

NOVATO SANITARY DISTRICT

Meeting Date: November 14, 2016

The Board of Directors of Novato Sanitary District will hold a regular meeting at 6:00 p.m., Monday, November 14, 2016, 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. Approve minutes of the October 24, 2016 meeting.
5. **CONSENT CALENDAR:**

The General Manager-Chief Engineer has reviewed the following item(s). To his knowledge, there is no opposition to the action. The item(s) 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. Approve regular disbursements, October 25 – November 14, 2016.
 - b. Receive Deposit Summary, October 2016.
 - c. Receive 1st Quarter Investment Report, Fiscal Year (FY)16-17.
 - d. Receive Summary 1st Quarter Financial Report, FY16-17.
 - e. Approve the Technical Services Manager to attend the American Water Works Association (AWWA) and Water Environment Federation (WEF) joint Utility Management 2017 training conference in Tampa, Florida.
6. **ADMINISTRATION/FINANCE:**
 - a. Receive memorandum/staff report titled "Establishment of Post-Employment Benefits Trust", and its recommendations summarized as Agenda Items 6.b.-6.f.
 - b. Approve setting up a combined Government Standards Accounting Board (GASB) Statements 45 and 68 Post-Employment Benefits Trust with Public Agency Retirement Services (PARS).

- c. Approve funding the GASB 45 (Other Post-Employment Benefits or OPEB) portion of the PARS combined trust fund with an initial partial discretionary contribution of \$700,000 from the unencumbered available cash balance in the Operating Fund; and each future year, subject to Board adoption of authorized amounts in the annual budget for that year, contribute an amount up to the full GASB 45 Annual Required Contribution (ARC) for that year, as established by the District's periodic GASB 45 valuation reports.
- d. Approve utilizing a further portion of the remaining unencumbered available cash balance in the Operating Fund to fund the GASB 68 (Net Pension Liability) portion of the combined trust fund with an initial partial discretionary contribution of \$200,000; and each future year, subject to Board adoption of authorized amounts in the annual budget for that year, contribute an amount up to the full GASB 68 ARC amount for that year, as established by CalPERS' periodic valuations of the District's GASB 68 pension liability.
- e. Authorize the General Manager to affirm the District's "conservative" investment philosophy to the PARS team for investment strategies adopted and asset allocations made on the District's behalf, and inform the PARS team of a desired average long term investment goal of 3%-5% for the District's combined GASB 45/68 trust fund.
- f. Adopt District Resolution No. 3104 – "Adoption Of The Public Agencies Post-Employment Benefits Trust Administered By Public Agency Retirement Services (PARS)", subject to minor changes, whereby the District adopts the PARS Public Agencies Post-Employment Benefits Trust, authorizes the General Manager to serve as the District's Combined Trust Plan Administrator, and subject to District Counsel review, authorizes him (as Plan Administrator) to execute all required legal and administrative documents on the District's behalf.

7. WASTEWATER OPERATIONS:

- a. Receive Wastewater Operations Report, October 2016.

8. BOARD MEMBER REPORTS AND REQUESTS:

9. GENERAL MANAGER'S REPORT AND ANNOUNCEMENTS:

Next Resolution No. 3105.

Next regular meeting date: Monday, December 12, 2016, 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.

NOVATO SANITARY DISTRICT

Board Meeting Minutes

Meeting Date: October 24, 2016

A regular meeting of the Board of Directors of the Novato Sanitary District was held at 6:00 p.m., Monday, October 24, 2016, at the District Office, 500 Davidson Street, Novato.

BOARD MEMBERS PRESENT: President Jerry Peters, Directors Carole Dillon-Knutson, Jean Mariani, and William Long. Director Brant Miller was absent (excused).

STAFF PRESENT: General Manager-Secretary Sandeep Karkal and Administrative Secretary Julie Swoboda.

ALSO PRESENT: John Bailey, Project Manager, Veolia Water
Erik Brown, Technical Services Manager, Novato Sanitary District
Jim Salyers, Vice President, Novato Disposal Services
John Warren, Chief Financial Officer, Novato Disposal Services
Rick Powell, General Manager, Novato Disposal Services
William Shoen, Principal, R3 Consulting Group
Steve Krauthem, Field Services Manager, Novato Sanitary District

PLEDGE OF ALLEGIANCE:

AGENDA APPROVAL: The agenda was approved as presented.

PUBLIC COMMENT: None.

REVIEW OF MINUTES:

Consider approval of minutes of the October 10, 2016 meeting.

On motion of Director Mariani, seconded by Director Long, and carried with the following vote, the October 10, 2016 Board meeting minutes were approved. Ayes: Peters, Mariani, Long. Abstain: Dillon-Knutson. (Director Dillon-Knutson abstained because she was not present at the October 10th meeting.) Absent: Miller.

CONSENT CALENDAR:

President Peters called for a motion on the Consent Calendar items as follows:

- a. Approve capital project disbursements in the amount of \$59,211.30, and regular disbursements in the amount of \$630,803.86.
- b. Approve payroll and payroll related disbursements in the amount of \$224,728.14.
- c. Receive Accounts Receivable Report as of October 21, 2016.
- d. Cancel Board meetings of November 28th and December 26th, 2016.

On motion of Director Mariani, seconded by Director Dillon-Knutson, and carried unanimously by those Directors present, the above listed Consent Calendar items were approved.

SOLID WASTE: PUBLIC HEARING – SET CALENDAR YEAR (CY) 2017 MAXIMUM ALLOWABLE SOLID WASTE RATES.

- Receive staff report. The General Manager stated that at its September 26, 2016 meeting, the District Board reviewed the following: the CY2017 rate adjustment request by Novato Disposal Service (NDS); the report by the District's consultant (R3 Consulting Group), that analyzed the NDS request; and a staff report with a recommendation for an overall solid waste rate adjustment based on a Refuse Rate Index (RRI) adjustment of +1.02%. He noted that a copy of the R3 Consulting Group report presented at the September 26, 2016 meeting was included in the Board materials for reference, labeled as Attachment 1. In addition, the General Manager pointed out that a comparison of the 2016 solid waste rates in Marin County was provided as Attachment 2. He stated that even if the proposed CY2017 maximum allowable rates are adopted, Novato's solid waste rates will continue to be the lowest across all entities in Marin County for residential, commercial and debris box services.

The General Manager stated that, as required, notices of the proposed rate increase and hearing were published in the Marin Independent Journal on both October 6th and 13th, 2016.

- Open public hearing. President Peters opened the public hearing at 6:08 p.m.

- Public comments. None.

- Board comments. Director Dillon-Knutson stated that the proposed rate increase was justified, noting that our rates are lower than others in the County. She commended the District for keeping rates so low.

Director Long stated that Novato Disposal was providing a good service at a good rate.

Director Mariani agreed with her colleagues, stating that the rate increase was clearly appropriate. She commented that Novato Disposal Company does a great job.

President Peters stated that the rate increase is very reasonable and that Novato Disposal has the lowest rates in the area.

- Close public hearing. President Peters closed the public hearing at 6:15 p.m.

Upon close of the public hearing, the General Manager-Chief Engineer requested that the Board adopt Resolution 3103 setting CY2017 maximum allowable rates for refuse collection and disposal services.

- Adopt Resolution No. 3103 setting CY2017 maximum allowable rates for refuse collection and disposal services.

On motion of Director Long, seconded by Director Dillon-Knutson, and carried unanimously by those Directors present, the Board adopted Resolution No. 3103: A Resolution Setting Maximum Solid Waste Service Charges for Novato Disposal Company in Novato Sanitary District.

At 6:17 p.m., Jim Salyers, William Shoen, John Warren, and Rick Powell, left the meeting.

BOARD MEMBER REPORTS AND REQUESTS:

North Bay Water Reuse Authority (NBWRA) report: Director Long gave an overview of his participation at the NBWRA meeting which was held on Monday, October 24th at the Novato City Hall. He stated that NBWRA continues to discuss Phase 2 projects, costs, and funding options.

Director Long also discussed his attendance at the CWEA/CASA Communication Essentials workshops which he attended on October 18th in Oakland, and on October 20th in Orange County.

INFORMATIONAL ITEMS:

- University of North Carolina, Chapel Hill, Environmental Finance Center article: "Fun Facts About Water System Rate Structures". The General Manager stated that this item was for informational purposes only.

GENERAL MANAGER'S ANNOUNCEMENTS:

- Announcement: Next Board meeting is Monday, November 14th, at 6:00 p.m.
- Announcement: Friday, November 11th, is Veteran's Day, a District holiday.
- Announcement: As in prior years, there will be no Board meetings in the second half of November and December.
- Announcement: At the last Board meeting, the General Manager had announced on behalf of District Counsel that the long running Bayside matter in the Hamilton neighborhood had been resolved per prior direction provided by the Board. The result is an unconditional settlement of \$225,000 with Lennar/Greystone Homes. Consistent with Board direction, District Counsel and the Board President have signed off on the settlement agreement on behalf of the District. District Counsel's office informed the General Manager this afternoon that the \$225,000 check was received by District Counsel's office and is being sent to the District via FedEx.

ADJOURNMENT: There being no further business to come before the Board, President Peters adjourned the meeting at 6:39 p.m.

Respectfully submitted,

Sandeep Karkal
Secretary

Julie Hoover, Recording

**Novato Sanitary District
Board Fees Check Register**

November 8, 2016

Item 5.a.
(Pages 6 to 8)

Date	Num	Name	Credit
Nov 8, 16			
11/08/2016	4691	Long, William C	575.47
11/08/2016	4694	Peters, Arthur Gerald	389.58
11/08/2016	3215	Dillon-Knutson-, Carole	207.79
11/08/2016	4692	Mariani, Jean M	
11/08/2016	4693	Miller, Brant	
Nov 8, 16			<u><u>1,172.84</u></u>

Novato Sanitary District Operating Check Register

November 14, 2016

Date	Num	Name	Credit
Nov 14, 16			
11/14/2016	59985	Veolia Water North America, Inc.	169,760.32
11/14/2016	59949	Custom Tractor Service	110,454.92
11/14/2016	59986	Veolia Water North America, Lab	27,458.66
11/14/2016	59965	Johnson, Dee	9,420.88
11/14/2016	59953	East Bay Muni Utility District	7,586.00
11/14/2016	59942	California Diesel & Power	7,075.00
11/14/2016	59977	Optiv Security Inc.	6,700.00
11/14/2016	59944	Central Marin Sanitation District	6,335.70
11/14/2016	59933	BakerCorp	4,817.91
11/14/2016	59943	Caltest Analytical Lab Inc.	3,500.85
11/14/2016	59960	Herc Corporation	2,958.76
11/14/2016	59962	IDEXX Distributing Corp.	2,868.48
11/14/2016	59959	Harris & Associates, Inc	2,750.00
11/14/2016	59984	U.S. Bank Card (3)Craig	2,631.28
11/14/2016	59983	Shape Incorporated	2,383.13
11/14/2016	59937	Beecher Engineering, Inc	1,850.00
11/14/2016	59956	Frontier Communications of CA	1,730.89
11/14/2016	59972	North Marin Water District	1,273.81
11/14/2016	59934	Bank of New York Mellon-fee	1,250.00
11/14/2016	59945	Cintas Corporation	1,180.21
11/14/2016	59963	IEDA, INC	1,143.00
11/14/2016	59964	Jan-Pro Cleaning Systems	1,005.00
11/14/2016	59971	North Marin Auto Parts	988.55
11/14/2016	59948	CSRMA-	853.40
11/14/2016	59929	Alpha Analytical Lab, Inc.	780.00
11/14/2016	59954	Environmental Products and Accessories	656.05
11/14/2016	59980	Pini Hardware	617.05
11/14/2016	59968	Manco	586.53
11/14/2016	59966	Leonardi Automotive & Electric, Inc.	571.98
11/14/2016	59931	Art's Towing	562.50
11/14/2016	59988	Vision Service Plan	526.35
11/14/2016	59957	Government Finance Officers Assoc.	435.00
11/14/2016	59951	Diesel Emissions Service, Inc.	432.71
11/14/2016	59981	Pitney Bowes Reserve Account	400.00
11/14/2016	59987	Verizon Wireless-	376.23
11/14/2016	59982	RP Equipment previously MBE	367.10
11/14/2016	59955	Evoqua Water Technologies - Lab	358.80
11/14/2016	59958	Grainger	351.72
11/14/2016	dir dep	Long, William C.	262.71
11/14/2016	59975	Novato Disposal-	253.21
11/14/2016	59946	Claremont EAP, Inc.	250.00
11/14/2016	59938	BoundTree Medical, LLC	238.39
11/14/2016	59970	Marin Mechanical II, Inc.	210.00
11/14/2016	59967	Lightning Services, Inc.	195.00
11/14/2016	59950	CWEAmembers	186.00
11/14/2016	59940	Buckles-Smith1	185.89
11/14/2016	59969	Marin Independent Journal - Subs	166.40
11/14/2016	59941	Cagwin & Dorward Inc.	160.05
11/14/2016	59978	Orkin Pest Control, Inc.	144.56
11/14/2016	59947	CSMFO	110.00
11/14/2016	59935	Barnett Medical LLC	90.00
11/14/2016	59930	American Messaging	88.70
11/14/2016	59961	Honey Bucket	88.20
11/14/2016	59973	Novato Builders Supply	85.61
11/14/2016	59932	AT&T Mobility	62.18
11/14/2016	59974	Novato Car Wash	62.00
11/14/2016	59936	Batteries Plus Inc	55.55
11/14/2016	59979	Petty Cash	36.40
11/14/2016	59989	Water Components & Building, Inc.	34.94
11/14/2016	59976	Novato Toyota	32.26
11/14/2016	59952	Don Johnsons Pool Service	28.26
11/14/2016	59939	Buck's Saw Service, Inc.	17.29
Nov 14, 16			<u>388,042.37</u>

Novato Sanitary District Capital Projects Check Register

November 14, 2016

Date	Num	Name	Credit
Nov 14, 16			
11/14/2016	3098	Linscott Engineering Contractors Inc	13,616.95
11/14/2016	3099	North Marin Water District Jobsite	6,160.70
11/14/2016	3100	Nute Engineering Inc.	1,022.75
11/14/2016	3101	Summit Engineering Inc	700.16
			<hr/>
Nov 14, 16			21,500.56
			<hr/> <hr/>

Novato Sanitary District
Deposit Detail
October 2016

Item 5.b.
(Pages 9 to 10)

Type	Date	Name	Account	Amount
Deposit	10/06/2016		11113 · Westamerica - Operations	
		Schuster, Allen	41040 · Permit & Inspection Fee	40.00
		Grier, Sandra	41040 · Permit & Inspection Fee	40.00
		AT &T	66193 · Telephone	16.64
		Novato Chevrolet	41040 · Permit & Inspection Fee	60.00
		Construction & Development Solutions	41040 · Permit & Inspection Fee	60.00
		Construction & Development Solutions	51020 · Connection Charges	21,413.90
		ETIC Engineering	11200 · Accounts Receivable	262.13
TOTAL				21,892.67
Deposit	10/12/2016		11113 · Westamerica - Operations	
		State of California	51070 · Other Revenue	2,890.72
		Peter Levi Plumbing	41040 · Permit & Inspection Fee	40.00
		Gopher It	41040 · Permit & Inspection Fee	40.00
		Hardiman Construction	41040 · Permit & Inspection Fee	40.00
		John Lomax	41040 · Permit & Inspection Fee	40.00
		Roto Rooter	41040 · Permit & Inspection Fee	40.00
TOTAL				3,090.72
Deposit	10/18/2016		11113 · Westamerica - Operations	
		Hartley, Heather	41040 · Permit & Inspection Fee	40.00
		Stag Mutual	41040 · Permit & Inspection Fee	40.00
		Stag Mutual	51020 · Connection Charges	10,860.00
		Gene Burch Plumbing	41040 · Permit & Inspection Fee	60.00
		Ben Franklin Plumbing	41040 · Permit & Inspection Fee	40.00
		Au Energy LLC	11200 · Accounts Receivable	1,240.00
TOTAL				12,280.00
Deposit	10/21/2016		11113 · Westamerica - Operations	
		Ben Franklin Plumbing	41040 · Permit & Inspection Fee	40.00
		P,G & E1	11200 · Accounts Receivable	1,804.46
		Homeward Bound	11200 · Accounts Receivable	7,414.62
TOTAL				9,259.08
Deposit	10/24/2016		11113 · Westamerica - Operations	
		Glassman Planning	41040 · Permit & Inspection Fee	60.00
		Creamer, Laura(reimb)	66090 · Office Expense	12.24
		MISC-	66090 · Office Expense	27.00
		Indian Valley College	11200 · Accounts Receivable	21,143.70
TOTAL				21,242.94
Deposit	10/25/2016		11113 · Westamerica - Operations	
		Lennar Homes of Calif	51070 · Other Revenue	225,000.00
TOTAL				225,000.00

**Novato Sanitary District
Deposit Detail
October 2016**

Deposit	10/25/2016	11113 · Westamerica - Operations	
	Colorado West Const	51020 · Connection Charges	3,801.00
	SMART-	11200 · Accounts Receivable	30.09
	Novato Charter School	11200 · Accounts Receivable	1,806.09
	Marin County Housing Auth	11200 · Accounts Receivable	11,460.00
	Bel Marin Keys CDS	11200 · Accounts Receivable	412.56
TOTAL			17,509.74
Deposit	10/26/2016	11113 · Westamerica - Operations	
	USCG	11200 · Accounts Receivable	14,608.10
TOTAL			14,608.10
Deposit	10/31/2016	11113 · Westamerica - Operations	
	County of Marin	51015 · Property Taxes	4,634.65
	CWEAmembers	66080 · Memberships	164.00
	Novato Fire Protection	11200 · Accounts Receivable	11,482.94
	P,G & E	11200 · Accounts Receivable	60.17
TOTAL			16,341.76
Deposit	10/31/2016	11113 · Westamerica - Operations	
	Roto Rooter	41040 · Permit & Inspection Fee	15.00
	Magana, Alma Rosa	41040 · Permit & Inspection Fee	60.00
	Optical Metal Services	11200 · Accounts Receivable	485.74
	Petaluma Septic	11200 · Accounts Receivable	1,106.42
	Golden Gate Bridge, Hwy & Trans -	11200 · Accounts Receivable	1,249.14
	City of Novato-	11200 · Accounts Receivable	17,519.50
TOTAL			20,435.80
		Total October Deposits	361,660.81

Novato Sanitary District

QUARTERLY INVESTMENT REPORT -- For Quarter Ended September 30, 2016

INVESTMENT	ACTIVITY	July	August	September	QTR TOTAL
STATE TREASURER'S INVESTMENT FUND	Total deposits/transfers in	25,561	0	0	25,561
	Total transfers out	1,487,000	595,000	849,000	2,931,000
	Minimum daily balance	18,238,580	17,643,580	16,794,580	16,794,580
Current Yield 0.634%	Maximum daily balance	19,700,019	18,238,580	17,643,580	17,643,580
	Interest earned	0	0	27,537	27,537
TRUST ACCOUNT					
BANK OF NEW YORK MELLON For COP Bond Funds	Total deposits/transfers in	0	0	0	0
	Total transfers out	0	0	0	0
	Minimum daily balance	1,693,859	1,693,873	1,693,888	1,693,859
	Maximum daily balance	1,693,873	1,693,888	1,693,902	1,693,902
	Interest earned	14	16	14	44
The LAIF Pooled Money Investment Account Report is attached as specified in California Government Code Section 53646(e)					
CHECKING ACCOUNTS					
Interest Rate	Regular Warrants Account				
0.03%	Total deposits & transfers in	1,537,336	877,496	870,234	3,285,066
	Total checks & transfers out	1,611,610	1,023,234	675,035	3,309,879
	Minimum daily balance	30,105	11,188	1,609	1,609
	Maximum daily balance	627,385	572,504	512,763	627,385
	Interest earned	4	6	2	12
	Payroll Account				
	Total transfers in	120,000	114,800	122,000	356,800
	Total checks & transfers out	119,657	114,661	121,890	356,208
	Minimum daily balance	1,399	1,888	2,054	1,399
	Maximum daily balance	110,088	107,888	111,306	111,306
	Project Account				
	Total transfers in	647,300	167,500	176,800	991,600
	Total checks & transfers out	711,688	167,296	44,835	923,819
	Minimum daily balance	2,558	2,558	2,762	2,558
	Maximum daily balance	612,778	156,058	134,728	612,778
	Interest earned	6	1	1	8
	ARRA Grant Project Account				
	Total transfers in	0	0	0	0
	Total checks & transfers out	0	0	0	0
	Minimum daily balance	100	100	100	100
	Maximum daily balance	100	100	100	100

NOTES: (1) The above investments are consistent with the annual Statement of Investment Policy approved by the District Board, most recently May 2016.

The District has the ability to meet six months cash needs.

(2) LAIF interest rate is currently .634% which is an increase from .576% in June, and .51% in March of 2016, and .40% in December and .337% in September of 2015.



**JOHN CHIANG
TREASURER
STATE OF CALIFORNIA**



PMIA Performance Report

Date	Daily Yield*	Quarter to Date Yield	Average Maturity (in days)
09/12/16	0.63	0.61	163
09/13/16	0.63	0.61	163
09/14/16	0.63	0.61	161
09/15/16	0.64	0.61	163
09/16/16	0.63	0.61	161
09/17/16	0.63	0.61	161
09/18/16	0.63	0.61	161
09/19/16	0.63	0.61	158
09/20/16	0.63	0.61	156
09/21/16	0.63	0.61	156
09/22/16	0.64	0.61	155
09/23/16	0.64	0.61	160
09/24/16	0.64	0.61	160
09/25/16	0.64	0.61	160
09/26/16	0.64	0.61	157
09/27/16	0.64	0.61	157
09/28/16	0.64	0.61	160
09/29/16	0.64	0.61	162
09/30/16	0.65	0.61	165
10/01/16	0.65	0.65	165
10/02/16	0.65	0.65	165
10/03/16	0.65	0.65	169
10/04/16	0.65	0.65	170
10/05/16	0.65	0.65	170
10/06/16	0.65	0.65	169
10/07/16	0.65	0.65	171
10/08/16	0.65	0.65	171
10/09/16	0.65	0.65	171
10/10/16	0.65	0.65	168
10/11/16	0.65	0.65	169
10/12/16	0.65	0.65	168

*Daily yield does not reflect capital gains or losses

[View Prior Month Daily Rates](#)

**LAIF Conference
October 25, 2016**

[Register Now!](#)

LAIF Performance Report

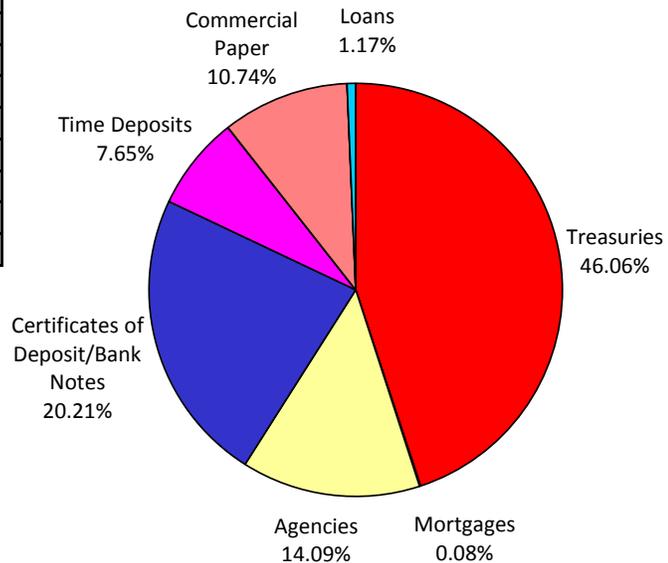
Quarter Ending 06/30/16

Apportionment Rate: 0.55%
 Earnings Ratio: 0.00001495296852820
 Fair Value Factor: 1.000621222
 Daily: 0.58%
 Quarter to Date: 0.55%
 Average Life: 167

PMIA Average Monthly Effective Yields

Sep 2016 0.634%
 Aug 2016 0.614%
 Jul 2016 0.588%

**Pooled Money Investment Account
Portfolio Composition
09/30/16
\$68.3 billion**



Based on data available as of 10/12/16



State of California
Pooled Money Investment Account
Market Valuation
9/30/2016

	Carrying Cost Plus					
	Description	Accrued Interest	Purch.	Amortized Cost	Fair Value	Accrued Interest
1*	United States Treasury:					
	Bills	\$ 11,401,506,250.08	\$ 11,424,324,705.67	\$ 11,428,957,500.00	NA	
	Notes	\$ 20,045,572,538.49	\$ 20,043,793,876.45	\$ 20,060,297,000.00	\$ 28,241,781.50	
1*	Federal Agency:					
	SBA	\$ 720,861,955.68	\$ 720,861,955.68	\$ 713,031,386.07	\$ 457,100.69	
	MBS-REMICs	\$ 54,197,494.37	\$ 54,197,494.37	\$ 57,380,084.72	\$ 255,981.62	
	Debentures	\$ 874,936,111.43	\$ 874,932,465.60	\$ 875,566,000.00	\$ 1,420,035.50	
	Debentures FR	\$ -	\$ -	\$ -	\$ -	
	Discount Notes	\$ 7,676,506,236.05	\$ 7,687,765,499.99	\$ 7,691,065,000.00	NA	
	GNMA	\$ -	\$ -	\$ -	\$ -	
1*	Supranational Debentures	\$ 349,980,433.20	\$ 349,980,433.20	\$ 350,734,500.00	\$ 653,124.50	
2*	CDs and YCDs FR	\$ 400,000,000.00	\$ 400,000,000.00	\$ 400,000,000.00	\$ 656,791.92	
2*	Bank Notes	\$ 800,000,000.00	\$ 800,000,000.00	\$ 800,059,819.97	\$ 2,270,333.35	
2*	CDs and YCDs	\$ 12,600,028,335.66	\$ 12,600,009,446.78	\$ 12,600,111,931.68	\$ 22,649,236.08	
2*	Commercial Paper	\$ 7,333,219,055.55	\$ 7,341,231,833.25	\$ 7,340,803,513.90	NA	
1*	Corporate:					
	Bonds FR	\$ -	\$ -	\$ -	\$ -	
	Bonds	\$ -	\$ -	\$ -	\$ -	
1*	Repurchase Agreements	\$ -	\$ -	\$ -	\$ -	
1*	Reverse Repurchase	\$ -	\$ -	\$ -	\$ -	
	Time Deposits	\$ 5,222,440,000.00	\$ 5,222,440,000.00	\$ 5,222,440,000.00	NA	
	AB 55 & GF Loans	\$ 803,510,000.00	\$ 803,510,000.00	\$ 803,510,000.00	NA	
	TOTAL	\$ 68,282,758,410.51	\$ 68,323,047,710.99	\$ 68,343,956,736.34	\$ 56,604,385.16	

Fair Value Including Accrued Interest \$ 68,400,561,121.50

* Governmental Accounting Standards Board (GASB) Statement #72

Repurchase Agreements, Time Deposits, AB 55 & General Fund loans, and Reverse Repurchase agreements are carried at portfolio book value (carrying cost).

The value of each participating dollar equals the fair value divided by the amortized cost (**1.000306032**).
 As an example: if an agency has an account balance of \$20,000,000.00, then the agency would report its participation in the LAIF valued at \$20,006,120.64 or \$20,000,000.00 x **1.000306032**.



