

## Schedule of Follow-up Requests (BOF/BOS) - March 20, 2018

<u>Doc#</u>	<u>REQUEST</u>	<u>REQUEST DATE</u>	<u>ASSIGNED TO</u>	<u>RESPONSE DATE</u>
1	Fund Balance comparison to other Aaa Towns	3/1/2018	Finance	3/8/2018
2	Salary Information- First Selectman and BOF Clerk	3/1/2018	Finance	3/6/2018
3	Storm Sandy out-of-pocket expense	3/1/2018	Finance	3/8/2018
4	Develop revised department budgets incorporating completed Collective Bargaining Agreement salary adjustments for prior years	3/1/2018	Finance	3/6/2018
5	State Revenue Updates	3/1/2018	Finance	3/6/2018
6	Non General Fund Donation and Fee Accounts	3/1/2018	Finance	open
7	Power Purchase Agreements (PPA) for the carports at Warde High School	3/6/2018	First Sel. Office	3/8/2018
8	Power Purchase Agreements (PPA) for the carports at Ludlowe High School	3/6/2018	First Sel. Office	3/8/2018
9	Number of Fairfield resident visits to Library	3/8/2018	Library	3/13/2018
10	Circulation of new vs. older material	3/8/2018	Library	3/19/2018
11	Status of Library Material expenditures in FY18	3/8/2018	Library	3/13/2018
12	Library Material by category and % of total	3/8/2018	Library	3/13/2018
13	Library Material purchased in FY17 (SEPARATE ATTACHMENT)	3/8/2018	Library	3/13/2018

14	Library Debt repayment schedule	3/8/2018	Finance	3/13/2018
15	Library Endowment Fund balance	3/8/2018	Library	3/13/2018
16	Library Part-time detail	3/8/2018	Finance	3/13/2018
17	Motor Vehicle Fuel by department	3/8/2018	Finance	3/13/2018
18	Penfield – Seasonal Payroll detail	3/8/2018	Rec/Finance	3/13/2018
19	Penfield Projection vs. budget	3/8/2018	Recreation	3/19/2018
20	Recreation Revolving Fund status	3/8/2018	Recreation	3/13/2018
21	Personal Computer Inventory by Department	3/14/2018	IT	3/19/2018
22	Update Recycling expense and revenue	3/14/2018	SW&R	open
23	PW Utility Expense Transfer	3/14/2018	PW	3.20.2018
24	PW Savings offset to Contracted Svcs (beginning 2015)	3/14/2018	PW	3.20.2018
25	PW Organization Chart	3/14/2018	PW	3.20.2018
26	PW Staffing Compliment History 2015 to present	3/14/2018	PW	3.20.2018
27	Fairfield Theater Company P&L	3/14/2018	Finance	3/19/2018
28	WPCA - % Commercial /Residential infiltration	3/14/2018	PW	3.20.2018
29	WPCA % Wastewater/runoff infiltration	3/14/2018	PW	3.20.2018
30	Actual Electricity expense for FY ending 2015 to present	3/14/2018	PW	open

31	Regional Fire School - all funding documents during approval process	3/14/2018	Fire/Finance	open
32	Cost of three Northeaster storms (snow, tree, other work)	3/14/2018	PW	3/19/2018
n/a	Upload Handouts on website	continual	Finance	continual

**Transfer of FY19 Utility Expenses  
From PW Ops Budget to Penfield, Waterfront and Golf Courses Budgets**

**Expenses in FY18 moved in FY 19**

**From:**

<u>Loc</u>	<u>Dept</u>	<u>Object</u>	<u>Object Description</u>	<u>Amount</u>
5030	PW Ops	54110	Utilities - Water	\$13,500
5030	PW Ops	54120	Utilities - Gas	\$29,400
5030	PW Ops	54130	Utilities - Electric	\$98,200
5030	PW Ops	54140	Utilities - Heating Fuel	\$0
<b>TOTAL FROM:</b>				<b>\$141,100</b>

**TO:**

<u>Loc</u>	<u>Dept</u>	<u>Object</u>	<u>Object Description</u>	<u>Amount</u>
7030	Penfield	54120	Utilities - Gas	\$13,300
7030	Penfield	54130	Utilities - Electric	\$21,100
7030	Penfield	54140	Utilities - Heating Fuel	\$0
7070	Waterfront	54110	Utilities - Water	\$13,500
7070	Waterfront	54120	Utilities - Gas	\$3,300
7070	Waterfront	54130	Utilities - Electric	\$40,000
7050	Waterfront	54140	Utilities - Heating Fuel	\$0
7111	CJD GC	54120	Utilities - Gas	\$5,000
7111	CJD GC	54130	Utilities - Electric	\$2,200
7111	CJD GC	54140	Utilities - Heating Fuel	\$0
7113	HSR GC	54120	Utilities - Gas	\$7,800
7113	HSR GC	54130	Utilities - Electric	\$34,900
7113	HSR GC	54140	Utilities - Heating Fuel	\$0
<b>TOTAL TO:</b>				<b>\$141,100</b>

