge vs. the observed height of the discharge above the pick-hole.

Cal EMA and Marin County Environmental Health Services (MCEHS) were notified within two (2) hours of District staff becoming aware of the discharge. Public Notification signs (10 signs) were posted in the Arroyo de San Jose at the direction of Armando Alegria, Marin County Environmental Health Services, (MCEHS) from 12/22/2012 to 12/26/2012. Due to the severe weather conditions at the time of this discharge, no sampling was required by MCEHS.

NSD personnel televised the affected sewer main line and found minor root intrusion at several of the joints in the line segment. It is possible that un-captured root debris from the two upstream line segments that had been previously cleaned on 12/10/2012 contributed to the cause of this overflow. This line segment was last cleaned on schedule on 11/19 /2012 using a hydro-flusher, and is on a 3 month cleaning frequency. The cleaning frequency for this main line section has not been changed due to this event and this line segment and the two line segments upstream from the discharge will be added to the Chemical Root Abatement Program for treatment in 2013. This event was reported into the CIWQS database on 12/22/2012 as a Category I event, SSO Event ID #789281 and was certified in CIWQS on 12/26/2012, Certification ID #138719.

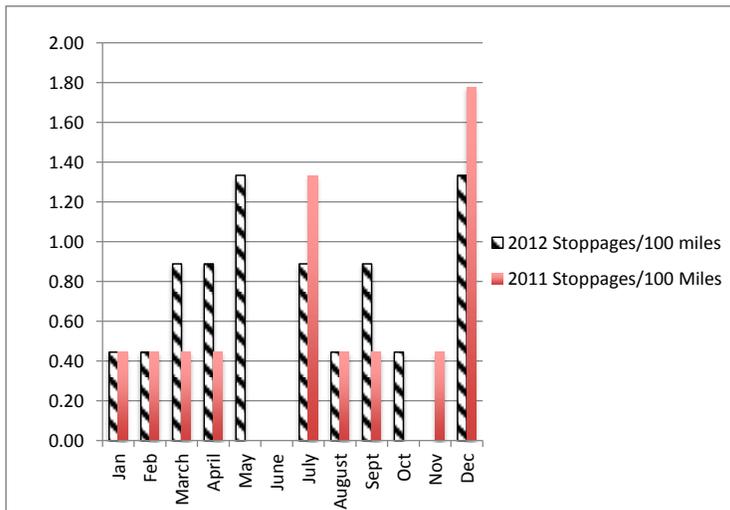
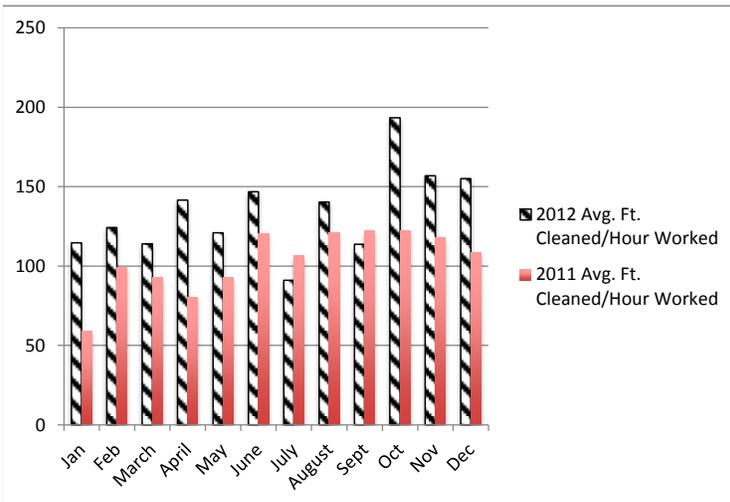
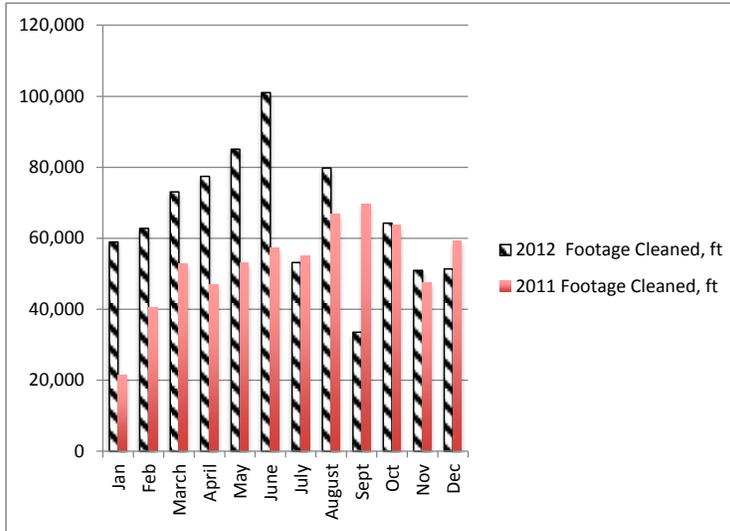
Novato Sanitary District
Collection System Monthly Report For 2012 (as of December 2012)