PAR VALUES MATURING BY DATE AND TYPE

Maturities in Millions of Dollars

ITEM	1 day to 30 days	31 days to 60 days	61 days to 90 days	91 days to 120 days	121 days to 150 days	151 days to 180 days	181 days to 210 days	211 days to 270 days	271 days to 1 year	1 year to 2 years	2 years to 3 years	3 years to 4 years	4 years to 5 year/out
TREASURY	\$ 1,950	\$ 1,550	\$ 3,500	\$ 850	\$ 1,700	\$ 3,800	\$ 2,200	\$ 3,850	\$ 6,100	\$ 6,000			
REPO													
TDs	\$ 1,633	\$ 1,141	\$ 1,413	\$ 607	\$ 338	\$ 91							
AGENCY	\$ 2,521	\$ 450	\$ 600	\$ 800	\$ 800	\$ 1,200	\$ 1,750	\$ 600	\$ 200	\$ 527	\$ 1,306		
CP	\$ 2,950	\$ 1,700	\$ 1,850		\$ 450	\$ 200	\$ 200						
CDs + BNs	\$ 4,950	\$ 3,100	\$ 1,450	\$ 1,500	\$ 700	\$ 700	\$ 700	\$ 400	\$ 300				
CORP BND													
TOTAL													
\$ 68,627	\$ 14,004	\$ 7,941	\$ 8,813	\$ 3,757	\$ 3,988	\$ 5,991	\$ 4,850	\$ 4,850	\$ 6,600	\$ 6,527	\$ 1,306	\$ -	\$ -
PERCENT	20.4%	11.6%	12.8%	5.5%	5.8%	8.7%	7.1%	7.1%	9.6%	9.5%	1.9%	0.0%	0.0%

Notes:

1. SBA Floating Rate Securities are represented at coupon change date.
2. Mortgages are represented at current book value.
3. Figures are rounded to the nearest million.
4. Does not include AB55 and General Fund loans.

NOVATO SANITARY DISTRICT

MEMORANDUM

BOARD

MEETING DATE: November 14, 2016

TO: District Board of Directors

FROM: Sandeep Karkal, General Manager-Chief Engineer
Laura M. Creamer, Finance Officer

SUBJECT: Fiscal Year (FY) 16-17 First Quarter Financial Report

INTRODUCTION

This memorandum presents a summary year-to-date financial report for the District as of the FY16-17 First Quarter ended September 30, 2016. The following items are presented as three sections herein:

1. Revenue and Expenditure Report (for the quarter ended September 30, 2016).
2. Debt Service Schedule as of September 30, 2016.
3. Operating and Capital Cash Flow for July 1 – September 30, 2016.

1.0 REVENUE AND EXPENDITURES REPORT

This section presents an overview of revenues and expenditures for the operating and capital funds through the first quarter of Fiscal Year 2016-17. A more detailed summary is presented in the attached tables titled “DRAFT – Revenues and Expenditures – Budget vs. Actual”. A brief discussion and analysis of items displaying variance from the final budget is also provided below, as appropriate.

OPERATING FUND

OPERATING REVENUE

	YTD Balance Received	Annual Budget	Budget Remaining	Pct. Received
Total Operating Revenues	\$136,736	\$10,108,692	\$9,971,956	1.4%

Discussion

Overall, operating revenues are approximately 1.4% of the total budget amount with 25% of the year complete. The operating revenue accounts are within the normal range for this time of year, since the District receives its primary revenues in December and April.

OPERATING EXPENDITURES

	YTD Balance	Annual Budget	Budget Unused	Pct. Used
Total Operating Expenditures	\$ 1,999,106	\$9,972,648	\$7,973,542	20.1%

Discussion

Overall, operating expenditures are at approximately 20.1% of budget, with 25% of the year complete. Variances in individual expenditure accounts are discussed below:

Collection System (22.1%)

General: In general, no significant variances noted for this cost center for the first quarter. Variances in individual expenditure accounts are discussed below.

Outside Services: 40.0% Variance is due to anticipated expenditures for Duke’s Root control services in the first quarter of the fiscal year. Account expected to stay within budget over remainder of the fiscal year.

Treatment Facilities - Contract Operations: (22.1%)

General: No significant variances noted for this cost center for the first quarter.

Reclamation/Disposal Facilities: (15.3%)

General: In general, no significant variances noted for this cost center for the third quarter. Variances in individual expenditure accounts are discussed below.

Repairs & Maintenance: 28.2%. Variance is due to the seasonal nature of the reclamation facility’s irrigation activities. Per review of account, no significant items noted, and account is expected to stay within budget for the current fiscal year.

Gas & Electricity: 27.8%. Expenditures are within expected parameters for this time of year. Once the Reclamation area irrigation season is over, the electrical usage will decrease and the expenditure will follow. Account expected to stay within budget over remainder of the fiscal year.

Water: 189.3%. Water is a reimbursable expenditure billed and paid by the rancher at the end of the fiscal year. Account expected to stay within budget over remainder of fiscal year, after accounting for cost reimbursement from rancher.

Permits & Fees: 46.9%. Significant variance due to the annual permit for Bay Area Air Quality Management District being paid in the first quarter of the fiscal year. Account expected to stay within budget over remainder of the fiscal year.

Laboratory/Monitoring: (18.2%)

General: In general, no significant variances noted for this cost center for the first quarter.

Pump Stations: (18.1%)

General: In general, no significant variances noted for this cost center for the first quarter.

Administration and Engineering: (19.4%)

General: In general, no significant variances noted for this cost center for the third quarter, other than those noted under "Discussion" above. Variances in individual expenditure accounts are discussed below.

Insurance: 28.5%. Insurance expense is within expected parameter for this time of year, typically paid as billed in the first and second quarter of the fiscal year. Account expected to stay within budget over remainder of the fiscal year.

Insurance Claim Expense: 35.2%. This expense represents the settlement of a claim in the amount of \$17.5k paid in the first quarter. Expenditures in this category are not necessarily a good indicator of fiscal year activity since insurance claims expenses are not controllable throughout the year. The District currently has no open claims and it is anticipated that this account will stay within budget over the remainder of the fiscal year.

Agency Dues: 40.3%. Significant variance as a large portion of agency dues are paid in the first quarter. Account expected to stay within budget over remainder of the fiscal year.

Accounting & Auditing: 37.4%. Significant variance due audit field work completed earlier in the year in the first quarter for the FY 2015/16 audit. The account is expected to stay within budget over remainder of the fiscal year.

Printing & Publications: 39.4%. Expenditures are within expected parameters for this time of year. The District completes semi-annual newsletters, in the Fall and in the Spring. These expenditures are representative of the District's Fall newsletter. The account is expected to stay within budget over remainder of the fiscal year.

Repairs & Maintenance: 26.8%. Per review of account, no significant items noted. The account is expected to stay within budget over remainder of the fiscal year.

AB 939 Solid Waste Programs: (17.5%)

General: In general, no significant variances noted for this cost center for the first quarter

Recycled Water: (13.2%)

General: In general, no significant variances noted for this cost center for the first quarter.

CAPITAL FUND

CAPITAL REVENUE

Capital Revenue	YTD Balance Received	Annual Budget	Over/(Under) Budget	Pct. Received
Sewer Service Charges	\$19,892	\$7,595,952	(\$7,576,060)	.26%
Property Taxes	383	1,938,000	(1,937,617)	.02%
Connection Charges	86,250	434,400	(348,150)	19.86%
Collector sewer/Special Equalization Charges	0	2,000	(2,000)	0.00%
Interest	12,442	25,000	(12,588)	49.77%
Other Revenue	0	20,000	(20,000)	0.00%
Total Revenue	\$118,967	\$10,015,352	(\$9,896,385)	1.19%

Discussion

Overall capital revenues are 1.2% of budget at the close of the first quarter, consistent with the District receiving the bulk of its revenue in December and April.

CAPITAL EXPENDITURES

	YTD Balance	Annual Budget	Budget Unused	Pct. Used
Capital Expenditures	\$820,870	\$11,734,705	(\$10,913,835)	7.0%

Discussion

The list of capital project accounts is shown in the attached tables. Overall expenses are 7.0% of budget.

As noted in prior reports, capital work follows a different spending trajectory than normal operating expenditures and this is reflected in Account Nos. 72508, 72708, and 72805, where the variances noted reflect the appropriate levels of engineering and construction work completed to date. All of these accounts are expected to stay within budget over the remainder of the fiscal year.

The principal and interest accounts for repayment of the District's outstanding State Revolving Fund (SRF) loan and 2011 Certificates of Participation (COPs) are within budget for this time of year.

Novato Sanitary District
DRAFT - Revenues & Expenditures Budget vs. Actual
 July through September 2016

	Jul - Sep 16	Budget	\$ Over Budget	% of Budget
Revenue				
41000 · OPERATING REVENUES				
41010 · Sewer Service Charges	24,590.20	9,208,992.00	(9,184,401.80)	0.27%
41030 · Plan Check & Inspection Fee	0.00	500.00	(500.00)	0.0%
41040 · Permit & Inspection Fee	2,040.00	6,000.00	(3,960.00)	34.0%
41060 · Interest Income	20.35	20,000.00	(19,979.65)	0.1%
41080 · Engineering & Admin Charges	0.00	165,000.00	(165,000.00)	0.0%
41090 · Non-domestic Permit Fees	3,002.13	25,000.00	(21,997.87)	12.01%
41100 · Garbage Franchise Fees	0.00	52,186.00	(52,186.00)	0.0%
41105 · AB 939 Collector Fees	88,533.50	354,134.00	(265,600.50)	25.0%
41107 · Oil/Bev/Tire Grants	0.00	59,880.00	(59,880.00)	0.0%
41130 · Ranch Income	0.00	70,000.00	(70,000.00)	0.0%
41135 · Recycle Water Facility Revenue	0.00	117,000.00	(117,000.00)	0.0%
41140 · Other Revenue	3,403.84	20,000.00	(16,596.16)	17.02%
41142 · Loss on disposal of assets	0.00	10,000.00	(10,000.00)	0.0%
Total 41000 · OPERATING REVENUES	121,590.02	10,108,692.00	(9,987,101.98)	1.2%
Expense				
60000 · COLLECTION SYSTEM				
60010 · Salaries & Wages	145,961.44	627,355.00	(481,393.56)	23.27%
60020 · Employee Benefits	70,337.32	286,293.00	(215,955.68)	24.57%
60060 · Gas, Oil & Fuel	1,803.79	28,000.00	(26,196.21)	6.44%
60085 · Safety	339.67	3,500.00	(3,160.33)	9.71%
60091 · Software Maint	2,899.98	75,000.00	(72,100.02)	3.87%
60100 · Operating Supplies	4,388.03	30,000.00	(25,611.97)	14.63%
60150 · Repairs & Maintenance	8,717.96	85,000.00	(76,282.04)	10.26%
60152 · Small Tools	0.00	2,000.00	(2,000.00)	0.0%
60153 · Outside Services	70,067.23	175,000.00	(104,932.77)	40.04%
60192 · Water	1,551.95	12,000.00	(10,448.05)	12.93%
60193 · Telephone	308.87	2,000.00	(1,691.13)	15.44%
60200 · Other(Garbage Coll)	54.52	1,000.00	(945.48)	5.45%
60201 · Permits & Fees	516.13	65,000.00	(64,483.87)	0.79%
Total 60000 · COLLECTION SYSTEM	306,946.89	1,392,148.00	(1,085,201.11)	22.05%
61000 · TREATMENT FACILITIES				
61000-1 · Fixed Fee	509,280.96	2,113,278.00	(1,603,997.04)	24.1%
61000-2 · Insurance & Bonds	832.66	14,000.00	(13,167.34)	5.95%
61000-3 · Major Repair/Replacement	0.00	150,000.00	(150,000.00)	0.0%
61000-4 · Water/Permits/Telephone	18,823.13	90,000.00	(71,176.87)	20.92%
61000-5 · Gas & Electricity	151,887.10	708,913.00	(557,025.90)	21.43%
Total 61000-0 · Treatment Facilities	680,823.85	3,076,191.00	(2,395,367.15)	22.13%
63000 · RECLAMATION/DISPOSAL				
63010 · Salaries & Wages	18,262.76	91,943.00	(73,680.24)	19.86%
63020 · Employee Benefits	6,276.07	36,595.00	(30,318.93)	17.15%
63060 · Gasoline & Oil	259.19	4,000.00	(3,740.81)	6.48%
63085 · Safety	0.00	500.00	(500.00)	0.0%

Novato Sanitary District
DRAFT - Revenues & Expenditures Budget vs. Actual
 July through September 2016

	Jul - Sep 16	Budget	\$ Over Budget	% of Budget
63091 · Software Maintenance	0.00	2,000.00	(2,000.00)	0.0%
63100 · Operating Supplies	417.40	2,000.00	(1,582.60)	20.87%
63115 · Sludge Disposal	0.00	190,000.00	(190,000.00)	0.0%
63150 · Repairs & Maintenance	19,737.21	70,000.00	(50,262.79)	28.2%
63152 · Small Tools	0.00	500.00	(500.00)	0.0%
63157 · Ditch/Dike Maintenance	0.00	20,000.00	(20,000.00)	0.0%
63191 · Gas & Electricity	26,366.59	95,000.00	(68,633.41)	27.75%
63192 · Water - Reclamation	5,677.83	3,000.00	2,677.83	189.26%
63201 · Permits & Fees	2,811.28	6,000.00	(3,188.72)	46.86%
Total 63000 · RECLAMATION/DISPOSAL	79,808.33	521,538.00	(441,729.67)	15.3%
64000 · LABORATORY/MONITORING				
64010 · Contract Lab Services	85,475.73	368,136.00	(282,660.27)	23.22%
64060 · Gasoline & Oil	165.88	2,500.00	(2,334.12)	6.64%
64085 · Safety	0.00	1,000.00	(1,000.00)	0.0%
64091 · Software Maintenance	0.00	4,000.00	(4,000.00)	0.0%
64100 · Operating Supplies	1,896.11	20,000.00	(18,103.89)	9.48%
64150 · Repairs & Maintenance	1,434.89	25,000.00	(23,565.11)	5.74%
64160 · Research & Monitoring	23,688.40	182,000.00	(158,311.60)	13.02%
64170 · Pollution Prevention/Public Ed	5,598.81	43,000.00	(37,401.19)	13.02%
64201 · Permits & Fees	0.00	3,000.00	(3,000.00)	0.0%
Total 64000 · LABORATORY/MONITORING	118,259.82	648,636.00	(530,376.18)	18.23%
65000 · PUMP STATIONS				
65010 · Salaries & Wages	77,208.99	344,528.00	(267,319.01)	22.41%
65020 · Employee Benefits	32,781.26	154,611.00	(121,829.74)	21.2%
65060 · Gasoline & Oil	381.02	6,000.00	(5,618.98)	6.35%
65085 · Safety Expenses	0.00	2,000.00	(2,000.00)	0.0%
65091 · Software Maintenance	0.00	12,000.00	(12,000.00)	0.0%
65100 · Operating Supplies	1,701.76	10,000.00	(8,298.24)	17.02%
65101 · Operating Chemicals	0.00	15,000.00	(15,000.00)	0.0%
65150 · Repairs & Maintenance	13,092.42	115,000.00	(101,907.58)	11.39%
65152 · Small Tools	0.00	2,000.00	(2,000.00)	0.0%
65153 · Outside Services, Electrical	0.00	35,000.00	(35,000.00)	0.0%
65191 · Gas & Electricity	19,094.46	110,000.00	(90,905.54)	17.36%
65192 · Water	1,462.22	7,000.00	(5,537.78)	20.89%
65193 · Telephone	5,835.03	24,000.00	(18,164.97)	24.31%
65201 · Permits & Fees	2,742.20	17,000.00	(14,257.80)	16.13%
Total 65000 · PUMP STATIONS	154,299.36	854,139.00	(699,839.64)	18.07%
66000 · ADMIN/ENGINEERING				
66010 · Salaries & Wages	243,481.45	1,152,160.00	(908,678.55)	21.13%
66020 · Employee Benefits	99,951.54	473,551.00	(373,599.46)	21.11%
66021 · Retiree Health Benefits	41,950.62	377,348.00	(335,397.38)	11.12%
66030 · Director's Fees	6,300.00	38,000.00	(31,700.00)	16.58%
66060 · Gasoline & Oil	729.75	10,000.00	(9,270.25)	7.3%
66070 · Insurance	42,723.74	150,000.00	(107,276.26)	28.48%

Novato Sanitary District
DRAFT - Revenues & Expenditures Budget vs. Actual
 July through September 2016

	Jul - Sep 16	Budget	\$ Over Budget	% of Budget
66071 · Insurance Claim Expense	17,589.47	50,000.00	(32,410.53)	35.18%
66075 · Agency Dues	24,968.75	62,000.00	(37,031.25)	40.27%
66080 · Memberships	2,385.00	10,000.00	(7,615.00)	23.85%
66085 · Safety	396.10	2,000.00	(1,603.90)	19.81%
66090 · Office Expense	3,844.68	27,000.00	(23,155.32)	14.24%
66100 · Engineering Supplies	2,198.85	10,000.00	(7,801.15)	21.99%
66121 · Accounting & Auditing	10,107.38	27,000.00	(16,892.62)	37.44%
66122 · Attorney Fees	3,662.60	75,000.00	(71,337.40)	4.88%
66123 · O/S Contractual	27,519.24	218,000.00	(190,480.76)	12.62%
66124 · IT/Misc Electrical	6,288.29	45,000.00	(38,711.71)	13.97%
66125 · Safety & Wellness Incentive Pro	0.00	10,000.00	(10,000.00)	0.0%
66130 · Printing & Publications	8,671.78	22,000.00	(13,328.22)	39.42%
66150 · Repairs & Maintenance	13,380.83	50,000.00	(36,619.17)	26.76%
66170 · Travel, Meetings & Training	12,425.91	55,000.00	(42,574.09)	22.59%
66193 · Telephone	2,042.16	10,000.00	(7,957.84)	20.42%
66202 · County Fees - Property Taxes	0.00	26,000.00	(26,000.00)	0.0%
66203 · County Fees - Sewer Service Chg	0.00	42,000.00	(42,000.00)	0.0%
66250 · Service Charge Sys Exp	0.00	5,150.00	(5,150.00)	0.0%
Total 66000 · ADMIN/ENGINEERING	570,618.14	2,947,209.00	(2,376,590.86)	19.36%
67000 · AB 939 SOLID WASTE PROGRAMS				
67400 · Consulting Services	14,670.00	134,750.00	(120,080.00)	10.89%
67500 · Household Hazardous Waste	56,384.41	220,000.00	(163,615.59)	25.63%
67530 · Used Oil/Beverage Cont Grant	1,260.00	22,537.00	(21,277.00)	5.59%
67540 · Outreach/Publicity/Education	550.00	23,500.00	(22,950.00)	2.34%
67600 · Other	0.00	5,000.00	(5,000.00)	0.0%
67610 · City AB 939 Admin Services	0.00	10,000.00	(10,000.00)	0.0%
Total 67000 · AB 939 SOLID WASTE PROGRAMS	72,864.41	415,787.00	(342,922.59)	17.52%
68000 · Recycled Water				
68010 · O & M Services	7,000.00	50,000.00	(43,000.00)	14.0%
68100 · Operating Supplies	85.33	2,000.00	(1,914.67)	4.27%
68101 · Operating Chemicals	2,415.87	26,000.00	(23,584.13)	9.29%
68150 · Repairs & Maintenance	2,573.76	22,000.00	(19,426.24)	11.7%
68160 · Research & Monitoring	3,410.00	14,000.00	(10,590.00)	24.36%
68191 · Gas & Electricity	0.00	2,000.00	(2,000.00)	0.0%
68201 · Permits & Fees	0.00	1,000.00	(1,000.00)	0.0%
Total 68000 · Recycled Water	15,484.96	117,000.00	(101,515.04)	13.24%
Total Expense	1,999,105.76	9,972,648.00	(7,973,542.24)	20.05%
Net Ordinary Income/(Loss)	(1,877,515.74)	136,044.00	(2,013,559.74)	(1,380.08%)

Novato Sanitary District
DRAFT Revenues & Expenditures - Capital
 July through September 2016

	Jul - Sep 16	Budget	\$ Over Budget	% of Budget
Revenue				
51000 · CAPITAL IMPROVEMENT REVENUE				
51010 · Sewer Service Charges	19,892.24	7,595,952.00	(7,576,059.76)	0.26%
51015 · Property Taxes	382.65	1,938,000.00	(1,937,617.35)	0.02%
51020 · Connection Charges	86,250.00	434,400.00	(348,150.00)	19.86%
51030 · Collector Sewer Charges	0.00	1,000.00	(1,000.00)	0.0%
51040 · Special Equalization Charge	0.00	1,000.00	(1,000.00)	0.0%
51060 · Interest	12,442.27	25,000.00	(12,557.73)	49.77%
51070 · Other Revenue	0.00	20,000.00	(20,000.00)	0.0%
Total 51000 · CAPITAL IMPROVEMENT REVENUE	118,967.16	10,015,352.00	(9,896,384.84)	1.19%
Expense				
72000 · CAPITAL IMPROVEMENT PROJECTS				
72403 · Pump Station Rehabilitation	0.00	50,000.00	(50,000.00)	0.0%
72508 · N. Bay Water Recycling Auth	207,344.00	440,000.00	(232,656.00)	47.12%
72706 · Collection System Improv				
72706-1 · Lateral Replacement Program	1,500.00	60,000.00	(58,500.00)	2.5%
72706 · Collection System Improv - Other	136,353.68	1,200,000.00	(1,063,646.32)	11.36%
Total 72706 · Collection System Improv	137,853.68	1,260,000.00	(1,122,146.32)	10.94%
72707 · Hamilton Wetlands/Outfall Monit	0.00	10,000.00	(10,000.00)	0.0%
72708 · Cogeneration	14,440.00	45,000.00	(30,560.00)	32.09%
72802 · Annual Sewer Adj. for City Proj	0.00	10,000.00	(10,000.00)	0.0%
72803 · Annual Collection Sys Repairs	13,573.80	200,000.00	(186,426.20)	6.79%
72804 · Annual Reclamation Fac Imp	7,804.58	100,000.00	(92,195.42)	7.81%
72805 · Annual Treatment Plnt Improv	30,041.74	100,000.00	(69,958.26)	30.04%
72806 · Annual Pump Station Improv	0.00	100,000.00	(100,000.00)	0.0%
72808 · Strategic Plan Update	0.00	20,000.00	(20,000.00)	0.0%
72809 · Novato Creek Watershed	0.00	10,000.00	(10,000.00)	0.0%
73003 · Admin Bldg/Maint.Bldg Upgrades	8,236.26	350,000.00	(341,763.74)	2.35%
73004 · Odor Control & NTP Landscaping	0.00	75,000.00	(75,000.00)	0.0%
73005 · RWF Expansion	4,608.85	1,300,000.00	(1,295,391.15)	0.36%
73006 · NTP Corrosion Control	9,093.15	180,000.00	(170,906.85)	5.05%
73090 · Vehicle Replacement	0.00	425,000.00	(425,000.00)	0.0%
Total 72000 · CAPITAL IMPROVEMENT PROJECTS	432,996.06	4,675,000.00	(4,242,003.94)	9.26%
78400 · Principal and Interest				
78500 · Interest - Capital Projects	387,873.75	2,385,943.00	(1,998,069.25)	16.26%
78501 · Principal - Capital Projects	0.00	4,673,762.00	(4,673,762.00)	0.0%
Total 78400 · Principal and Interest	387,873.75	7,059,705.00	(6,671,831.25)	5.49%
Total Expense	820,869.81	11,734,705.00	(10,913,835.19)	7.0%
Net Income(Loss)	(820,869.81)	(11,734,705.00)	10,913,835.19	7.0%

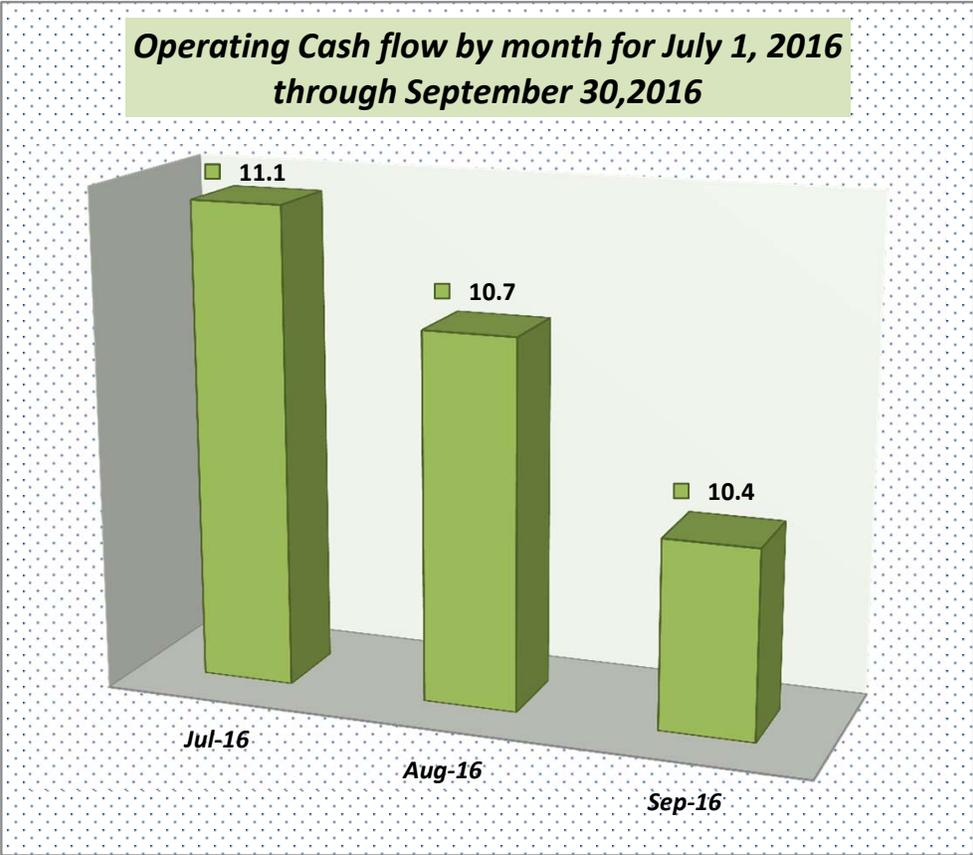
	<u>State Revolving Fund Loan</u>		
		Principal	Interest
	SRF Loan Payable 6/30/16.....	67,091,444	
	Principal Payment 2016-17		
	Interest payments 2016-17		
	SRF Loan Balance/Interest Paid 9/30/16.....	67,091,444	0
	<u>COP Bond Financing Issued October 2011</u>		
	COP Payable Balance 6/30/16.....	18,380,000	
	Principal Payment 2016-17		
	Interest payments 2016-17		(387,874)
	COP Payable Balance/Interest Paid 9/30/16...	18,380,000	(387,874)
	Note: Principal and Interest payment for SRF Loan Payable due in December 2015.		
	Principal and Interest payment for COP Bond Payable due in February 2016.		

3.0 OPERATING AND CAPITAL CASH FLOW

**Operating:
Cash Flow For Novato Sanitary District
July 1, 2016 - September 30, 2016
Dated: November 7, 2016**

Month Earned	Operating Revenue	Monthly Operating Expenditures	Cash Balance
Jul-16	\$ 27,853	\$ 752,224	* \$ 11,452,761
Aug-16	117,540	516,110	10,728,390
Sep-16	26,058	673,323	10,329,820
	\$ 171,451	\$ 1,941,657	9,682,555

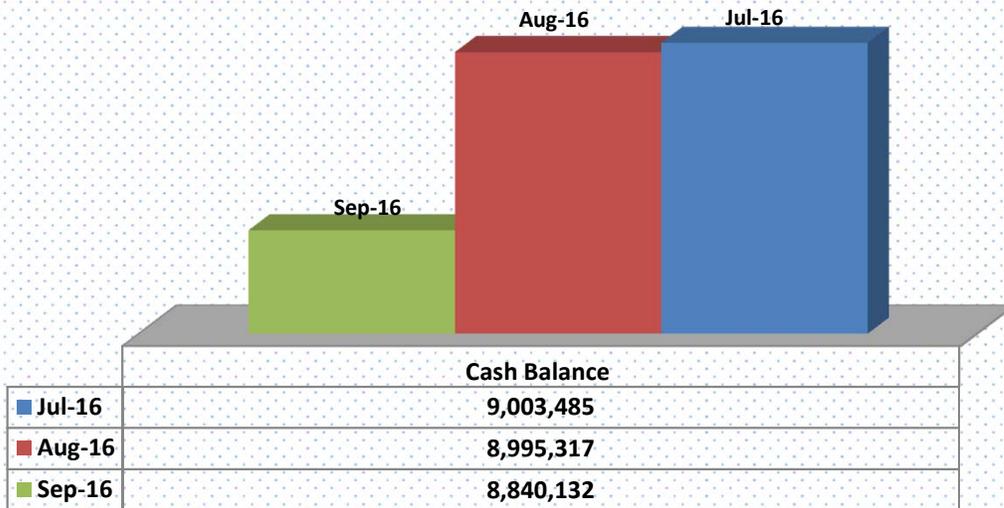
Note: Cash balances at year end split 55/45 - Operating/Capital based on split sewer service charges.
* Beginning balance adjusted for accrual vs cash basis differences.