**New Expenses not in any FY 18 Budget - Shown in FY19 Fire Training School Budget**

7113	Fire School	54110	Utilities - Water	\$1,088
7113	Fire School	54120	Utilities - Gas	\$7,000
7113	Fire School	54130	Utilities - Electric	\$27,000
7113	Fire School	54140	Utilities - Heating Fuel	\$0
				<b>\$35,088</b>

Information in response to BOS/BOF Budget Meeting of 3/14/18 prepared by Joseph Michelangelo

PW Savings to offset Contracted Services from 2015.

Although the Contracted Service Line Item has risen significantly since 2015, this has been offset by reductions in other accounts. Please note this does not show the additional savings which are associated with the payroll reductions.

	Actual FY 15	Proposed FY 19 Budget	% Increase
Full Time Employees	74	72	-2.7%
51010 Regular Payroll	\$ 4,852,324	\$ 4,808,200	-0.9%
51030 Part time Payroll	\$ 79,663	\$ 69,119	-13.2%
51050 Overtime Earnings	\$ 279,371	\$ 225,700	-19.2%
51070 Seasonal Payroll	\$ 144,400	\$ 111,000	-23.1%
Subtotal	\$ 5,355,758	\$ 5,214,019	-2.6%
54010 Contracted Property Services	\$ 1,408,164	\$ 1,977,065	40.4%
54320 Maint Buildings & Grounds	\$ 436,178	\$ 464,500	6.5%
54370 Material for Maintenance/Repair	\$ 740,971	\$ 675,000	-8.9%
56140 Special Departmental Supplies	\$ 230,397	\$ 150,250	-34.8%
Subtotal	\$ 2,815,710	\$ 3,266,815	16.0%
Total for 8 line items above:	\$ 8,171,468	\$ 8,480,834	3.8%
Totals for PW Operations: w/o Paving & Capital	\$ 11,779,019.00	\$ 12,087,850.00	2.6%



**DPW Operations Staffing Levels**

FY08	79
FY09	79
FY10	76
FY11	76
FY12	76
FY13	76
FY14	74
FY15	74
FY16	74
FY17	72
FY18	72
FY19- proposed	72

**TABLE 1-1  
WPCF FLOW COMPONENTS**

<b>Flow Component</b>	<b>1997 Facilities Report (MGD)</b>	<b>2015 I/I Abatement Evaluation (MGD)</b>
Baseline Sanitary Flow	3.50	3.70
Total I/I	5.10	4.94
<b>Total Average Daily Flow</b>	8.60	8.64

In particular, the East Trunk Interceptor line, which conveys a significant portion of the Town flow and is located in the Rooster River / Ash Creek Flood Plain, is suspected to be a significant source of I/I into the system and the WPCF.

**1.2 PURPOSE OF THE STUDY**

The purpose of the Inflow / Infiltration Study is to identify sources of I/I that could be cost effectively removed to reduce excess non-sanitary flows being conveyed to the Fairfield Wastewater Pollution Control Facility. The presence of I/I in a wastewater collection system increases the cost of treatment through pumping, reduces the treatment capacity at the WPCF, and reduces capacity for actual sanitary flows. Cost effective removal of I/I flows can provide for additional capacity within the existing collection system and treatment facility.

**1.3 PROJECT SCOPE AND APPROACH**

In order to remove I/I and regain capacity to meet current and the projected sewer flows for the Town of Fairfield, the sources of I/I must be identified. The initial step in the I/I identification is to install flow meters throughout the entire system to narrow in on regions or sewersheds that are experiencing significant I/I and prioritize these areas for future study.

An initial analysis was performed to determine the overall magnitude of I/I entering the system. As part of the initial I/I analysis, influent flow records for the Fairfield WPCF were evaluated to



**SECTION 1****INTRODUCTION****1.1 INTRODUCTION**

The influent flow to the Town of Fairfield Wastewater Pollution Control Facility (WPCF) is nearing the permitted capacity, and there are concerns that there is inadequate capacity to meet the projected sewer flows that will occur through the growth and redevelopment of the community. In Wright-Pierce's recent memorandum entitled "*Review and Update of Infiltration and Inflow Abatement Fee Fairfield, Connecticut*", it was estimated that that over half of the 8.64 MGD total average daily influent flow at the WPCF may be Infiltration or Inflow (I/I). Refer to Appendix A for a copy of the 2015 I/I Abatement report.

