



**Topsfield Water Department**  
Monthly Control Sheet  
November 2018

	Commitments				Payments					Miscellaneous Transactions			Tax Liens	Balance Forward
Date	User Fees	Conn. Fees	Penaties	Misc. Charges	Manual	Lockbox	Electronic	Unibank	Bounced Checks	Refunds	Abatements			
											BOWC	TWD		
														209,632.69
01-Nov-18	64.65	-	-	-	-	(5,903.86)	-	-	-	-	-	-	-	203,793.48
02-Nov-18	-	-	-	-	-	(2,553.52)	-	(634.15)	-	-	-	-	-	200,605.81
03-Nov-18	-	-	-	-	-	-	-	(1,770.12)	-	-	-	-	-	198,835.69
04-Nov-18	-	-	-	-	-	-	-	(928.22)	-	-	-	-	-	197,907.47
05-Nov-18	1,268.70	-	-	-	(4,620.52)	(5,323.20)	-	(855.40)	-	-	-	(96.82)	-	188,280.23
06-Nov-18	48.35	-	-	-	(64.65)	-	-	-	-	-	-	-	-	188,263.93
07-Nov-18	394.58	-	-	-	-	(2,971.94)	-	-	-	-	-	-	-	185,686.57
08-Nov-18	88.70	-	-	-	(5,980.81)	(1,628.24)	-	(242.85)	-	-	-	(50.00)	-	177,873.37
09-Nov-18	-	-	-	-	-	(636.72)	-	-	-	-	-	-	-	177,236.65
10-Nov-18	-	-	-	-	-	-	-	(27.50)	-	-	-	-	-	177,209.15
11-Nov-18	-	-	-	-	-	-	-	(309.00)	-	-	-	-	-	176,900.15
12-Nov-18	-	-	-	-	-	-	-	(672.00)	-	-	-	-	-	176,228.15
13-Nov-18	-	-	-	-	(31,209.40)	(7,428.61)	-	(631.20)	-	-	-	-	-	136,958.94
14-Nov-18	-	-	-	-	(879.68)	-	-	(707.04)	-	-	-	-	-	135,372.22
15-Nov-18	136,262.34	-	-	-	(8,098.61)	(5,508.48)	-	(3,219.72)	-	-	-	-	-	254,807.75
16-Nov-18	-	-	-	-	-	(1,243.84)	-	(100.45)	-	-	-	-	-	253,463.46
17-Nov-18	-	-	-	-	-	-	-	-	-	-	-	-	-	253,463.46
18-Nov-18	-	-	-	-	-	-	-	(174.00)	-	-	-	-	-	253,289.46
19-Nov-18	-	-	-	-	-	(874.50)	-	(367.41)	-	-	-	-	-	252,047.55
20-Nov-18	-	-	-	-	(12,463.54)	(205.86)	-	(478.20)	-	-	-	-	-	238,899.95
21-Nov-18	-	-	-	-	(153.18)	(1,571.34)	-	(807.80)	-	-	-	-	-	236,367.63
22-Nov-18	-	-	-	-	-	-	-	-	-	-	-	-	-	236,367.63
23-Nov-18	-	-	-	-	-	-	-	(402.60)	-	-	-	-	-	235,965.03
24-Nov-18	-	-	-	-	-	-	-	(110.94)	-	-	-	-	-	235,854.09
25-Nov-18	-	-	-	-	-	-	-	(154.50)	-	-	-	-	-	235,699.59
26-Nov-18	-	-	-	-	(9,330.01)	(21,759.73)	-	(911.28)	-	-	-	-	-	203,698.57
27-Nov-18	-	-	-	-	-	-	-	(384.30)	-	-	-	-	-	203,314.27
28-Nov-18	125.55	-	-	-	-	(5,228.49)	-	(507.80)	-	-	-	-	-	197,703.53
29-Nov-18	-	-	2,754.29	-	-	(6,587.98)	-	-	128.10	-	-	-	(33,787.85)	160,210.09
30-Nov-18	-	-	-	-	(4,865.19)	(1,649.20)	-	(831.50)	-	-	-	-	-	152,864.20
#N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub Totals	138,252.87	-	2,754.29	-	(77,665.59)	(71,075.51)	-	(15,227.98)	128.10	-	(146.82)		(33,787.85)	(56,768.49)
Totals	141,007.16				(163,840.98)					(146.82)			(33,787.85)	186,652.05



**Topsfield Water Department**  
**Statement of Revenues and Commitments**  
As of the last day of: November 2018

COMMITMENTS	This Month	Fiscal Year to Date
User Fees	138,252.87	767,152.69
Connections	-	4,000.00
Misc. Charges	-	2,000.00
Penalties	2,754.29	7,638.35
<b>TOTAL</b>	<b>141,007.16</b>	<b>780,791.04</b>

INCOME	This Month	Fiscal Year to Date
Manual Payments	(77,665.59)	(332,433.42)
Lockbox Payments	(71,075.51)	(348,672.86)
Electronic Transfers	-	(302.85)
Unibank Payments	(15,227.98)	(77,748.94)
Bounced Checks	128.10	871.57
<b>TOTAL</b>	<b>(163,840.98)</b>	<b>(758,286.50)</b>