Capital:
Cash Flow For Novato Sanitary District
July 1, 2016 - September 30, 2016
Dated: November 7, 2016

Month Earned	Monthly Operating Expenditures	Debt Service	Capital Revenue	Cash Balance
				\$ 9,646,171
Jul-16	\$ 261,238	\$ 387,874	\$ 6,426	9,003,485
Aug-16	167,496		159,328	8,995,317
Sep-16	176,966		21,781	8,840,132

Capital Cash Flow by Month for July 1, 2016 through September 30, 2016



**NOVATO SANITARY DISTRICT
BOARD AGENDA ITEM SUMMARY**

<p>TITLE: Administration: Attendance at the AWWA/WEF Utility Management Conference - 2017.</p>	<p>MEETING DATE: November 14, 2016</p> <p>AGENDA ITEM NO.: 5.e.</p>
<p>RECOMMENDED ACTION: Approve the Technical Services Manager to attend the American Water Works Association (AWWA) and Water Environment Federation (WEF) joint Utility Management 2017 training conference in Tampa, Florida.</p>	
<p>SUMMARY AND DISCUSSION:</p> <p>Over the past 28 years, the American Water Works Association (AWWA) and the Water Environment Federation (WEF) have established the joint Utility Management Conference as one of the leading management conferences available for senior utility management and engineering staff members. The conference provides the opportunity to share and learn from technical experts on the most pressing issues with a focus on topics including: Leadership and Workforce Development; Utility Management and Management Tools; Business Practice Optimization; Finance, Accounting and Rates; Communicating Values to Customers and Stakeholders; and Innovation and Strategic Planning.</p> <p>The topics covered in the Utility Management Conference align well with the District's Strategic Plan goal of achieving operational and organizational excellence.</p> <p>To ensure that District staff continue to grow professionally and increase their knowledge base by keeping abreast of current trends in the industry, the General Manager-Chief Engineer recommends that the Board authorize the Technical Services Manager to attend the AWWA/WEF Utility Management Conference to be held February 7-10, 2017 in Tampa, Florida. A copy of the program brochure is attached.</p>	
<p>BUDGET INFORMATION: The cost of this attendance would be funded from Account #66170 which has a FY16-17 budget of \$55,000, and a current balance of \$42,574.</p>	
<p>STRATEGIC PLAN INFORMATION: This item addresses Goal 1 (Operational Excellence) and Goal 5 (Effective Governance and Administration) of the latest Strategic Plan Update.</p>	
<p>DEPT. MGR.: ssk</p>	<p>GENERAL MANAGER: SSK</p>

Item 5.e.
Attachment 1
(Pages 28 to 32)

The Utility Management Conference™
Jointly sponsored by
AWWA | WEF

February 7–10, 2017 | Tampa, Florida USA
Tampa Marriott Waterside Hotel and Marina
www.awwa.org/umc



Over the past 28 years, members of AWWA and WEF have established The Utility Management Conference as one of the leading, most informative, and most prestigious management conferences available. Come prepared to share your experiences and learn from others in similar situations as we respond to the most pressing management issues of the day.

Conference Highlights

- Benchmarking & Performance Measurement
- Business Practice Optimization
- Communicating Value
- Customer Service
- Environmental Issues & Sustainability
- Finance, Accounting & Rates
- Infrastructure & Asset Management
- Legal/Regulatory/Political Issues
- Public Involvement/Public Affairs
- Public Officials Issues
- Regional Collaboration
- Reuse/Reclaimed Water
- Smart Water Systems
- Security & Emergency Preparedness
- Water Loss
- Workforce Development & Succession Planning

Who Attends UMC?

- Utility managers and executives
- CFOs and finance directors
- Public works directors
- Human resource professionals
- Public officials
- Regulatory representatives
- Board members
- Young professionals and students

Now you don't have to choose between NACWA's Winter Conference and The AWWA/WEF Utility Management Conference! From February 4-10, 2017, these events are co-locating at the Tampa Marriott Waterside Hotel. We hope to see you there.

www.nacwa.org/meetings



Continuing Education Credits (CEs) and Professional Development Hours (PDHs)

AWWA awards attendees Continuing Education Units (CEUs) for technical sessions and workshops. A PDH tracking form is available for manually tracking attendance. For additional information regarding AWWA CEUs and PDHs, visit

www.awwa.org/credits
NSD Agenda Packet

Nov. 14, 2016 (Page 29 of 107)

Technical Sessions by Subject Area

Subject to change. Time and speaker information available online.

LEADERSHIP AND WORKFORCE DEVELOPMENT

WED08	Being the Utility of the Future: Workforce Development and Succession Planning
WED11	Developing Water Utility Leaders from Within
WED12	<u>*Utility Leader Forum</u> —The Effective Water Professional
THU06	Building Success for Tomorrow through Leadership Development
THU07	Building a Strong and Engaged Workforce
THU09	<u>*Utility Leader Forum</u> —Help Wanted: Providing Workforce Development Opportunities to Low Income/High Risk Community Members
FRI03	Safe and Secure: Protecting your Workforce

UTILITY MANAGEMENT AND MANAGEMENT TOOLS

WED02	Developing your Asset Management Programs
WED04	Case Studies in Management Development
WED09	Executing Large Scale Programs with the Public
THU04	Implementing Solutions through Public Private Partnerships
THU08	Management Perspectives of Infrastructure Projects
THU12	Case Studies in Wastewater Management

BUSINESS PRACTICE OPTIMIZATION

THU01	Perspective on Business Practice Optimization to Achieve Success
THU05	Utility Benchmarking and Performance Measurement: How do you Stack Up?
FRI02	<u>*Utility Leader Forum</u> —Utility Benchmarking: Using Survey Results to Improve your Organizational Performance
FRI06	<u>*Utility Leader Forum</u> —New Directions and Results in Utility Performance Benchmarking
FRI07	Approaches to Integrated Utility Management

FINANCE, ACCOUNTING AND RATES

WED03	Keys for Building a Strong Financial Foundations
WED07	Finance, Accounting and Rates from a Conservation Perspective
WED10	Practical Approaches to Funding Strategies
THU03	How do we pay for it all? Tools and Techniques for Future Financing

COMMUNICATING VALUES TO CUSTOMERS AND OTHER STAKEHOLDERS

WED01	Customer Analytics and Effective Stakeholder Engagement
WED05	Communication Value to Customers and other Stakeholders
THU11	Tackling the Uncertainty of Climate Change through Utility Sustainability Planning
THU14	Innovative Solutions for Public Private Partnership
FRI04	Keys to Success through Regional Collaboration
FRI08	Advancing your Utility through Customer Service

INNOVATION AND STRATEGIC PLANNING

WED06	<u>*Utility Leader Forum</u> —Transforming Utilities by Fostering Innovation
THU02	<u>*Utility Leader Forum</u> —Innovation: It takes a Culture – Not just Technology
THU10	Cybersecurity Threats...Is Your Utility Prepared?
THU13	Resiliency Planning for Sustainable Water Management
FRI01	Innovative Approaches to Integrated Strategic Planning
FRI05	Planning to Succeed: Strategic Planning for Today's Utility Manager

**Utility Leader Forum sessions are interactive panel discussions lasting 1.5 to 3 hours*



Preliminary Conference-at-a-Glance

All information is preliminary and subject to change. For an updated and complete agenda, go to www.awwa.org/umc. All conference events will take place at The Tampa Marriott Waterside unless otherwise indicated.

TUESDAY, FEBRUARY 7

- 8:00 a.m.–5:00 p.m. Registration Open
- 8:30 a.m.–5:00 p.m. Workshops (additional fee)
- 8:30 a.m.–5:00 p.m. AWWA/WEF YP Summit (registered YP Summit attendees)
- 5:30 p.m.–7:30 p.m. YP Summit Reception (registered YP Summit attendees)

WEDNESDAY, FEBRUARY 8

- 7:30 a.m.–6:00 p.m. Registration Open
- 8:30–10:00 a.m. Opening General Session
- 10:30 a.m.–5:00 p.m. Professional Sessions
- noon–1:30 p.m. Luncheon (with Speaker)
- 5:00–6:00 p.m. Networking Reception

THURSDAY, FEBRUARY 9

- 8:00 a.m.–5:00 p.m. Registration Open
- 8:30 a.m.–5:00 p.m. Professional Sessions
- noon–1:30 p.m. Lunch Break (on your own)

FRIDAY, FEBRUARY 10

- 8:00–10:30 a.m. Registration Open
- 8:30 a.m.–noon Professional Sessions

Workshops

Tuesday, February 7

Workshops offer excellent opportunities to exchange ideas and learn about topics in-depth. Additional fee is required for workshops.

TUE01—Developing a Roadmap for Leadership and Succession Planning 2.0: A Collaborative Approach

8:30 a.m.–noon

This workshop will take a forward looking approach to the Effective Utility Management Program's attribute of "Employee Leadership and Development," and the importance of managing mission critical staff and knowledge as key organizational assets. The WEF Workforce Sustainability Subcommittee and the AWWA Workforces Strategies Committee have collaborated to develop this interactive session which will identify and present the key success elements and business value of succession planning with a focus on the issues facing the water/wastewater industry.

TUE02—Sustaining Asset Management—The Leadership View

8:30 a.m.–noon

One of the major challenges face by utilities trying to implement asset management programs is to achieve organizational change required to implement a successful program. This workshop will provide a highly interactive forum for participants to learn from senior leaders about experiences and practical methods that are effective for leading a successful asset management program.

TUE03—A 360-Degree Perspective for Enabling Effective Utility Management

8:30 a.m.–5:00 pm (includes lunch)

As EUM continues to evolve, the Five Keys to Success remain at the core of this evolution. Industry leaders will present what has changed over the past several years, including what do we know now that we didn't know before?

TUE05—WaterOpolis—Utility Budget Simulation...Issues and Choices

1:30–5:00 p.m.

"WaterOpolis is an interactive board game designed to provide utility organizations a new tool to engage stakeholders, enhance community understanding, support, and demonstrate the value of water." Wateropolis is a facilitated gaming experience that leverages the industry's Effective Utility Management and leads participants through the myriad of issues and choices that confront their local utility service providers.

Conference Venue & Hotel Information

Tampa Marriott Waterside
700 South Florida Avenue
Tampa, Florida 33602

AWWA has secured rates of \$229 plus taxes per night, available until January 7 or until the block fills whichever occurs first.

Visit www.awwa.org/umc to book your room and for additional hotel information.



Registration

Early Registration Deadline: January 10, 2017

Included in full conference registration option is lunch, networking reception, technical sessions, and refreshment breaks. Full conference registration is \$620 for members.

AWWA/WEF Young Professionals Summit and Reception

Tuesday, February 7

Registration and fee required.

The premier water industry professional development workshop for young professionals will be co-located with The Utility Management Conference.

Join us for the Summit and Reception, and then stick around to attend Conference at a special discounted full-conference price. Learn more

at www.awwa.org/umc.

**NOVATO SANITARY DISTRICT
BOARD AGENDA ITEM SUMMARY**

<p>TITLE: Administration/Finance: Post-Employment Benefits Trust.</p>	<p>MEETING DATE: November 14, 2016</p> <p>AGENDA ITEM NOS.: 6.a. - 6.f.</p>
<p>RECOMMENDED ACTION: Receive memorandum/staff report titled “Establishment of Post-Employment Benefits Trust”, and its recommendations summarized as Agenda Items 6.b.-6.f.</p>	
<p>SUMMARY AND DISCUSSION:</p> <p>The attached memorandum/staff report provides a detailed discussion of the District’s Other Post-Employment Benefits (OPEB) or retiree health benefits liability, and Net Pension Liability (NPL), under Government Accounting Standards Board (GASB) Statement 45 (OPEB), and GASB Statement 68 (NPL).</p> <p>As discussed in the staff report, the Board Finance Committee and the Board have previously received multiple staff and consultant presentations on this subject over the past year or so, along with potential alternatives for managing the liabilities. The Committee and Board have also received presentations from representatives of the entities that typically provide investment and management/trust services on these liabilities for agencies such as the District, i.e. Public Agency Retirement Services (PARS) of Irvine, CA, and the CalPERS California Employers Retiree Benefit Trust Fund (CERBT) program.</p> <p>At this time, it is recommended that the Board approve implementing a PARS Combined Post-Employment Benefits Trust for its GASB 45/68 liabilities, as discussed in the staff report. It is also recommended that the Board consider and approve the recommendations presented as Agenda Items 6.b. through 6.f. herein, and as further discussed in the staff report.</p>	
<p>ATTACHMENTS:</p> <ol style="list-style-type: none"> 1. Memorandum/staff report titled “Establishment of Post-Employment Benefits Trust”. 2. Resolution No. 3104 – “Adoption Of The Public Agencies Post-Employment Benefits Trust Administered By Public Agency Retirement Services (PARS)”. 	
<p>BUDGET INFORMATION: Fund the combined trust with an initial partial discretionary amount of \$900,000 from the projected unencumbered available cash balance of \$2.0 million (as of July 1, 2017) in in the Operating Fund; and each future year, subject to Board adoption of authorized amounts in the annual budget for that year, contribute amounts up to the GASB 45 and GASB 68 Annual Required Contributions (ARC) for that year, as established by the District’s periodic OPEB and CalPERS NPL valuation reports.</p>	
<p>STRATEGIC PLAN INFORMATION: This item addresses Goal 4 (Well Planned Finances with a Long Range Outlook) of the latest Strategic Plan Update. The item also addressess other goals of the Strategic Plan including Goal 1 (Operational Excellence), and Goal 3 (Alignment and Communications).</p>	
<p>DEPT. MGR.: lmc, ssk</p>	<p>GENERAL MANAGER: SSK</p>

NOVATO SANITARY DISTRICT

MEMORANDUM

BOARD

MEETING DATE: November 14, 2016

TO: District Board of Directors

FROM: Sandeep Karkal, General Manager-Chief Engineer
Laura Creamer, Finance Officer

SUBJECT: **Establishment of Post-Employment Benefits Trust**
Prefunding of Government Accounting Standards Board (GASB)
Statements 45 and 68 Related Liabilities.

A. Background

At its September 2, 2015 meeting, the Finance Committee received a report titled "Valuation of Retiree Health Benefits, Report of GASB 45 Valuation as of July 1, 2015", prepared by Nick Franceschine of North Bay Pensions. Mr. Franceschine verbally reviewed his report with the Committee at that meeting, including information on the District's retiree health benefit obligations, and the District's future funding options, consistent with Government Accounting Standards Board Statement 45 (GASB 45) requirements.

In addition, staff and Mr. Franceschine presented information on prefunding scenarios for the District's projected GASB 45 liabilities based on Mr. Franceschine's actuarial work. Also, it was noted that there are surprisingly few choices when it comes to companies that provide trust services for OPEB prefunding options, and the most commonly used entities by agencies of the District's size are:

1. CalPERS with its California Employers Retiree Benefit Trust Fund (CERBT) program, and
2. Public Agency Retirement Services (PARS) through its combination GASB 45/68 OPEB/Pension Rate Stabilization Program. PARS is a respected trust administrator based in Orange County, partnered with U.S. Bank as trustee, and HighMark Capital Management as subadvisor for investment management.

Upon discussion, the Committee asked that the presentation be shared with the full District Board. The Committee also asked that staff bring forward at a future Finance Committee meeting, a side-by-side presentation by CalPERS and PARS representatives of their individual investment options for prefunding alternatives.

As directed by the Finance Committee, staff shared the presentation with the full District Board at its September 14, 2015 meeting. Staff also contacted CALPERS and PARS to set up presentations by their representatives to the Committee.

Subsequently, at its November 30, 2015 meeting, the Committee received presentations from representatives of both CalPERS and PARS. At that meeting, the Committee asked that the CalPERS and PARS representatives make the same presentation to the full Board.

At its December 14, 2015 meeting, the District Board received a presentation from Ms. Vikki Rodriguez of Maze and Associates, the District's independent external audit firm. As part of her presentation on the District's recently completed "clean" audit, Ms. Rodriguez noted the District is now also in compliance with GASB Statement 68 – "Accounting and Financial Reporting for Pensions", beginning with the fiscal year ending June 30, 2015. She noted that the information on pension liability and cost as determined for the District by CalPERS is now reflected in the District's financial statements.

Also at its December 14, 2015 meeting, the District Board received presentations from the PARS and CalPERS representatives on prefunding the District's OPEB liability. The PARS representatives also discussed the PARS combination OPEB/Pension Rate Stabilization Program offering.

Following these presentations, the General Manager asked if the Board wished to provide further direction to staff. Upon Board discussion and concurrence, then President Mariani directed the General Manager and staff to further explore the CalPERS and PARS offerings, and recommended that a comparison of the CalPERS and PARS investment and funding options be brought before the Board at a future meeting, along with staff recommendations for prefunding both GASB 45 and GASB 68 liabilities.

This memo seeks to respond to direction provided to staff, and present options to prefund both GASB 45 and GASB 68 liabilities.

B. Prefunding the GASB 45 Liability for Other Post-Employment Benefits (OPEB)

Discussion

Under GASB 45, the District is required to actuarially calculate its OPEB obligation and the annual amount required to fund this obligation (referred to as the Annual Required Contribution or ARC). The ARC represents a level of funding that if paid on an ongoing basis, is projected to cover the cost each year and amortize any unfunded actuarial liabilities over a 30-year period.

The most recent GASB 45 actuarial report for the District, by Mr. Franceschine of North Bay Pensions, showed that as of June 30, 2015, the District's unfunded liability was \$6.52 million, based on a 4% discount rate. This \$6.52 million number includes the value of "subsidized premiums" that the Actuarial Standard of Practice (ASOP) No. 6 requires for valuations made after March 31, 2015. If "subsidized premiums" were not reflected in these numbers, the District's GASB 45 liability would be \$5.51 million.

The use of "subsidized premiums" essentially eliminates an exemption previously embedded into actuarial valuations for "community rated plans", such as the CalPERS plans that the District utilizes. Premium amounts for such plans are based on the pooled experience of a large group of individuals, and the actual demographics of a specific employer (especially a small agency like the District) have little or no effect on its actual premium amounts. The elimination of this exemption is likely overly broad in the District's context, but ASOP 6 does not make allowances or offer actuaries any discretion with its elimination. Therefore, while the current valuation of \$6.52 million could be viewed as overstating the District's GASB 45 liability, unfortunately, that is the valuation the District will be required to use going forward.

Additionally, for illustrative purposes only, Mr. Franceschine calculated two “prefunding” scenarios starting with an assumption that the District would make an upfront one-time payment to an irrevocable trust, and follow it by making the required ARCs. Under these types of funding scenario, the OPEB liabilities were actuarially calculated to be significantly lower at the next GASB 45 valuation.

In the first illustrative scenario, Mr. Franceschine assumed an upfront discretionary payment of \$1.0 million, a closed 30-year amortization period, a CalPERS/CERBT validated investment rate of 7.28%, and making the required ARCs. With these assumptions, he estimated the actuarial unfunded liability would be \$4.2 million at the next valuation of June 30, 2018, (versus \$6.52 million at the current valuation).

For the second illustrative scenario, Mr. Franceschine assumed an upfront discretionary payment of \$1.0 million, an open 30-year amortization period, an investment rate of 7.28%, and making the required ARCs. Based on these assumptions, he estimated the unfunded liability would drop to \$3.06 million at the June 30, 2018 valuation, for this scenario.

From these illustrative scenarios, there is considerable value to prefunding this liability, since the monies in the trust, per GASB 45, can be counted against the District’s calculated OPEB liability for financial reporting purposes.

Prefunding Alternatives & Strategy

Aside from the two “prefunding” scenarios calculated by Mr. Franceschine, staff looked at several prefunding alternatives as discussed below:

1. *Alternative 1 – Partial discretionary prefunding:*

Under this alternative, the District would establish an irrevocable trust and partially prefund it, with potential optional future prefunding payments at the Board’s discretion. Retiree benefits could also potentially be paid from the irrevocable trust.

The District’s final Fiscal Year (FY)16-17 and preliminary FY17-18 budgets project the Operating Fund cash balance at about \$12.4 million, as of July 1, 2017. District Policy No. 3500 sets reserves requirements for each fiscal year. Similarly, District Policy No. 3510 sets the Operating Fund Minimum Beginning Balance for each fiscal year. After accounting for reserves and beginning minimum Operating Fund account balance requirements consistent with these policies, the estimated available cash balance in the District’s Operating Fund is projected to be about \$2.0 million as of July 1, 2017. This \$2.0 million amount (or a portion thereof) would be available for potential partial discretionary prefunding. Therefore, this alternative is a very achievable strategy for the District if it chooses to implement it.

2. *Alternative 2 - Fund the ARC only:*

Under this alternative, an actuary would establish the District’s Annual Required Contribution (ARC) amounts at least once every three fiscal years, as required by GASB 45. The District’s funding policy would be to contribute to an irrevocable trust each year, an amount equal to that year’s ARC. Also, for the last four budget cycles (beginning with FY13-14) the District has budgeted the ARC for each year into its annual operating budgets. However, the District does not currently have a trust fund or separate account. Therefore, the portion of the budgeted amount

associated with the OPEB liability for current eligible employees has been “carrying over” into the District’s Operating Fund cash position at the end of each fiscal year, as shown in Table 1.

Table 1: Summary of OPEB budgeted amounts and unspent “carryovers” into Operating Fund Balance, FY14-17

Fiscal Year (FY)	Budgeted Amounts for OPEB liability^(a)	Carryover from Budgets for OPEB liability
2013-14	\$387,078	\$159,884
2014-15	\$396,155	\$191,949
2015-16	\$375,260	\$193,813
2016-17	\$377,348	\$185,388 ^(b)
TOTALS	\$1,535,841	\$731,034

^(a) In Operating Budget beginning in FY2013-14.

^(b) Estimated for FY16-17.

As seen from this table, the District fully budgeted its ARC each fiscal year. Moreover, it did so while achieving a balanced operating budget in each of those years. Therefore, this alternative is a very achievable strategy if the District chooses to implement it. Also, note that this \$731,034 amount currently is a part of the estimated Operating Fund cash balance of \$2.0 million (projected as of July 1, 2017) available after meeting reserves and minimum account balance requirements, as discussed earlier.

3. Alternative 3: Partial prefunding and funding the ARC:

This alternative combines the elements of Alternatives 1 and 2 above, and is similar to Mr. Francheschine’s two “prefunding” scenarios discussed earlier. It would require that the District establish an irrevocable trust and partially prefund it with an initial discretionary amount, with potential optional future prefunding payments at the Board’s discretion. Retiree benefits may be paid from the trust to the extent the trust is funded.

As seen from Table 1 above, since a trust fund has not yet been established, the District will have potentially “accumulated” over \$700,000 as of FY16-17, as the District has funded its ARC each year but carried over the unspent funds into the Operating Fund cash balance at the end of the year. Also, it is anticipated that the District will be able to continue to fully fund its GASB 45 ARC each year in future years, while continuing to achieve a balanced operating budget during each of those years. Therefore, this alternative of partial prefunding and funding the ARC into a trust fund is a very achievable strategy for the District if it chooses to implement it.

4. Prefunding Strategy:

From the above discussion of alternatives, Alternative 3 would offer the most flexibility in that the District could make an initial discretionary payment, and then make any future prefunding payments at the Board’s discretion. For example, the District could establish a GASB 45 trust fund, partially prefund it with an initial discretionary amount, and then annually budget an amount equal to the OPEB ARC (from the actuarial valuation) within the District’s operating budget as part of its annual budget.

C. Prefunding the GASB 68 Net Pension Liability

Discussion

GASB Statement No. 68 was issued in 2012. It requires that public agencies such as the District that participate in multi-employer defined benefit plans such as CalPERS, must recognize a Net Pension Liability (NPL), or Unfunded Actuarial Accrued Liability (UAAL) on their balance sheet. The NPL is essentially the difference between the District's total pension liability (actuarial accrued liability) and actual plan assets. GASB 68 became effective for fiscal years starting after June 15, 2014. As mentioned earlier, the District first recognized its GASB 68 liability as established by CalPERS in its financial statements for the fiscal year ending June 30, 2015.

CalPERS has established the District's total NPL as of June 30, 2016 at about \$3.5 million, which is up from about \$3.3 million a year ago, as CalPERS continues to refine its NPL calculation methodology. Based on its NPL calculations, CalPERS has established the District's pension ARC amounts at \$177,747 for FY16-17, \$223,168 for FY17-18, and \$290,119 (projected) for FY18-19. CalPERS includes these amounts in the District's annual Employer Required Contribution (ERC) payments, and the District budgets them in its annual Operating Budget.

Until recently, the District's only option for addressing the pension liability (other than the provisions of the ERC payments) was to commit additional funds to CalPERS. However, these additional funds would also: (a) be subject to the same market volatility risk as the CalPERS investment policy target of 7.5%, and (b) not be accessible to the District for other CalPERS pension expenses. For information, CalPERS lists its investment performance for the last four years on its website as 13.2% for FY12-13, 18.4% for FY13-14, 2.4% for FY14-15, and 0.6% for FY15-16.

The Internal Revenue Service (IRS) has established through private letter rulings that a public agency such as the District can create a separate trust to "pre-fund" its PERS unfunded liability. This would provide the District with an alternative to sending funds to CalPERS. Such prefunding will provide for greater District control over assets, portfolio management by a registered investment advisor selected and monitored by the District, and allow for future excess contributions to be transferred to CalPERS (or to the District for reimbursement for up to two years of pension expenses) at the District's discretion.

Prefunding Strategy

Just as with a GASB 45 liability trust fund, the District could potentially fund a GASB 68 trust fund in one of three ways:

1. Partial discretionary prefunding, or
2. Funding an amount equal to the pension ARC (as established by CalPERS) only, or
3. A combination of partial initial discretionary prefunding, and annual amounts up to the pension ARC.

Of these, Alternative 3 offers the most flexibility in that the District could make a partial initial discretionary payment, and then make any future prefunding payments at the Board's discretion. For example, the District could establish a GASB 68 trust fund, partially prefund it with an initial discretionary amount, and then annually budget an amount up to the pension ARC (as established by CalPERS) within the District's operating budget as part of its annual budget.

As mentioned earlier, the estimated available cash balance in the District's Operating Fund is projected to be about \$2.0 million as of July 1, 2017. This amount, less any amount that may be used to prefund the OPEB liability, would be available for potential partial discretionary prefunding of the District's pension liability. Also, similar to funding the OPEB ARC, the District could potentially budget an additional amount up to the GASB 68 pension ARC as established by CalPERS, each fiscal year in future years, while meeting the criterion of achieving a balanced Operating Budget in each of those years. As mentioned earlier, CalPERS has established the District's pension ARC amounts at \$177,747 for FY16-17, \$223,168 for FY17-18, and \$290,119 (projected) for FY18-19.