	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total Year to Date	Average Year to Date
Employee Hours Worked	547	549	689	575	709	723	611	612	307	364	363	367	6,415	535
Number of FTEs (main line cleaning)	3.2	3.2	4.0	3.3	4.1	4.2	3.5	3.5	1.8	2.1	2.1	2.1	6,031	503
Regular Time Worked on Coll. Sys., hrs	514	505	640	547	703	688	584	569	295	332	325	331	6,031	503
Regular Time Worked on Other, hrs ⁽¹⁾	69	148	174	189	153	232	341	336	383	419	334	227	3,004	250
Regular Time Worked on CCTV ⁽²⁾	NA	NA	NA	NA	NA	NA	NA	NA	NA	104	96	51	251	84
Vacation/Sick Leave/Holiday, hrs	221	357	292	365	371	77	194	257	142	55	278	280	2,889	241
Overtime Worked on Coll. Sys., hrs	33	44	49	29	6	35	27	44	12	32	38	36	384	32
Overtime Worked on Other, hrs ⁽¹⁾	1	0	3	13	1	7	1	10	30	10	9	11	94	8
Overtime Worked on CCTV ⁽²⁾	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	0	0	0	0
After Hours Callouts, #	1	2	0	0	0	1	0	1	0	0	2	2	9	1
Service calls, normal hours, #	7	3	8	4	6	6	8	3	10	14	5	9	83	7
Average S.C. response time, mins	29	30	23	13	14	14	18	20	19	15	11	18	NA	19
Productivity														
Rodder Work Orders Generated, ft	16	18	3	54	92	75	56	13	10	24	13	40	414	35
Rodder 3203 Ft. Cleaned	1,626	1,064	708	10,369	12,117	12,886	8,995	3,071	2,936	2,920	2,353	7,583	66,628	5,552
Flusher Work Orders Generated	275	286	299	344	428	452	235	454	151	303	228	217	3,672	306
Truck 3205V Ft. Cleaned	7,667	23,744	0	2,364	2,125	0	6,892	24,699	6,366	10,305	1,257	1,282	86,701	7,225
Truck 3206V Ft. Cleaned	49,636	37,928	59,307	64,640	70,815	88,100	37,294	51,970	24,190	51,001	47,310	42,466	624,657	52,055
Camera Ft. Videoed	5,274	1,031	13,000	1,565	8,545	17,237	23,790	15,534	19,268	NA	6,503	2,473	114,220	10,384
Work Orders Completed	291	304	302	398	520	527	291	467	161	327	241	257	4,086	341
Work Orders backlog	14	42	67	41	27	28	16	0	0	10	6	13	264	22
Total Footage Cleaned	58,929	62,736	73,015	77,373	85,057	100,986	53,181	79,740	33,492	64,226	50,920	51,331	790,986	65,916
Stoppages	1	1	2	2	3	0	2	1	2	1	0	3	18	NA
Minor	0	1	2	2	3	0	1	1	0	0	0	1	11	NA
Major	1	0	0	0	0	0	1	0	2	1	0	2	7	NA
Overflow Gallons	75	26	398	316	68	0	3,385	5	14,184	2,900	0	3,435	24,792	NA
Volume Recovered	0	26	108	93	63	0	3,385	5	707	0	0	81	4,468	NA
Percent Recovered	0%	100%	27%	29%	93%	NA	100%	100%	5%	0%	NA	2%	18%	NA
Benchmarks														
Average Ft. Cleaned/Hour Worked	115	124	114	142	121	147	91	140	114	193	157	155	NA	134
Total Stoppages/100 Miles	0.4	0.4	0.9	0.9	1.3	0.0	0.9	0.4	0.9	0.4	0.0	1.3	8.0	NA
Average spill response time (mins)	8	9	20	20	28	0	14	60	17	28	NA	16	NA	20
Callouts/100 Miles	0.4	0.9	0.0	0.0	0.0	0.4	0.0	0	0	0	0	0	4.0	0.2
Overtime hours/100 Miles	15	20	22	13	3	16	12	19	5	14	17	16	171	14
Overflow Gallons/100 Miles	33	12	177	140	30	0	1504	2	6304	1289	0	1527	11019	918