ADJUSTMENTS	This Month	Fiscal Year to Date
Refunds	-	-
Abatements	(146.82)	(4,519.38)
<b>TOTAL</b>	<b>(146.82)</b>	<b>(4,519.38)</b>

TAX LIENS		
Tax Liens	(33,787.85)	(33,787.85)

<b>NET TOTAL</b>	<b>(22,980.64)</b>	<b>17,985.16</b>
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BALANCE FORWARD	209,632.69
THIS MONTH'S TRANSACTIONS	(56,768.49)
<b>OUTSTANDING BALANCE</b>	<b>\$ 186,652.05</b>

	<u>FY2019</u>	<u>FY2018</u>
ESTIMATED TOTAL INCOME	1,771,900.00	1,467,939.00
ACTUAL TOTAL INCOME	758,286.50	1,446,055.67
<b>% REALIZED Y-T-D</b>	<b>42.8%</b>	<b>98.5%</b>



**TOPSFIELD WATER DEPARTMENT**  
**MONTHLY COMMITMENTS**  
**FY 2019**

61000-13110 User Charges & Water Connections - Fees Receivable

For the Month of November 2018 in the amount of \$141,007.16

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:**

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Philip Knowles, Chairman

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Richard Stone, Clerk

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Mark Gallagher



**TOPSFIELD WATER DEPARTMENT**  
**MONTHLY ABATEMENTS**  
**FY 2019**

61000-13110 User Charges & Water Connections - Fees Receivable

For the Month of November 2018 in the amount of -\$146.82

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:**

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Philip Knowles, Chairman

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Richard Stone, Clerk

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Mark Gallagher  
#NAME?

**Water Department**  
**Expense Budget for FY2019**

**11-Dec-18**

**Expended Period 11/11/2018 1:39:56 PM - 12/11/2018 1:39:56 PM**

**Budget Month 6**

		Budgeted	Revised	Expended This Period	Expended YTD	Available	Percent Remaining
<b>Operating Budget</b>							
<b>E4501 Salary</b>							
51120	Superintendent	98,409	98,409	7,569.60	42,768.24	55,640.76	57%
51490	Longevity, Superintendent	1,750	1,750	0.00	1,750.00	0.00	0%
Sub Total Salary		100,159	100,159	7,569.60	44,518.24	55,640.76	56%
<b>E4502 Wages</b>							
51130	Laborers, Full Time	113,016	113,016	9,091.68	51,367.98	61,648.02	55%
51131	Clerical, Full Time	36,045	36,045	2,772.64	15,665.42	20,379.58	57%
51141	Seasonal Wages	7,000	7,000	0.00	4,454.04	2,545.96	36%
51200	Outside Help, Labor	2,933	2,933	561.67	2,049.58	883.42	30%
51310	Overtime, Labor	42,398	42,398	2,670.68	15,228.53	27,169.47	64%
51490	Longevity	988	988	0.00	987.50	0.50	0%
Sub Total Wages		202,380	202,380	15,096.67	89,753.05	112,626.95	56%
<b>E4505 Other</b>							
51920	Uniform Allowance	2,730	2,730	0.00	2,730.00	0.00	0%
51970	Meal Allowance	1,400	1,400	80.00	550.00	850.00	61%
52100	Electricity	41,500	41,500	3,252.93	16,983.05	24,516.95	59%
52106	PWB Electricity	3,200	3,200	883.98	3,727.08	-527.08	-16%
52150	Gas	2,600	2,600	219.80	697.49	1,902.51	73%
52156	PWB Gas	2,200	2,200	307.38	384.31	1,815.69	83%
52400	Building Maintenance	750	750	1,205.99	2,307.55	-1,557.55	-208%
52406	PWB Building Maintenance	2,800	2,800	239.25	3,782.50	-982.50	-35%
52415	Property Maintenance, Wellfi	14,000	14,000	0.00	0.00	14,000.00	100%
52416	PWB Cleaning	700	700	46.00	230.00	470.00	67%
52420	Systems Maintenance	16,000	16,000	837.49	11,332.47	4,667.53	29%
52430	Systems Maintenance, Emerg	25,000	25,000	0.00	3,468.72	21,531.28	86%
52450	Vehicle Maintenance	2,000	2,000	200.00	235.00	1,765.00	88%
52510	Equipment Maintainance	500	500	0.00	0.00	500.00	100%
52520	Radio Maintenance	1,000	1,000	0.00	0.00	1,000.00	100%
52700	Equipment Rental	1,500	1,500	735.51	2,295.51	-795.51	-53%
52720	Street Paving, Contract.	3,500	3,500	0.00	0.00	3,500.00	100%
52750	Security, Contracted	4,500	4,500	0.00	2,227.70	2,272.30	50%
52940	Waste Disposal	2,500	2,500	0.00	2,274.55	225.45	9%
53050	Annual DEP Maintainence	10,000	10,000	0.00	0.00	10,000.00	100%
53110	Engineering	0	0	0.00	0.00	0.00	N/A
53120	Water Testing	21,000	21,000	1,762.00	10,807.50	10,192.50	49%
53400	Telephone	5,000	5,000	375.81	1,914.63	3,085.37	62%
53430	Postage	6,800	6,800	238.89	1,502.13	5,297.87	78%
53450	Advertising	1,500	1,500	0.00	0.00	1,500.00	100%
53800	DEP Volume Assessment	1,500	1,500	0.00	0.00	1,500.00	100%
53801	Lock Box	1,800	1,800	178.62	447.16	1,352.84	75%
53806	PWB Tank Cleaning	500	500	0.00	0.00	500.00	100%
53810	Water Treatment Services	2,000	2,000	0.00	0.00	2,000.00	100%
53870	Police Detail	2,000	2,000	416.00	416.00	1,584.00	79%
54100	Gasoline	5,500	5,500	0.00	4,290.88	1,209.12	22%
54200	Office Supplies	3,500	3,500	11.58	1,903.99	1,596.01	46%
54210	Forms & Printing	7,500	7,500	690.56	2,290.52	5,209.48	69%
54300	Building Supplies	1,500	1,500	0.00	0.00	1,500.00	100%