D. Trust Services Providers

Staff researched options to create trusts to prefund the District's GASB 45 and GASB 68 benefits to set aside assets and prefund obligations. As mentioned earlier, there are surprisingly few choices when it comes to entities that provide trust services for OPEB pre-funding options. The most commonly utilized entities by agencies of the District's size are CalPERS through its CERBT program, and PARS and its combination OPEB/Pension Rate Stabilization Program.

Staff researched and compared the two trust services providers, and found that:

- The PARS trust complies with the Internal Revenue Code (IRC) Section 115, and has received a favorable Private Letter Ruling (PLR) from the IRS for its individual OPEB and Pension Rate Stabilization Program, as well as for a combined OPEB/Pension Rate Stabilization Program, or Post Employment Benefits Trust program. CERBT also complies with and has received a similar PLR for its GASB 45 offering only.
- As mentioned earlier, of the two trust providers, PARS provides both GASB 45 and 68 related trust services while CALPERS CERBT currently only offers GASB 45 services. PARS also offers a combined trust program.
- With a PARS trust, the fiduciary responsibility and liability is transferred to U.S. Bank as the fund trustee. With CERBT, the CalPERS Board is the fiduciary.
- In terms of investment choices, CERBT offers three investment strategies or options, while PARS offers five asset allocation strategies within active and passive investment portfolios ranging from conservative to moderate to aggressive.
- With PARS, the District retains investment control with input on asset allocation and risk tolerance for both GASB 45 and 68 investments, and the investment manager executes the strategy with input from the District. With CERBT, the CalPERS Board determines investment policy, asset classes and asset allocation strategies.
- In terms of costs, CERBT has lower management fees (ten basis points versus about fifty basis points for PARS). While recognizing that past performance does not guarantee future results, the entities appear to have comparable performance, net of fees. This is seen in Tables 2 and 3, which provide a comparison of relative performance for the two entities in their Aggressive and Conservative investment portfolios or strategies.

However, PARS appears to have the edge when the investment types and strategies are considered for consistency with the District's investment philosophy. For instance, in the Conservative category of Table 3, the relative performance of the two entities is similar. But the asset allocation mix used by PARS to meet its performance objectives in its conservative strategy (79% fixed income vs. CERBT's 39% fixed income) is more attuned

to the District's historically conservative investment philosophy. Also, in terms of life span of the entities portfolios or strategies, inception dates for CERBT's three available strategies are 2007, 2011, and 2012 respectively. On the other hand, PARS can consistently demonstrate 5-year (or longer) histories for all five of their typical portfolios.

Table 2: PARS and CalPERS CERBT Performance⁽¹⁾ (Aggressive)

Entity	Returns		
	1-year	3-year	5-year
PARS/Highmark Capital Appreciation Strategy ⁽²⁾	10.05%	5.80%	10.25%
CalPERS CERBT Strategy 1 ⁽³⁾	11.08%	5.30%	9.32%

(1) Net of all fees.

(2) 24% Fixed Income.

(3) 27% Fixed Income.

Table 3: PARS and CalPERS CERBT Performance⁽¹⁾ (Conservative)

Entity	Returns	
	1-year	3-year
PARS/Highmark Conservative Strategy ⁽²⁾	10.05%	5.80%
CalPERS CERBT Strategy 3 ⁽³⁾	11.08%	5.30%

(1) Net of all fees.

(2) 79% Fixed Income, 15% Equity, 6% cash.

(3) 39% Fixed Income, 24% Global Equity, 26% TIPS, 8% REITs, 3% Commodities

E. RECOMMENDATIONS

General Recommendations

It is recommended that the Board prefund the District's GASB 45 and 68 post-employment liabilities into trust fund(s) managed by an outside trust services provider, for reasons including:

- It is consistent with current Government Finance Officers Association, (GFOA), generally accepted best financial management practices.
- Prefunding its OPEB and Pension liabilities will allow the District to make long-term investments to potentially mitigate these liabilities, and eventually reduce the total cost of providing the associated benefits.
- The fiduciary responsibility and liability for the funds would be transferred to the outside trust services provider and investment manager.
- Establishing an irrevocable trust fund has the potential benefit of generating investment earnings to provide additional resources for funding post-employment benefit liabilities.
- Once placed into a trust, funds are not subject to creditors' claims or State takeaways.
- Also, if properly managed by an expert service provider, prefunding can be less expensive for the District over the long run since more of the unfunded liability will potentially be paid for by investment returns.

Trust Program and Services Provider Recommendations

It is recommended that the District implement the PARS offering of a combined OPEB/Pension Rate Stabilization Program, or Post Employment Benefits Trust program, for reasons including:

- Provides an element of diversification from CalPERS as the sole service provider of post-employment benefits services to the District, and potentially lowers overall exposure to market volatility risk from the CalPERS investment policy target of 7.5%.
- The PARS trust provides both GASB 45 and 68 services for unified administrative and fiduciary responsibilities to meet the District's needs. Note that even though the program is a combined trust account, the District's GASB 45 and 68 obligations will be set up as separate sub-accounts and tracked individually for GASB reporting purposes.
- The PARS trust is also the only combined trust fund of this nature available to an agency such as the District, that is approved for these purposes by the Internal Revenue Service (IRS). A copy of the trust's IRS Private Letter Ruling (PLR) under Section 115 of the Internal Revenue Code (IRC), is attached for information.
- PARS offers five asset allocation strategies within active and passive investment portfolios ranging from conservative to aggressive. The District provides input based on its risk tolerance, investment philosophy, and investment goals, and the PARS investment manager executes a customizable asset allocation strategy based on this input.
- PARS' portfolios generally have a history of significant out-performance relative to the CERBT portfolios, net of fees. PARS also has a significantly longer operating history in post-employment benefit plan services.

For informational purpose, several entities in Marin and Sonoma counties have adopted PARS' GASB 45 and 68 programs including: Bodega Bay Public Utility District, City of Healdsburg, City of Novato, City of Rohnert Park, City of Sausalito, Cotati-Rohnert Park Unified School District, County of Sonoma, Town of Tiburon, Southern Marin Fire Protection District, Superior Court of California - County of Marin, and Superior Court of California - Sonoma County.

Implementation Strategy Recommendations

1. Funding Amounts: It is recommended the District set up a combined GASB 45/68 Post-Employment Benefits Trust Fund with PARS. As noted earlier, the District currently projects an estimated unencumbered available cash balance of about \$2.0 million (as of July 1, 2017) in the Operating Fund, which could potentially provide initial partial discretionary prefunding to a combined GASB 45/68 Post-Employment Benefits Trust fund. Therefore, it is further recommended that the District:

a. Fund the GASB 45 portion of the combined trust fund with an initial partial discretionary contribution of \$700,000, consistent with the amount that has "accumulated" for this purpose in the Operating Fund over the period of FY13-14 to FY16-17 (see Table 1 above). Also, each future year, subject to Board adoption of authorized amounts in the Annual Budget for that year, contribute an amount up to the full GASB 45 ARC for that year, as established by the District's periodic GASB 45 valuation reports.

b. Utilize a further portion of the remaining unencumbered available cash balance in the Operating Fund to prefund the GASB 68 portion of the PARS combined trust fund with an initial partial discretionary contribution of \$200,000. Also, each future year, subject to Board adoption of authorized amounts in the Annual Budget for that year, contribute an amount of up to the full GASB 68 ARC amount for that year, as established by CalPERS' periodic valuations of the

District's pension liability.

These initial and annual amounts would be invested into the District's PARS combined trust on a "dollar-cost averaging" basis. The total investable amounts would be divided into equal monthly amounts over the fiscal year (or portion thereof), transmitted to PARS on a regular monthly disbursement schedule, and reported to the Board at each regular Board meeting consistent with reporting for regular, payroll and payroll related disbursements.

2. Types of investments and performance goal: Historical performances of post-employment benefits trust plan strategies and portfolios were reviewed for both absolute and relative performance. It was concluded that plans of this nature generally adopt pragmatic performance goals that are typically less than the CalPERS investment policy target of 7.5%.

As mentioned earlier, the District has historically used a discount rate of 4% in its GASB 45 actuarial evaluations. The District has also historically adopted conservative investment strategies in its role as a good steward of the public funds that it oversees.

Therefore, it is recommended that the District affirm and convey its "conservative" investment philosophy to the PARS team for investment strategies adopted and asset allocations made on the District's behalf. Further, it is recommended that the District inform the PARS team of a desired average long term investment goal of 3%-5% for its combined GASB 45/68 trust fund.

3. Plan Administration: It is also recommended that the Board authorize the General Manager to serve as the District's combined trust Plan Administrator by adopting the attached District Resolution No. 3104 - Adoption Of The Public Agencies Post-Employment Benefits Trust Administered By Public Agency Retirement Services (PARS). This is consistent with District practices where the General Manager currently serves as the District's Plan Administrator for the District's deferred compensation plan ("457 Plan") and defined contribution plan ("401a Plan").

As mentioned earlier, the District Finance Committee and full Board have received several presentations from staff and trust service providers, including PARS. In their presentations, the trust services providers discussed their trust agreements and relevant commitments therein. It is noted that while formal trust agreements are proprietary in nature for competitive reasons, they will be subject to further internal review by staff and District Counsel prior to execution. As Plan Administrator of the PARS combined trust fund, the General Manager will work with District Counsel to review and execute the PARS' Trust's legal documents on behalf of the District, take actions necessary to maintain the District's participation in the Trust, and work with the PARS team to maintain regulatory compliance for the District's Trust.

Also, consistent with the investment of all District funds, the General Manager will continue to receive direction from the District Board, and in conjunction with District Counsel and District staff, provide administrative oversight to the management of the trust fund by PARS and its trustee and sub-advisor team.

Attachment: 1. PARS Trust Fund, Internal Revenue Service (IRS) Private Letter Ruling (PLR).

Internal Revenue Service

Department of the Treasury
Washington, DC 20224

Index Number: 115.00-00

Third Party Communication: None
Date of Communication: Not Applicable

U.S. Bank National Association
c/o Susan Hughes, Vice President
3121 Michelson Drive (Suite 300)
Irvine, CA 92612

Person To Contact:
Robin J. Ehrenberg, ID No. 1000219292
Telephone Number:
(202) 317-5800
Refer Reply To:
CC:TEGE:EOEG:EO3
PLR-146796-14
Date: June 5, 2015

Legend

- Trust = Public Agencies Post-Employment Benefits Trust
- Trust Agreement = Public Agencies Post-Employment Benefits Trust Agreement
- Trustee = U.S. Bank National Association

Dear Ms. Hughes:

This letter responds to a letter from your authorized representative dated December 22, 2014, requesting rulings that (1) the Trust's income is excludable from gross income under section 115 of the Internal Revenue Code (IRC) and (2) the Trust is not required to file annual federal income tax returns under IRC section 6012(a)(4). The Trust represents the facts as follows:

FACTS

The Trust is a multiple employer trust established to enable public-agency employers to fund post-retirement employee benefits. Each participating employer must be a public agency that is a state, political subdivision of a state, or an entity the income of which is excludable from gross income under IRC section 115. The employer's governing body must authorize in writing the adoption of the Trust and the employer must execute the adoption agreement, which approves the Trust's administrator and provides that the agency adopts and agrees to be bound by the Trust Agreement. In the adoption agreement, the employer elects to fund obligations to provide benefits under a post-employment health care plan and contribute to a defined-benefit pension plan maintained by the employer that is qualified under IRC section 401(a). The employer may elect to fund either or both obligations.

The Trust Agreement provides that assets are held by the Trust for the exclusive purpose of funding participating employers' benefit obligations and defraying the reasonable expenses of the Trust. The Trust's assets may not be used for any other purpose. Each employer's contributions to the Trust, together with any allocable investment earnings and losses, are held in a separate account for that employer. Assets allocated to satisfy an employer's health and welfare benefit obligation or the employer's pension obligation may only be used for purposes of satisfying that particular obligation. The assets held in an employer's account are not available to pay any obligations incurred by any other employer.

The employers appoint the Trustee and the Trust's administrator and may remove the Trustee or the administrator by a two-thirds vote of all employers. The employers may amend the Trust Agreement with the approval of two-thirds of all employers then participating in the Trust. The employers may terminate the Trust by unanimous agreement of all employers.

Upon termination of the Trust, any assets remaining in an employer's account, after satisfaction of benefit and the Trust's obligations are returned to the employer to the extent permitted by law and consistent with the requirements of IRC section 115.

LAW AND ANALYSIS

Issue 1 - IRC section 115(1)

IRC section 115(1) provides that gross income does not include income derived from any public utility or the exercise of any essential governmental function and accruing to a state or any political subdivision thereof.

Rev. Rul. 77-261, 1977-2 C.B. 45, holds that income generated by an investment fund that is established by a state to hold revenues in excess of the amounts needed to meet current expenses is excludable from gross income under IRC section 115(1), because such investment constitutes an essential governmental function. The ruling explains that the statutory exclusion is intended to extend not to the income of a state or municipality resulting from its own participation in activities, but rather to the income of an entity engaged in the operation of a public utility or the performance of some governmental function that accrues to either a state or political subdivision of a state. The ruling points out that it may be assumed that Congress did not desire in any way to restrict a state's participation in enterprises that might be useful in carrying out projects that are desirable from the standpoint of a state government and that are within the ambit of a sovereign to conduct.

Rev. Rul. 90-74, 1990-2 C.B. 34, holds that the income of an organization formed, funded, and operated by political subdivisions to pool various risks (e.g., casualty, public liability, workers' compensation, and employees' health) is excludable from gross income under IRC section 115(1), because the organization is performing an essential governmental function. The revenue ruling states that the income of such an organization is excludable from gross income so long as private interests do not participate in the organization or benefit more than incidentally from the organization. The benefit to the employees of the insurance coverage obtained by the member political subdivisions was deemed incidental to the public benefit.

Through the Trust, participating public agency employers fund health and welfare and pension obligations for retired employees. Each of the Trust's participating employers is required to be a state, political subdivision of a state or an entity the income of which is excludable from gross income under IRC section 115. Providing health, welfare and pension benefits to current and former employees constitutes the performance of an essential government function within the meaning of IRC section 115(1). See Rev. Rul. 90-74 and Rev. Rul. 77-261.

The Trust's income accrues to its participating employers, all of which are political subdivisions of a state or entities the income of which is excludable from gross income under IRC section 115. No private interests will participate in, or benefit from, the operation of Trust, other than as providers of goods or services. The benefit to employees is incidental to the public benefit. See Rev. Rul. 90-74.

In no event, including dissolution, will the Trust's assets be distributed or revert to any entity that is not a state, a political subdivision of a state, or entity the income of which is excludable from its gross income by application of IRC section 115(1).

Issue 2- IRC section 6012(a)(4)

Section 301.7701-1(b) of the Procedure and Administration Regulations (Regulations) provides that the classification of organizations that are recognized as separate entities is determined under sections 301.7701-2, 301.7701-3, and 301.7701-4, unless a provision of the IRC provides for special treatment of that organization.

Section 301.7701-4(a) of the Regulations provides that, in general, an arrangement will be treated as if it can be shown that the purpose of the arrangement is to vest in trustees responsibility for the protection and conservation of property for beneficiaries who cannot share in the discharge of this responsibility and, therefore, are not associates in a joint enterprise for the conduct of business for profit.

The Trust enables public-agency employers to set aside funds to be used to satisfy each employer's separate pension and health and welfare benefit obligations. The

Trustee is charged with the responsibility of the protection and conservation of the Trust property for the benefit of the beneficiaries of the Trust. The beneficiaries of the Trust cannot share in the discharge of the Trustee's responsibility for the protection and conservation of property and, therefore, are not associates in a joint enterprise for the conduct of business for profit. IRC section 6012(a)(4) provides that every trust having for the taxable year any taxable income or having gross income of \$600 or more, regardless of the amount of taxable income, shall make returns with respect to income taxes under Subtitle A.

Based solely on the facts and representations submitted by the Trust, we conclude that:

1. Because the income of the Trust derives from the exercise of an essential governmental function and will accrue to a state or a political subdivision thereof, the Trust's income is excludable from gross income under IRC section 115(1).
2. The Trust is classified as a trust within the meaning of IRC section 7701(a) and section 301.7701-4(a) of the Regulations. Because Trust's income is excludable from gross income under IRC section 115, the Trust is not required by IRC section 6012(a)(4) to file an annual income tax return.

Except as expressly provided herein, no opinion is expressed or implied concerning the tax consequences of any aspect of any transaction or item discussed or referenced in this letter. This ruling concerns only the federal tax treatment of the Trust's income and may not be cited or relied upon by any taxpayer, including the Trust, employers participating in the Trust, and any recipients of benefits paid under the terms of the Trust, as to any matter relating to the taxation of accident or health contributions or benefits.

This ruling is directed only to the taxpayer who requested it. IRC section 6110(k)(3) provides that it may not be used or cited as precedent.

In accordance with the Power of Attorney on file with this office, a copy of this letter is being sent to your authorized representative.

A copy of this letter must be attached to any income tax return to which it is relevant. Alternatively, taxpayers filing their returns electronically may satisfy this requirement by attaching a statement to their return that provides the date and control number of the letter ruling.

The rulings contained in this letter are based upon information and representations submitted by the taxpayer and accompanied by a penalty of perjury statement executed by an appropriate party. While this office has not verified any of the material submitted in support of the request for rulings, it is subject to verification on examination.

Sincerely,

A handwritten signature in black ink, appearing to read 'K. Griffin', with a stylized flourish at the end.

Kenneth M. Griffin
Branch Chief, Exempt Organizations Branch 3
(Tax Exempt and Government Entities)

cc: Marcus Wu
Pillsbury Winthrop Shaw Pittman LLP
12255 El Camino Real, Suite 300
San Diego, CA 92130-4088

Paul Marmolejo
Director, Office of Federal, State and Local Governments
SE:T:GE:FSL

RESOLUTION NO. 3104

**RESOLUTION OF THE BOARD OF DIRECTORS
OF THE NOVATO SANITARY DISTRICT
APPROVING
ADOPTION OF THE
PUBLIC AGENCIES POST-EMPLOYMENT BENEFITS TRUST
ADMINISTERED BY PUBLIC AGENCY RETIREMENT SERVICES (PARS)**

WHEREAS PARS has made available the PARS Public Agencies Post-Employment Benefits Trust (the "Program") for the purpose of pre-funding OPEB obligations and/or pension obligations; and

WHEREAS the Novato Sanitary District ("District") is eligible to participate in the Program, a tax-exempt trust performing an essential governmental function within the meaning of Section 115 of the Internal Revenue Code, as amended, and the Regulations issued there under, and is a tax-exempt trust under the relevant statutory provisions of the State of California; and

WHEREAS the District's adoption and operation of the Program has no effect on any current or former employee's entitlement to post-employment benefits; and

WHEREAS the terms and conditions of post-employment benefit entitlement, if any, are governed by documents or contracts separate from and independent of the Program; and

WHEREAS the District's funding of the Program does not, and is not intended to, create any new vested right to any benefit, nor strengthen nor diminish any existing vested right; and

WHEREAS the District reserves the right to make contributions, if any, to the Program, or use the funds therein, at its sole discretion, and as provided for by the Program.

BE IT RESOLVED, by the Board of Directors of the Novato Sanitary District, Marin County California that:

1. The Board hereby adopts the PARS Public Agencies Post-Employment Benefits Trust, effective _____; and
2. The Board of Directors hereby appoints the District General Manager, or his/her successor, or his/her designee as the District's Plan Administrator for the Program; and
3. The District's Plan Administrator is hereby authorized to execute the PARS legal and administrative documents on behalf of the District and to take any additional

actions necessary to maintain the District's participation in the Program and to maintain compliance of any relevant regulation issued or as may be issued; therefore, authorizing him/her to take whatever additional actions are required to administer the District's Program.

* * * * *

I hereby certify that the foregoing resolution was duly and regularly passed and adopted by the Board of Directors of the Novato Sanitary District, Marin County, California, at a meeting thereof duly held on the 14th day of November, 2016, by the following vote:

AYES, and in favor thereof, Members:

NOES, Members:

ABSENT, Members:

Gerald Peters, President,
Board of Directors
Novato Sanitary District

ATTEST:

(SEAL)

Sandeep Karkal
General Manager, and
Secretary, Board of Directors
Novato Sanitary District

NOVATO SANITARY DISTRICT BOARD AGENDA ITEM SUMMARY

TITLE: Receive Wastewater Operations Report, October 2016 – Information.

MEETING DATE: November 14, 2016

AGENDA ITEM NO.: 7.a.

RECOMMENDED ACTION: Receive Wastewater Operations Report for October 2016.

SUMMARY AND DISCUSSION:

The October 2016 Wastewater Operations Report incorporating operations reports for wastewater treatment operations, collection system operations, and the reclamation facilities is attached.

District and Veolia staff will be present at the meeting to provide overviews of the reports for their operational areas, and be available to discuss the reports or respond to any questions.

ATTACHMENTS: 1. Wastewater Operations Report for the month of October 2016.

STRATEGIC PLAN INFORMATION: This item addresses Goal 1 (Operational Excellence) and Goal 2 (Reliable and Efficient Facilities) of the latest Strategic Plan Update.

DEPT. MGR.: JB (Veolia), SRK, DD, EB

GENERAL MANAGER: SSK



November 9, 2016

Mr. Sandeep Karkal
General Manager – Chief Engineer
Novato Sanitary District
500 Davidson Street
Novato, CA 94545

Subject: Veolia Water Operations Report – October 2016

Dear Mr. Karkal:

I am pleased to provide the Monthly Operation report for October 2016.

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

Best regards,

A handwritten signature in blue ink, appearing to read "John Bailey".

John Bailey
Project Manager, Veolia



**MONTHLY OPERATIONS REPORT
October 2016**

Prepared for

**NOVATO SANITARY DISTRICT (NSD)
WASTEWATER TREATMENT PLANT
500 Davidson Street
Novato, CA 94945**

Prepared by

Veolia Water West Operating Services, Inc. (VWWOS)

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- Photos
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- Process Control Data / Graphs
- Customer Notifications (Odor / Noise)
- Jerome Meter Readings and Locations

A: TREATMENT PLANT PERFORMANCE SUMMARY: October 2016:

Parameter	Value		Limit	
	Ave	Max	#1	#2
Flow, MGD (monthly ave/max)	4.15	6.40	N/A	N/A
Max Peak Hour, MGD – 10/25/16 - 0920 Hours	N/A	~11	N/A	N/A
Influent				
BOD ₅ , lb/day (month ave/max)	10,306	11,875	N/A	N/A
TSS, lb/day (monthly ave/max)	11,566	14,250	N/A	N/A
Effluent				
BOD ₅ , mg/L (monthly ave/max weekly ave)	<5	5	40	N/A
TSS, mg/L (monthly ave/max weekly ave)	5.3	8	N/A	N/A
BOD ₅ - % Removal, Minimum	98	N/A	85	N/A
TSS - % Removal, Minimum	98	N/A	85	N/A
Ammonia, mg/L – (monthly ave/daily max)	<2	<2	5.9	21
pH, su (min / max)	6.8	7.0	6.0	9.0
Enterococcus, MPN/100 ml (30 day geo mean)	1.3	N/A	35	N/A
Fecal Coliform, MPN/100 ml (30 day median)	N/A	N/A	N/A	N/A
Fecal Coliform, MPN/100 ml (90 th percentile)	N/A	N/A	N/A	N/A
Total Coliform, MPN/100 ml (5 Sample Median/Max)	23	79	240	10,000
Total Permit Exceedances (NPDES)	0			

Title 22 - Recycled Water Production and Quality

Description	Units	Value	Limit
Volume Produced	Million Gallons	2.89	N/A
Average Turbidity	NTU	0.7	2.0
Turbidity > 5 NTU (in 24 hour)	Minutes	0	72
Minimum CT (disinfection)	mg-min/L	>450	450 minimum
Minimum Dissolved Oxygen (DO)	mg/L	7.3	2 mg/L minimum
Maximum Total Coliform	MPN/100 ml	<2	240
Maximum Total Coliform 2 Samples 30 d	MPN/100 ml	<2	23
Total Coliform 7 Sample Median	MPN/100 ml	<2	2.2

Discussion of Violations / Excursions

- Bay Discharge (NPDES) - None
- Waste Discharge Requirements (WDR) – None
- Recycled Water – None



B: SAFETY AND TRAINING:

- Monthly plant safety inspections for Novato WWTP and Ignacio Transfer Pump Station completed
- Five Minute Tailgate training is held daily with all staff.
- No safety incidents for the month of October
- Accident Free: 6/1/10 – 10/31/16: 2,351 days
- Monthly Safety Topics and Training:
 - Distracted Driving
 - Great Shakeout Emergency Drill

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

Transitioned from Reclamation / Storage to Bay Discharge mode on October 26th.

Novato

- Routine rounds, readings and maintenance
- Placed Aeration Basin #2 in service
- Removed Aeration Basin #3 from service for maintenance
- Replaced two bearings on Gravity Belt Thickener #2
- Troubleshoot and repair Bio-Gas Flare, replaced control relays and timers
- Replaced bearing in Biofilter Fan

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

- Aeration Basin #1 & #3 (not needed at current flows)
- Secondary Clarifier #2 (not needed at current flows)
- Primary Clarifier #1 (not needed at current flows)

Ignacio Transfer Pump Station

- Routine rounds, readings and maintenance
- Pulled and cleaned out Grinder – reinstalled
- Replaced O2 Sensor on gas monitor

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

- None

Recycled Water Plant (RWP)

- Performed plant rounds and maintenance

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

- None



Sludge Lagoons

- Performed routine rounds and inspection
- Pumped down monitoring wells

D: LABORATORY ACTIVITIES SUMMARY:

Discharge to Reclamation October 1-25

Discharge to Bay October 26-31

Wildlife Pond and Reclamation Activities**Wildlife Pond**

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

Irrigation Wetwell Sampling

Monthly sampling of the irrigation wetwell in October occurred (started in June) and will continue as long as irrigation is ongoing. The data collected will be compiled and reported in the 2018 triennial Irrigated Pasture Report.

Monitoring Wells

Sampling of the NSD groundwater monitoring wells was conducted on October 26, 2016. This biannual monitoring is to assure the protection of groundwater around the Designated Land Disposal (DLD) site and the old sludge disposal site at the Ignacio Treatment Plant as part of the EPA Part 503 Biosolids requirements. Sampling and data collection was performed by Kurt Hawkyard and Tony Silva. The weed clearing and pump down of the wells in preparation of the sampling was accomplished by Preston Ingram and Manny Arias.

Total Coliforms

When effluent is discharged to reclamation the bacteriological requirement is for total rather than fecal coliforms and there is no requirement for *Enterococcus*. Three samples were analyzed each week for Total Coliforms and all results were under the regulatory limits.

Enterococcus

When effluent is discharged to the Bay the bacteriological requirement is for *Enterococcus*. Bay discharge occurred mid-week at the end of the month so it was necessary to comply with both the total coliform and *Enterococcus* requirement for the last full week of October. The three samples analyzed in October were all low and well under the regulatory limits.

Fecal Coliforms

Fecal Coliforms are required once per quarter during Bay discharge. That sample will be taken in November for the September-November quarter as stipulated in the NDPES Permit.



Whole Effluent Toxicity Testing

No quarterly Acute or Chronic Toxicity testing were performed in October as they are only required during bay discharge. This testing will be completed in November for the September-November quarter as stipulated in the NDPEs Permit.

Proficiency Testing

Proficiency testing for ELAP certified inorganic chemistry parameters was conducted in October and we received a certificate of excellence from the vendor ERA for achieving 100% acceptable data in the study. This was a collaborative effort between Kurt, Liz (Veolia), and Jessica Bena from North Marin Water district.

