



Topsfield Water Department
Monthly Control Sheet
November 2019

Date	Commitments				Payments					Miscellaneous Transactions			Tax Liens	Balance Forward
	User Fees	Conn. Fees	Penaties	Misc. Charges	Manual	Lockbox	Electronic	Unibank	Bounced Checks	Refunds	Abatements			
											BOWC	TWD		
														288,716.32
01-Nov-19	255.10	-	-	-	-	(8,691.10)	-	(397.95)	-	-	-	(1,038.53)	-	278,843.84
02-Nov-19	-	-	-	-	-	-	-	(994.50)	-	-	-	-	-	277,849.34
03-Nov-19	-	-	-	-	-	-	-	(2,825.78)	-	-	-	-	-	275,023.56
04-Nov-19	-	-	-	-	-	(15,093.67)	-	(630.79)	-	-	-	-	-	259,299.10
05-Nov-19	112.95	-	-	-	(7,649.50)	(91.40)	-	(379.50)	-	-	-	(14.85)	-	251,276.80
06-Nov-19	73.30	-	-	-	-	(9,814.26)	-	(281.95)	-	-	-	-	-	241,253.89
07-Nov-19	-	-	-	-	(3,828.05)	(3,294.14)	-	(1,436.00)	-	-	-	-	-	232,695.70
08-Nov-19	-	-	-	-	-	(3,803.66)	-	(248.10)	-	-	-	-	-	228,643.94
09-Nov-19	-	-	-	-	-	-	-	(1,358.75)	-	-	-	-	-	227,285.19
10-Nov-19	-	-	-	-	-	-	-	(166.67)	-	-	-	-	-	227,118.52
11-Nov-19	-	-	-	-	-	-	-	(1,884.65)	-	-	-	-	-	225,233.87
12-Nov-19	-	-	-	-	(10,428.78)	(4,874.06)	-	(56.10)	(150.00)	-	-	-	-	209,724.93
13-Nov-19	904.54	-	-	-	-	-	-	(629.91)	-	-	-	-	-	209,999.56
14-Nov-19	162.67	-	-	-	-	(7,506.68)	-	(971.10)	-	-	-	-	-	201,684.45
15-Nov-19	197,148.87	-	-	-	-	(1,229.05)	-	(2,036.65)	-	-	-	-	-	395,567.62
16-Nov-19	-	-	-	-	-	-	-	(7,545.23)	-	-	-	-	-	388,022.39
17-Nov-19	-	-	-	-	-	-	-	-	-	-	-	-	-	388,022.39
18-Nov-19	-	-	-	-	(22,906.07)	(5,375.50)	-	(500.96)	-	-	-	-	-	359,239.86
19-Nov-19	-	-	-	-	-	(236.75)	-	(915.81)	-	-	-	-	-	358,087.30
20-Nov-19	1.75	-	-	-	-	(738.70)	-	(947.13)	-	-	-	(439.06)	-	355,964.16
21-Nov-19	-	-	-	-	(18,823.39)	(304.20)	-	(2,041.37)	-	-	-	(102.43)	-	334,692.77
22-Nov-19	904.45	-	-	-	-	(1,111.58)	-	(1,004.90)	-	-	-	113.40	-	333,594.14
23-Nov-19	-	-	-	-	-	-	-	(454.81)	-	-	-	-	-	333,139.33
24-Nov-19	-	-	-	-	-	-	-	(529.80)	-	-	-	-	-	332,609.53
25-Nov-19	189.49	-	-	-	(12,871.26)	(14,741.45)	-	(1,132.84)	-	-	-	-	-	304,053.47
26-Nov-19	235.71	-	-	-	1,100.00	-	-	(1,218.30)	-	-	-	-	-	304,170.88
27-Nov-19	-	-	-	-	(3,593.67)	(10,322.28)	-	(132.66)	-	-	-	-	-	290,122.27
28-Nov-19	-	-	-	-	-	-	-	-	-	-	-	-	-	290,122.27
29-Nov-19	-	-	-	-	-	(4,743.48)	-	(192.00)	-	-	-	-	-	285,186.79
30-Nov-19	-	-	-	-	-	-	-	(730.10)	-	-	-	-	-	284,456.69
#N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub Totals	199,988.83	-	-	-	(79,000.72)	(91,971.96)	-	(31,644.31)	(150.00)	-	(1,481.47)		-	(4,259.63)
Totals	199,988.83				(202,766.99)					(1,481.47)			0.00	284,456.69



Topsfield Water Department
Statement of Revenues and Commitments
As of the last day of: November 2019

COMMITMENTS	This Month	Fiscal Year to Date
User Fees	199,988.83	1,005,339.57
Connections	-	-
Misc. Charges	-	1,000.00
Penalties	-	13,142.77
TOTAL	199,988.83	1,019,482.34

INCOME	This Month	Fiscal Year to Date
Manual Payments	(79,000.72)	(414,436.83)
Lockbox Payments	(91,971.96)	(400,155.99)
Electronic Transfers	-	(413.40)
Unibank Payments	(31,644.31)	(115,378.89)
Bounced Checks	(150.00)	1,195.68
TOTAL	(202,766.99)	(929,189.43)

ADJUSTMENTS	This Month	Fiscal Year to Date
Refunds	-	465.90
Abatements	(1,481.47)	(10,566.19)
TOTAL	(1,481.47)	(10,100.29)

TAX LIENS		
Tax Liens	-	-

NET TOTAL	(4,259.63)	80,192.62
------------------	-------------------	------------------

--	--	--

BALANCE FORWARD	288,716.32
THIS MONTH'S TRANSACTIONS	(4,259.63)
OUTSTANDING BALANCE	\$ 284,456.69

	<u>FY2020</u>	<u>FY2019</u>
ESTIMATED TOTAL INCOME	2,111,147.00	1,835,272.00
ACTUAL TOTAL INCOME	929,189.43	1,669,095.00
% REALIZED Y-T-D	44.0%	90.9%



TOPSFIELD WATER DEPARTMENT

MONTHLY COMMITMENTS

FY 2020

61000-13110 User Charges & Water Connections - Fees Receivable

For the Month of **November 2019** in the amount of **\$199,988.83**

TO: Catherine Gabriel, Town Accountant

You are hereby notified that the **COMMITMENTS** in the amount shown above have this day been made by the Board of Water Commissioners. Included in this amount are water rates & fees, connection fees, miscellaneous charges and penalties.