		Budgeted	Revised	Expended This Period	Expended YTD	Available	Percent Remaining
54506	PWB Custodial Supplies	450	450	0.00	0.00	450.00	100%
54800	Vehicular Supplies	2,000	2,000	0.00	49.96	1,950.04	98%
55300	Public Works Supplies	18,000	18,000	2,654.03	16,101.74	1,898.26	11%
55310	Meters	30,000	30,000	0.00	7,507.11	22,492.89	75%
55800	Water Treatment Supplies	75,000	75,000	2,711.91	27,136.39	47,863.61	64%
55820	Safety Gear	1,500	1,500	290.28	290.28	1,209.72	81%
55860	Computer Software	5,000	5,000	0.00	472.77	4,527.23	91%
57100	In State Travel	0	0	0.00	0.00	0.00	N/A
57300	Dues, Conferences, Licenses	3,750	3,750	0.00	1,532.33	2,217.67	59%
57810	Water Conservation Program	0	0	0.00	0.00	0.00	N/A
58500	Additional Equipment	5,000	5,000	0.00	461.99	4,538.01	91%
58510	Computer	5,000	5,000	6.95	62.74	4,937.26	99%
58700	Replacement Equipment	5,000	5,000	0.00	939.84	4,060.16	81%
Sub Total Other		349,180	349,180	17,344.96	131,353.89	217,826.11	62%
Total Operating Budget		651,719	651,719	40,011.23	265,625.18	386,093.82	59%
<b>Reserves</b>							
<b>E4515 Unanticipated Emergenci</b>							
52730	Unanticipated Emerg.	300,000	300,000	0.00	0.00	300,000.00	100%
Sub Total Unanticipated Emerge		300,000	300,000	0.00	0.00	300,000.00	100%
<b>E4590 Reserve Fund</b>							
52730	Reserve Fund	56,710	56,710	0.00	0.00	56,710.00	100%
Sub Total Reserve Fund		56,710	56,710	0.00	0.00	56,710.00	100%
Total Reserves		356,710	356,710	0.00	0.00	356,710.00	100%
<b>Debt Service</b>							
<b>E4591 Multipurpose, Interest</b>							
59195	Interest	68,578	68,578	0.00	9,407.50	59,170.50	86%
Sub Total Multipurpose, Interest		68,578	68,578	0.00	9,407.50	59,170.50	86%
<b>E4593 Multipurpose, Principal</b>							
59195	Principal	152,500	152,500	0.00	0.00	152,500.00	100%
Sub Total Multipurpose, Princip		152,500	152,500	0.00	0.00	152,500.00	100%
<b>E4594 Short-Term Debt</b>							
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	377,634	377,634	0.00	0.00	377,634.00	100%
Sub Total Short-Term Debt		382,634	382,634	0.00	0.00	382,634.00	100%
Total Debt Service		603,712	603,712	0.00	9,407.50	594,304.50	98%
<b>Grand Total</b>		<b>1,612,141.00</b>	<b>1,612,141.00</b>	<b>40,011.23</b>	<b>275,032.68</b>	<b>1,337,108.32</b>	<b>83%</b>

# Warrant Articles

Water Department

Fiscal Year: 2019

Period Start: 11-Nov-18

Period End: 11-Dec-18

	Appropriation	Revised	Period Total	Fiscal Total	Total Spent	Remainder	Percent
<b>36000 Prospect Street &amp; River Road Water Main Improvements</b>							
88003 Construction	1,600,000.00	1,600,000.00	0.00	870,758.13	886,706.17	713,293.83	44.6%
	1,600,000.00	1,600,000.00	0.00	870,758.13	886,706.17	713,293.83	44.6%
<b>E4545 A39/13ATM Minor Water Main Replacement</b>							
58000 General	100,000.00	100,000.00	0.00	0.00	79,079.76	20,920.24	20.9%
	100,000.00	100,000.00	0.00	0.00	79,079.76	20,920.24	20.9%