Pretreatment**Permits**

- Received one Class I Temporary Discharge Permit Closeout Report

Inspections

- 1 Class I, Categorical Significant Industrial User
- 1 Class I, Significant Industrial User
- 1 Class III, Industrial User
- 1 Food Service Establishment / Non-Permitted Industrial User
- 2 Class I, Temporary Dischargers

Public Education

Liz attended the North Bay Science Discovery Day with John Bailey, Brian Exberger and John O'Hare. Along with showing the mysterious and fascinating microorganisms of the wastewater treatment plant, we demonstrated what not to flush and why, using magical magnetic stir plates and shaker flasks.

Mutual Aid

Liz provided Mutual Aid to CMSA after the retirement of their Environmental Services Manager.

E: ADMINISTRATION:

- September Electronic Self-Monitoring Report (SMR) submitted on October 20, 2016
- September Electronic Discharge Monitoring Report (DMR) submitted on October 20, 2016
- September Recycled Water Report submitted on October 20, 2016

F: ODORS & LANDSCAPING:

- Eighteen contacts from neighbors during the month.
- Jerome meter (H₂S) readings performed in neighborhood and within treatment plant.
- All readings in neighborhood were at the minimum detection threshold of the Jerome meter.
- Sodium Hypochlorite tank for Ignacio has been ordered.



G: MISCELLANEOUS

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

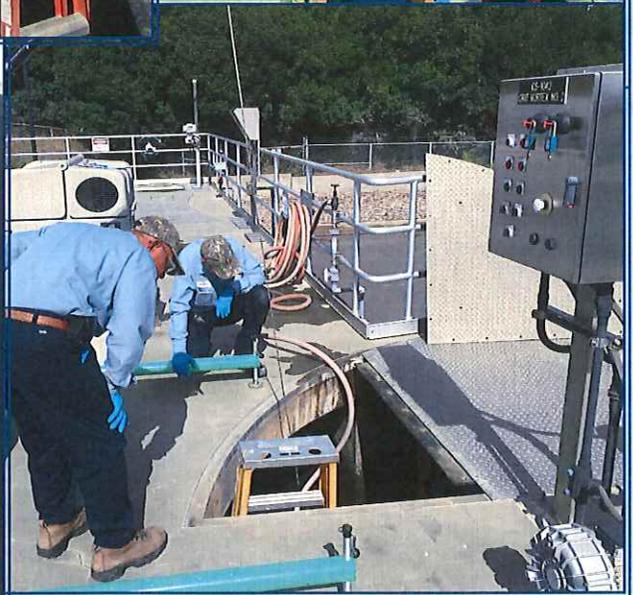
Veolia Support Staff On/Off Site (Various Times)

John O'Hare (Veolia Corporate)	Technical Support
Mike Schnack (Veolia Corporate)	Human Resources / Contract Negotiation
Dennis Flosi (Veolia Richmond)	Instrumentation and Controls



PHOTOS

GRIT VORTEX CLEANING- CONFINED SPACE ENTRY
OCTOBER 2016



Top Left & Right – Jeff Hendricks making a confined space entry assisted by Preston Ingram.
Bottom Left – Jeff cleaning and inspecting Grit Vortex
Bottom Right – Alejo Cuntapay and Preston provide “top side” support and assist Jeff.

ODOR CONTROL
OCTOBER 2016



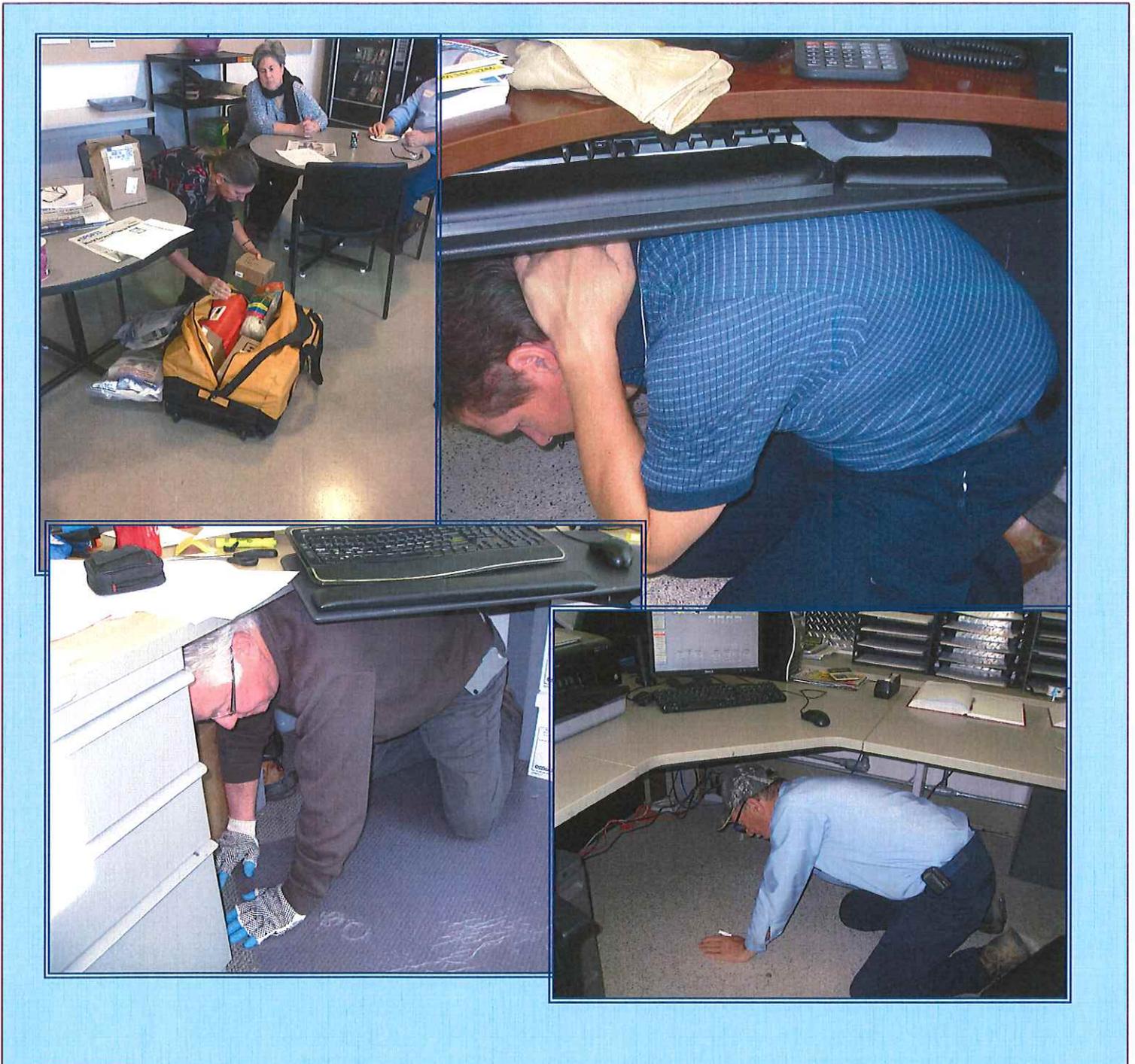
John O'Hare discusses odor control biofilter operation with new operator Manny Arias

GRAVITY BELT THICKENER BEARING REPLACEMENT
OCTOBER 2016



Top Left & Right - Jeff Hendricks checking water proof boot fit on new bearing
Bottom Left & Right - Jeff with a piece of struvite removed from a sludge pump.

GREAT SHAKEOUT – EMERGENCY EXERCISE
OCTOBER 2016



Top Left – Safety Coordinator, Lynda Farmery inventories emergency supplies bag.

Top Right, Bottom Left, & Bottom Right – Brian Exberger, John Bailey, & Preston Ingram perform “drop, cover, & hold during earthquake simulation.

NORTH BAY SCIENCE AND DISCOVERY DAY
OCTOBER 2016



LABORATORY DATA

Novato Sanitary District
BOD/TSS Report



October, 2016

Date	Flow MGD	Influent				Effluent				BOD % Removal PERCENT	TSS % Removal PERCENT
		BOD		TSS		BOD		TSS			
		mg/l	lb/d	mg/l	lb/d	mg/l	lb/d	mg/l	lb/d		
10/01/16	3.77										
10/02/16	3.76										
10/03/16	3.35										
10/04/16	3.61	330	9,935	284	8,551	<5	<151	4	120	98.5	98.6
10/05/16	3.71					<5	<155	<3	<93		
10/06/16	3.33					<5	<139	<3	<83		
10/07/16	3.84										
10/08/16	3.47										
10/09/16	3.40										
10/10/16	3.41										
10/11/16	3.78					<5	<158	<3	<95		
10/12/16	3.63	360	10,899	456	13,805	<5	<151	<3	<91	98.6	99.3
10/13/16	3.84					<5	<160	<3	<96		
10/14/16	3.91										
10/15/16	4.21										
10/16/16	4.18										
10/17/16	4.06										
10/18/16	3.48										
10/19/16	3.64					<5	<152	6	182		
10/20/16	3.52	290	8,513	329	9,658	<5	<147	7	205	98.3	97.9
10/21/16	3.51					<5	<146	8	234		
10/22/16	3.69										
10/23/16	3.74										
10/24/16	4.91	290	11,875	348	14,250	<5	<205	8	328	98.3	97.7
10/25/16	6.40					<5	<267	8	427		
10/26/16	4.30					6	215	7	251		
10/27/16	5.48										
10/28/16	6.27										
10/29/16	4.90										
10/30/16	5.70										
10/31/16	5.75										
Weekly Averages											
10/01/16	Week 1	390	10,896	358	10,002	5	142	7	190		
10/08/16	Week 2	330	9,935	284	8,551	5	148	3	99		
10/15/16	Week 3	360	10,899	456	13,805	5	156	3	94		
10/22/16	Week 4	290	8,513	329	9,658	5	148	7	207		
10/29/16	Week 5	290	11,875	348	14,250	5	229	8	335		
Monthly											
Minimum	3.33	290	8,513	284	8,551	<5	<139	<3	<83	98	98
Maximum	6.40	360	11,875	456	14,250	6	<267	8	427	99	99
Total	128.55										
Average	4.15	318	10,306	354	11,566	<5	<170	<5.3	<184	98	98

Novato Sanitary District
Conventional Pollutants Report



October, 2016

Date	INFLUENT - A001			Effluent - E002							
	Flow Total	pH	Ammonia	Coliform / Bacteria			pH	Ammonia	Unionized Ammonia	Oil & Grease	Temp
				Fecal	Entero	Total					
MGD	su	mg/L	MPN/100 mL			su	mg/L	mg/L		Deg C	
10/01/16	3.77										
10/02/16	3.76										
10/03/16	3.35						6.9				23.4
10/04/16	3.61						6.9				23.4
10/05/16	3.71					8	7.0				23.1
10/06/16	3.33					33	7.0				23.4
10/07/16	3.84	7.4				23	7.0				23.6
10/08/16	3.47										
10/09/16	3.40										
10/10/16	3.41						6.9				23.6
10/11/16	3.78					33	7.0				23.2
10/12/16	3.63					23	6.9				23.3
10/13/16	3.84					2	6.9				23.6
10/14/16	3.91	7.2					6.9				23.4
10/15/16	4.21										
10/16/16	4.18										
10/17/16	4.06						6.9				23.3
10/18/16	3.48						6.9				23.1
10/19/16	3.64					11	6.9				23.0
10/20/16	3.52					17	6.9				21.9
10/21/16	3.51	7.2				79	6.9				23.0
10/22/16	3.69										
10/23/16	3.74										
10/24/16	4.91					23	7.0				22.9
10/25/16	6.40					79	6.8				22.0
10/26/16	4.30				1.0		6.8				22.3
10/27/16	5.48				<1.0	23	6.8				22.5
10/28/16	6.27	7.2			2.0		6.8				22.1
10/29/16	4.90										
10/30/16	5.70										
10/31/16	5.75						6.8				21.8
Monthly											
Minimum	3.33	7.2			<1.0	2	6.8				21.8
Maximum	6.40	7.4			2.0	79	7.0				23.6
Total	128.55										
Average	4.15	7.3					6.9				22.9

RECYCLED WATER REPORT

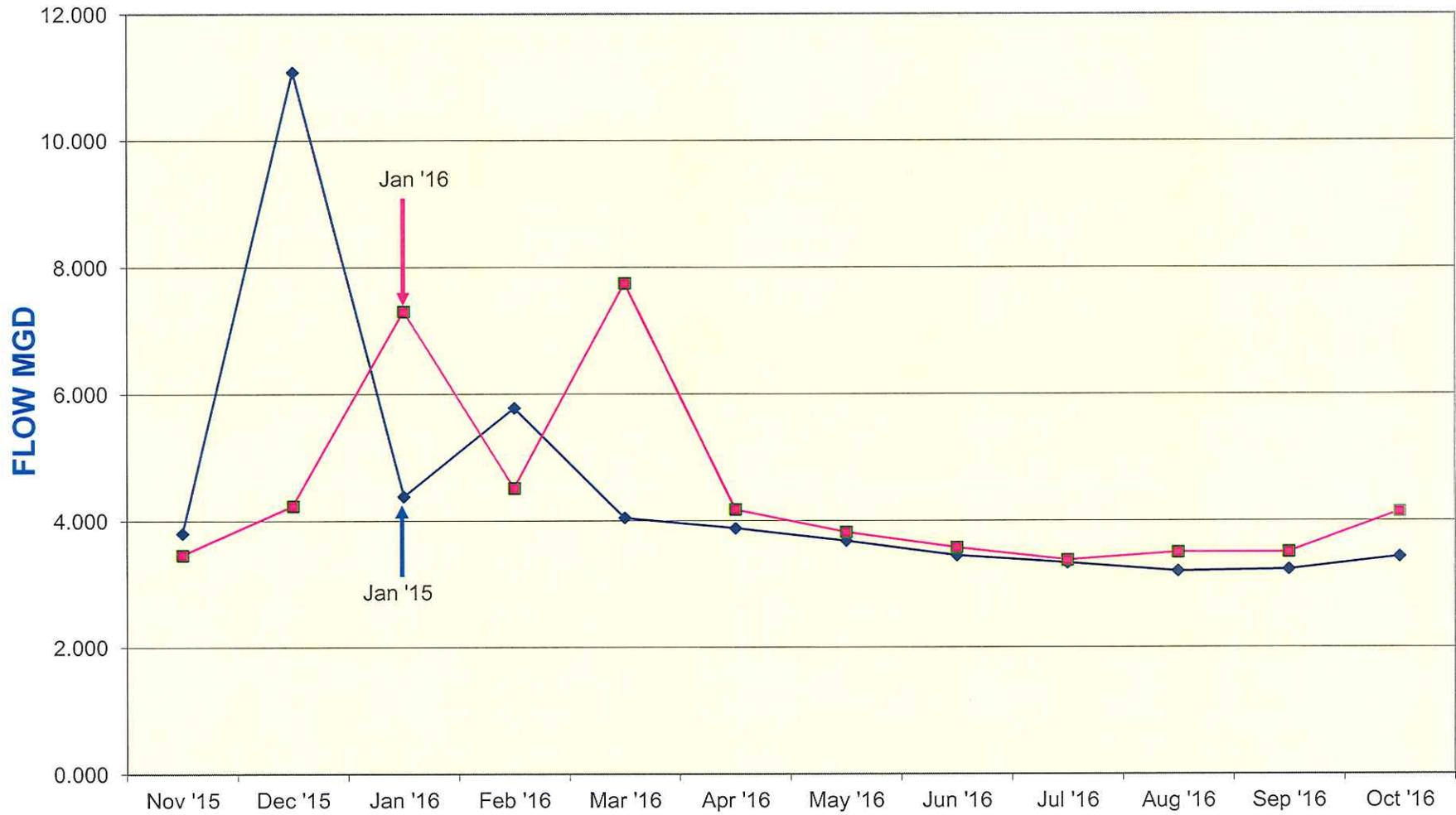
NOVATO SANITARY DISTRICT RECYCLED WATER COMPLIANCE SUMMARY REPORT

Filter Influent Flow	Recycled Water Flow to Plum St.	Recycled Water Banked	Banked Water To Plum Street Tank	Potable Water To Plum St Tank	Recycled Water Influent Turbidity Max	Minutes Over 5 NTU Turbidity	Filter Effluent 24 Hr Average Turbidity	Filter Effluent Dissolved Oxygen	Filter Effluent Total Coliform	Chlorint Contact Time
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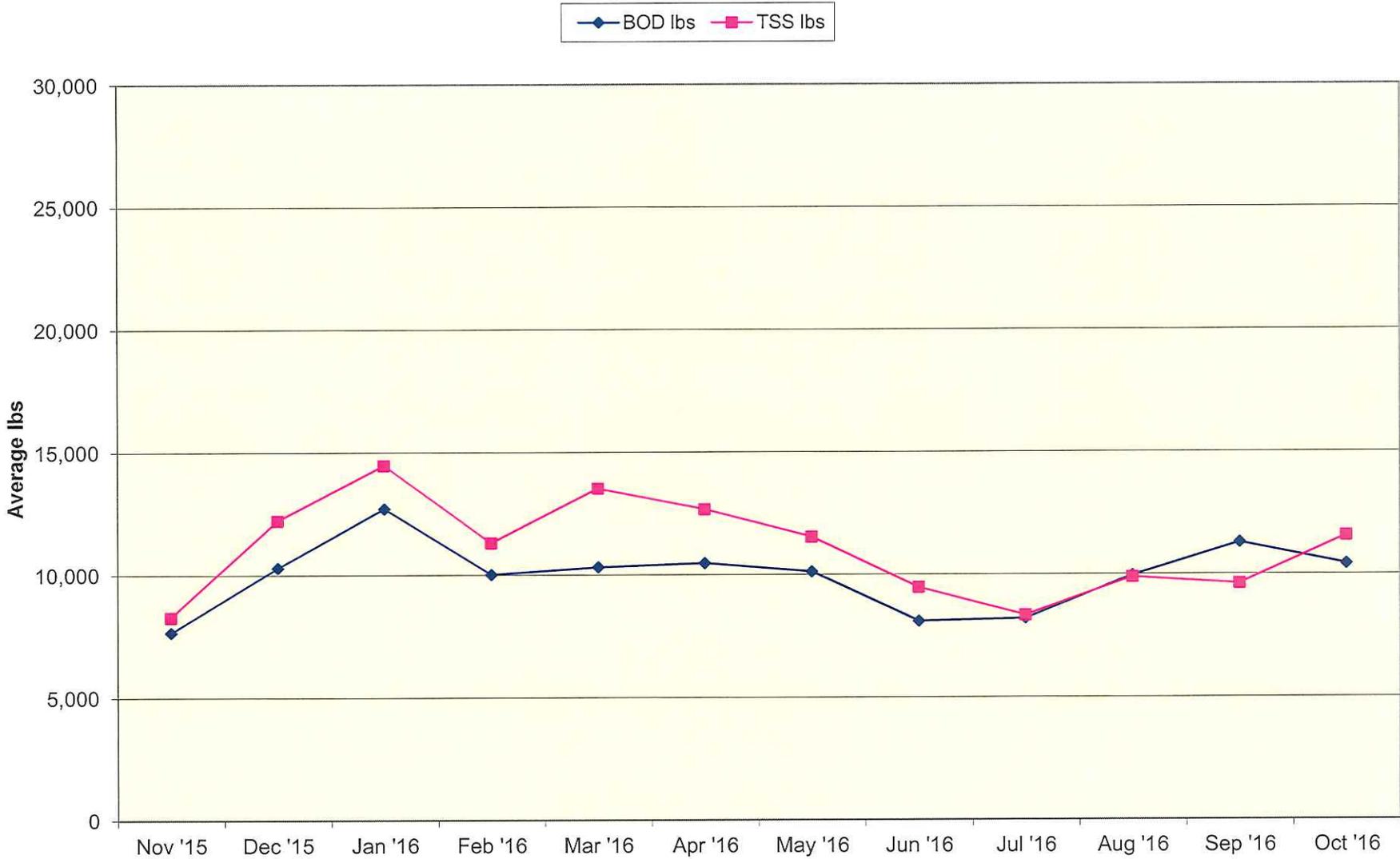
Date	MGD	MGD	MG	MGD	NTU	(m)	NTU	(mg/l)	MPN/100m	Minutes
10/1/2016	0.650	0.167				0	1.1		<2	>450.000
10/2/2016	0.210	0.013				0	0.7	7.2	<2	>450.000
10/3/2016	0.330	0.187				0	1.2	6.6	<2	>450.000
10/4/2016	0.790	0.207				0	0.8	6.8	<2	>450.000
10/5/2016	0.250	0.102				0	0.7		<2	>450.000
10/6/2016	0.640	0.290				0	0.7		<2	>450.000
10/7/2016	0.610	0.259				0	0.6		<2	>450.000
10/8/2016	0.570	0.218				0	0.5		<2	>450.000
10/9/2016	0.050					0	0.5			
10/10/2016	0.720	0.377				0	0.4	7.1	<2	>450.000
10/11/2016	0.600	0.224				0	0.3	7.3	<2	>450.000
10/12/2016	0.660	0.069				0	0.5	7.4	<2	>450.000
10/13/2016	0.260	0.198				0	0.5		<2	>450.000
10/14/2016										
10/15/2016										
10/16/2016										
10/17/2016										
10/18/2016	0.250	0.198				0	0.8	7.5	<2	>450.000
10/19/2016										
10/20/2016										
10/21/2016	0.690	0.206				0	1.0	8.4	<2	>450.000
10/22/2016										
10/23/2016	0.080									
10/24/2016	0.640	0.175				0	1.1	7.4	<2	>450.000
10/25/2016										
10/26/2016										
10/27/2016										
10/28/2016										
10/29/2016										
10/30/2016										
10/31/2016										
Total	8.000	2.890								
Minimum	0.050	0.013				0	0.3	6.6	<2	>450.0
Maximum	0.790	0.377				0	1.2	8.4	<2	>450.0
Average	0.471	0.193				0	0.7	7.3	<2	>450.0

ANNUAL COMPLIANCE SUMMARY – GRAPHS

WASTEWATER INFLUENT FLOW COMPARISON

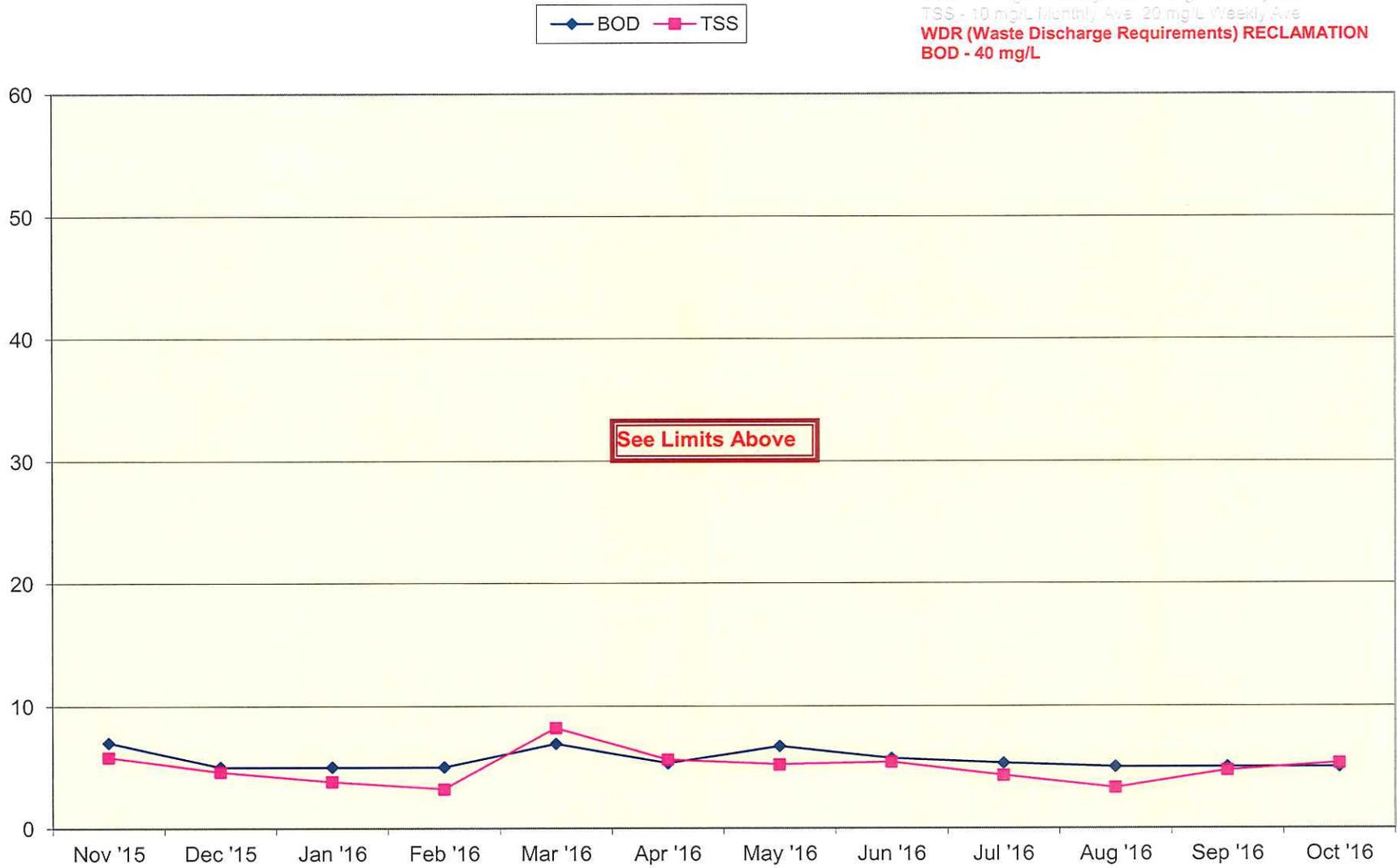


Influent Load BOD / TSS lbs



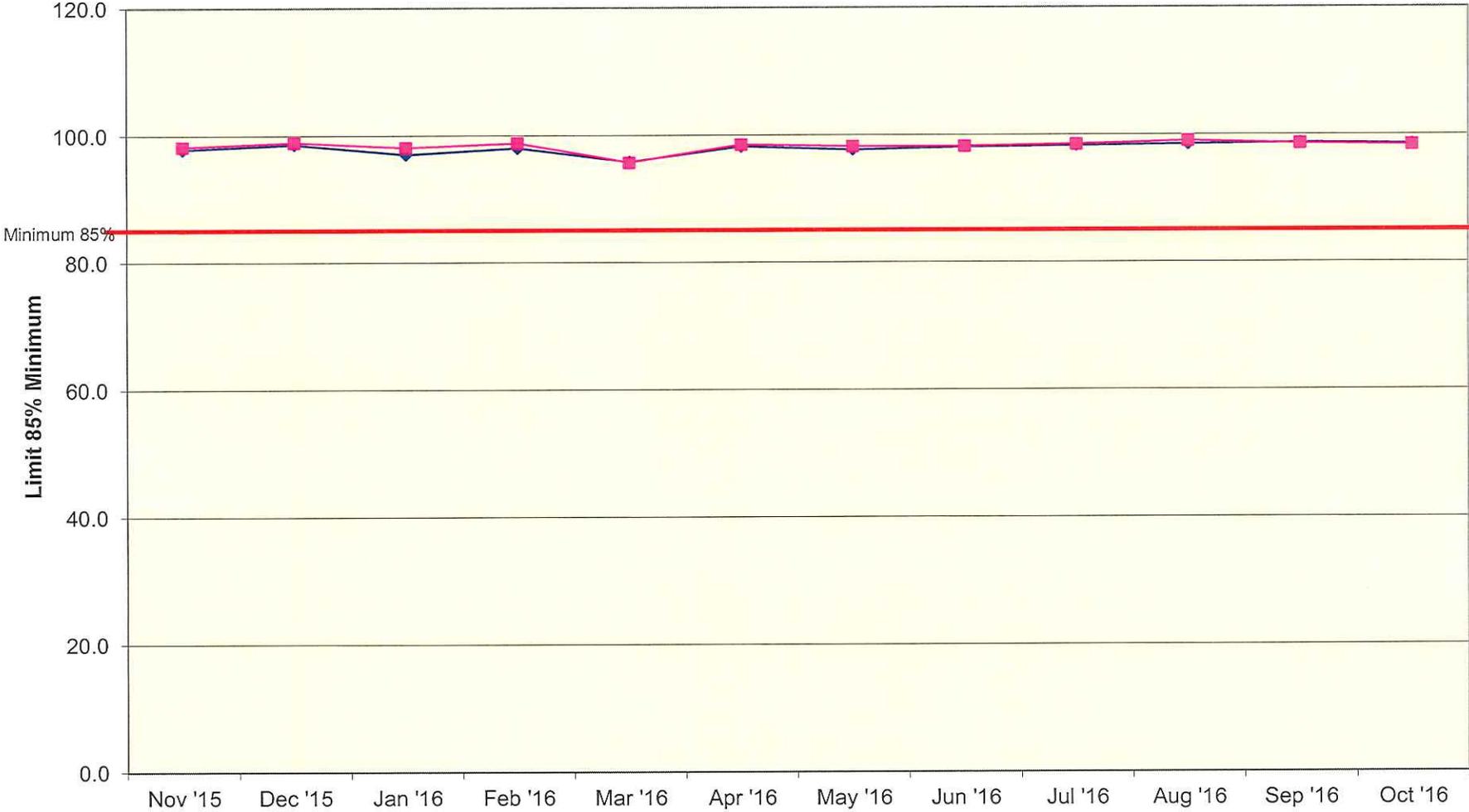
Effluent BOD / TSS Concentration

NPDES LIMITS WET SEASON
 BOD & TSS - 30 mg/L Monthly Ave. 25 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