DATE:

Philip Knowles, Chairman

Richard Stone, Clerk

Mark Gallagher



TOPSFIELD WATER DEPARTMENT
MONTHLY ABATEMENTS
FY 2020

61000-13110 User Charges & Water Connections - Fees Receivable

For the Month of November 2019 in the amount of -\$1,481.47

TO: Catherine Gabriel, Town Accountant

You are hereby notified that the ABATEMENTS in the amount shown above have this day been made by the Board of Water Commissioners. Included in this amount are all abatements, refunds, bounced checks and other adjustments.

DATE:

Philip Knowles, Chairman

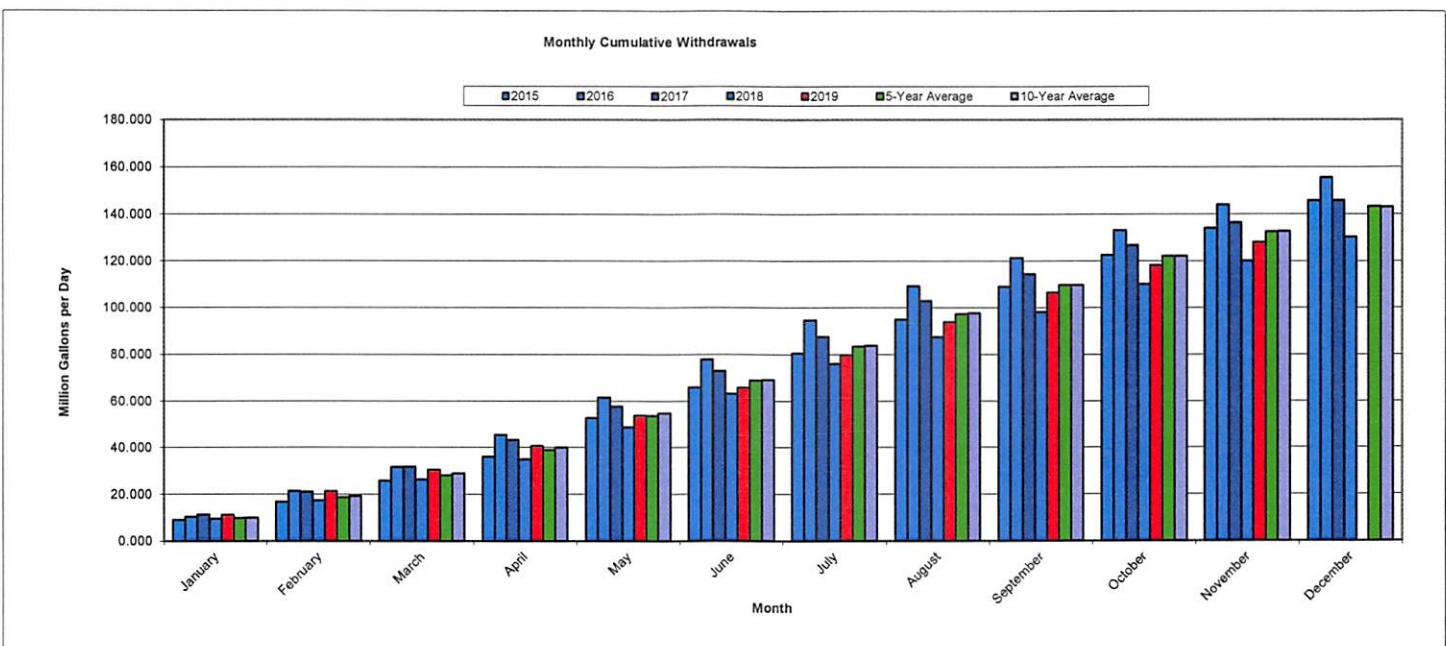
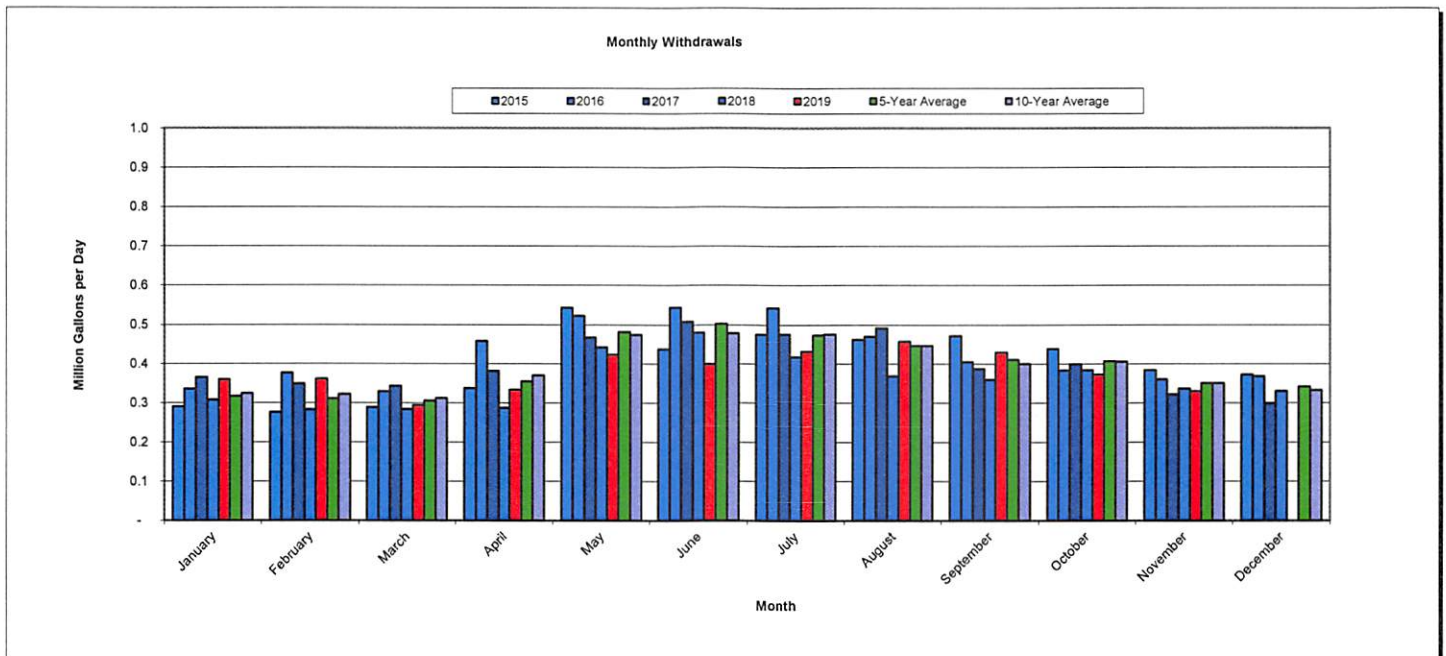
Richard Stone, Clerk

Mark Gallagher
#NAME?