# Water Treatment Plant Project

Water Department

Fiscal Year: 2019

Period Start: 11-Nov-18

Period End: 11-Dec-18

	Appropriation	Revised	Period Total	Fiscal Total	Total Spent	Remainder	Percent
<b>38600 A3/17STM Water Treatment Plant Construction</b>							
58300 Owner's Project Manager	259,000.00	259,000.00	0.00	32,765.22	96,545.14	162,454.86	62.7%
58310 Engineering	782,166.00	782,166.00	0.00	177,649.26	544,794.93	237,371.07	30.3%
58320 Transmission Mains	1,524,629.85	1,524,629.85	0.00	499,058.12	1,486,421.24	38,208.61	2.5%
58330 Plant Construction	7,246,000.00	7,246,000.00	0.00	2,221,581.65	5,433,049.35	1,812,950.65	25.0%
58380 Miscellaneous	588,204.15	588,204.15	5,149.31	42,647.50	100,758.27	487,445.88	82.9%
	10,400,000.00	10,400,000.00	5,149.31	2,973,701.75	7,661,568.93	2,738,431.07	61.1%

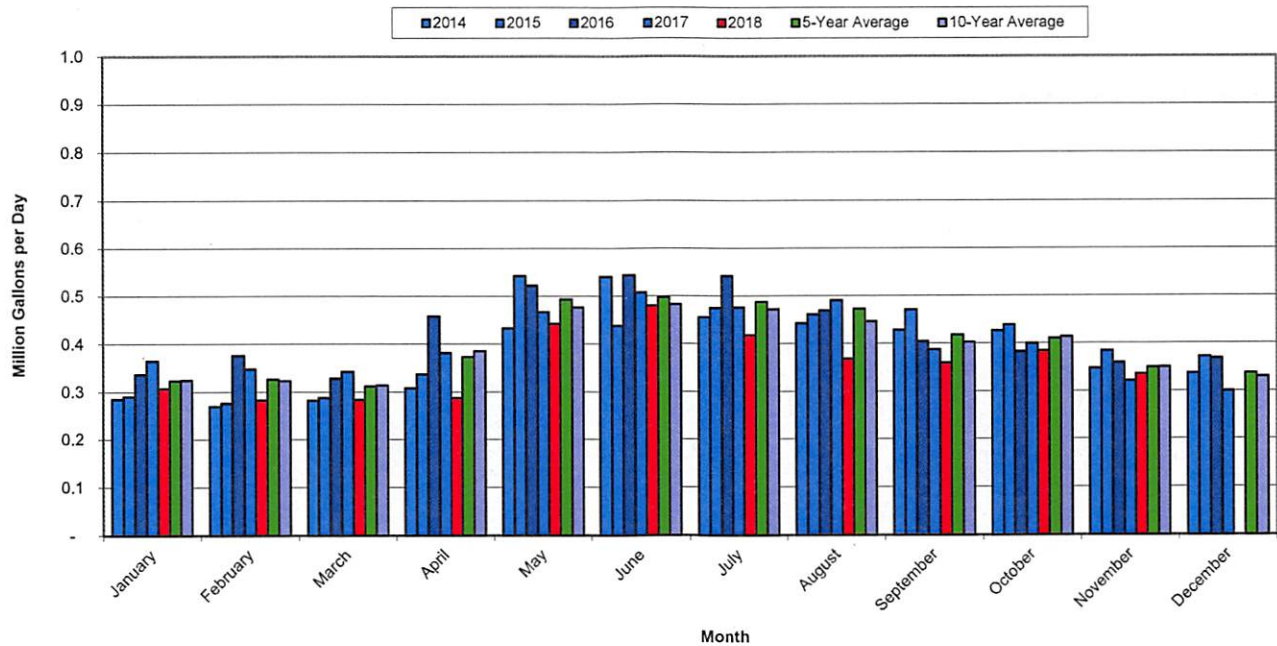


**Topsfield Water Department**  
**Annual Withdrawal Report**  
 Calendar Year