⁽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 beginning October 2012 .

Collection System 2011-12 Graphs



Novato Sanitary District

Pump Station Monthly Report For 2012 (as of December 2012)

	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total Year to Date	Average Year to Date
Employee Hours Worked	334	263	336	276	401	331	352	307	284	324	227	272	3,705	
Number of Employees	1.9	1.5	1.9	1.6	2.3	1.9	2.0	1.8	1.6	1.9	1.3	1.6		1.8
Regular Time Worked on Pump Sta	254	236	280	246	281	277	294	283	234	303	179	204	3,070	
Overtime Worked on Pump Sta	80	27	56	30	120	54	58	25	50	21	48	68	635	
After Hours Callouts	4	2	6	2	3	4	4	4	4	2	3	4	42	
Average Callout response time (mins)	23	25	38	27	34	22	24	23	35	25	40	36	352	29
Work Orders														
Number generated in month	114	154	112	105	119	119	130	123	119	141	188	154	1578	
Number closed in month	87	73	88	80	92	93	103	97	137	122	181	114		
Backlog	27	81	24	25	27	26	27	26	8	19	7	40		

**COLLECTION SYSTEM (Pump Stations)
WORK ORDER STATISTICS
December 1, 2012 - December 31, 2012**

	Open Work Orders Due Prior to 12/1/2012	Open Work Orders 12/1/2012 - 12/30/2012	Total Open Work Orders
Preventive	7	154	40
Corrective	NA	0	0
Total	0	154	154

	Closed Work Orders 12/1/2012 - 12/30/2012
Preventive	114
Corrective	NA
Total	114

Total Outstanding Work Orders as of 12/31/2012	40
---	-----------

Appendix B: 2012-13 SSMP Audit Checklist

**Novato Sanitary District
Biennial Sewer System Management Plan Audit Form
2014**

The purpose of the Sewer System Management Plan (SSMP) Audit is to evaluate the effectiveness of Novato Sanitary District's (NSD) SSMP and to identify deficiencies, if any, and steps to correct them. The audit is submitted pursuant to the requirements included in the State Water Resources Control Board Order No. 2006-0003-DWQ and San Francisco Bay Regional Water Quality Control Board's Sewer System Management Plan Development Guide, July 2005. Information collected in the Annual Report of Sanitary Sewer Overflows is used in preparing this audit and therefore the two reports are intended to be submitted simultaneously.

Directions: Please circle **YES** or **NO** for each question. To answer the following questions refer to the text of the SSMP Element, any referenced material in the text, all corresponding Attachments, and any data collected to assist in assessing SSMP effectiveness. For any **NO** responses describe the updates or changes needed and the timeline to completion in "Description of Scheduled Updates/Changes to the SSMP" on Page 5 of this form.