Topsfield Water Department
Annual Withdrawal Report
Calendar Year

2019

Month	North Street	Perkins Row	WTP	Total	Error	Month AGD	5-Year Average	10-Year Average	Running Average	Historical Rank
January	10.277	0.849	-	10.277		0.332	0.317	0.324	0.332	30%
February	8.439	1.671	-	10.110		0.361	0.311	0.322	0.340	52%
March	5.544	3.571	-	9.115		0.294	0.305	0.312	0.328	16%
April	5.950	4.055	10.199	10.199	2%	0.340	0.354	0.369	0.331	21%
May	7.915	5.218	13.430	13.430	2%	0.433	0.482	0.475	0.352	29%
June	7.277	4.695	12.170	12.170	2%	0.406	0.502	0.479	0.361	10%
July	8.027	5.340	14.086	14.086	5%	0.454	0.473	0.476	0.374	14%
August	8.581	5.593	14.993	14.993	5%	0.484	0.447	0.446	0.388	41%
September	7.537	5.330	13.489	13.489	5%	0.450	0.410	0.400	0.395	58%
October	6.895	4.627	12.201	12.201	6%	0.394	0.406	0.405	0.395	29%
November	5.948	3.932	10.545	10.545	6%	0.352	0.350	0.350	0.391	35%
December	-	-	-	-			0.341	0.332	0.384	
Total	82.390	44.881	101.113	130.615		0.391	Indicates source of monthly total			





**Topsfield Water Department
279 Boston Street
Topsfield, MA 01983**

December 11, 2019

To: Catherine Gabriel, Town Accountant
Toula Guarino, Town Assessor
Jackie Cuomo, Town Treasurer and Collector

From: Topsfield Board of Water Commissioners

You are hereby notified that on December 11, 2019 the Board of Water Commissioners voted to transfer past due water charges from Fiscal Year 2019 in the amount of \$39,466.07 to the tax rolls for collection by the Town Collector. Payments are to be deposited in the Water Enterprise Fund.

Board of Water Commissioners

Philip Knowles, Chairman

Richard Stone, Clerk

Mark Gallagher, Member

Water Department
Expense Budget for FY2020

10-Dec-19

Expended Period 11/10/2019 12:50:33 PM - 12/10/2019 12:50:33 PM

		Budget Month 6					
		Budgeted	Revised	Expended This Period	Expended YTD	Available	Percent Remaining
Operating Budget							
E4501 Salary							
51120	Superintendent	103,920	103,920	7,932.80	43,630.40	60,289.60	58%
51490	Longevity, Superintendent	1,750	1,750	0.00	1,750.00	0.00	0%
Sub Total Salary		105,670	105,670	7,932.80	45,380.40	60,289.60	57%
E4502 Wages							
51130	Laborers, Full Time	122,552	122,552	9,355.08	51,452.94	71,099.06	58%
51131	Clerical, Full Time	38,079	38,079	2,906.80	15,987.40	22,091.60	58%
51140	Laborers, Part Time W/E	0	0	0.00	0.00	0.00	N/A
51141	Seasonal Wages	6,000	6,000	0.00	2,646.66	3,353.34	56%
51200	Outside Help, Labor	11,649	11,649	480.94	949.91	10,699.09	92%
51310	Overtime, Labor	93,187	93,187	7,557.14	45,401.33	47,785.67	51%
51490	Longevity	1,250	1,250	0.00	1,737.50	-487.50	-39%
51970	Meal Allowance	1,400	1,400	330.00	1,370.00	30.00	2%
Sub Total Wages		274,117	274,117	20,629.96	119,545.74	154,571.26	56%
E4505 Other							
51920	Uniform Allowance	2,730	2,730	0.00	2,730.00	0.00	0%
52100	Electricity	115,000	115,000	5,496.24	27,410.90	87,589.10	76%
52106	PWB Electricity	3,000	3,000	202.72	1,349.61	1,650.39	55%
52150	Gas	2,600	2,600	5,619.28	6,608.53	-4,008.53	-154%
52156	PWB Gas	2,200	2,200	106.19	169.01	2,030.99	92%
52400	Building Maintenance	750	750	0.00	137.62	612.38	82%
52406	PWB Building Maintenance	2,800	2,800	106.25	986.11	1,813.89	65%
52415	Property Maintenance, Wellfi	14,000	14,000	0.00	4,315.76	9,684.24	69%
52416	PWB Cleaning	700	700	56.00	325.00	375.00	54%
52420	Systems Maintenance	16,000	16,000	3,149.80	8,510.73	7,489.27	47%
52430	Systems Maintenance, Emerg	25,000	25,000	0.00	14,376.48	10,623.52	42%
52450	Vehicle Maintenance	2,000	2,000	0.00	0.00	2,000.00	100%
52510	Equipment Maintainance	500	500	0.00	159.45	340.55	68%
52520	Radio Maintenance	1,000	1,000	206.25	206.25	793.75	79%
52700	Equipment Rental	1,500	1,500	0.00	1,516.88	-16.88	-1%
52720	Street Paving, Contract.	3,500	3,500	0.00	0.00	3,500.00	100%
52750	Security, Contracted	7,094	7,094	85.23	3,092.93	4,001.07	56%
52940	Waste Disposal	2,500	2,500	0.00	2,246.00	254.00	10%
53050	Annual DEP Maintainence	10,000	10,000	2,128.00	3,178.00	6,822.00	68%
53110	Engineering	0	0	0.00	0.00	0.00	N/A
53120	Water Testing	26,000	26,000	1,476.50	10,808.14	15,191.86	58%
53150	Contract Clerical Service	0	0	0.00	0.00	0.00	N/A
53400	Telephone	4,800	4,800	216.72	1,766.15	3,033.85	63%
53430	Postage	6,000	6,000	304.79	3,141.08	2,858.92	48%
53450	Advertising	1,000	1,000	0.00	0.00	1,000.00	100%
53800	DEP Volume Assessment	1,500	1,500	0.00	0.00	1,500.00	100%
53801	Lock Box	1,600	1,600	176.38	443.20	1,156.80	72%
53806	PWB Tank Cleaning	250	250	0.00	0.00	250.00	100%
53810	Water Treatment Services	1,000	1,000	0.00	0.00	1,000.00	100%
53870	Police Detail	2,000	2,000	0.00	1,404.00	596.00	30%
54100	Gasoline	5,500	5,500	0.00	0.00	5,500.00	100%
54200	Office Supplies	3,500	3,500	177.24	853.82	2,646.18	76%