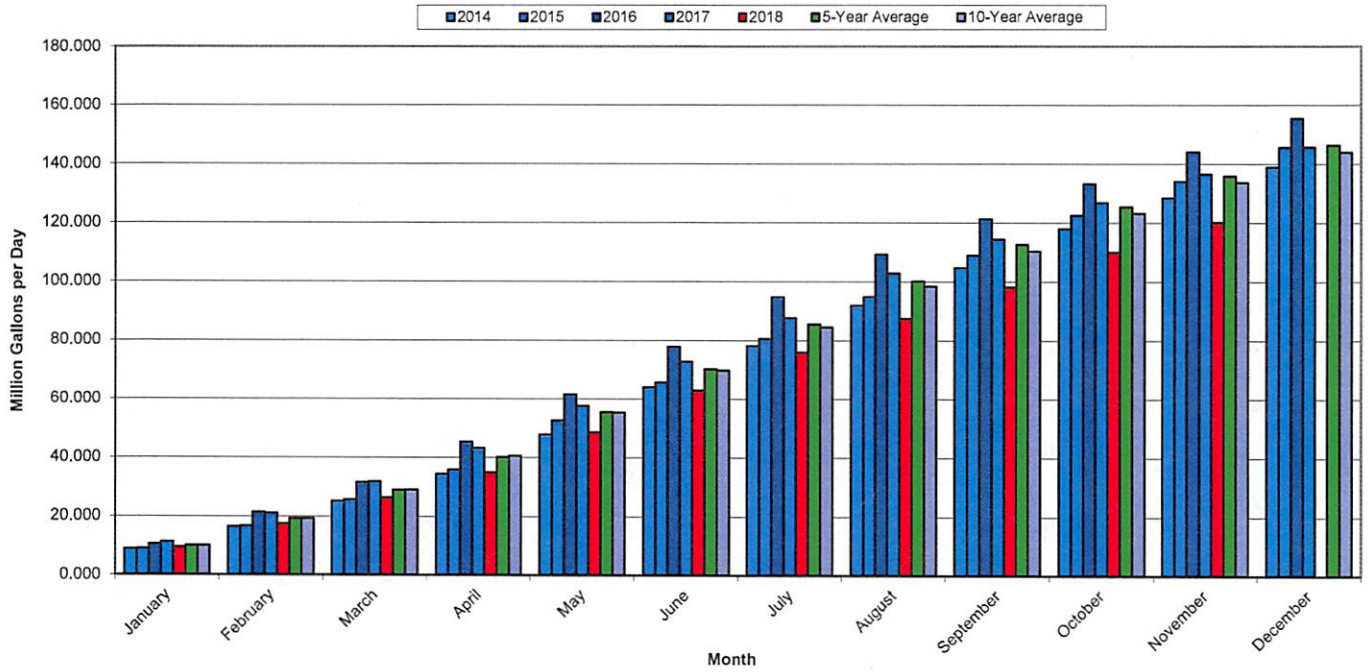
2018

Month	North Street	Perkins Row	Total	Month AGD	5-Year Average	10-Year Average	Running Average	Historical Rank
January	9.509	0.016	9.525	0.307	0.323	0.325	0.307	19%
February	7.814	0.113	7.927	0.283	0.327	0.324	0.291	12%
March	8.666	0.122	8.788	0.283	0.312	0.314	0.292	10%
April	8.499	0.121	8.620	0.287	0.373	0.385	0.291	8%
May	12.986	0.737	13.723	0.443	0.494	0.477	0.322	38%
June	12.981	1.425	14.406	0.480	0.497	0.483	0.348	31%
July	11.807	1.165	12.972	0.418	0.488	0.472	0.358	11%
August	10.632	0.769	11.401	0.368	0.473	0.447	0.360	4%
September	10.074	0.708	10.782	0.359	0.418	0.403	0.360	12%
October	11.015	0.887	11.902	0.384	0.411	0.413	0.362	27%
November	9.665	0.418	10.083	0.336	0.350	0.350	0.360	18%
December	-	-	-	#N/A	0.337	0.330	#N/A	
<b>Total</b>	<b>113.648</b>	<b>6.481</b>	<b>120.129</b>	<b>0.360</b>				