ELEMENT I. GOALS

1. Are the goals stated in the SSMP still appropriate and accurate? YES / NO

ELEMENT II. ORGANIZATION

2. Is the SSMP up-to-date with NSD organization and staffing contact information? YES / NO

ELEMENT III. OVERFLOW EMERGENCY RESPONSE PLAN

3. Does the SSMP contain or reference an up-to-date version of NSD's Overflow Emergency Response Plan? YES / NO
4. Considering the information in the Annual SSO Report, is the Overflow Emergency Response Plan effective in handling SSOs? YES / NO

ELEMENT IV. FATS, OILS, AND GREASE (FOG) CONTROL PLAN

5. Does the SSMP reference up-to-date information about NSD's FOG control program? YES / NO
6. Based upon information in the SSO Annual Report, is the current FOG program effective in documenting and controlling FOG sources? YES / NO

ELEMENT V. LEGAL AUTHORITY

7. Does the SSMP reference up-to-date information about NSD's legal authority? YES / NO

8. Does NSD have sufficient legal authority to control sewer use and maintenance? YES / NO

ELEMENT VI. MEASURES AND ACTIVITIES

a. COLLECTION SYSTEM MAPS

9. Does the SSMP reference up-to-date information about NSD's maps? YES / NO
10. Are NSD's collection system maps complete, up-to-date, and sufficiently detailed? YES / NO

b. RESOURCES AND BUDGET

11. Does the SSMP reference up-to-date information about NSD's resources and budget? YES / NO
12. Are NSD's resources and budget sufficient to support effective sewer system management? YES / NO
13. Do NSD's planning efforts support long-term goals? YES / NO

c. PRIORITIZED PREVENTIVE MAINTENANCE

14. Does the SSMP reference up-to-date information about NSD's preventive maintenance activities? YES / NO
15. Based upon information in the Annual SSO Report, are NSD's preventive maintenance activities sufficient and effective in reducing and preventing SSOs and blockages? YES / NO

d. SCHEDULED INSPECTIONS AND CONDITION ASSESSMENT

16. Does the SSMP reference up-to-date information about NSD's inspections and condition assessment? YES / NO
17. Is NSD's scheduled inspections and condition assessment system effective in locating, identifying, and addressing deficiencies? YES / NO

e. CONTINGENCY EQUIPMENT AND REPLACEMENT INVENTORIES

18. Does the SSMP reference up-to-date information about equipment and replacement inventories? YES / NO
19. Are contingency equipment and replacement parts sufficient to respond to emergencies and properly conduct regular maintenance? YES / NO

f. TRAINING

20. Does the SSMP reference up-to-date information about NSD's training expectations and programs? YES / NO
21. Do supervisors believe that their staff are sufficiently trained? YES / NO

22. Are staff satisfied with the training opportunities and support offered to them? YES / NO

g. OUTREACH TO PLUMBERS AND BUILDING CONTRACTORS

23. Does the SSMP reference up-to-date information about NSD's outreach to plumbers and building contractors? YES / NO
24. Has NSD conducted or participated in any outreach activities to plumbers and building contractors? YES / NO

ELEMENT VII. DESIGN AND CONSTRUCTION STANDARDS

25. Does the SSMP contain or reference up-to-date information about NSD's design and construction standards? YES / NO
26. Are design and construction standards, as well as standards for inspection and testing of new and rehabilitated facilities sufficiently comprehensive and up-to-date? YES / NO

ELEMENT VIII. CAPACITY MANAGEMENT

27. Does the SSMP reference up-to-date information about NSD's capacity assessment? YES / NO
28. Has NSD completed a capacity assessment and identified and addressed any hydraulic deficiencies in the system? YES / NO

ELEMENT IX. MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

29. Does the SSMP reference up-to-date information about NSD's data collection and organization? YES / NO
30. Is NSD's data collection and organization sufficient to evaluate the effectiveness of the SSMP? YES / NO

ELEMENT X. SSMP AUDITS

31. Will this SSMP Audit be submitted with the Annual Report to the Regional Water Board by March 15? YES / NO

ELEMENT XI. COMMUNICATION PROGRAM

32. Has NSD effectively communicated with the public and other agencies about the development, implementation and performance of the SSMP? YES / NO
33. Has NSD provided the public the opportunity for input as the program is developed and implemented? YES / NO

Evaluation of the Effectiveness of the SSMP

Directions: Include information on evaluation of effectiveness of the SSMP (performance measures, etc.)

Response: See Section 4 – SSMP above.