		Budgeted	Revised	Expended This Period	Expended YTD	Available	Percent Remaining
54210	Forms & Printing	7,500	7,500	199.36	1,396.33	6,103.67	81%
54300	Building Supplies	1,000	1,000	0.00	1,755.23	-755.23	-76%
54506	PWB Custodial Supplies	400	400	113.12	285.34	114.66	29%
54800	Vehicular Supplies	1,000	1,000	630.66	630.66	369.34	37%
55300	Public Works Supplies	18,000	18,000	16,484.37	29,342.39	-11,342.39	-63%
55310	Meters	30,000	30,000	4,104.00	19,547.96	10,452.04	35%
55800	Water Treatment Supplies	65,000	65,000	1,665.44	24,109.77	40,890.23	63%
55820	Safety Gear	1,500	1,500	1,564.44	3,637.39	-2,137.39	-142%
55860	Computer Software	5,000	5,000	782.05	876.10	4,123.90	82%
57100	In State Travel	0	0	0.00	0.00	0.00	N/A
57200	Out of State Travel	0	0	0.00	0.00	0.00	N/A
57300	Dues, Conferences, Licenses	4,000	4,000	280.98	1,750.98	2,249.02	56%
57810	Water Conservation Program	0	0	0.00	0.00	0.00	N/A
58500	Additional Equipment	5,000	5,000	0.00	4,153.30	846.70	17%
58510	Computer	5,000	5,000	6.95	3,761.69	1,238.31	25%
58700	Replacement Equipment	5,000	5,000	0.00	859.00	4,141.00	83%
Sub Total Other		414,424	414,424	45,338.96	187,841.79	226,582.21	55%
Total Operating Budget		794,211	794,211	73,901.72	352,767.93	441,443.07	56%
Reserves							
E4515 Unanticipated Emergenci							
52730	Unanticipated Emerg.	100,000	100,000	0.00	0.00	100,000.00	100%
Sub Total Unanticipated Emerge		100,000	100,000	0.00	0.00	100,000.00	100%
E4590 Reserve Fund							
52730	Reserve Fund	50,000	50,000	0.00	0.00	50,000.00	100%
Sub Total Reserve Fund		50,000	50,000	0.00	0.00	50,000.00	100%
Total Reserves		150,000	150,000	0.00	0.00	150,000.00	100%
Debt Service							
E4591 Multipurpose, Interest							
59195	Interest	342,695	342,695	0.00	97,357.50	245,337.50	72%
Sub Total Multipurpose, Interest		342,695	342,695	0.00	97,357.50	245,337.50	72%
E4593 Multipurpose, Principal							
59195	Principal	529,000	529,000	0.00	260,000.00	269,000.00	51%
Sub Total Multipurpose, Princip		529,000	529,000	0.00	260,000.00	269,000.00	51%
E4594 Short-Term Debt							
59210	Principal	0	0	0.00	0.00	0.00	N/A
59250	Debt Issuance Cost	5,000	5,000	0.00	0.00	5,000.00	100%
59251	Interest	115,375	115,375	0.00	0.00	115,375.00	100%
Sub Total Short-Term Debt		120,375	120,375	0.00	0.00	120,375.00	100%
Total Debt Service		992,070	992,070	0.00	357,357.50	634,712.50	64%
Grand Total		1,936,281.00	1,936,281.00	73,901.72	710,125.43	1,226,155.57	63%

Warrant Articles

Water Department

Fiscal Year: 2020

Period Start: 10-Nov-19

Period End: 10-Dec-19

	Appropriation	Revised	Period Total	Fiscal Total	Total Spent	Remainder	Percent
36000 Prospect Street & River Road Water Main Improvements							
88003 Construction	1,600,000.00	1,070,000.00	0.00	94,235.44	980,941.61	89,058.39	8.3%
	1,600,000.00	1,070,000.00	0.00	94,235.44	980,941.61	89,058.39	8.3%
E4580 Water Warrant Articles							
88049 FY19STM/A9 Prospect Street/River Ro	300,000.00	300,000.00	0.00	79,204.56	79,204.56	220,795.44	73.6%
88050 FY20A15 Water System Improvements	100,000.00	100,000.00	0.00	0.00	0.00	100,000.00	100.0%
88051 FY20/A16 Meter Reading System	25,000.00	25,000.00	0.00	0.00	0.00	25,000.00	100.0%
88052 FY20/A17 North Street Drilling	100,000.00	100,000.00	0.00	0.00	0.00	100,000.00	100.0%
88053 FY20/A18 Front End Loader	15,000.00	15,000.00	0.00	15,000.00	15,000.00	0.00	0.0%
	540,000.00	540,000.00	0.00	94,204.56	94,204.56	445,795.44	95.0%

Water Treatment Plant Project

Water Department

Fiscal Year: 2020

Period Start: 10-Nov-19

Period End: 10-Dec-19

	Appropriation	Revised	Period Total	Fiscal Total	Total Spent	Remainder	Percent
38600 A3/17STM Water Treatment Plant Construction							
58300 Owner's Project Manager	259,000.00	259,000.00	0.00	3,452.52	147,686.97	111,313.03	43.0%
58310 Engineering	782,166.00	782,166.00	805.03	8,142.98	760,708.48	21,457.52	2.7%
58320 Transmission Mains	1,524,629.85	1,524,629.85	0.00	0.00	1,486,421.24	38,208.61	2.5%
58330 Plant Construction	7,246,000.00	7,246,000.00	0.00	170,634.37	7,164,009.18	81,990.82	1.1%
58380 Miscellaneous	588,204.15	588,204.15	2,384.76	77,452.12	236,928.06	351,276.09	59.7%
	10,400,000.00	10,400,000.00	3,189.79	259,681.99	9,795,753.93	604,246.07	8.5%



Town of Topsfield

Monthly Report of Accrued Time

Water Department

For the month of November 2019

Date Reviewed: _____

Signature: _____

Department Head

Fontaine, Travis

12/2/2009

Personal Time (hours)				Sick Time (hours)				Vacation Time (hours)				Comp Time (hours)			
Previous	Added	Used	Total	Previous	Added	Used	Total	Previous	Added	Used	Total	Previous	Added	Used	Total
4.00	0.00	-4.00	0.00	873.57	10.00	-8.00	875.57	40.00	0.00	0.00	40.00	92.50	18.00	-4.00	106.50

Krom, Gregory

3/12/1992

Personal Time (hours)				Sick Time (hours)				Vacation Time (hours)				Comp Time (hours)			
Previous	Added	Used	Total	Previous	Added	Used	Total	Previous	Added	Used	Total	Previous	Added	Used	Total
8.00	0.00	0.00	8.00	1,747.00	6.00	0.00	1,753.00	58.50	0.00	-6.00	52.50	0.00	0.00	0.00	0.00