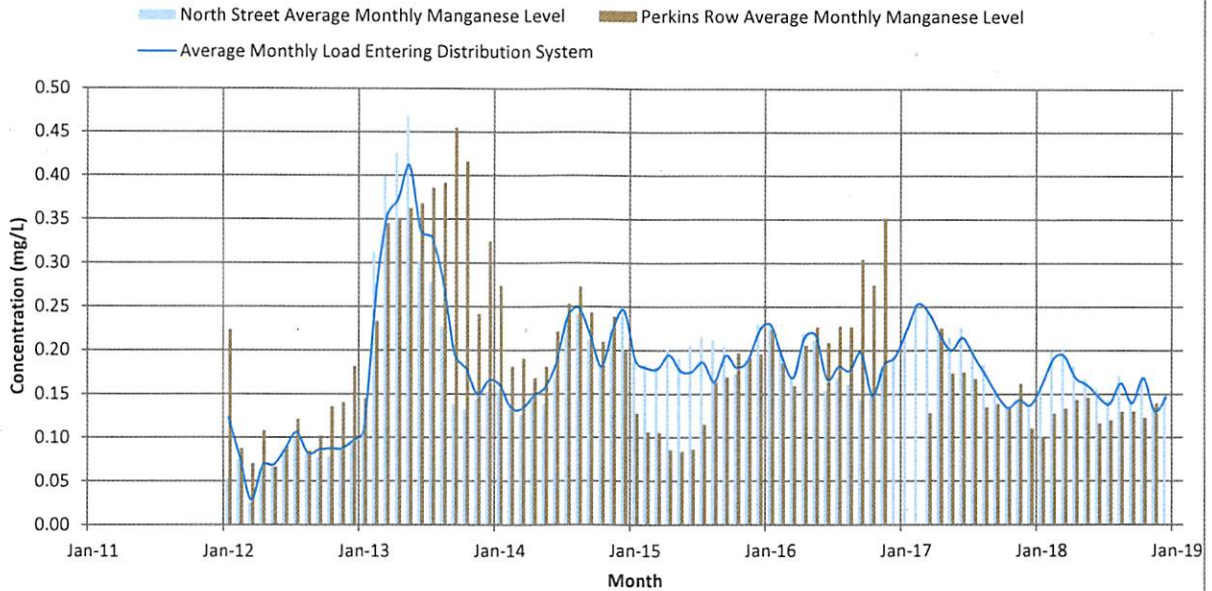
Monthly Withdrawals



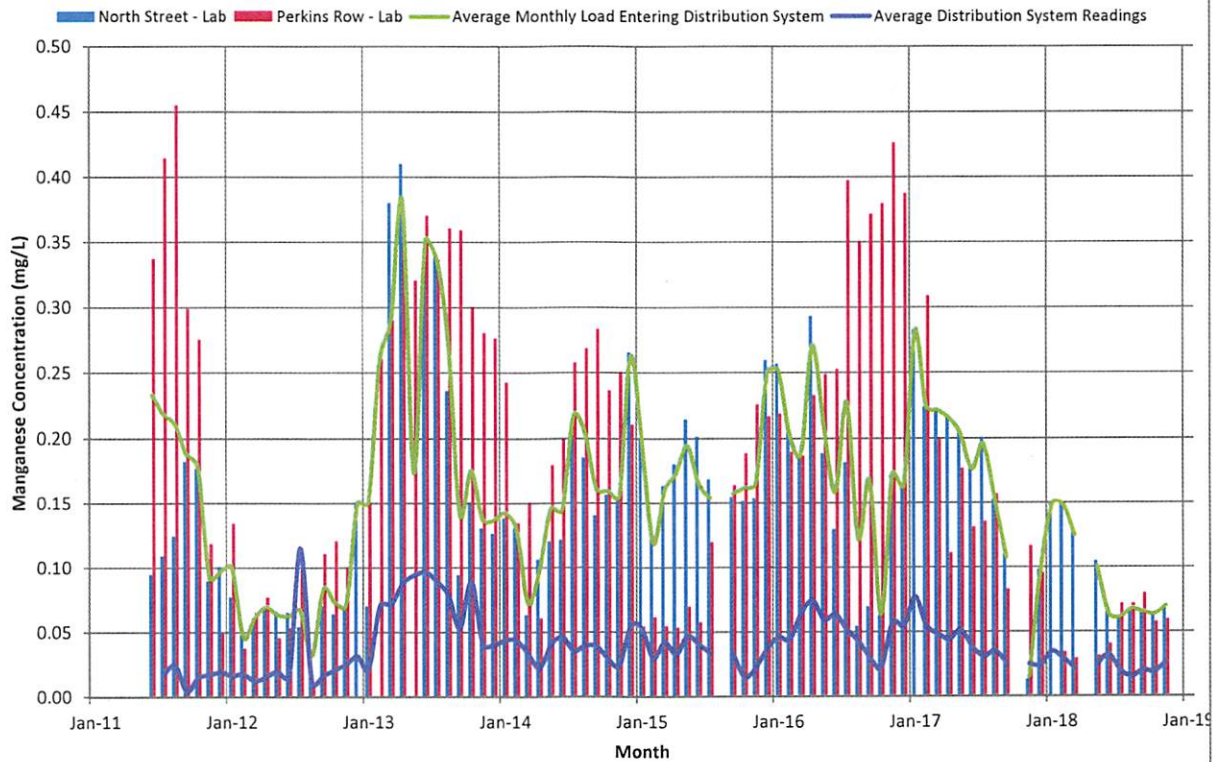
Monthly Cumulative Withdrawals



## Monthly Source Water Manganese Concentrations & System Loading based on TWD Test Kit Results and Withdrawals



## Monthly Source Water Manganese Concentrations & System Loading based on Lab Tests and Withdrawals







# Town of Topsfield

## Task Sheet Report - Water Department

November 2018

Category	Anne-Marie Yeo	Ben Reuell	Gregory Krom	Travis Fontaine	Total
<b>Accrued Time</b>					
Holidays	22	24	24	16	86
Personal				16	16
Sick				8	8
Vacation	14		20	40	74
	36	24	44	80	184
<b>Administrative</b>					
Accrual Tracking	3				3
Charts		53		36	89
Correspondence	24				24
Data Tracking			2		2
File Maintenance	12				12
Meeting Prep.	3		4		7
Meetings	2		12		14
Purchasing/Procurement			3		3
System Review			2		2
Training				8	8
	44	53	23	44	164
<b>Billing</b>					
Bill Prep.	1		4		5
Meter Reading				2	2
Meter Reading Radio			3		3
Other		2			2
	1	2	7	2	12
<b>Building Maintenance</b>					
Annual				1	1
Security			10		10
			10	1	11
<b>Computer Systems</b>					
Networking			2		2
Website			3		3
			5		5
<b>Customer Service</b>					
Billing Questions			2	1	3
Dispute Resolution				1	1
Lien Requests	4				4