Infiltration is defined as water, other than wastewater, that enters the collection system from the ground through defects in the piping system or manholes. Inflow is defined as water, other than wastewater, that enters the collection system directly through sources such as roof leaders, foundation drains, storm drains, manhole covers, and other direct connections to the sewer system. Typically, the overall inflow rate reaching a WPCF is evaluated by analyzing the maximum instantaneous flows received at the treatment facility during or immediately following a storm event. Infiltration, on the other hand, is typically measured during non-rain events and is calculated as the difference between minimum nighttime wastewater flow during high and low groundwater periods.

As shown in Table 1-1, the annual average daily flow recorded at the WPCF is 8.64 MGD during the I/I Abatement study. Therefore, it is approximated that the influent flow due to infiltration and inflow is approximately 4.94 MGD, with 3.7 MGD being the calculated baseline sanitary sewer flow. As a back check, these numbers were compared to the baseline sanitary sewer flow calculated in the *June 1997 Wastewater Facilities Report prepared by Stearns and Wheeler* as summarized in Table 2 below. The baseline sanitary flow and I/I flows have remained relatively consistent over the last 20-years.

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WPCA Flows

Flows

Please find an attached spreadsheet and graphs which show flows to the Fairfield Wastewater Treatment Plant since 2004. The flows for 2017 were 7.8 million gallons per day (MGD). Please note the high flows for this period was 9.9 MGD in 2011.

Inflow & Infiltration

As discussed, much of this is extraneous flows that enter our sewer system through inflow and infiltration (I & I). Thus, this is very much wet weather dependent. I believe the downward trend in flows over the years is a reflection of the remediation work that has been done to remove I & I from the system. I & I is inherent in any underground gravity sanitary sewer system. However, by reducing the amount of I & I we can reduce pumping and treatment cost, preserve the capacity of the system and the plant for actual sewage discharge, and eliminate the need for an expansion of capacity at the Wastewater Treatment Plant.

According to a 2015 study by a Wright-Pierce, working for the Fairfield WPCA, approximately 57% of sewer flows were from Inflow & Infiltration. I have included an excerpt from that report. This compares to a similar study from 1997 (by GHD Engineers) in which 59% of the flows were attributed to I & I.

Residential vs Non-Residential

Please find the amounts listed below. Please note there are 4,400 buildings which are served by private septic systems. These are in rural areas (mostly Greenfield Hill) and almost exclusively residential.

Total Properties

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20,068	Residential Buildings
998	Non Residential Buildings
21,066	

Total Sewer Users

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15,681	Residential Buildings
985	Non Residential Buildings
16,666	

## Average Flows in million gallons per day

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
January	7.9	9.3	12.0	10.5	8.1	8.6	8.3	7.1	9.3	8.2	7.9	8.4	7.2	8.3	7.2
February	8.4	8.3	9.8	7.0	10.5	7.5	9.0	10.0	8.4	8.9	8.4	7.0	9.6	7.7	10.9
March	8.9	8.8	7.6	10.4	11.3	7.6	14.6	13.6	8.2	11.4	9.9	11.5	8.5	8.1	
April	12.4	10.3	9.7	13.3	9.0	8.7	11.4	11.2	7.7	7.9	11.8	10.0	8.3	11.7	
May	8.8	7.7	11.5	9.3	8.7	9.3	8.6	10.7	9.6	7.5	12.4	8.3	8.0	10.1	
June	7.0	6.8	9.0	7.5	7.1	10.8	7.7	10.2	9.1	12.2	9.0	8.3	7.2	8.7	
July	7.2	6.9	8.0	6.4	6.1	8.3	6.4	7.7	7.2	7.5	7.6	6.6	6.0	6.8	
August	7.7	6.3	7.9	6.1	6.0	7.1	5.9	8.4	7.4	6.2	6.4	5.6	5.7	5.7	
September	8.2	6.0	9.1	5.9	7.4	6.4	5.9	10.9	6.7	7.0	6.4	5.6	5.5	5.8	
October	7.6	11.6	8.6	5.9	6.5	7.0	6.4	9.2	8.4	7.5	6.3	5.8	5.4	6	
November	6.9	8.9	11.3	6.0	7.1	7.5	6.6	9.3	8.4	6.4	6.8	5.5	6.0	7.3	
December	8.3	10.0	9.3	7.0	10.2	10.2	7.3	10.7	8.1	6.5	9.7	5.4	7.3	6.9	
MIN Q	6.9	6.0	7.6	5.9	6.0	6.4	5.9	7.1	6.7	6.2	6.3	5.4	5.4	5.7	7.2
MAX Q	12.4	11.6	12.0	13.3	11.3	10.8	14.6	13.6	9.6	12.2	12.4	11.5	9.6	11.7	10.9
AVG Q	8.3	8.4	9.5	7.9	8.2	8.3	8.2	9.9	8.2	8.1	8.6	7.3	7.1	7.8	9.1