Reuell, Ben

6/2/2014

Personal Time (hours)				Sick Time (hours)				Vacation Time (hours)				Comp Time (hours)			
Previous	Added	Used	Total	Previous	Added	Used	Total	Previous	Added	Used	Total	Previous	Added	Used	Total
24.00	0.00	0.00	24.00	360.50	10.00	-12.00	358.50	62.00	0.00	-4.00	58.00	66.00	18.50	0.00	84.50

Yeo, Anne-Marie

4/14/2005

Personal Time (hours)				Sick Time (hours)				Vacation Time (hours)				Comp Time (hours)			
Previous	Added	Used	Total	Previous	Added	Used	Total	Previous	Added	Used	Total	Previous	Added	Used	Total
24.00	0.00	0.00	24.00	286.00	10.00	0.00	296.00	131.50	0.00	-8.00	123.50	7.50	0.00	0.00	7.50

Sick Bank, Union

7/1/2013

Personal Time (hours)				Sick Time (hours)				Vacation Time (hours)				Comp Time (hours)			
Previous	Added	Used	Total	Previous	Added	Used	Total	Previous	Added	Used	Total	Previous	Added	Used	Total
0.00	0.00	0.00	0.00	1,118.00	0.00	0.00	1,118.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Per Union contract,

- 40 hours per employee put in sick bank July 1st with a maximum sick bank of 1600 hours
- Maximum of 14 working days (112 hours) of compensatory time allowed
- Starting with the July 2017 contract the total sick bank hours were reduced from 1760 to 1600 and the Parks Cemeteries joined the bargaining unit.

**Topsfield Water Department
Superintendent's Report
December 11, 2019**

1. Water Treatment Plant Project

The final permanent borrowing for the plant and also the Prospect/River Water Main Improvement is complete. The Town was able to get the final loans at 2.2%.

The Board of Selectmen approved change orders 8 and 9 last week. Most of the work included in these has already been completed. Kinsmen has not contacted us yet to schedule the work needed for the automatic aerator drain.

Kinsmen has submitted a payment requisition which has been reviewed by Wright-Pierce and is currently being reviewed by Woodard & Curran. It will be submitted for payment once the review process is completed.

2. Water Treatment Plant Automated Operations

Recent conversations with MassDEP indicate that we'll have to staff the plant for a full year which will end in March 2020. We can start working on collecting the required documentation to accompany the waiver request beforehand but it is likely the budget process will be almost finished before we receive an answer.

3. Water Withdrawals

As with previous months, November's withdrawals were slightly below normal. This is likely due to the cancellation of hydrant flushing. A new column has been added to the report to show the total volume leaving the water treatment plant. There is a disparity between the venturi meters at the stations and the magnetic meters at the plant. This probably means one or both of the station meters has drifted and needs to be adjusted. We'll reassemble the meter testing rig and get the meters tested this month.

4. Leaks & Breaks

A leaking gate valve was replaced on High Street near #39 last month. At the same time a hydrant was installed and valve replaced near the driveway to the Public Works Building. The hydrant was installed to facilitate flushing and air release when working on High Street. The valve was replaced because we believed it was broken in the closed position.

5. Leak Detection and Unaccounted for Water (UAW)

Despite having lower than normal withdrawals, our UAW remains elevated along with early morning water use which can be used as a surrogate for leakage this time of year. We currently have UAW levels in the high teens and early morning use is around 100 gpm. A use value of 43 gpm correlates to a UAW of 0% so we're looking for leaks totaling near 40 gpm. We did a full leak detection round this past spring which located one service leak on Prospect Street that was repaired by R&D. I've contacted three vendors for quotes for a full system survey.

6. Well Cleaning

Our seasonal laborer, Ken Thompson, will be back in town for winter break and will be working for us for a few weeks. He assisted us with well cleaning over the summer and I expect to do some more cleaning as weather permits.

7. FY2021 Capital Plan

The capital plan was submitted.

8. FY2021 Budget Wages

The budget process is underway. This year's wage guidelines allow for contractual wage increases along with steps and raises for non-union personnel for current positions. Any changes beyond this will get a great deal of scrutiny but we need to discuss potentially adding more operators. Unfortunately, we are going to have to wait until March to file for an automation waiver and will not have time to adjust the budget, unless at Town Meeting, to match what is ultimately decided by MassDEP.

There are three options that need to be examined. While reviewing the following descriptions please keep in mind that it is early in the budget process and an analysis of each scenario will need to be done using a variety of sources of information including accrual records, task sheet data, historical pumping data, etc. It would be helpful if part of today's discussion includes suggestions about what type of information and analysis would be aid this process.

We have 3 certified operators including myself. Current obligations for vacation time mean we're a two-man operation during the week for a minimum of 21% of the year which could be up to 33% of the year if vacation is rolled over and comp time is used. This will increase gradually as Travis and Ben accrue more vacation time at a rate of 1 day per two years with a maximum 5 weeks. There is always the risk of running with two operators if there is an extended sickness or loss of personnel to other systems. The risk of this is low but not low enough it shouldn't be considered. I'm on call 24/7 and although we don't have a formal weekend on call arrangement Ben and/or Travis are usually around.

The first scenario is that the waiver is granted and staff is kept at current levels. We'll recover 4 hours per day of labor that can be directed elsewhere. This would be a vast improvement over the current situation and reduce the strain on resources but is the bare minimum staffing level.

The second scenario is that the waiver is granted but one more operator is added. Adding one additional operator to the staff will help cover vacations, hedge against the risk of losing an operator for an extended time, add one person to the weekend coverage rotation, and provide more labor for distribution activities such as meter changes, well cleaning, etc.

The second and most drastic is if MassDEP doesn't grant the automated operations waiver or does so but with onerous conditions. It is abundantly clear in this scenario that one or two operators would be needed or plant operations would be contracted out to a vendor. The issue is really how many hours per day does the plant need to run in the summer, how will it be staffed, and what the operators will do during low demand periods. This scenario would likely change our operations from a five-day work week with overtime weekend coverage to a seven work day system.

9. FY2021 Budget – Other Expenses

The Finance Committee wants to level fund the "Other" section of the budget. The FY2020 budget was submitted without any knowledge about plant operations. We now have almost a year of experience that provides a lot of useful information when developing a budget. The highlights are:

- The electrical budget can be reduced by about \$50,000. This was increased last year not knowing how much additional cost would be incurred due to running the plant and booster station.
- Waste disposal needs to be increased to cover the plant's disposal needs including sludge and

grey water. This is expected to be \$5,000 annually.