# Town of Topsfield

## Task Sheet Report - Water Department

November 2018

Category	Anne-Marie Yeo	Ben Reuell	Gregory Krom	Travis Fontaine	Total
Title 5 Requests	2				2
Water Service Flushing				1	1
	6		2	3	11
<b>DEP Projects</b>					
Bacteria			2		2
Monthly Reports			6		6
			8		8
<b>Equipment Maintenance</b>					
Other				2	2
Preventative				1	1
				3	3
<b>Financials</b>					
Budget Prep.			4		4
Capital Plan			4		4
Payment Processing	23				23
Payroll/Bills	20				20
	43		8		51
<b>Fire Department</b>					
Fire Call				3	3
				3	3
<b>Mapping</b>					
CAD/Maps			4		4
			4		4
<b>Public Service</b>					
Citizen Concerns				1	1
Markouts/DigSafe		18		2	20
Other				1	1
		18		4	22
<b>Quality Control</b>					
Bacteria Sampling		12		9	21
Fluoride Testing		42		6	48
In-house Testing		4			4
Manganese Testing		4		2	6
Other		2			2
pH Testing		8		12	20
Phosphates		4			4



# Town of Topsfield

## Task Sheet Report - Water Department

November 2018

Category	Anne-Marie Yeo	Ben Reuell	Gregory Krom	Travis Fontaine	Total
		76		29	105
<b>Special Projects</b>					
Skeffington Well			1		1
			1		1
<b>Treatment Plant Project</b>					
Plant Construction			40	3	43
Startup			4		4
			44	3	47
<b>Water Controls</b>					
SCADA System			4		4
			4		4
<b>Water Distribution</b>					
Hydrant Flushing		24	15		39
Meter Replacements		16		2	18
Private Property Repairs				1	1
Valve				1	1
		40	15	4	59
<b>Water Supply</b>					
Dam Management				2	2
				2	2
<b>Water Treatment</b>					
Analyzer Calibration		2		2	4
Analyzer Maintenance				2	2
Chlorine			4	5	9
Fluoride		2			2
Sequestrant				1	1
		4	4	10	18
<b>Grand Total</b>					
	130	217	179	188	714
<b>Total Monthly Work Hours (40 hrs/wk)</b>					
	176				



# Town of Topsfield

Monthly Report of Accrued Time

Water Department

For the month of November 2018

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
16.00	0.00	-16.00	0.00	761.57	10.00	0.00	771.57	72.00	0.00	-32.00	40.00	83.00	0.00	0.00	83.00

## 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
24.00	0.00	0.00	24.00	1,722.00	10.00	0.00	1,732.00	98.00	0.00	-16.00	82.00	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
16.00	0.00	0.00	16.00	307.50	10.00	0.00	317.50	42.00	0.00	0.00	42.00	91.50	6.00	-8.00	89.50

## 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
16.00	0.00	-0.50	15.50	206.00	10.00	0.00	216.00	127.50	0.00	-16.00	111.50	0.00	0.00	0.00	0.00

## 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	1,196.00	0.00	0.00	1,196.00	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 12, 2018**

**1. Water Treatment Plant Project**

*Plant*

Work continues in all areas of the plant. Roof work is nearly complete with both sides being machine sealed and only the ridge cap and some minor snow rail work remain. The electrician is still pulling and terminating wires. The transformer for the booster pump station was set this past month so National Grid can energize both buildings when the electrician is ready. The mechanical contractor was offsite for a couple of weeks due to a dispute with the general contractor. They were also waiting for some equipment to arrive and are now installing unit heaters etc. The plumbing work is nearly complete. The general contractor is cleaning the water tanks in the basement and getting them ready to fill with water. They're also working on the chemical feed systems. Piping in the potassium hydroxide room and chlorine room almost complete. A pre-startup meeting is scheduled for later this week.

In the next month we expect the electrician to finish up, the buildings to be energized, and the mechanical work to wrap up. Suppliers will be arriving to certify the equipment is installed properly and they'll start testing equipment. The SCADA vendor is scheduled to start work in early January. Performance testing should be completed by the end of January and the plant should be on line by the middle of February.

*Siding*

We held a meeting with the siding installer, the manufacturer, Wright-Pierce, and Woodard & Curran to determine what needed to be done to correct the wrinkled appearance of the siding on all sides of the building. The manufacturer sent a list of recommendations to the installer which was forwarded to Wright-Pierce. Wright-Pierce wrote a memo outlining what was required to move forward including scrapping all of the siding already on the building, getting new materials of better quality and installing the siding properly according to the manufacturer's and trade group requirements. The installer is planning to remove the panels on the gable end facing the Public Works Building and place new panels on that face to see how it looks.

*Transmission Mains*

R&D Site Development connected the Perkins Row station to the transmission main last week. We flushed the line to waste on Wednesday, Thursday and Friday last week. The water still had phosphates in it so flushing continued on Monday and Tuesday of this week. The station is producing 275 gallons per minute which is substantially higher than when pumping into the distribution system due to the lower elevation of the plant as compared to the storage tank. The station has not run more than 6 hours a day for many years so we ran it for 28 hours to see if the higher flow rate was sustainable which it appears to be.

**2. Water Withdrawals**

Withdrawals are back to normal.

**3. Leaks & Breaks**

A private service leak was repaired on Ledgewood Circle last week. The leaking hydrant at English Commons was turned off for the winter and will be replaced in the spring.

#### 4. Budget

It's budget season again and this year's guidelines are one step and a 2% raise for non-union, employees, contractual raises for union employees and 0% for other expenses. Obviously, we're not going to be able to meet these requirements with the opening of the plant. I've started to look at anticipated plant operating costs and have found a couple of deviations from previous cost opinions.