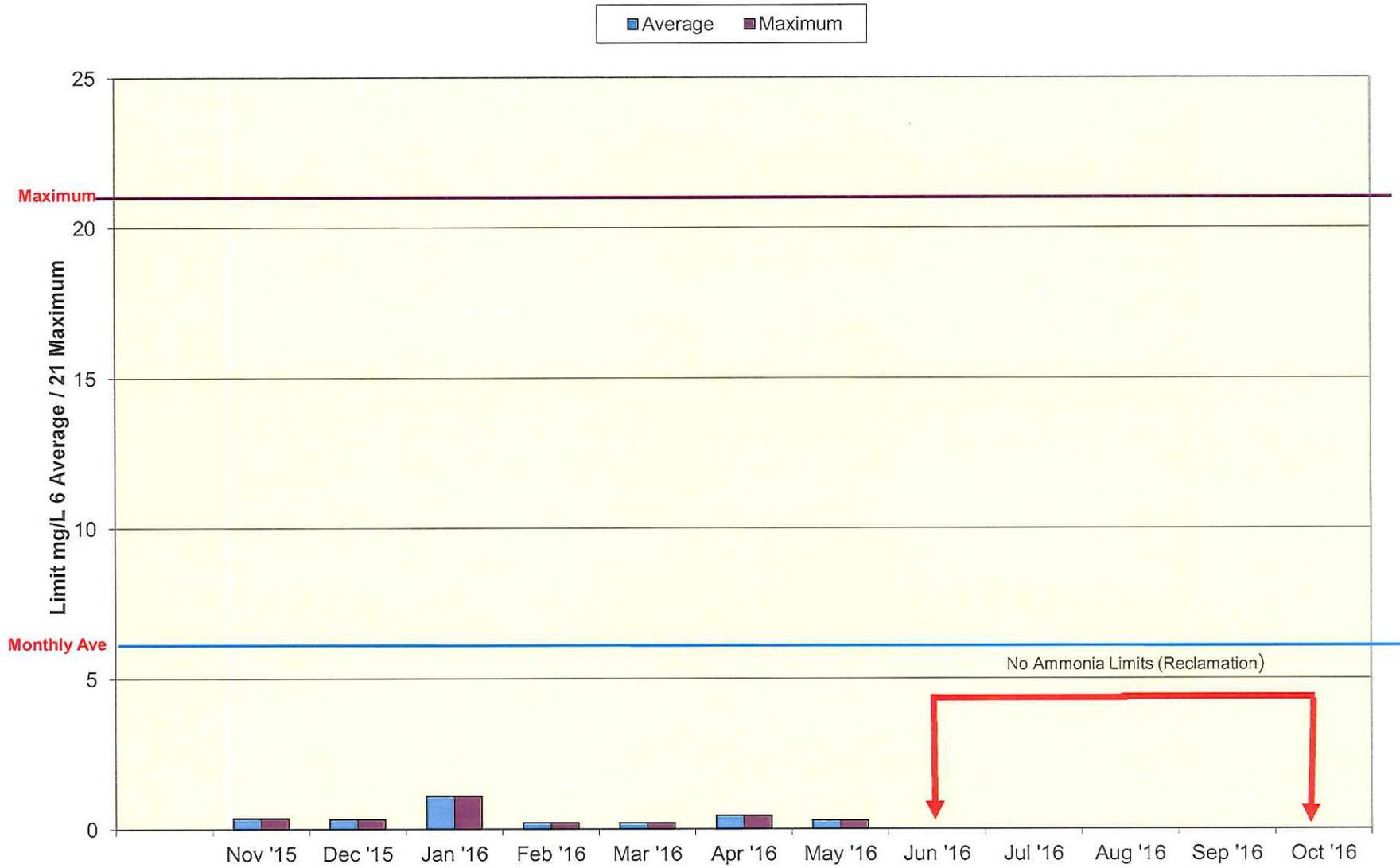


BOD / TSS Percent Removal

—◆— BOD —■— TSS

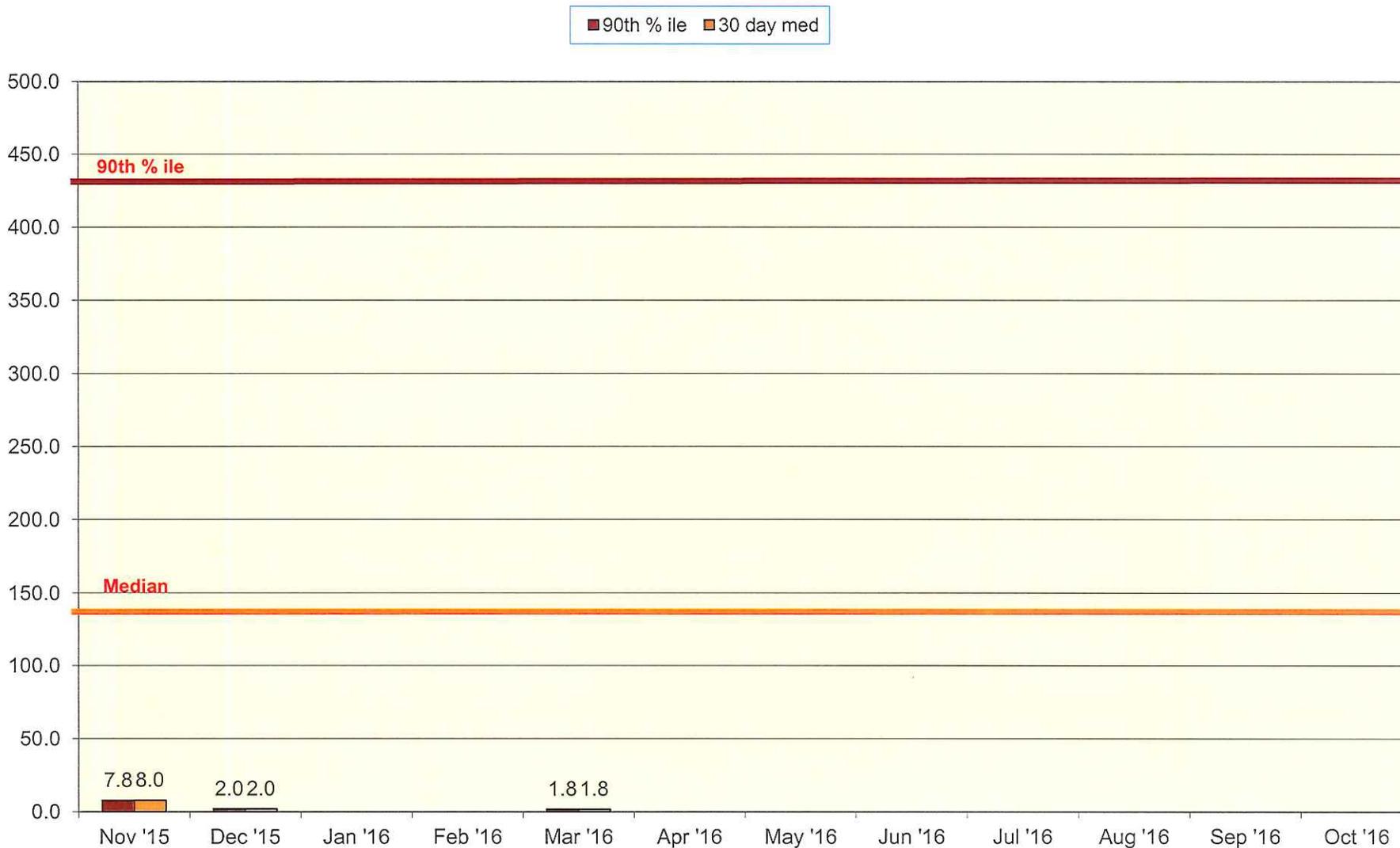


Effluent Ammonia



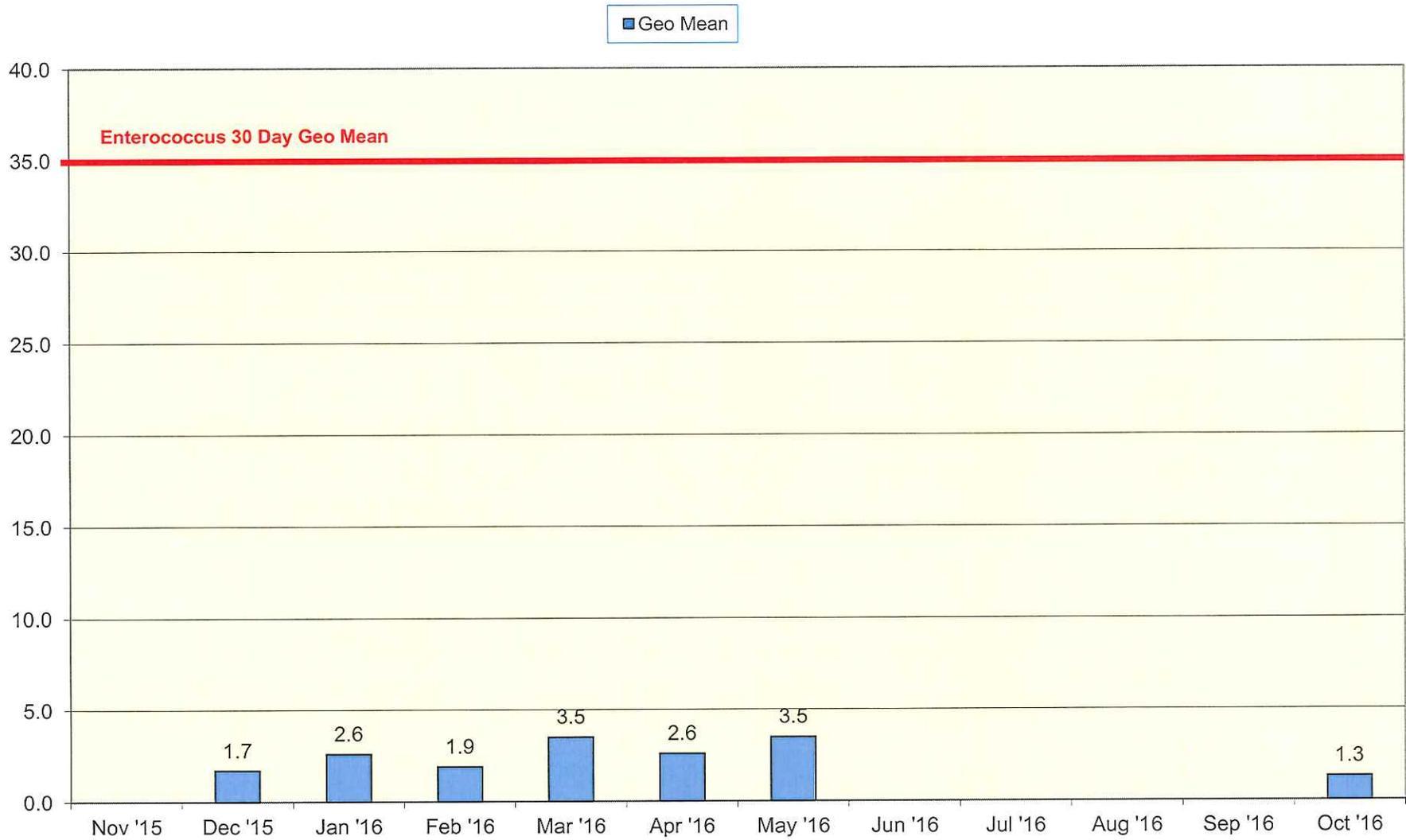
Disinfection - Fecal Coliform

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



Disinfection - Enterococcus

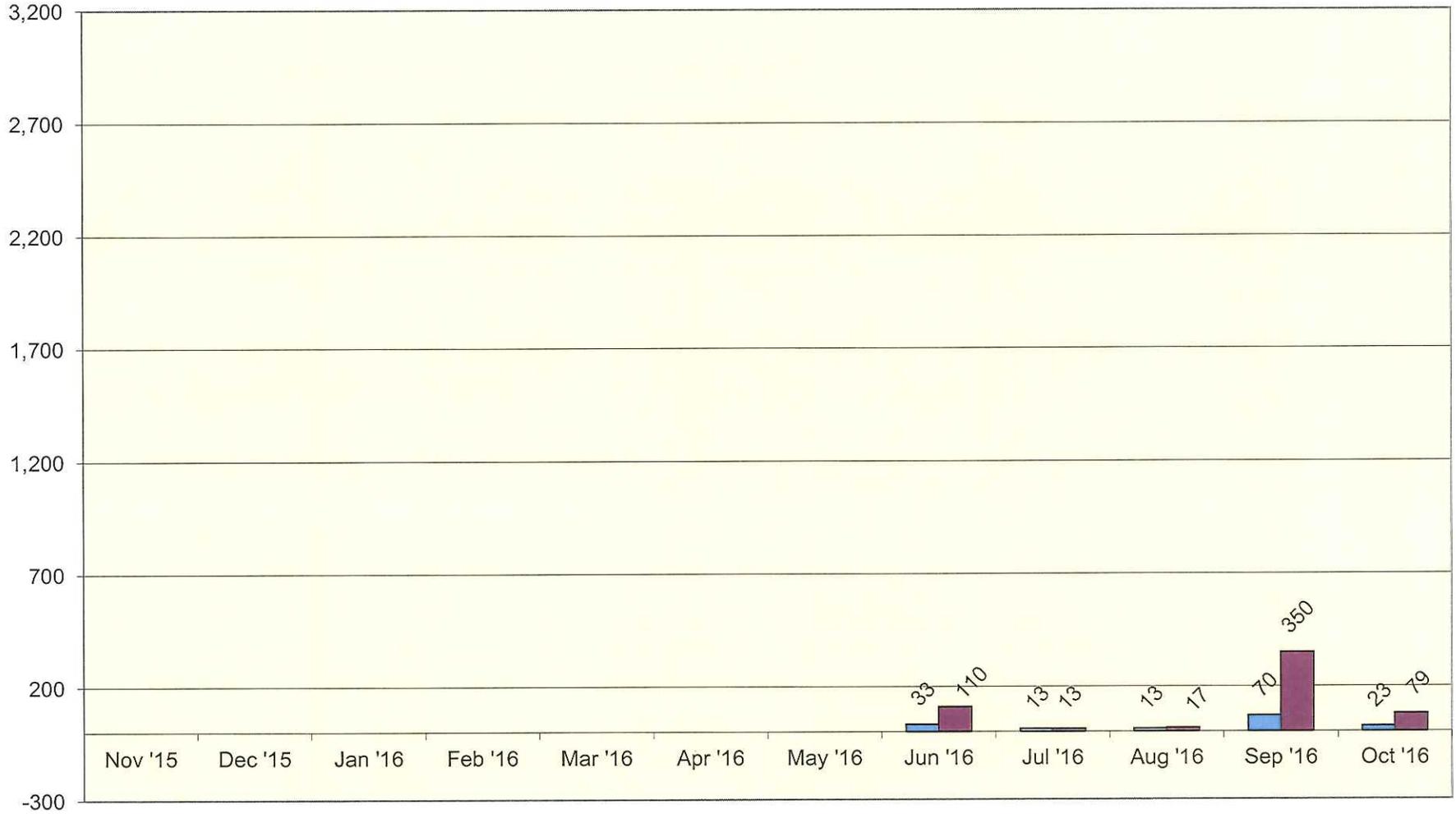
LIMITS - NPDES
Entero 30 day geo mean 35 mpn /100ml