- Water treatment supplies can be trimmed a bit. It looks like there will be a surplus in this line item but I need to analyze chemical use to date before settling on a reduction.
- Meters could be increased. We had planned on replacing 10% of the meter fleet each year and raised the budgeted amount a few years ago to accommodate this rather than make a frequent warrant article request. The increase didn't account for the need to replace the radio transmitters. Replacing meters every 10 years and radios every 20 years requires an increase by \$10,000 to \$15,000. These numbers are rough and assume all of our meters are household size and the age of the radios is
- evenly distributed between 0 and 20 years when it's actually quite clustered.
- System Maintenance and Public Works Supplies are chronically under funded and this may not be the time to fully correct this but these line items should be increased by a couple thousand dollars each to gradually bring them into line.

10. Rates

The water treatment project is essentially complete and the permanent bonds are in place. Now would be a good time to start discussing future capital expense planning. The way our bonds are funded - by paying equal principal amounts each year means the interest payments will decline each year. How this decline is handled and ultimately what happens once the final payments are made can determine how future capital projects are funded.

The major challenge is that in an effort to keep water rates low, depreciation of assets has been ignored since the system's inception. It's a nationwide issue, not just a Topsfield problem, and at this point is too far along to easily correct. Increasing the reserve fund each year by the amount saved in interest payments that year and not removing it in future years will help build budget capacity and cash reserves so the system will be less dependent on borrowing in the future. Originally, I was thinking about half of the savings would be diverted to the reserve fund and half for rate relief but the initial calculations showed this really didn't have a substantial effect. All of the interest and 75% of the principal savings would need to be preserved to reach anticipated water main costs in 2045. Saving just the interest would get us about halfway there. Additional modeling can be done if the Board wishes to investigate this further.

11. MassDEP Sanitary Survey

MassDEP was here for a full day last week and will be returning for another day this week. It was snowing when the inspector was here. Ben & Travis were plowing so the inspector and I were in the plant reviewing distribution, storage and treatment topics. This week we'll be visiting the pump stations, tanks and booster stations as well as reviewing records. We'll likely get some comments in the final report about backflow, repair work, alarm testing and additional security at the tanks.

12. Tax-Liens

As discussed at last month's meeting, all unpaid water charges due prior to July 1st of this year were forwarded to the Assessor's Office to be included on the January 1st tax bill. The Board needs to vote to transfer the final amount at the meeting.



Town of Topsfield

Task Sheet Report - Water Department

November 2019

Category	Andrew Dwinell	Anne-Marie Yeo	Ben Reuell	Gregory Krom	Travis Fontaine	Total
Accrued Time						
Holidays		18	24	24	24	90
Personal					16	16
Sick					8	8
Vacation		6		10		16
		24	24	34	48	130
Administrative						
Accrual Tracking		4				4
Charts				2	14	16
Correspondence		17				17
File Maintenance		4		2		6
Meeting Prep.				10		10
Meetings		2		8		10
Other				1		1
Purchasing/Procurement				7		7
System Review				2		2
		27		32	14	73
Billing						
Bill Prep.				3		3
Meter Problems				18	5	23
Meter Reading Radio				1		1
Other		3				3
		3		22	5	30
Building Maintenance						
Annual					3	3
Grounds					3	3
Preventative				7		7
				7	6	13
Computer Systems						
Assistance				1		1
Development				3		3
Networking				1		1
Repairs				7		7
				12		12
Customer Service						
Billing Questions		5		6	1	12



Town of Topsfield

Task Sheet Report - Water Department

November 2019

Category	Andrew Dwinell	Anne-Marie Yeo	Ben Reuell	Gregory Krom	Travis Fontaine	Total
High Use Investigation					3	3
Lien Requests		6				6
Title 5 Requests		4				4
		15		6	4	25
Equipment Maintenance						
Other					1	1
Preventative					2	2
					3	3
Financials						
Payment Processing		21				21
Payroll/Bills		19				19
		40				40
Mapping						
CAD/Maps				11		11
				11		11
Public Service						
Markouts/DigSafe					5	5
					5	5
Quality Control						
Bacteria Sampling				2	14	16
Fluoride Testing					1	1
Manganese Testing					5	5
Other					5	5
pH Testing					2	2
Records Management					4	4
				2	31	33
Road Maintenance						
Paving	8					8
	8					8
Treatment Plant Project						
Plant Construction				2		2
				2		2
Vehicle Maintenance						
Annual					2	2
					2	2
Water Controls						