Description of Scheduled Updates/Changes to the SSMP

Directions: For each question answered NO, please reference the SSMP Element and the audit question number when describing the content of any updates/changes needed and the timeline to completion. N/A

RESOLUTION OF APPRECIATION

Resolution No. 3069

**A Resolution Commending Ms. Beverly B. James for
Distinguished Service As
Manager-Engineer
Of Novato Sanitary District**

Whereas, Ms. BEVERLY B. JAMES

has served the Novato Sanitary District for over 14 years, having been first appointed Technical Services Manager in April 2000 and then appointed Manager-Engineer in February 2004; and

Whereas, Ms. James has faithfully served the District with honesty, efficiency, and dedicated service; has provided considerable expertise in water and wastewater issues; and has contributed substantially to the continued successful operation of said District; and

Whereas, the Members of the Board of Directors of this Novato Sanitary District wish to give public recognition to her valuable contributions to the District;

NOW, THEREFORE, SAID DISTRICT BOARD OF DIRECTORS DOES HEREBY ORDER, as follows:

1. That this Board of Directors on its behalf, and on behalf of the people of this District, does hereby express appreciation and gratitude to **MS. BEVERLY B. JAMES** for her years of loyal and dedicated service to said Board and District.

2. That the President of the Board of Directors transmit a copy of this Resolution to **MS. BEVERLY B. JAMES** with the sincere good wishes of every member of this Board of Directors.

UNANIMOUSLY ADOPTED by the Board of Directors of the Novato Sanitary District at a meeting thereof held on March 24, 2014.

Attest: _____

Michael DiGiorgio, President

Jean Mariani, President Pro-Tem

William Long, Member

Brant Miller, Member

A. Gerald Peters, Member

Kenton Alm, Legal Counsel

NOVATO SANITARY DISTRICT BOARD AGENDA ITEM SUMMARY

TITLE: Appointment of District Secretary-Treasurer	MEETING DATE: March 24, 2014
AGENDA ITEM NO.: 7.b.	
RECOMMENDED ACTION: Consider appointment of Sandeep Karkal, Manager-Engineer, as District Secretary-Treasurer, effective April 1, 2014.	
SUMMARY AND DISCUSSION:	
<p>Traditionally, the District Manager-Engineer also serves as the District Secretary-Treasurer. Appointments are usually made in June each year when new Board officers are elected for the fiscal year.</p> <p>With the retirement of Beverly James as District Manager-Engineer/Secretary-Treasurer on March 31, 2014, the Board has appointed Deputy Manager-Engineer Sandeep Karkal, to assume the position of Manager-Engineer, effective April 1, 2014. Therefore, it is recommended that Manager-Engineer Sandeep Karkal also be appointed the new Secretary-Treasurer of the District, effective April 1, 2014.</p>	
ALTERNATIVES: No alternatives recommended	
BUDGET INFORMATION: No budget impact.	
DEPT. MGR. :	MANAGER'S APPROVAL:

NOVATO SANITARY DISTRICT BOARD AGENDA ITEM SUMMARY

TITLE: Update District Policy 3120 (Investment of District Funds)	MEETING DATE: March 24, 2014 AGENDA ITEM NO.: 7.c.
RECOMMENDED ACTION: Consider changes to Section 3120.5 of the policy titled “Delegation of Authority” to reflect appointment of Sandeep Karkal, Manager-Engineer, Secretary-Treasurer, effective April 1, 2014.	
SUMMARY AND DISCUSSION: Section 3120.5 of the District’s current policy number 3120 titled “Investment of District Funds” currently delegates authority to manage the District’s investment program to Beverly James in her capacity as Manager-Engineer/Secretary-Treasurer. With the retirement of Beverly James as District Manager-Engineer/Secretary-Treasurer on March 31, 2014, the Board has appointed Deputy Manager-Engineer Sandeep Karkal, to assume the position of Manager-Engineer, and subsequently as District Secretary-Treasurer, both to be effective April 1, 2014. Therefore, it is recommended that Section 3120.5 of this policy number 3120 titled “Delegation of Authority”, be updated to reflect these changes, effective April 1, 2014.	
ALTERNATIVES: No alternatives recommended	
BUDGET INFORMATION: No budget impact.	
DEPT. MGR. :	MANAGER’S APPROVAL:

NOVATO SANITARY DISTRICT BOARD AGENDA ITEM SUMMARY

TITLE: 401(a) Plan Amendment	MEETING DATE: 03/24/2014
	AGENDA ITEM NO.: 7.d.
RECOMMENDED ACTION: Adopt resolution amending Lincoln National Life Insurance Company 401(a) Plan	
SUMMARY AND DISCUSSION: <p>In October 2008, the Board authorized establishment of a 401(a) "Profit Sharing Defined Contribution Plan" for Management and Confidential employees. Amendments or restatements of the plan are required to comply with the Pension Protection Act (PPA) of 2006 and other legislative and regulatory requirements whenever the Plan is modified or when updates are required under the Economic Growth Tax Relief Reconciliation Act of 2001 (EGTRRA).</p> <p>The District's Plan is now being amended to reflect the change of Trustee from Manager-Engineer Beverly James to Manager-Engineer Sandeep Karkal, effective April 1, 2014.</p> <p>A copy of the resolution adopting the amended Lincoln National Life Insurance 401(a) Plan is attached.</p>	
ALTERNATIVES: N/A	
BUDGET INFORMATION: No budget impact.	
DEPT. MGR. :	MANAGER'S APPROVAL:

RESOLUTION NO. 3070

**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE NOVATO SANITARY DISTRICT,
AMENDING THE DISTRICT'S 401(a) PLAN
WITH LINCOLN NATIONAL LIFE INSURANCE COMPANY
TO REFLECT CHANGE OF TRUSTEE**

WHEREAS, on October 13, 2008, the Board of Directors of the Novato Sanitary District adopted a Lincoln National Insurance Company Profit Sharing Defined Contribution 401(a) Plan; and

WHEREAS, certain amendments to the Plan are required to comply with the Pension Protection Act of 2006 and other legislative and regulatory changes, as described in the Amended Adoption Agreement, Plan Number 002;

NOW, THEREFORE, BE IT RESOLVED that Novato Sanitary District adopts the Amended Adoption Agreement, Plan Number 002, to the Lincoln Financial Group 401(a) Plan; authorizes and directs the President of the Board of Directors to execute said agreement on behalf of Novato Sanitary District, and directs staff to provide Lincoln National Life Insurance Company with such information and cooperation as may be needed on an ongoing basis in the administration of the 401(a) Plan.

PASSED AND ADOPTED as a resolution of the Board of Directors of the Novato Sanitary District, at a meeting held on March 24, 2014.

AYES,	Members:	Di Giorgio, Long, Mariani, Miller, Peters
NOES,	Members:	None
ABSENT,	Members:	None

Michael Di Giorgio, President

Attest:

Beverly B. James, Manager-Engineer

NOVATO SANITARY DISTRICT BOARD AGENDA ITEM SUMMARY

TITLE: North Bay Water Reuse Authority:	MEETING DATE: 03/24/2014
AGENDA ITEM NO.: 8.a.	
RECOMMENDED ACTION: Give direction to staff with regard to Phase II participation.	
SUMMARY AND DISCUSSION:	
<p>The Technical Advisory Committee for North Bay Water Reuse Authority will be meeting on Wednesday, March 26th. One of the items on the agenda is to review the proposed consultant contracts and budget for 2014-15, 2015-16, 2016-17, and 2017-18 and consider recommending approval of the contracts and budget to the Board of NBWRA.</p> <p>The Board reviewed a previous version of the budget on February 10, 2014 and gave direction to staff to reduce the number of projects and investigate ways to reduce the engineering, administration, and advocacy costs.</p> <p>Staff worked with the other Technical Advisory Committee members and all consultants were asked to submit revised proposals with a 35% cost reduction. All of the consultants did submit new proposals with an overall cost reduction of 4.8%. However, this cost savings was more than offset by the fact that Las Gallinas Valley Sanitary District decided to not participate in Phase II and the Marin Municipal Water District and City of Petaluma significantly reduced their number of projects. The net result was that the cost for Novato Sanitary District to participate increased from \$1,005,040 to \$1,332,296 if we don't eliminate any projects.</p> <p>The attached Tables show the cost to Novato Sanitary District for three options:</p> <ol style="list-style-type: none"> 1. All three projects with a total cost of \$35,540,000 2. Hamilton Storage Wetlands and Lower Novato Creek Watershed with a total cost of \$19,740,000 3. Hamilton Storage Wetlands only with a total cost of \$15,100,000. <p>If we eliminate the treatment plant and Lower Novato Creek Watershed projects the total Novato Sanitary District cost would potentially be reduced to \$747,121 unless one or more of the other agencies also reduced their projects.</p> <p>Staff recommends that the District not approve the budget at this time and direct staff to work with the other agencies and consultants to address the costs.</p>	
ALTERNATIVES: N/A	
BUDGET INFORMATION: No budget impact.	
DEPT. MGR. :	MANAGER'S APPROVAL:

**North Bay Water Reuse Authority
 Novato Sanitary District Cost Allocation
 Including Treatment Plant Upgrade, Storage, and
 Lower Novato Creek Watershed**

Phase 1 Support	
25% Shared Equally Between 7 Agencies/ 75% Shared By Phase 1 Benefit	Novato Sanitary District
<i>MOU Percent for Phase 1</i>	8.611%
Grant Applications and Management - B&C	8,290
Program Development (40% of \$221,110 total) - Bryant	27,197
Federal Advocacy (30% of \$157,900 total) - TFG sub to Bryant	10,953
Total	\$46,440

Phase 2 Support	
Shared on the Basis of Phase 2 Project Cost in Feasibility Study	Novato Sanitary District
<i>Percent for Phase 2 Support</i>	25.767%
Program Development (60% of \$221,110 total) - Bryant	122,072
Federal Advocacy (70% of \$157,900 total) - TFG sub to Bryant	76,476
Total	\$198,548

Phase 2 Feasibility Study	
Shared on the Basis of Phase 2 Project Cost in Feasibility Study	Novato Sanitary District
<i>Percent for Phase 2 Feasibility Study</i>	25.767%
Engineering, Environmental, and Outreach Services - B&C	865,907
SCWA Administration - Grants and EIR/EIS	103,067
Total	\$968,974

Joint Use	
Shared Equally Between Current and New Members	Novato Sanitary District
<i>Percent for Joint Use</i>	11.111%
Program Management - Weir	33,000
State Advocacy - The Onate Group (Sub to Bryant)	18,667
SCWA Administration	66,667
Total	\$118,333

for FY2014/15, FY2015/16	
Total Phase I and 2 Cost	Novato Sanitary District
Total Phase I and 2 Cost	\$1,332,296
Potential Federal Cost Sharing Reimbursement	\$484,487
Potential Net Cost to NBWRA	\$847,809
Annual Cost if split equally over three years (w/o fed)	\$444,099
Annual Cost if split equally over three years (w fed)	\$282,603

**North Bay Water Reuse Authority
 Novato Sanitary District Cost Allocation
 Without Treatment Plant Upgrade**

Phase 1 Support	
25% Shared Equally Between 7 Agencies/ 75% Shared By Phase 1 Benefit	Novato Sanitary District
<i>MOU Percent for Phase 1</i>	8.611%
Grant Applications and Management - B&C	8,290
Program Development (40% of \$221,110 total) - Bryant	27,197
Federal Advocacy (30% of \$157,900 total) - TFG sub to Bryant	10,953
Total	\$46,440

Phase 2 Support	
Shared on the Basis of Phase 2 Project Cost in Feasibility Study	Novato Sanitary District
<i>Percent for Phase 2 Support</i>	16.163%
Program Development (60% of \$221,110 total) - Bryant	76,574
Federal Advocacy (70% of \$157,900 total) - TFG sub to Bryant	47,972
Total	\$124,546

Phase 2 Feasibility Study	
Shared on the Basis of Phase 2 Project Cost in Feasibility Study	Novato Sanitary District
<i>Percent for Phase 2 Feasibility Study</i>	16.163%
Engineering, Environmental, and Outreach Services - B&C	543,172
SCWA Administration - Grants and EIR/EIS	64,652
Total	\$607,825