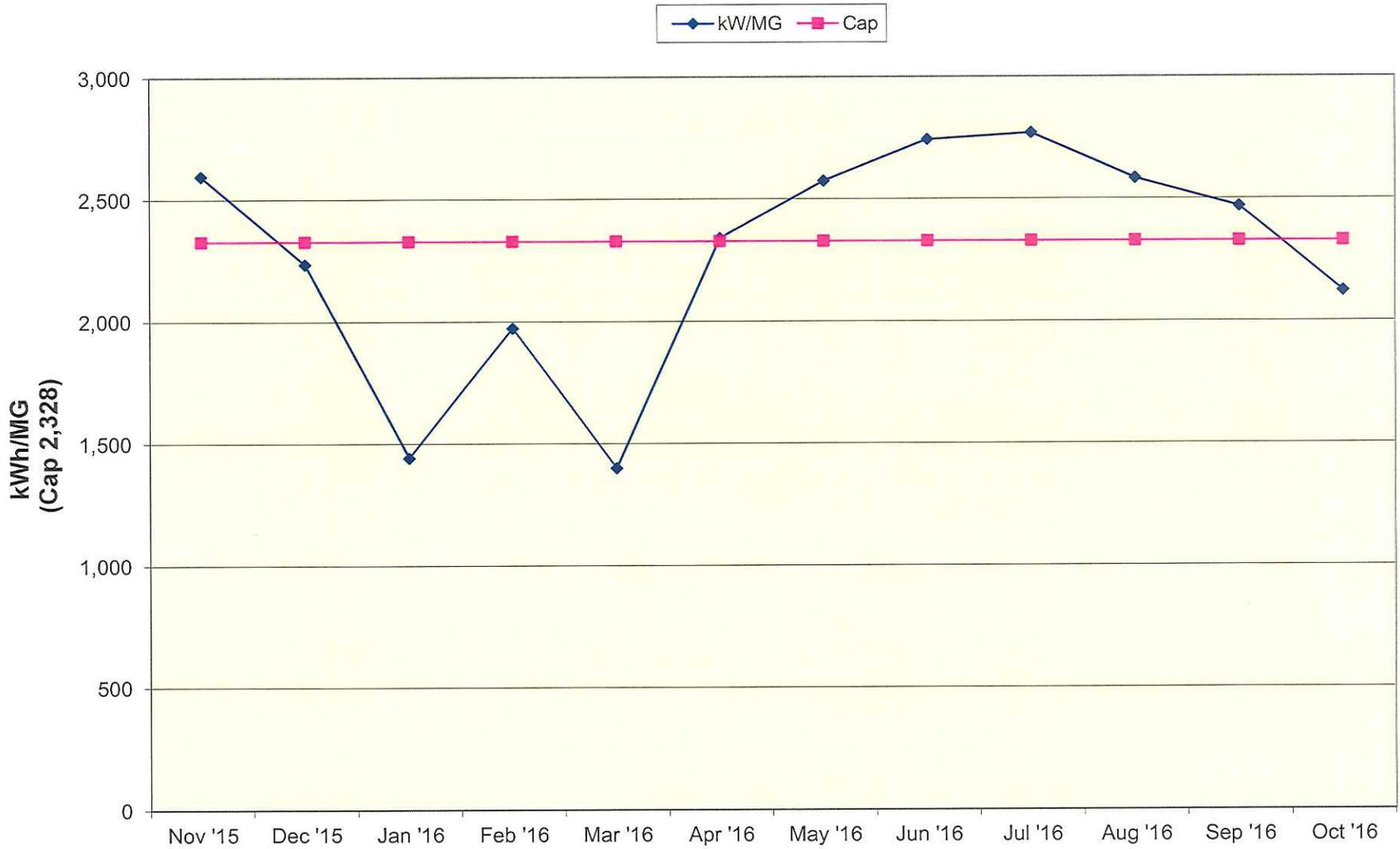
Disinfection - Total Coliform

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

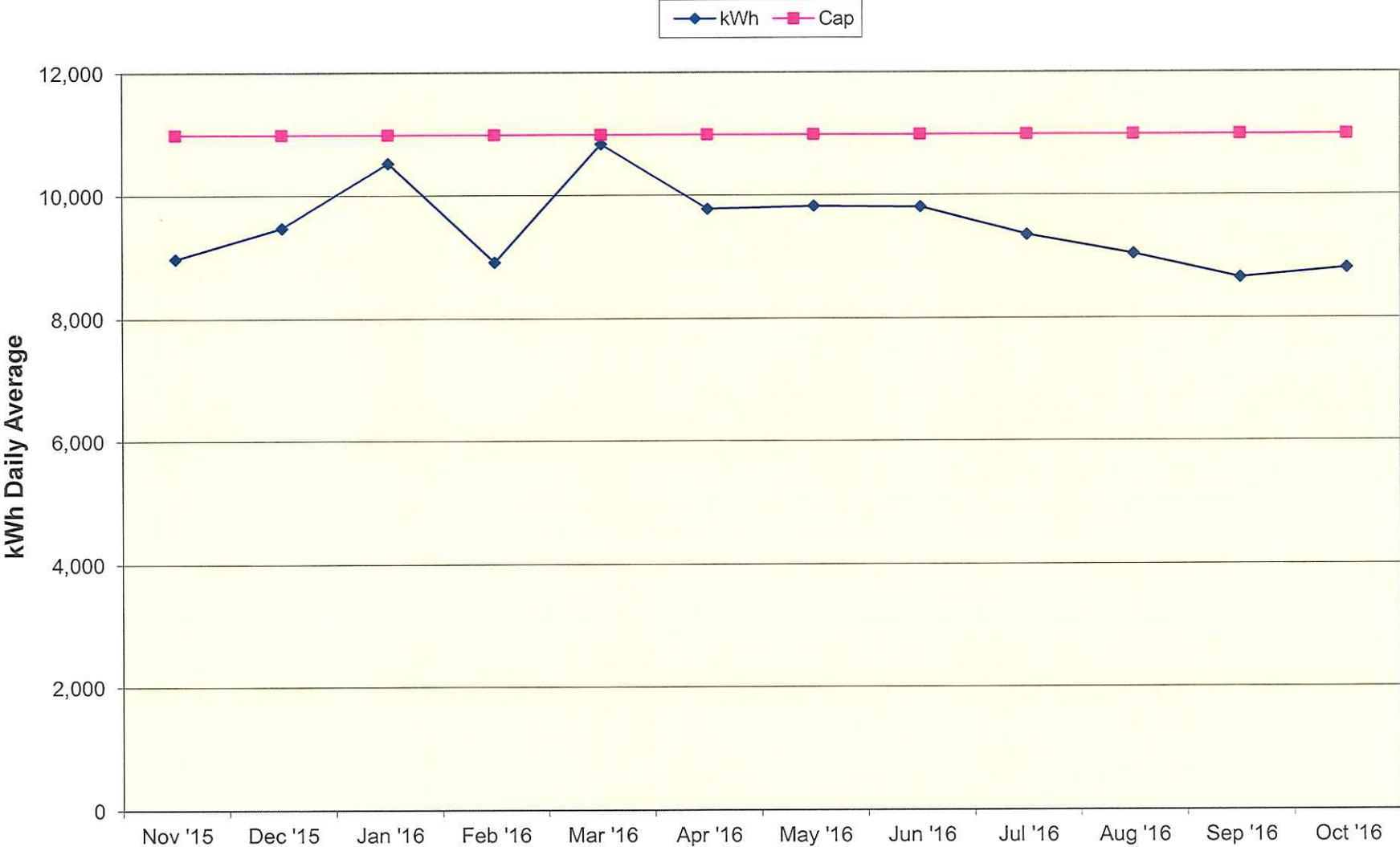
■ 5 Sampl Med ■ Monthly Max



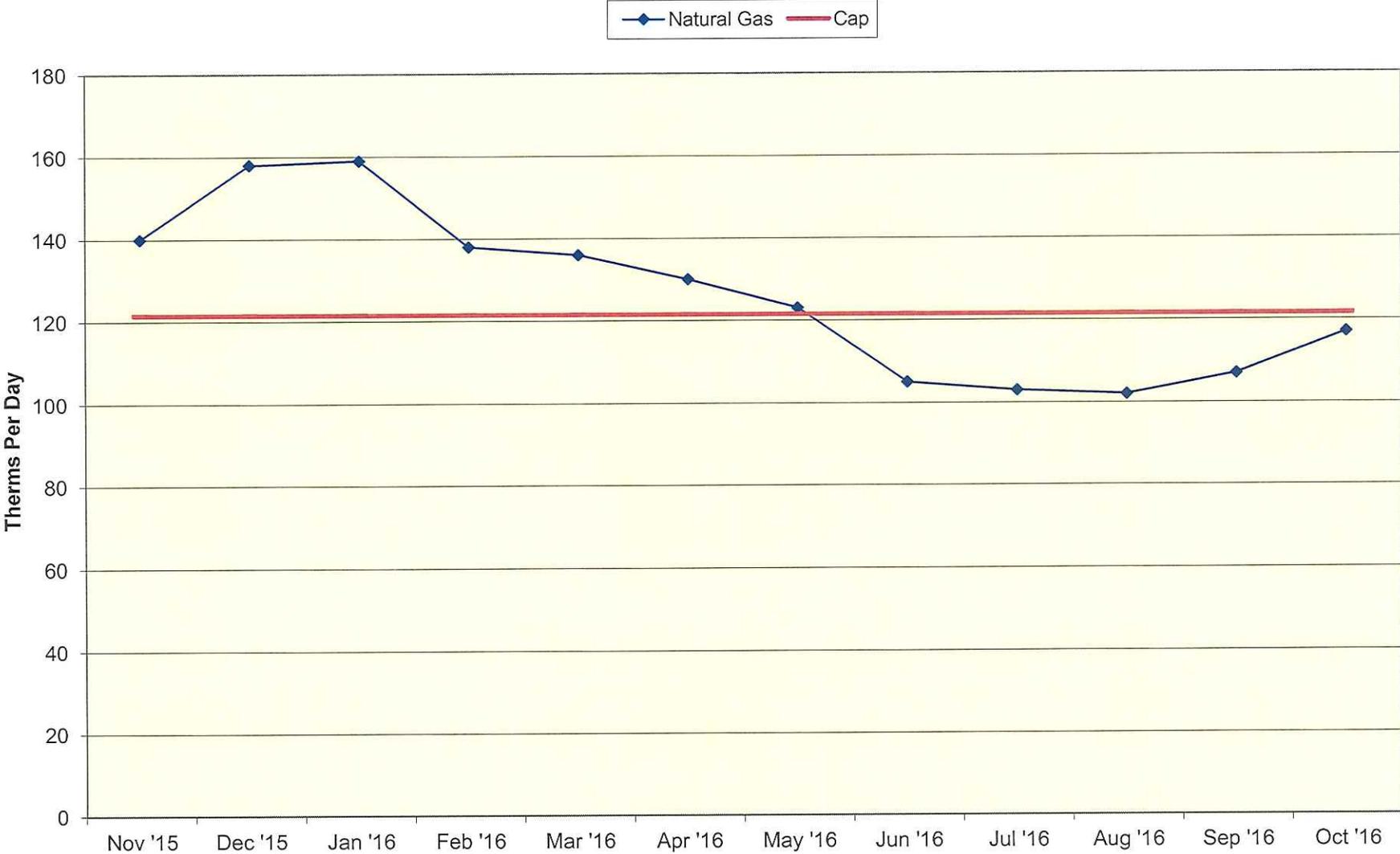
Energy kWh/MG



Energy kWh

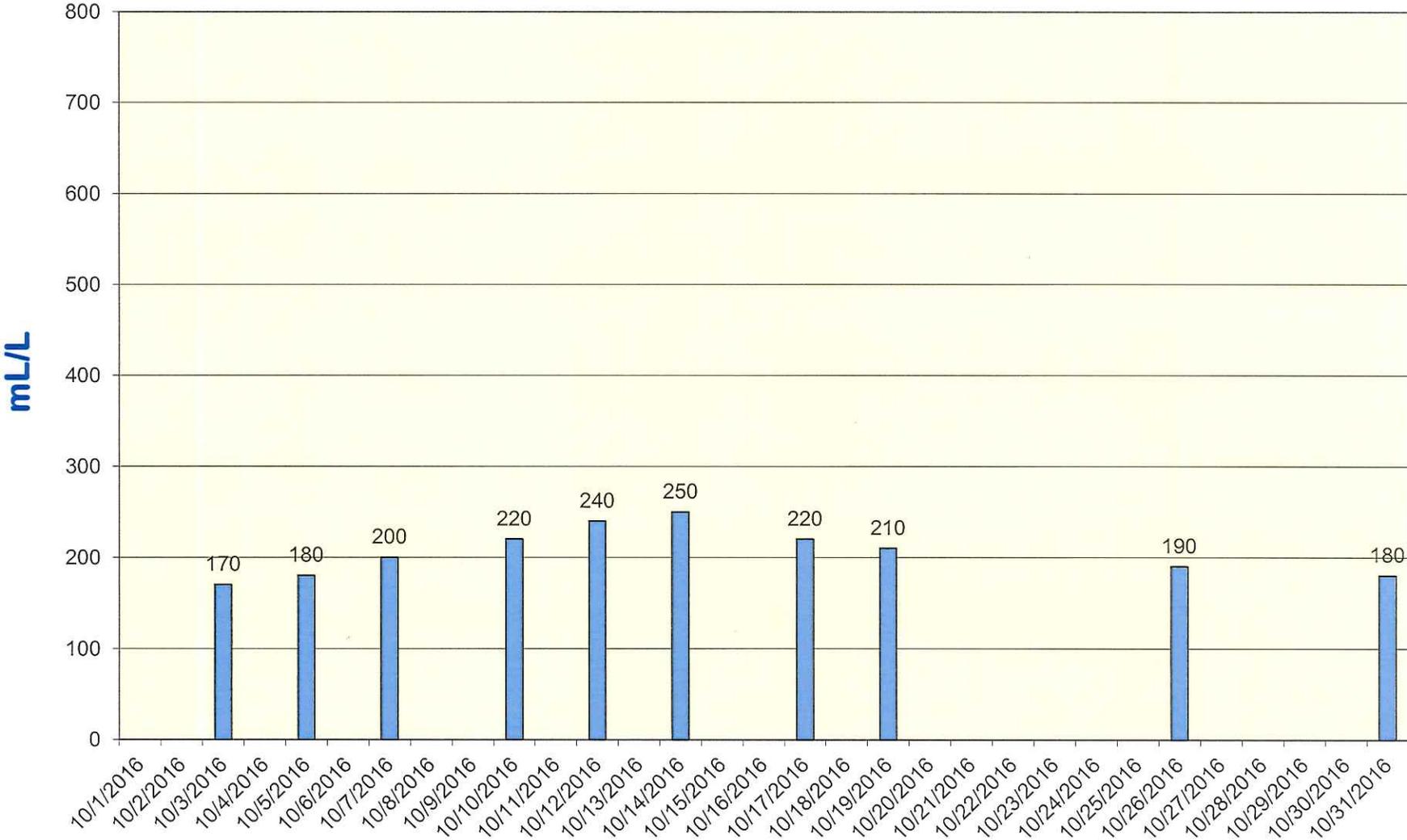


Natural Gas Use

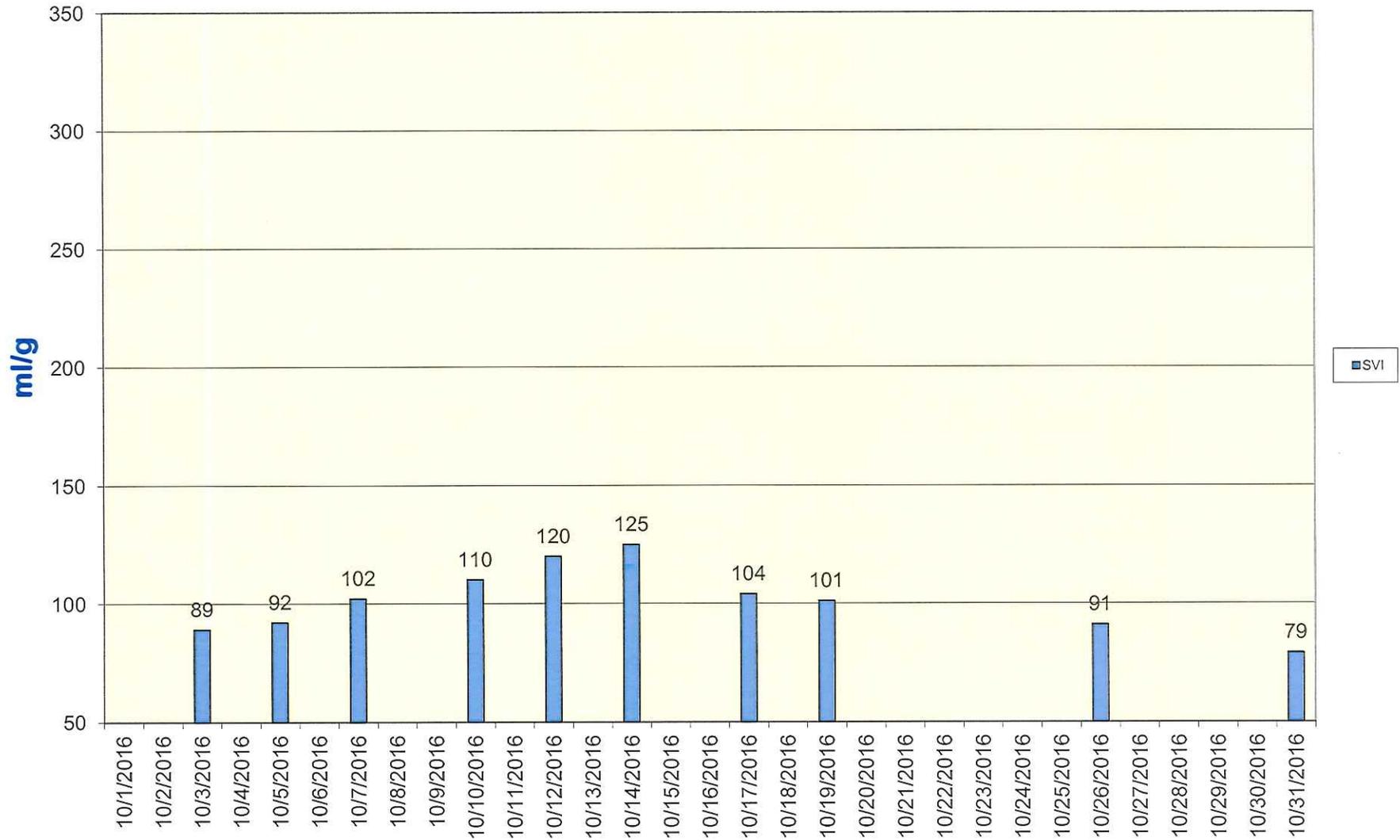


PROCESS CONTROL DATA / GRAPHS

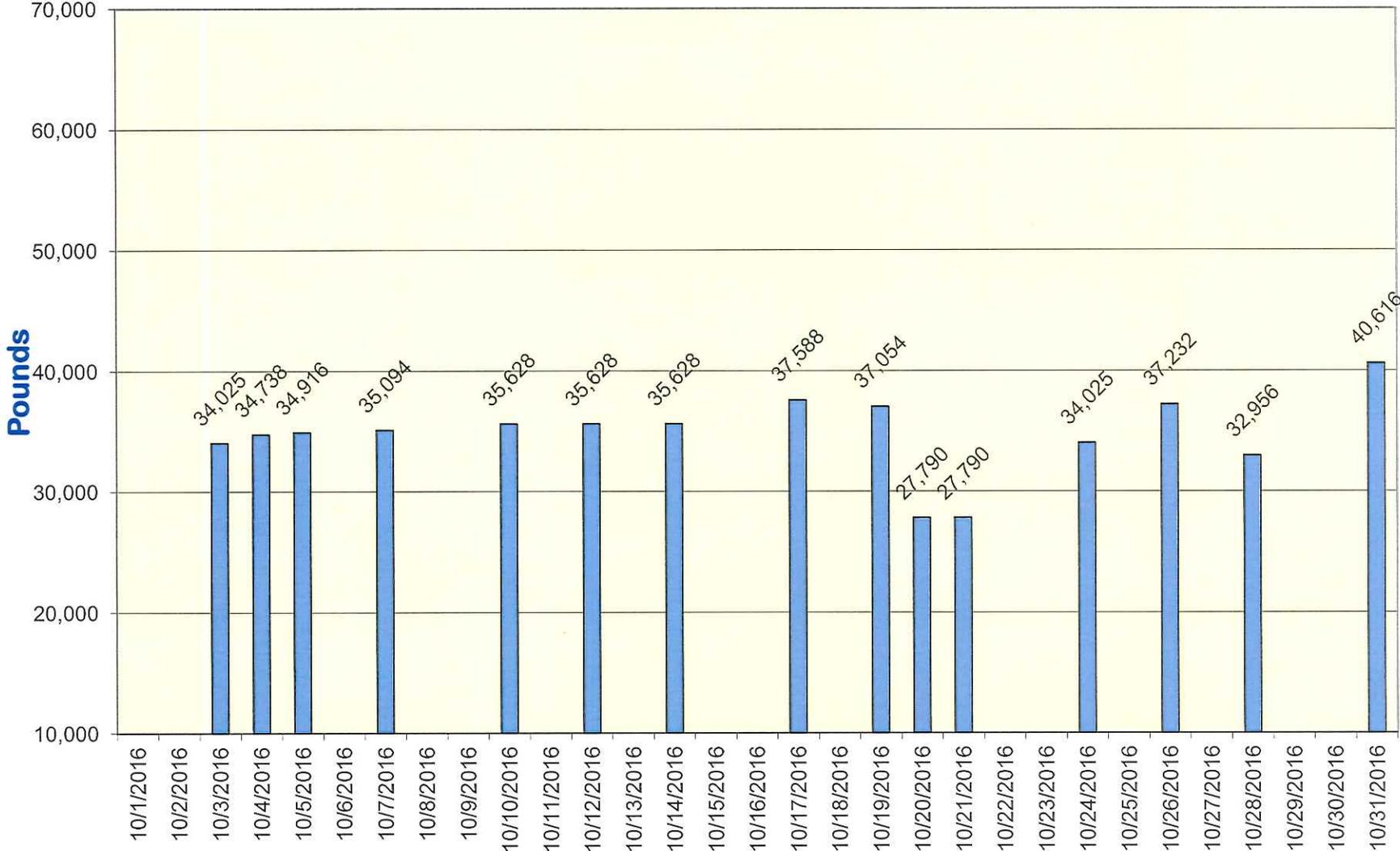
Settleability



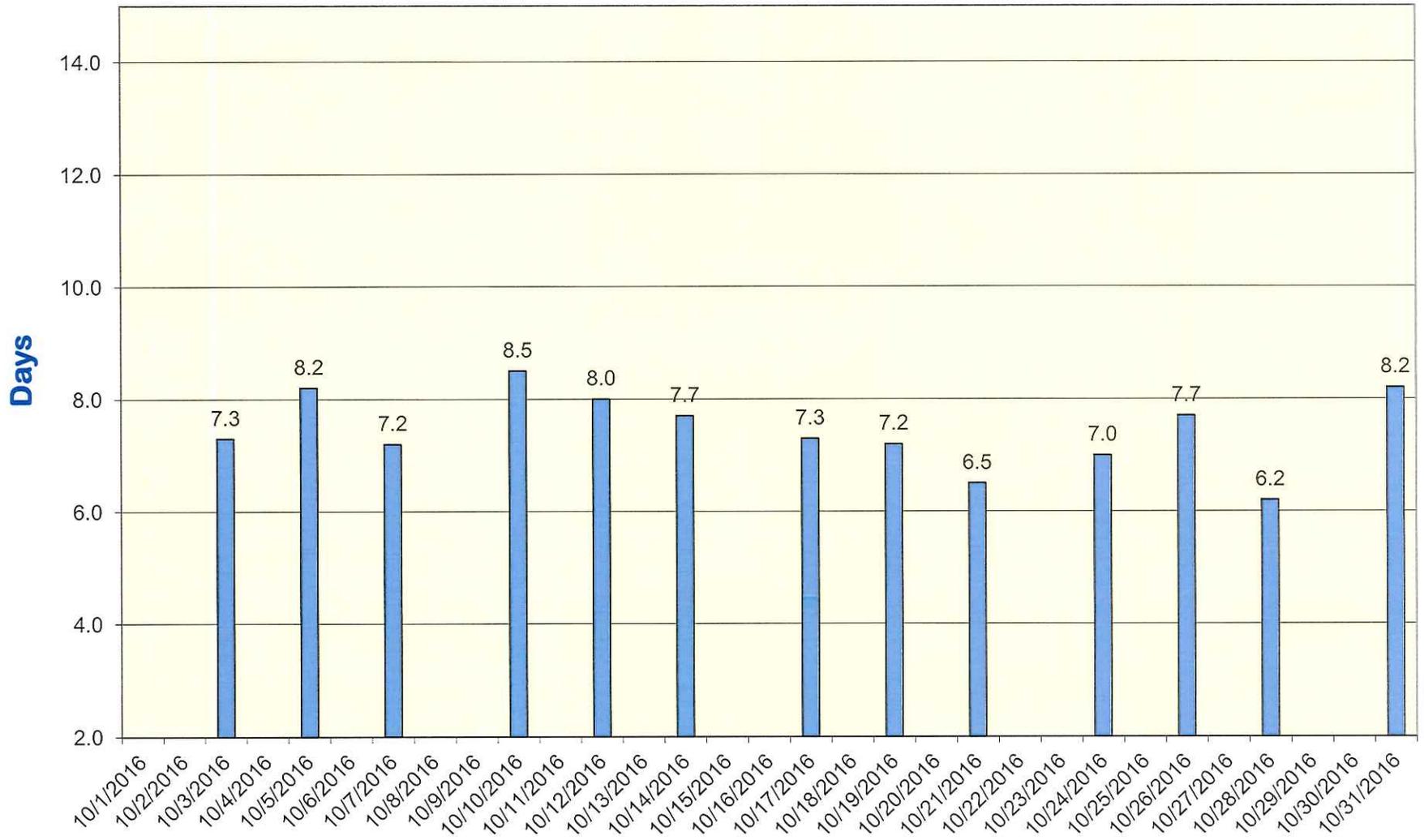
Sludge Volume Index



MLSS Inventory



Mean Cell Residence Time

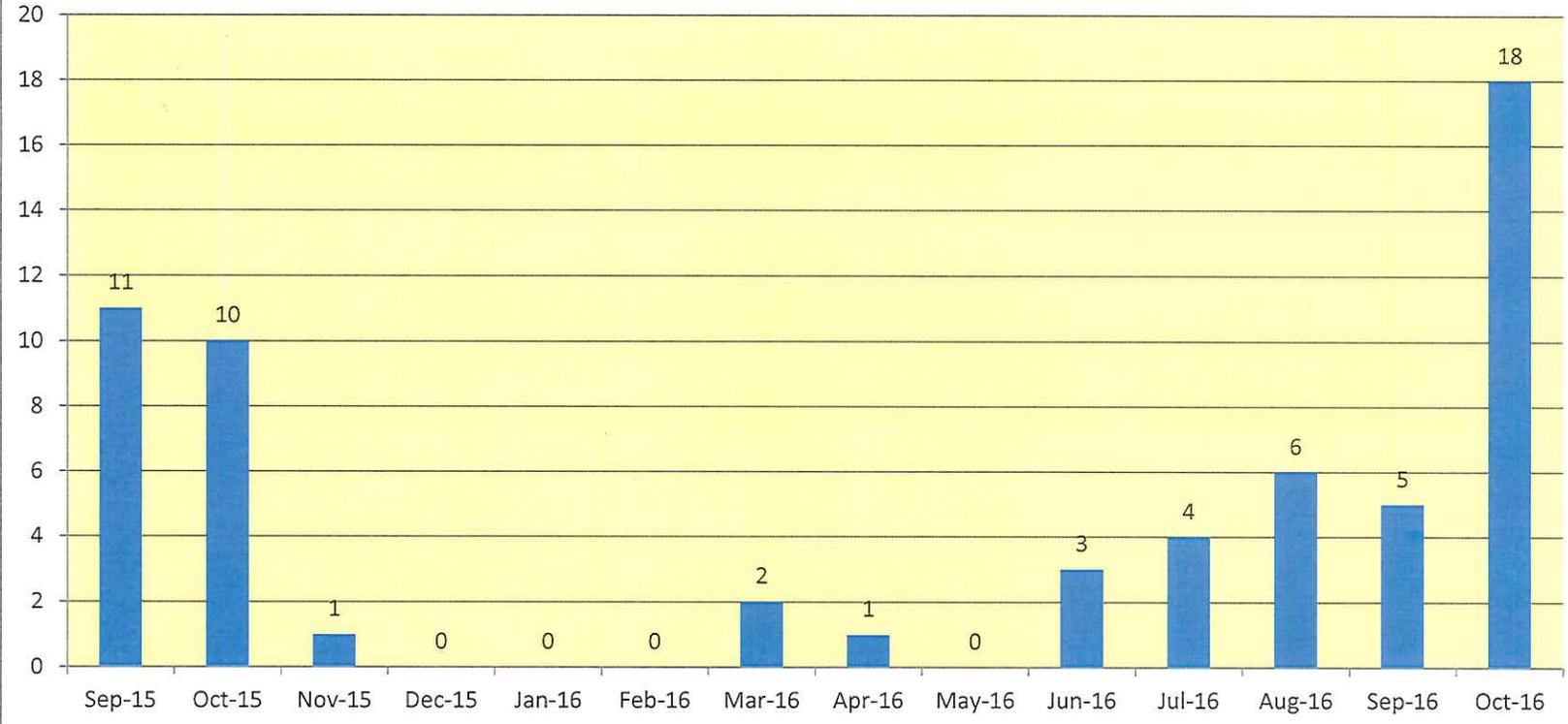


Process Control Data

	Influent Flow	Settleability	MLSS Concentration	MLSS Inventory	F:M Ratio	MCRT	SVI
10/1/2016	3.77						
10/2/2016	3.76						
10/3/2016	3.35	170	1,910	34,025		7.3	89
10/4/2016	3.61		1,950	34,738	0.27		
10/5/2016	3.71	180	1,960	34,916		8.2	92
10/6/2016	3.33						
10/7/2016	3.84	200	1,970	35,094		7.2	102
10/8/2016	3.47						
10/9/2016	3.40						
10/10/2016	3.41	220	2,000	35,628		8.5	110
10/11/2016	3.78						
10/12/2016	3.63	240	2,000	35,628	0.23	8.0	120
10/13/2016	3.84						
10/14/2016	3.91	250	2,000	35,628		7.7	125
10/15/2016	4.21						
10/16/2016	4.18						
10/17/2016	4.06	220	2,110	37,588		7.3	104
10/18/2016	3.48						
10/19/2016	3.64	210	2,080	37,054		7.2	101
10/20/2016	3.52		1,560	27,790	0.30		
10/21/2016	3.51		1,560	27,790		6.5	
10/22/2016	3.69						
10/23/2016	3.74						
10/24/2016	4.91		1,910	34,025	0.35	7.0	
10/25/2016	6.40						
10/26/2016	4.30	190	2,090	37,232		7.7	91
10/27/2016	5.48						
10/28/2016	6.27		1,850	32,956		6.2	
10/29/2016	4.90						
10/30/2016	5.70						
10/31/2016	5.75	180	2,280	40,616		8.2	79
Minimum	3.33	170	1,560	27,790	0.23	6.2	79
Maximum	6.40	250	2,280	40,616	0.35	8.5	125
Total	128.55						
Average	4.15	206	1,949	34,714	0.29	7.5	101

NEIGHBORHOOD CONTACTS

Neighborhood Contacts Received



WEEKLY NEIGHBOR CONTACT LOG													
September 26, 2016	September 26, 2016 - October 2, 2016												
NEIGHBOR	Mon 26-Sep	Tue 27-Sep	Wed 28-Sep	Thu 29-Sep	Fri 30-Sep	Sat 1-Oct	Sun 2-Oct						
	Time	Time	Time	Time	Time	Time	Time	Notes					
Neighbor #1						1 3		am/pm	On & off throughout the day				
Neighbor #2													
Neighbor #3													
Neighbor #4													
Total													

Legend

Description	
Aeration Basins	1
Raw Sewage	2
H2S	3
Aeration + Sewage	4
Aeration, Sewage, H2S	5
Sewage + H2S	6
Other (see notes)	7
Not Specified / Unknown	8
Intensity	
Mild Intermittent	1
Mild Persistent	2
Moderate Intermittent	3
Moderate Persistent	4
Strong Intermittent	5
Strong Persistent	6
Other (see notes)	7
Not Specified / Unknown	8

Received notice of this odor event on Monday, 10/3

WEEKLY NEIGHBOR CONTACT LOG													
October 3, 2016	October 3, 2016 - October 9, 2016												
NEIGHBOR	Mon 3-Oct	Tue 4-Oct	Wed 5-Oct	Thu 6-Oct	Fri 7-Oct	Sat 8-Oct	Sun 9-Oct	Notes					
	Time	Time	Time	Time	Time	Time	Time						
Neighbor #1													
Neighbor #2													
Neighbor #3						6 5 am		Text message					
Neighbor #4													
Total													

Legend

Description	
Aeration Basins	1
Raw Sewage	2
H2S	3
Aeration + Sewage	4
Aeration, Sewage, H2S	5
Sewage + H2S	6
Other (see notes)	7
Not Specified / Unknown	8
Intensity	
Mild Intermittent	1
Mild Persistent	2
Moderate Intermittent	3
Moderate Persistent	4
Strong Intermittent	5
Strong Persistent	6
Other (see notes)	7
Not Specified / Unknown	8

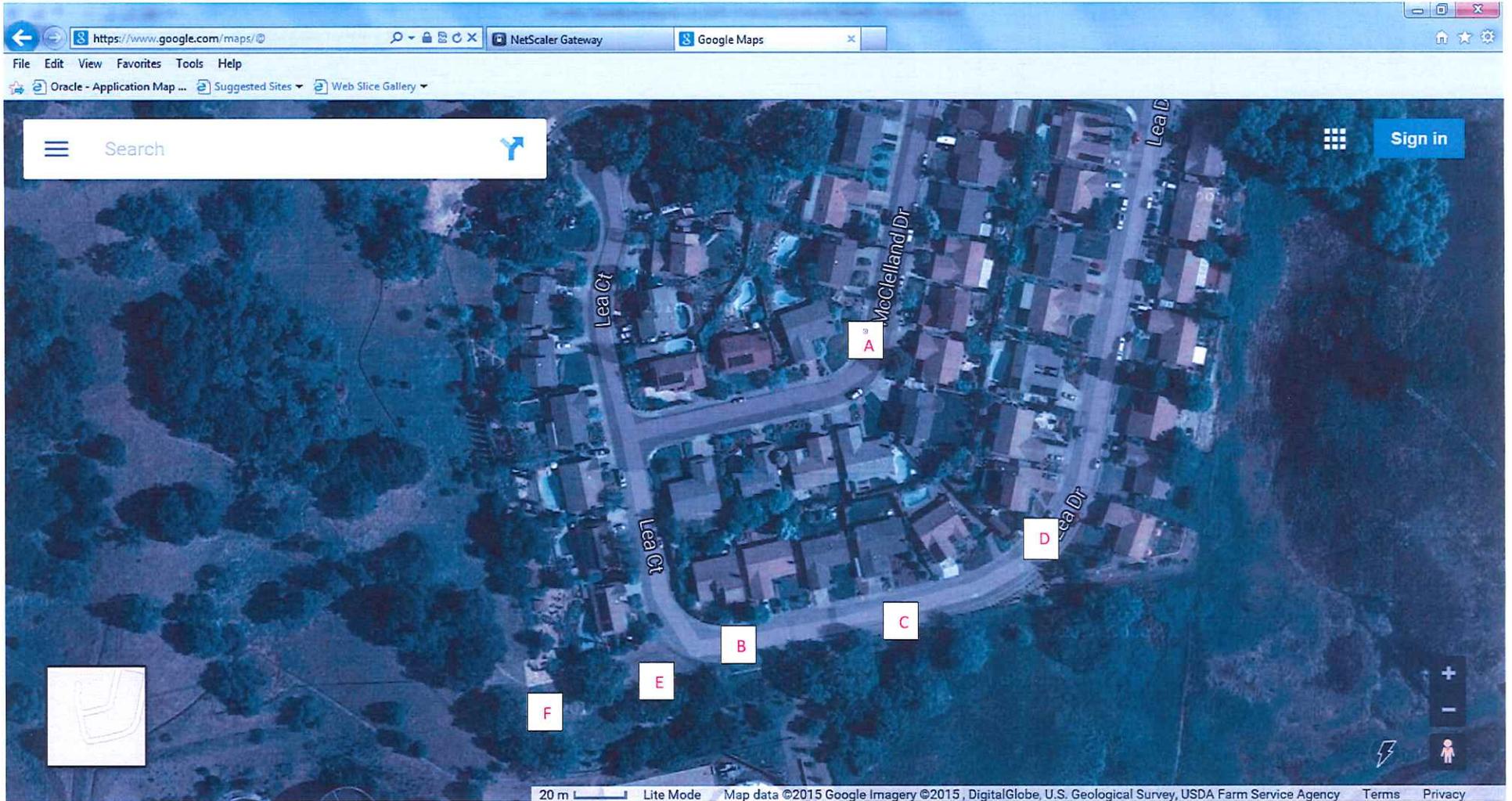
Returned text to neighbor. Checked site and odor control. Nothing unusual found. Neighbor returned text to inform me the odors were gone.