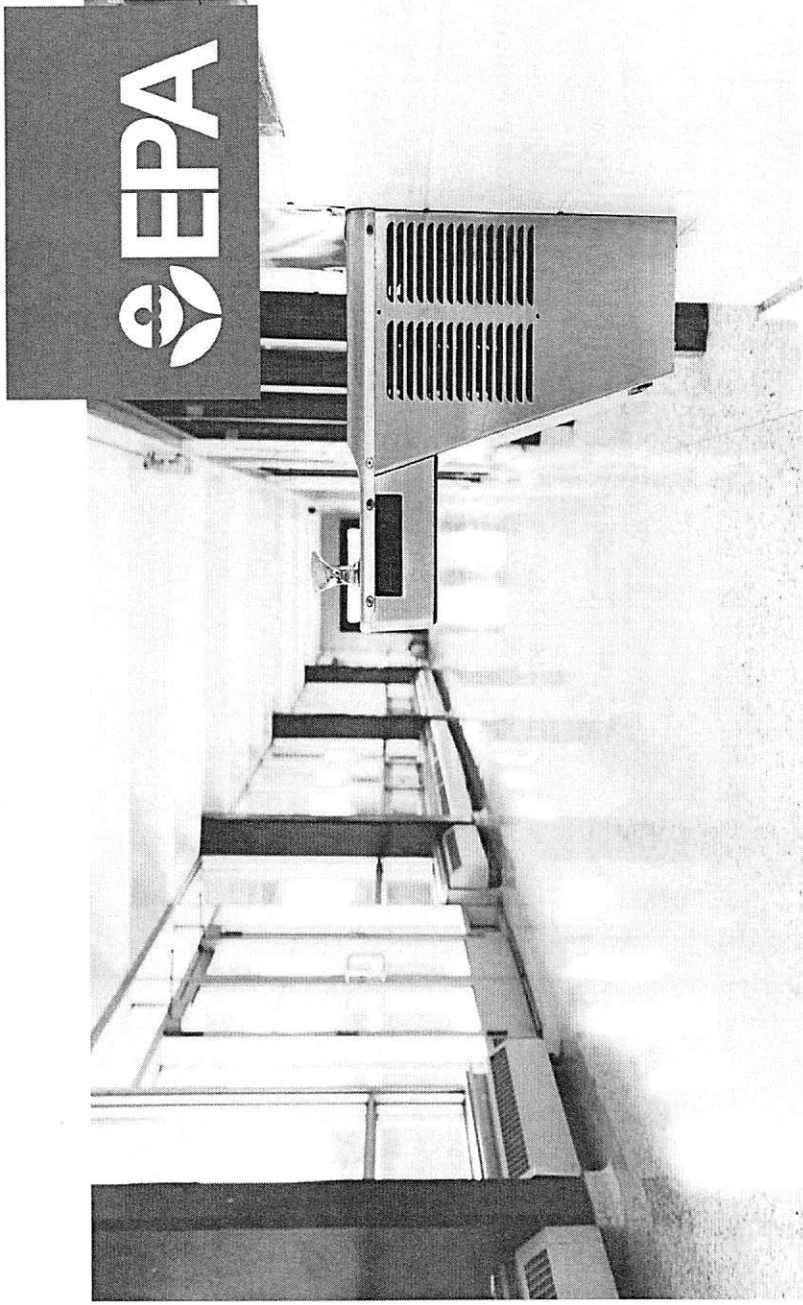


Town of Topsfield

Task Sheet Report - Water Department

November 2019

Category	Andrew Dwinell	Anne-Marie Yeo	Ben Reuell	Gregory Krom	Travis Fontaine	Total
Alarms				1		1
SCADA System				3		3
				4		4
Water Distribution						
Hydrant Repair					3	3
Leak Detection				1		1
Meter Replacements					4	4
PWB Booster Station					1	1
Service Repair					2	2
Tanks					2	2
Valve				6	3	9
Water Main Repair				10	16	26
				17	31	48
Water Supply						
Vacuum System					2	2
					2	2
Water Treatment						
Analyzer Calibration			9			9
Analyzer Maintenance					1	1
KOH				5		5
WTP Staffing			196	27	85	308
			205	32	86	323
Grand Total						
	8	109	229	181	237	764
Total Monthly Work Hours (40 hrs/wk)						
	168					



LCR Proposal Summary and Key Improvements

EPA's proposed Lead and Copper Rule (LCR) includes a suite of actions to reduce lead exposure in drinking water where it is needed the most. The proposed rule will identify the most at-risk communities and ensure systems have plans in place to rapidly respond by taking actions to reduce elevated levels of lead in drinking water.

The proposed LCR maintains the current Maximum Contaminant Level Goal (MCLG) of zero and the Action Level of 15 ppb. The proposed rule will require a more comprehensive response at the action level and introduces a trigger level of 10 ppb that requires more proactive planning in communities with lead service lines.

The agency's proposal therefore takes a proactive and holistic approach to improving the current rule—from testing to treatment to telling the public about the levels and risks of lead in drinking water. This approach focuses on six key areas provided below.

1: IDENTIFYING AREAS MOST IMPACTED

To help identify areas with the greatest potential for lead contamination of drinking water, the EPA is proposing that all water systems prepare and update a lead service line (LSL) inventory. To reduce high levels of lead in certain locations, the EPA is proposing to require water systems to "find-and-fix" the causes of these elevated levels.

Key Improvements:

- The EPA will for the first time require a public lead service line inventory.
- Unlike now, systems will have to pay attention to individual locations with elevated levels of lead by identifying the cause and mitigating the problem.

Under the Current LCR:

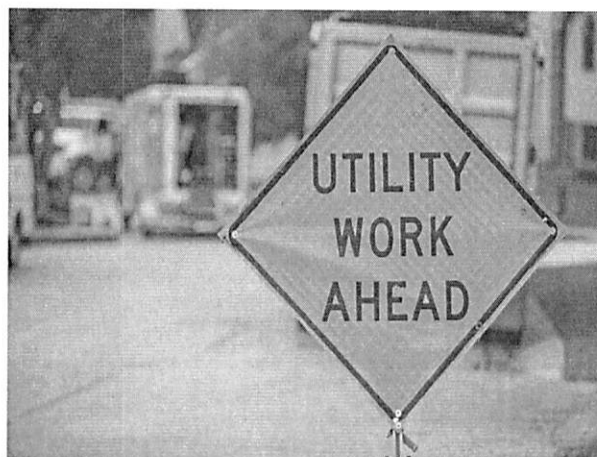
- Systems are only required to conduct a materials inventory for the purposes of identifying enough sites for tap sampling. These inventories are not of the entire system, nor are they public.
- Systems must only take action if more than 10% of tap samples are greater than the action level (15 ppb). There are no requirements for systems to take follow-up samples at sites with individual tap samples greater than 15 ppb.

2: STRENGTHENING TREATMENT REQUIREMENTS

The EPA is proposing to revise requirements for corrosion control treatment (CCT) based on tap sampling results. The EPA's proposal also establishes a new trigger level of 10 ppb. At this trigger level, systems that currently treat for corrosion would be required to re-optimize their existing treatment. Systems that do not currently treat for corrosion would be required to conduct a corrosion control study so that the system is prepared to respond quickly when necessary.

Key Improvements:

- Based on sampling results, systems with elevated lead levels will reevaluate their existing corrosion control treatment or conduct a treatment study so that they are prepared to respond quickly when necessary.



Under the Current LCR:

- Requirements are based primarily on system size. Systems serving > 50,000 persons are required to have CCT while systems serving \leq 50,000 have CCT requirements after an action level exceedance and may discontinue these requirements if the action level no longer exceeded for two 6-month monitoring periods.
- Systems are not required to re-optimize their CCT, unless directed to do so by the state, and may only be required to conduct a CCT study when there is an action level exceedance.

3: REPLACING LEAD SERVICE LINES

The EPA is proposing to require water systems to replace the water system-owned portion of an LSL when a customer chooses to replace their customer-owned portion of the line. The EPA is also proposing to require water systems to conduct outreach and initiate lead service line replacement programs when lead levels are above the proposed trigger level of 10 ppb. The proposal requires systems that are above 10 ppb but at or below 15 ppb to work with their state to set an annual goal for replacement. Systems that are above 15 ppb will be required to replace a minimum of three percent of the number of LSLs annually. The proposal also prevents systems from avoiding lead service line replacements (LSLR) by "testing out" through sampling. Additionally, small systems that exceed the trigger and action levels will have flexibility with respect to treatment and lead service line replacement actions.

Key Improvements:

- The trigger level is a new flexible provision designed to compel water systems to take proactive, tailored actions to plan upgrades to aging infrastructure and reduce levels of lead in drinking water.
- Systems above 10 parts per billion would be required to work with their state to set an annual goal for replacing lead service lines. Water systems above 15 parts per billion would be required to fully replace a minimum of three percent of the number of known or potential lead service lines annually.
- Importantly, the proposal prohibits "test-outs" to avoid replacing lead service lines – an allowed practice under the current rule that has significantly slowed national progress in removing this significant source of lead from our homes.
- Partial lead service line replacements will no longer be allowed except in certain situations (e.g., emergency repair) because science has recently shown us that partial lead service line replacement may increase short-term lead exposure.
- Flexibility is important for small systems so that they can protect public health by taking the action that makes sense for their community.