Joint Use	
Shared Equally Between Current and New Members	Novato Sanitary District
<i>Percent for Joint Use</i>	11.111%
Program Management - Weir	33,000
State Advocacy - The Onate Group (Sub to Bryant)	18,667
SCWA Administration	66,667
Total	\$118,333

for FY2014/15, FY2	
Total Phase I and 2 Cost	Novato Sanitary District
Total Phase I and 2 Cost	\$897,145

**North Bay Water Reuse Authority
 Novato Sanitary District Cost Allocation
 Without Treatment Plant Upgrade or
 Lower Novato Creek Watershed**

Phase 1 Support	
25% Shared Equally Between 7 Agencies/ 75% Shared By Phase 1 Benefit	Novato Sanitary District
<i>MOU Percent for Phase 1</i>	8.611%
Grant Applications and Management - B&C	8,290
Program Development (40% of \$221,110 total) - Bryant	27,197
Federal Advocacy (30% of \$157,900 total) - TFG sub to Bryant	10,953
Total	\$46,440

Phase 2 Support	
Shared on the Basis of Phase 2 Project Cost in Feasibility Study	Novato Sanitary District
<i>Percent for Phase 2 Support</i>	12.852%
Program Development (60% of \$221,110 total) - Bryant	60,888
Federal Advocacy (70% of \$157,900 total) - TFG sub to Bryant	38,145
Total	\$99,034

Phase 2 Feasibility Study	
Shared on the Basis of Phase 2 Project Cost in Feasibility Study	Novato Sanitary District
<i>Percent for Phase 2 Feasibility Study</i>	12.852%
Engineering, Environmental, and Outreach Services - B&C	431,905
SCWA Administration - Grants and EIR/EIS	51,409
Total	\$483,314

Joint Use	
Shared Equally Between Current and New Members	Novato Sanitary District
<i>Percent for Joint Use</i>	11.111%
Program Management - Weir	33,000
State Advocacy - The Onate Group (Sub to Bryant)	18,667
SCWA Administration	66,667
Total	\$118,333

for FY2014/15, FY2	
Total Phase I and 2 Cost	Novato Sanitary District
Total Phase I and 2 Cost	\$747,121
Potential Federal Cost Sharing Reimbursement	\$241,657
Potential Net Cost to NBWRA	\$505,464
Annual Cost if split equally over three years (w/o fed)	\$249,040
Annual Cost if split equally over three years (w fed)	\$168,488

Subject: Water Board Adopts Modified Financial Incentives for Water Recycling Projects

Date: Tuesday, March 18, 2014 2:09:23 PM PT

From: CASA

To: Beverly James

Having trouble viewing this email? [Click here](#)

Member Alert

Water Board Adopts Financial Incentives for Water Recycling Projects

On March 18, 2014, the State Water Resources Control Board adopted a resolution to provide low interest rates on State Revolving Fund (SRF) loans for recycled water projects that are ready to provide new water supplies within the next three years. The State Water Board adopted a 1% rate for recycled water projects with complete applications between the date of the Governor's drought declaration-January 17, 2014-and December 2, 2015 up to a funding cap to \$800 million.

The Board also indicated their support for exercising flexibility on a case-by-case basis on two points raised by CASA and its members:

- Senior Lien Debt: Consider the overall credit-worthiness of a given agency rather than a strict standard that new CWSRF loans be senior to other agency debt.
- Repayment Schedules: Allow agencies to request and justify "customized" schedules based on their unique circumstances rather than amortize the loan over the repayment period so that annual debt service payments are the same in each year.

CASA conducted a survey jointly with other associations interested in increased water recycling which identified 44 projects in need of state funding assistance that are permitted and "shovel ready" that will produce 220,000 acre-feet of new water.

Loan applications and information are available on the State Water Board's website:

Applications and information are available on the State Water Board's website:

[Financial Assistance Programs: Grants and Loans CWSRF](#)

[Forward email](#)

This email was sent to bevj@novatosan.com by dwelch@casaweb.org | [Update Profile/Email Address](#) | Instant removal with [SafeUnsubscribe™](#) | [Privacy Policy](#).