The last electrical cost estimate we received was an additional \$20,000 of electrical use on top of the \$40,000 we were already spending on electricity to operate the well pumps on an annual basis. The estimate was done following the pilot study and before the design was complete. It appears the annual electrical cost of running the plant will be \$70,000 based on the number of motors in the plant, their horsepower, electric rates and expected run times. The existing electrical costs of the pump stations works out to be exactly as estimated using the same methodology so the \$70,000 is a good number.

I've spoke with MassDEP again and they are standing by their staffing requirement of having an operator in the plant whenever it runs for the first six months, possibly as long as a year. The best-case scenario is a bit more than average withdrawals for six months which will increase overtime costs by \$18,000 for FY2020. The worst case is maximum withdrawals for a year which requires \$54,000. One caveat is how long our operators will be able work ten to twelve-hour days, 7 days a week during the summer months. Factor in vacations, illness, etc. we'll clearly need some additional operators so I'm looking into possibly hiring a couple of part-time operators and getting prices for contract operators. Long-term labor expenses that need to be negotiated with the union include higher licensing requirements for operators (T1-T2), additional weekend work requirements and primary operator designations. New job descriptions for these positions are being developed.

The final item is treatment chemical costs, particularly KOH costs. During the design process the addition of an aerator was intended to aid corrosion control with the benefit of reducing KOH costs. The use of KOH can not be eliminated entirely because the raw water pH needs to be raised from 6.5 to 6.8-7.0 for the filters to work properly. KOH costs will be reduced but by how much has yet to be determined but the best case is around \$20,000 annually.

#### 5. Rates

The overtime start-up expenses should be temporary and rates have the capacity to absorb the annual plant operating costs such as electrical and supply expenses. A \$50,000 annual operating cost was built into the rate model, starting in FY2020, to hedge against the possibility of these expenses with the hope it wouldn't be needed.

This year we can plan on slightly higher water consumption due to growth. However, the reason for this year's shortfall needs to be determined. It could be simply the weather, especially the wet summer, depressed outdoor water use. My concern is we've reached the point where water costs are no longer elastic. Pricing of any item can vary within a certain range with no real effect on demand for the item. We may have reached the point where further cost increases will result in significant demand reductions.

The gap between the lowest and highest rate has broadened over the years as rate increases were applied. The ratios between the tiers is roughly the same as when the increasing block rate was introduced in the early 2000s but the difference in dollars between the lowest rate, \$13.20, and the highest rate, \$22.00, is substantial and will increase over the next couple of years as the final treatment plant rate adjustments are made. It might be time to look at adding rate tiers to make the transition

from the lowest to highest tiers more gradual. Adding one or two tiers between tier 2 (\$15.60) and 3 (\$22.00) so the jump from one tier to the next is only a few dollars will soften the penalty aspects of the structure. This type of change requires significant alterations to the rate model, our billing system and bill printing system.

#### 6. Capital Plan

The draft FY2020 Capital Plan is available for your review. This year's proposed requests include North Street Exploratory Drilling (\$100K), Meter Reading Upgrades (\$25,000), Misc. Water Main Improvements (\$80K), Prospect Street & River Road Paving (\$300K), and Loader Replacement (\$15K). These are contingent on available certified free cash which is unknown at this point but is expected to be more than sufficient to cover these expenses.

North Street Exploratory Drilling is the first step in rehabilitating or replacing the wells at the North Street well field. We've had a number of corrosion related leaks and approximately half the wells were installed in 1949 and the remainder in 1969. The station has lost capacity and the wells need to be replaced. Exploratory drilling will give us needed information about aquifer thickness and permeability which is needed to determine if gravel packed wells are a replacement option. Similar exploratory work was done at Perkins Row several years ago.

Our meter manufacturer, Sensus, has discontinued the radio transponders (MXU) we use to read meters. They're consolidating on one radio that can be used for both drive-by and fixed based reading systems. Unfortunately, the new radio is not compatible with our drive-by system because it operates on a different frequency. As a result, our drive-by reading system will gradually become obsolete as new MXUs are installed due to attrition and system expansion. The cost of purchasing a new reading system capable of reading the new MXUs is estimated to be \$25,000.

Miscellaneous Water System Improvements is a reboot of an existing warrant article dedicated to water main replacements. Broadening the scope of the article will be more useful and allow for improvements besides water mains. The request will be for \$100,000 in total and will transfer the remaining balance of the existing water main article.

The Town appropriated funding for the Prospect Street/River Road project totaling \$1.6 million mostly comprised of debt. This request will reduce the overall request to \$1.3 million to bring it in line with actual costs and allow us to pay for the paving out of retained earnings, lessening the debt load to \$970,000.

The Highway Department is planning to replace their loader this year and we typically contribute 10% of the cost.

#### 7. SCADA Computer

The computer appears to be on the verge of a hard-disk failure and is being replaced. This computer is vital to the operation of the water system as it is the only way to monitor system parameters and change settings. The replacement should be up and running by the end of next week and we'll try and repair the existing CPU for use as a spare.