Under the Current LCR:

- Water systems are not required to replace their portion of an LSL when the customer-owned portion of the line is being replaced.
- No LSLR plan is required. Systems are only required to implement an LSLR program when the lead action level of 15 ppb is exceeded.
- Systems can count partial LSLRs and LSLs that have been tested out (i.e., samples from the LSL do not exceed 15ppb) as replaced to meet the 7% mandatory annual replacement rate.

EPA's proposed Lead and Copper Rule has **sensible approaches to protect children from lead** in drinking water. By providing flexibility for small systems, the rule allows systems to protect public health by taking **common sense actions**.

Under the Current LCR:

- Systems are not prohibited from instructing samplers to flush before sampling, remove and/or clean faucet aerators, and use narrow-necked collection bottles, all of which could mask elevated lead levels.
- Systems with LSLs are only required to collect 50% of tap samples from sites served by LSLs, which could obscure problems in the system.

5: IMPROVING RISK COMMUNICATION

The EPA is proposing to require systems to notify customers of an action level exceedance within 24 hours. The EPA is also proposing to require that systems make the LSL inventory publicly available and conduct regular outreach to homeowners with LSLs.

Key Improvements:

- Homeowners will learn about elevated levels of lead in their system sooner. They will also understand where lead services lines are in their community and how to protect their family from exposure to lead.

Under the Current LCR:

- Customers are notified of their tap sampling results, regardless of whether there is an action level exceedance, within 30 days of the system receiving the results.
- A materials evaluation is only required for sites used for tap monitoring and is not public. Water systems are not required to inform customers if they have a known or potential LSL.

6: PROTECTING CHILDREN IN SCHOOLS

Since children are most at risk, the EPA is proposing that community water systems (CWS) sample drinking water outlets at each school and each child care facility served by the system. The system would be required to provide the results and information about the actions the school or child care facility can take to reduce lead in drinking water.

Key Improvements:

- For the first time, systems will be required to test school and child care facilities.

Under the Current LCR:

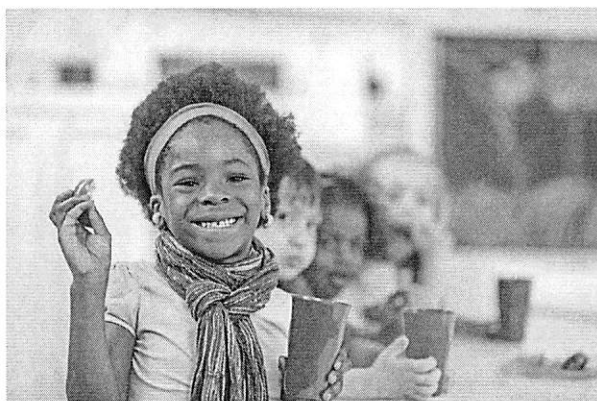
- Community water systems are not currently required to test schools and child care facilities. Only schools and child care facilities classified as Non-Transient Non-Community Water Systems must sample for lead and copper.

4: INCREASING SAMPLING RELIABILITY

The EPA is proposing to improve tap sampling procedures. For example, requiring wide-mouth bottles for collection and prohibiting flushing and cleaning or removing faucet aerators before sampling. The EPA is also changing the criteria for selecting homes where samples are taken to require sampling in homes with lead service lines. And, systems with higher levels of lead will sample more frequently.

Key Improvements:

- Water systems will follow new, improved sampling procedures, will adjust sampling sites to better target locations with higher lead levels, and systems with higher levels will sample more frequently.



For more information, visit:
epa.gov/safewater/LCRproposal

Topsfield Water Department

Annual Lead & Copper Test Results

Residential Lead Concentration (mg/L)							
Statistic	2013	2014	2015	2016	2017	2018	2019
Maximum	0.0150	0.0058	0.0039	0.0400	0.0072	0.0614	0.0045
Minimum	-	-	-	-	-	-	-
90th Percentile	0.0024	0.0030	0.0015	0.0033	0.0018	0.0028	-
Average	0.0017	0.0010	0.0006	0.0024	0.0009	0.0033	0.0001
Median	0.001	-	-	0.001	-	-	-
Count	23	22	26	34	24	24	44
Std Dev.	0.0030	0.0015	0.0009	0.0067	0.0016	0.0122	0.0007
Action required if 90th percentile exceeds 0.0150 mg/L							

Residential Copper Concentration (mg/L)							
Statistic	2013	2014	2015	2016	2017	2018	2019
Maximum	0.3700	0.4600	0.1400	0.3600	0.2600	0.1490	0.1240
Minimum	-	-	-	-	0.0308	0.0095	-
90th Percentile	0.1980	0.2320	0.1150	0.3040	0.1615	0.1232	0.1123
Average	0.1270	0.1517	0.0771	0.1721	0.1126	0.0846	0.0706
Median	0.110	0.140	0.087	0.170	0.115	0.092	0.069
Count	23	22	26	34	24	24	44
Std Dev.	0.0868	0.1107	0.0391	0.0906	0.0468	0.0357	0.0305
Action required if 90th percentile exceeds 1.3 mg/L							

School Lead Concentration (mg/L)							
Statistic	2013	2014	2015	2016	2017	2018	2019
Maximum	0.0140	-	0.0089	0.0046	0.0058	0.0054	-
Minimum	-	-	-	-	-	-	-
90th Percentile	0.0097	-	0.0056	0.0028	0.0044	0.0045	-
Average	0.0041	-	0.0019	0.0011	0.0020	0.0013	-
Median	0.003	-	-	-	0.002	-	-
Count	6	6	6	8	5	7	11
Std Dev.	0.0048	-	0.0033	0.0016	0.0021	0.0021	-

School Copper Concentration (mg/L)							
Statistic	2013	2014	2015	2016	2017	2018	2019
Maximum	0.8200	-	0.3400	0.7600	0.3550	0.4320	0.4300
Minimum	0.1700	-	0.0870	0.2800	0.0531	-	-
90th Percentile	0.6100	-	0.3300	0.5430	0.3314	0.2892	0.3400
Average	0.3450	-	0.2162	0.4363	0.2250	0.1684	0.1805
Median	0.235	-	0.220	0.425	0.236	0.182	0.163
Count	6	6	6	8	5	7	11
Std Dev.	0.2247	-	0.1011	0.1355	0.1032	0.1351	0.1305