October 24, 2016		WEEKLY NEIGHBOR CONTACT LOG												Notes
		October 24, 2016 - October 30, 2016												
NEIGHBOR	Mon 24-Oct	Tue 25-Oct	Wed 26-Oct	Thu 27-Oct	Fri 28-Oct	Sat 29-Oct	Sun 30-Oct							
	Time	Time	Time	Time	Time	Time	Time	Time	Time	Time	Time	Time	Time	
Neighbor #1	1 6				1 3 am									Email 10/24 indicated odors all weekend through Mon 10/24 from mild intermittent to strong persistent
Neighbor #2	1 6				1 3 am									Email 10/24 Neighbor #2 agreed with Neighbor #1
Neighbor #3														
Neighbor #4					1 3 am									Neighbor #4 emailed - Neighbor #1 & #2 agreed
Total														

Legend		
Description		Finished cleaning aeration basins. Increased chlorination to Influent Junction Structure from 150 to 200 gallons per day. Went into neighborhood, did not detect odors. Checked all odor control systems fogger, biofilter fan, etc. Found nothing unusual or out of order.
Aeration Basins	1	
Raw Sewage	2	
H2S	3	
Aeration + Sewage	4	
Aeration, Sewage, H2S	5	
Sewage + H2S	6	
Other (see notes)	7	
Not Specified / Unknown	8	
Intensity		
Mild Intermittent	1	
Mild Persistent	2	
Moderate Intermittent	3	
Moderate Persistent	4	
Strong Intermittent	5	
Strong Persistent	6	
Other (see notes)	7	
Not Specified / Unknown	8	

JEROME METER READINGS & LOCATIONS

NEIGHBORHOOD JEROME METER LOCATIONS – LEA AND McCLELLAND



JEROME METER READINGS - OCTOBER 2016

Sample Location	Min	Max	Ave	NOTES / COMMENTS
A: McLelland	0.000	0.001	0.0002	Neighborhood
B: Lea 1	0.000	0.001	0.0002	Neighborhood
C: Lea 2	0.000	0.001	0.0002	Neighborhood
D: Lea 3	0.000	0.001	0.0003	Neighborhood
E: Lea 4	0.000	0.001	0.0003	Neighborhood
F: Lea 5	0.000	0.000	0.0000	Neighborhood

Novato Sanitary District Wastewater Operations - Collection System Operations Report October 2016

1.0 General:

The equivalent of about seven (7) full time employees (FTE) worked in the Collection System Department during the month of October. The breakdown of staff time for the month in terms of equivalent full-time employee hours utilized, works out approximately as follows:

- 1.1 FTE field workers for Sewer Maintenance (main line cleaning)
- 1.8 FTE field workers for Pump Station Maintenance
- 0.2 FTE field workers for Closed Circuit Television (CCTV) work
- 2.6 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, or special activities (for e.g. smoke testing of mainlines), and
- An equivalent of 1.2 FTE field workers for vacation, holiday or sick leave.

2.0 Collection System Maintenance:

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

Line Cleaning Performance

A total of 243 work orders were generated for October by the ICOM3 Computerized Maintenance Management System (CMMS). Staff completed 169 work orders leaving 74 work orders outstanding. The 169 maintenance work orders completed in October resulted in 34,913 feet of sewer pipelines cleaned by staff. The remaining 74 work orders will be completed in November.

Smoke Testing

In addition to line cleaning, Collection System Department staff completed smoke testing of sewer mains in the Loma Verde area. Approximately 23,053 feet of sewer mains were smoke tested. The smoke testing identified two open clean outs and one damaged or deficient lateral. Staff will notify the relevant residents by letter, asking that they correct the identified deficiencies.



Line cleaning on Vallejo Avenue

CCTV Performance: The District's CCTV van was in the field for five working days in October and televised 23 line segments, totaling 4,863 feet of sewer main inspected. Production from the CCTV van has been limited due to breakdowns of the CCTV program, as well as the seasonal smoke testing projects and training opportunities. Staff did not conduct any sewer main inspections using the push camera in October.

**Novato Sanitary District
Wastewater Operations - Collection System Operations Report
October 2016**

CCTV Findings:

- **Infrastructure related:** In October, CCTV work did not identify any areas that require immediate spot repairs.
- **O&M related:** In October, SSO follow up CCTV work identified a line segment that required a change in sewer line maintenance operations due to increased grease accumulation.



CCTV crew setting up

3.0 Pump Station Maintenance:

The Collection System Department conducted 240 lift station inspections this month. 116 of the inspection visits were generated through the District's JobsCal Plus CMMS system. There are six (6) outstanding work orders for the month, zero correctives and six (6) preventives. A Collection Systems (Pump Stations) Work Order Statistics summary is attached.

In addition to normal maintenance activities, District staff completed electrical repairs resulting from a flooded dry well condition at the Rowland Plaza Pump Station. The station has been returned to service. The cause of the flooding while unknown at this time, is the subject of an ongoing analysis.

4.0 Air Relief/Vacuum Valves (ARVs):

Staff completed maintenance inspections on thirteen (13) air relief/vacuum valves.

5.0 Safety and Training:

General:

Collection System staff attended four (4) safety tailgate meetings in October.

Specialized training:

Collections Department staff members attended a Confined Space Safety Refresher Training given by Safety Director Dale Thrasher.

Collections Department staff members also participated in a Confined Space Rescue Drill.



Confined Space Entry Rescue Drill

Three Collections staff members attended the CWEA Northern Safety Day in Woodland.

Two Collections staff members attended the 11th Annual Sewer Summit in Union City.

Safety performance:

There were no lost time accidents this month for a total of 2,059 accident free days since the last lost time accident.

**Novato Sanitary District
Wastewater Operations - Collection System Operations Report
October 2016**

6.0 Minor Projects:

Collections Department staff received flush-mount strobe lighting for testing on District vehicles. This is part of an ongoing effort to increase the visibility of our crews and equipment while working in the right-of-way.

Collections Department staff prepared and distributed 300 grease and wipes informational doorhanger packets to residents upstream of the Meadow Park Pump Station in an outreach effort to reduce associated maintenance costs.

7.0 Sanitary Sewer Overflows (SSOs):

There was one (1) Category I overflow in October, as discussed below.

No.	Date	Location	Amount, gal	Cause/Probable Cause
1.	10/22/2016	608 Rowland Blvd.	7,900	Grease and wipes

On Saturday, October 22, 2016 at 8:24am, Collection System Worker I (CSW I) Joe Moreno received a page from the Novato Police Department reporting a possible sewage overflow at 608 Rowland Boulevard.

Joe responded to the address, confirmed that the stoppage was in the District main and notified Collections System Superintendent Dasse de longh of the SSO. Dasse directed Joe to call for assistance and retrieve the hydro-flusher truck from NTP.

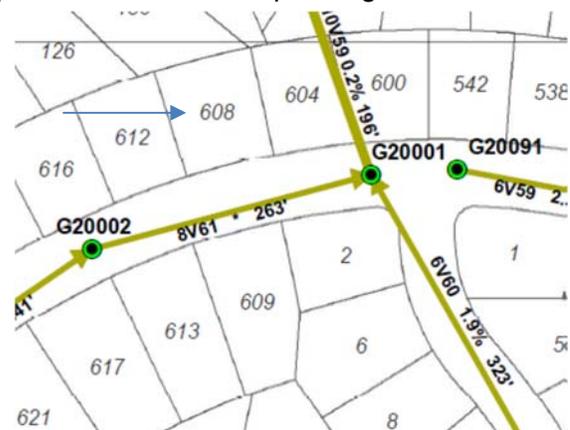
Dasse arrived on site and saw sewage coming from the front yard of the residence and flowing down the gutter to a storm drain catch basin. Dasse checked the upstream manhole (G20002), saw that it was surcharged indicating a stoppage in the sewer main, and notified Field Services Manager Steve Krautheim of the overflow.

Joe returned with the hydro-flusher and set up at the downstream manhole (G20001). Joe noted ¼ pipe flow prior to set up. The stoppage was broken at 9:10am. An accumulation of grease and wipes was recovered and was determined to be the probable cause of the overflow.

CSW II Aaron Hendricks arrived on site to assist, and the crew proceeded with clean up and recovery efforts in the immediate area to limit exposure to the public.

Dasse interviewed the resident to determine the start time. The resident reported that at 8:30pm Friday evening, she contacted the Novato Police Department, and the responding North Marin Water District representative for help with what she thought was a water leak in her front yard. The Water District representative was unable to determine the source of water and advised the resident to “maybe call the Sanitary District if it is still going in the morning.” Based on the resident’s observations, staff determined that the earliest possible start time was 8:00pm Friday night.

Steve Krautheim arrived on site and began tracking the overflow that had entered the storm drain system to determine the final spill destination.



Location Map

**Novato Sanitary District
Wastewater Operations - Collection System Operations Report
October 2016**



Overflow from private lateral clean out

Steve determined that the storm drain discharges into Lynwood Slough, 875 feet downstream from the catch basin where the overflow entered the storm drain system. The initial determination was that this was a Category 1 event because the overflow volume exceeded one thousand gallons and was not captured before reaching surface waters. Staff contacted Marin EHS and Cal OES to report the Category 1 event.

The crew flushed the storm drain system with fresh water to ensure all sewage was removed from the storm drain. All flushing water was recovered at a drainage structure just upstream of the discharge point at Lynwood Slough. Warning signs were posted along the upper reach of Lynwood Slough.

Jennifer Snow of Marin County Environmental Health Services visited the site and advised she was satisfied with all clean up and recovery efforts.

Staff estimated the spill volume to be 7,900 gallons, based on staff and reporting party observations, and timeline calculations. Approximately 50 gallons were recovered from the gutter pan using the hydro-flusher truck. An estimated 570 gallons soaked into the ground. Ground saturation calculations were based on area/volume calculations and soil saturation testing, as described in the SMART Sewer Overflow Volume Estimation Workbook.

Follow up CCTV inspection revealed signs of grease accumulation at the location of the stoppage. This line segment was last cleaned using a hydro-flusher truck on April 28, 2015 and is on a 36-month frequency. The cleaning frequency will be increased to every 12 months. Staff will distribute grease and wipes informational flyer packets to residents upstream of the SSO.

Staff will reach out to NMWD and NPD encouraging them to contact NSD personnel immediately whenever the source of a water leak is in question.

Staff arranged with a landscape contractor to replace the mulch in the front yard of the affected residence which was saturated with sewage.

This event was reported into the CIWQS database on October 25, 2016 as a Category 1 event, SSO Event ID # 829331.

Novato Sanitary District
Collection System Monthly Report For October 2016 (as of October 31, 2016)

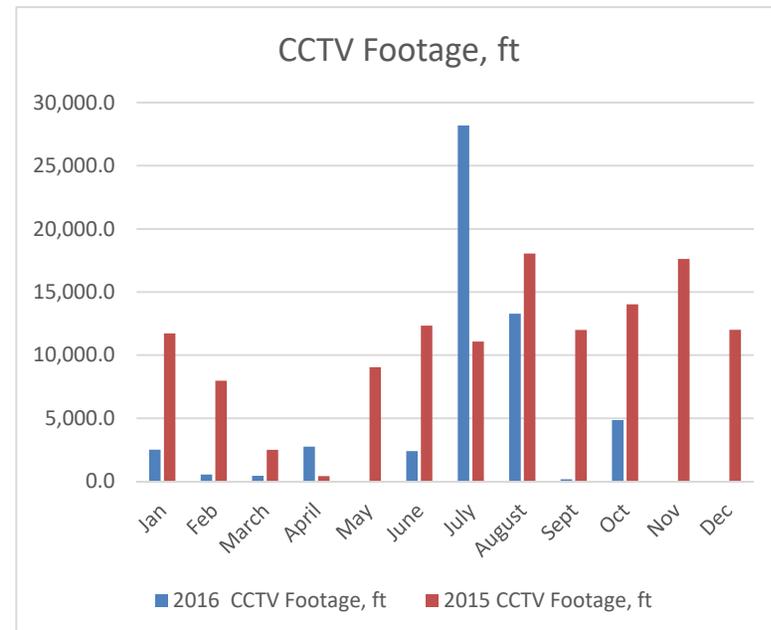
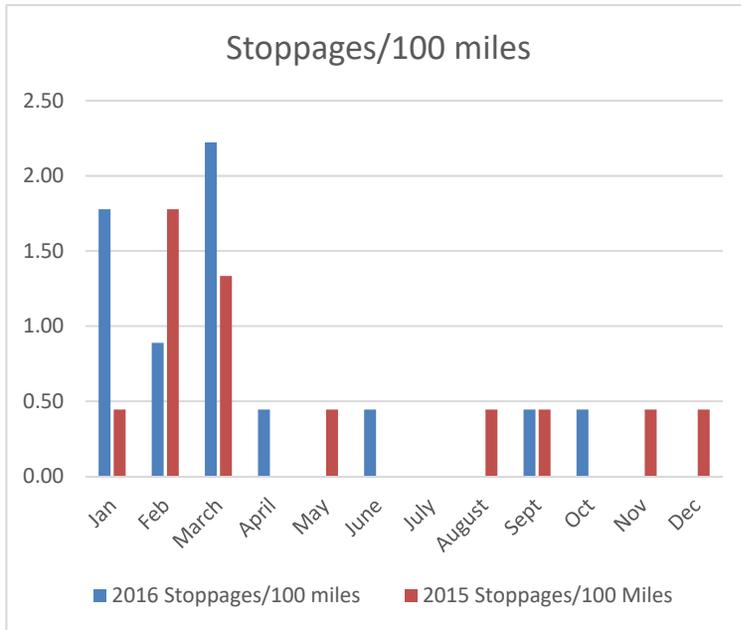
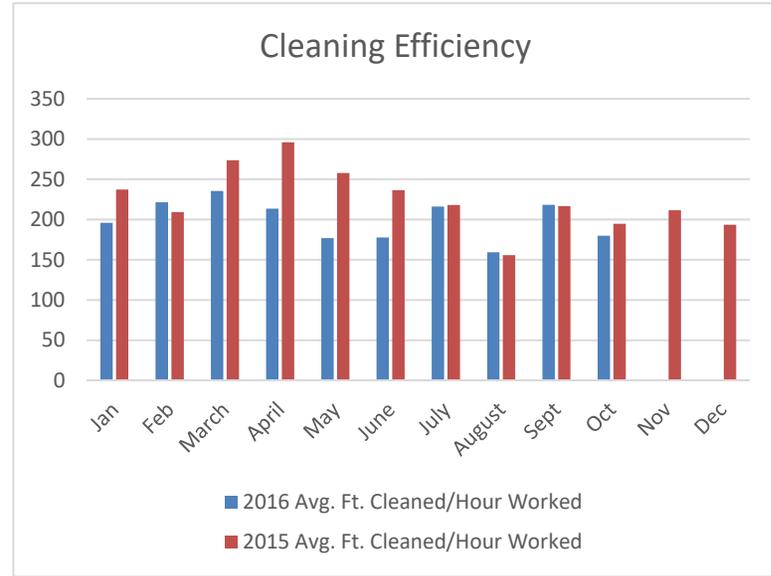
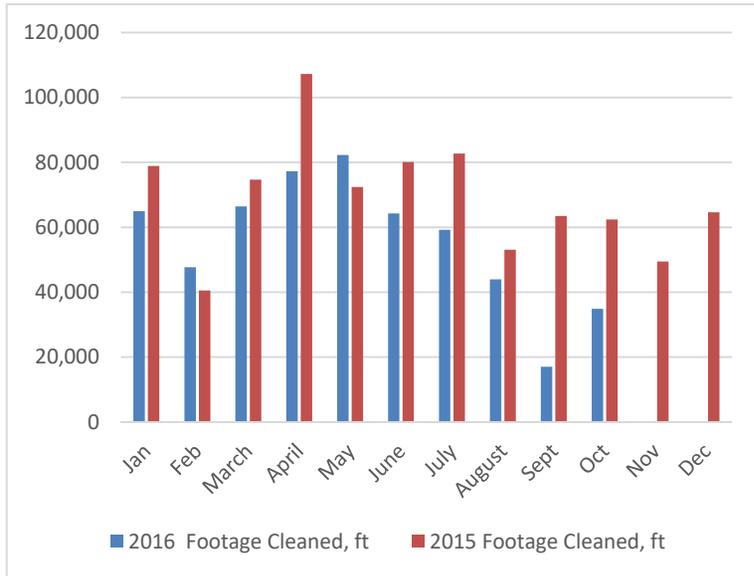
	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total Year to Date	Average Year to Date
A. Employee Hours Worked														
Number of FTEs (main line cleaning), hrs.	1.9	1.3	1.7	2.0	2.7	2.0	1.7	1.5	0.4	1.1	0.0	0.0	NA	1.4
Number of FTEs (other)	2.5	3.5	3.3	2.8	2.2	2.3	3.3	2.2	3.0	2.6	0.0	0.0	NA	2.3
Number of FTEs (CCTV)	0.1	0.1	0.0	0.0	0.0	0.1	0.4	0.5	0.0	0.2	0.0	0.0	NA	0.1
Total, FTEs	4.5	4.9	4.9	4.9	4.9	4.4	5.3	4.2	3.5	4.0	0.0	0.0	NA	3.8
Regular Time Worked, (main line cleaning), hrs	332	216	282	362	465	362	274	276	78	194				
Regular Time Worked on Other, hrs (1)	426	556	552	496	388	402	534	417	521	441				
Regular Time Worked on CCTV (2)	19	17	0	7	0	16	66	95	4	42				
Total Regular time, worked, hrs	776	788	834	865	853	779	874	788	603	677	0	0	7,837	653
Total Vacation/Sick Leave/Holiday, hrs	225	238	262	89	192	156	127	315	417	209			2,229	223
Vacation/Sick Leave/Holiday, FTEs	1.3	1.5	1.6	0.5	1.1	0.9	0.8	1.7	2.4	1.2	0.0	0.0	12.9	1.1
Overtime Worked on Coll. Sys., hrs	2	0	0	0	3	8	0	0	0	10			23	2
Overtime Worked on Other, hrs (1)	65	6	19	30	6	10	14	16	6	14			185	18
Overtime Worked on CCTV (2)	0	0	0	0	0	0	2	0	0	0			2	0
Total Overtime, hrs	67	6	19	30	9	18	16	16	6	24	NA	NA	210	21
B. Productivity														
1. Line Cleaning														
Rodder Work Orders generated	59	10	41	45	204	64	87	35	9	22			576	58
Rodder 3208 ft. cleaned	11,888	2,289	8,682	9,749	36,994	10,476	13,754	5,308	0	4,379			103,519	10,352
Rodder - outside services, ft cleaned	0	0	0	0	0	0	0	0	0	0			0	0
Flusher Work Orders generated	227	237	307	350	248	221	221	194	128	221			2,401	240
Truck 3205V ft. cleaned	14,729	6,341	5,004	5,886	2,776	4,295	0	2,217	2,072	9,995			53,315	5,332
Truck 3206V ft. cleaned	38,305	39,088	52,713	61,606	42,516	49,467	45,445	36,441	14,950	20,539			401,070	40,107
Flusher - outside services, ft. cleaned	0	0	0	0	0	0	0	0	0	0			0	0
Total Footage cleaned(3)	64,922	47,718	66,399	77,241	82,286	64,238	59,199	43,966	17,022	34,913	NA	NA	557,904	55,790
Work Orders completed	278	247	348	395	452	332	424	377	102	169			3,124	312
Work Orders backlog	8	NA	NA	NA	NA	NA	NA	NA	35	74	NA	NA	117	39
2. Closed Circuit Television (CCTV)														
Camera Work Orders generated	0	0	0	0	0	0	0	0	0	0			0	0
CCTV Truck 3126T, ft. videoed	843	540	0	541	0	652	10,374	12,498	186	4,863			30,497	3,050
CCTV (hand cam), ft. videoed	1,669	0	456	2,210	0	1,754	5,487	793	0	0			12,369	
CCTV Inspection - outside services, ft. videoed	0	0	0	0	0	0	12,322	0	0	0			12,322	
Total CCTV footage(3)	2,512	540	456	2,751	0	2,406	28,183	13,291	186	4,863	NA	NA	55,188	
C. Sanitary Sewer Overflows (SSOs)														
Minor (Category III)	4	2	5	1	0	1	0	0	1	1			15	NA
Major (Category II)	3	1	4	1	0	0	0	0	1	0			10	NA
Major (Category I)	0	1	1	0	0	0	0	0	0	0			2	NA
Major (Category I)	1	0	0	0	0	1	0	0	0	1			3	NA
Overflow Gallons	482	290,330	2,308	20	0	540	0	0	75	7,900			301,655	NA
Volume Recovered	130	147,250	760	20	0	165	0	0	75	50			148,450	NA
Percent Recovered	27%	51%	33%	100%	NA	31%	NA	NA	100%	1%	NA	NA	49%	NA
D. Service Calls (non-SSO related)														
Service calls, normal hours, #	8	7	8	4	5	9	4	4	9	6			64	6
Normal hours S.C. response time, mins (avg.)	20	17	18	17	16	25	13	25	12	15			178	18
Service Callouts, after hours, #	5	3	1	1	1	0	0	1	1	2			15	2
After Hours S.C. response time, mins (avg.)	17	27	16	60	35	0	0	16	54	23			248	25
E. Benchmarks														
Average Ft. Cleaned/Hour Worked	196	221	235	213	177	178	216	159	218	180	NA	NA	NA	199
Total Stoppages/100 Miles	1.8	0.9	2.2	0.4	0.0	0.4	0.0	0.0	0.4	0.4	0.0	0.0	6.5	NA
Average spill response time (mins)	15	31	11	11	0	15	0	0	23	18			NA	12
Callouts/100 Miles	2.2	1.3	0.4	0.4	0.4	0.0	0.0	0.4	0.4	0.9	0.0	0.0	6.5	0.6
Overtime hours/100 Miles	1	0	0	0	1	4	0	0	0	4	0	0	10.22	1
Overflow Gallons/100 Miles	210	126,230	1,003	9	0	235	0	0	33	3435	0	-	131,154	10930

(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: 2016 & 2015 Graphs



Novato Sanitary District

Pump Station Report For October 2016 (As of October 31, 2016)

	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total Year to Date	Average Year to Date
Employee Hours Worked	238	185	252	238	235	251	186	242	254	355	0	0	2,435	
Number of Employees (FTEs)	1.4	1.0	1.2	1.1	1.2	1.2	0.9	1.1	1.1	1.8	0.0	0.0		1.0
Regular Time Worked on Pump Sta	183	157	210	194	202	217	148	207	196	298			2,011	
Overtime Worked on Pump Sta	55	28	43	44	33	34	38	35	58	57			424	
After Hours Callouts	4	1	8	2	0	1	4	6	1	3			30	
Average Callout response time (mins)	30	10	34	28	0	15	31	25	45	10			228	23
Work Orders														
Number generated in month	136	106	89	92	115	91	95	107	78	116			1025	103
Number closed in month	111	106	89	92	115	91	93	107	69	110			983	98
Backlog	25	0	0	0	0	0	2	0	9	6	0	0	42	4

**Job Cal CMMS
WORK ORDER STATISTICS
October 1, 2016-October 31, 2016**

	Open Work Orders Due Prior to 10/1/2016	Open Work Orders 10/1/2016-10/31/2016	Total Open Work Orders
Preventive	4	175	179
Corrective	0	0	0
Total	4	175	179

	Closed Work Orders 10/1/2016 - 10/31/2016
Preventive	173
Corrective	0
Total	173

Total Outstanding Work Orders as of 10/31/2016	6
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NOVATO SANITARY DISTRICT
Wastewater Operations - Reclamation Facilities Report
October 2016

1.0 Summary:

The rancher installed District furnished impact sprinklers in a test area on Site 7. Irrigation was disabled at all Sites this month due to early rains. Sludge disposal operations were completed this month.

2.0 Ranch Operations:

As reported last month, many of the sprinklers at Reclamation are not turning due to algae buildup in the filter screen of each individual sprinkler. Staff believes that small bits of algae are passing through the strainers at the Irrigation Pump Station and clogging the filters on the rotor style sprinklers. This has been an ongoing problem over the last several years. To combat the algae buildup in the irrigation system staff proposed installation of impact type sprinklers in lieu of the rotor style in a test area in an irrigated parcel to the rancher. Impact sprinklers have a larger orifice and no filter to clog.

The new sprinkler heads and appurtenances were received and delivered to the rancher for installation. The sprinkler heads were installed approximately five feet above the pasture to prevent the livestock from damaging the heads. The initial tests before wet weather arrived were promising.



Impact sprinklers installed above pasture.

Separately, staff issued a Work Order to remove about a dozen fallen Eucalyptus trees from Site 2.

3.0 Irrigation Parcels:

Staff disabled the irrigation system for the year before the wet weather arrived and enabled Drainage Pump Stations 3 & 7 for the season. During the shutdown of the irrigation system staff found the valve in Zone 232 on site 2 stuck open. After the Parcel dried out staff found that the closing timer had failed. The timer was replaced, and the valve closed.

4.0 Irrigation Pump Station:

Approximately 66.2 MG of treated water was used for irrigation this month.

Approximately 124.14 MG was delivered to the storage ponds from the Novato Treatment Plant this month.

5.0 Sludge Handling & Disposal:

Custom Tractor Service (CTS) of Petaluma completed the work to empty and clean out the sludge lagoons this month, pumping approximately 2.56 MG of sludge out of the lagoons and into the DLD. In addition, approximately 4,174 cubic yards of solids were excavated out of Ponds 2 through 6 and spread in the DLD. Pond 1 was cleaned out in September.

NOVATO SANITARY DISTRICT
Reclamation Facility - Monthly Statistics for Calendar Year 2016, as of October 2016

	January	February	March	April	May	June	July	August	September	October	November	December	Total Year to Date	Annualized Monthly Average
Irrigation Pump Station														
Plant flow to ponds (MG)	0	0	0	0	0	90	86.1	90.72	93.36	124.14			484.3	40.36
Irrigation (MG)	0	0	0.0	0	0	33.83	69.51	72.89	64.77	66.18			307.2	25.60
Irrigation Pump 1 Hours						76.9	86.5	0	100.3	109.3			373.0	31.08
Irrigation Pump 2 Hours						75.8	134	190.3	139.9	108.3			648.3	54.03
Irrigation Pump 3 Hours						76.3	117.4	187.9	131	101.4			614.0	51.17
Washdown Water Pump Hours													-	0.00
Wildlife Feed Pump Hours	744	696	744	720	744	696	770.5	741.9	720.8	647.2			7,224.4	602.03
Water Circulated through Wildlife Pond (MG)	46.872	43.848	46.872	45.36	47	44	49	46.74	45.41	40.77	0	0	455.1	37.93
Strainer No. 1 Hours						23.9	41.5	47.1	47.1	40			199.6	16.63
Strainer No. 2 Hours						18.8	41.8	47.2	47.1	40			194.9	16.24
Pond 1 Gauge @ Beginning of Month	3.1	3.9	3.9	4.4	4	3.5	5.8	5.7	5.7	6.2				
Pond 1 Gauge @ End of Month	3.9	3.9	4.4	4	3.5	5.8	5.7	5.7	6.2	7.2				
Pond 1 Gallons Stored @ End of Month(MG)	27.2	27.2	31.2	28	24	43	42	42	46.8	54.6				
Pond 2 Gauge @ Beginning of Month	3.1	3.9	3.9	4.4	4	3.5	5.8	5.7	5.7	6.2				
Pond 2 Gauge @ End of Month	3.9	3.9	4.4	4	3.5	5.8	5.7	5.7	6.2	7.2				
Pond 2 Gallons Stored @ End of Month(MG)	35	35	40	36	31	55	54	54	59.4	70				
Total Irrigation Water Stored	62.2	62.2	71.2	64	55	98	96	96	106.2	124.6	0	0		
Drainage Pump Station No. 3														
Drainage Pump No. 1 Hours	341.4	0.2	386	15.1	0	0	0	0	0	0				
Drainage Pump No. 2 Hours	0	34.7	0	0	0	0	0	0	0	1.9				
Drainage Pump No. 3 Hours	0	1.9	0.1	0	0	0	0	0	0	91.3				
Total Gallons Stormwater Pumped (MG)	102.42	11.04	115.83	4.53	0	0	0	0	0	27.96	0	0	261.78	21.82
Drainage Pump Station No. 7														
Drainage Pump No. 1 Hours	131.7	0.2	72.4	3.4	0.2	0	0	0	0	0				
Drainage Pump No. 2 Hours	14.2	13	0	0	0.7	0	0	0	0	2				
Drainage Pump No. 3 Hours	2.9	0	41.3	12.2	0.6	0	0	0	0	58.9				
Total Gallons Stormwater Pumped (MG)	66.96	6	51	7.02	0.675	0	0	0	0	27.41	0	0	159.165	13.26