# **Public Works Department**

## Memorandum

To:

Gayle Corrigan, Town Manager

From:

Joseph C. Duarte, P.E., Director of Public Works

Cc:

Kristen Benoit, Finance Director

Shawn O'Neil, Waste Water Superintendent

David Perrotta, Assistant Waste Water Superintendent

Date:

June 29, 2017

Subject:

Waste Water Treatment Facility FY 2018 Proposed Budget

Attached for your review you will find the proposed budget for the Waste Water Treatment Facility for Fiscal Year 2018. Below are highlights to the line items that will have changes greater than or less than 2% for the proposed budget.

<u>Salaries</u> - There is a 2% pay increase proposed for FY 2018. Please note that a portion of the Town Manager's, Finance Director's and Director of Public Works salaries are added to this line item. This is to provide a more appropriate accounting of all employees that are involved in administering the Waste Water Treatment Facility's enterprise fund.

**Longevity** - This account is increasing to reflect employee step increases due to years of service with the town.

<u>Contract Services</u> – This account is increasing due to an increase of repairs needed due to the age of the Treatment Facility.

<u>Electricity</u> - This account is being increased to reflect market increases and usage.

<u>Health Insurance</u> - This fund is being increased due to new insurance rate increases.

 $\underline{\textbf{Lab and Safety}}$  - This account is being increased to reflect an increase in lab sampling.

<u>Life Insurance</u> - This fund is being increased due to new insurance rate increases.

<u>Building Insurance -</u> This fund is being increased due to new insurance rate increases.

FY 2018 Proposed Sewer Budget June 29, 2017 Page 2

Water - This account is being decreased due to minor plant operation changes.

Workers Compensation - This fund is being increased due to new insurance rate increases.

<u>Building Maintenance</u> - This account is increasing due to an increase of repairs needed due to the age of the Treatment Facility.

<u>Chemicals</u> This fund is being decreased due to operation changes.

Heating Fuel - This account is being decreased to reflect market decreases and usage.

<u>Billing and Collection</u> - This account is being increased due to increases in user accounts.

 $\underline{\text{Tipping fees}}$  - This account is being increased to reflect contractual fee increases and increases in sludge handling.

<u>Capital</u> – The following reflects the capital upgrade needs of the Waste Water Treatment Plant for FY 2018:

<u>Grinder Pumps</u> – As part of the sewer expansion program, there are several properties that are not able to connect to the sewer system through conventional gravity sewers. As such, the town provides these properties with grinder pumps.

Scum Pump - Funding is being requested for the replacement of a scum pump. A scum pump is used to pump the floatable materials (grease, etc.) collected from different tanks throughout the Treatment Plant. Said floatable materials are mixed with sludge also collected throughout the Plant and transported off site for incineration.

<u>Boiler</u> - Funding is being requested for the replacement of the boiler. The boiler is in immediate need of replacement. There have been several repairs made in recent years but unfortunately further repairs are not being recommended.

FY 2018 Proposed Sewer Budget June 29, 2017 Page 3

<u>Debt Service</u> – Debt service is increasing due to an increase in principal and interest on the sewer bond from the 2017 Treatment Plant upgrades.

The general operating cost of the Treatment Plant is increasing in FY 2018 mainly due to repairs of aging equipment and additional sludge handling. The greater portion of the increase for the sewer budget is due to debt service. Debt service resulting from the sewer bond for the 2017 Treatment Plant upgrades.

The Sewer Department has experienced a substantial decrease in sewer flows over the last few years. This has been due to the loss of industrial processing from On –Semi Conductor and Stanley Bostitch. The loss of industrial users has shifted a greater portion of the operating costs to residential users. The residential flows are now approximately 67% of total flows.

Department of Public Works Wastewater Treatment Facility Budget Fiscal Year 2018

# SUMMARY OF REVENUE

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Wastewater Facility

#### **Revenue Summary**

#### 0000 - User Fees

The sewer use revenue is based on individual account usage; user consumption is expressed as cubic feet of water used per year. There are 6 user classifications, each classification has a factor assigned to it.

- 1) Residential (based on 85% of consumption)
- 2) Commercial A (based on 100% of consumption)
- 3) Commercial B (based on 145% of consumption)
- 4) Governmental (based on 100% of consumption)
- 5) Industrial A (based on 100% of consumption)
- 6) Industrial B (based on 100% of consumption)

#### SEWER USAGE HISTORY

	2017				
CLASSIFICATION	2014	2015	2016	<b>AVERAGE</b>	PROJECTED
Residential	16,903,021	18,499,575	17,700,286	17,700,961	17,710,000
Commercial A	3,451,923	3,666,700	3,860,417	3,659,680	3,728,000
Commercial B	1,969,182	2,055,087	2,037,888	2,020,719	2,020,000
Governmental	1,794,572	2,031,012	1,841,762	1,889,115	1,890,000
Industrial A	268,814	216,049	248,840	244,568	244,000
Industrial B	81,400	99,200	75,352	NA	75,500
OD Residential	29,931	36,695	43,496	36,707	38,000
OD Commercial A	273,402	325,208	290,791	296,467	290,000
OD Commercial B	266,185	313,484	431,178	336,949	355,000
	25,038,430	27,243,010	26,530,010	26,270,483	26,350,500

#### **SEWER BILLING REVENUE for FY 2017**

(usage based on Calendar year flows for 2016)

\$10.65 per 100 cu ft

CLASSIFICATION	USAGE	<b>FACTOR</b>	REVENUE
Residential	17,700,286	85%	\$1,602,318
Commercial A	3,860,417	100%	\$411,134
Commercial B	2,037,888	145%	\$314,701
Governmental	1,841,762	100%	\$196,148
Industrial A	248,840	100%	\$26,501
Industrial B	75,352	100%	\$8,025
OD Residential	43,496	127.5%	\$5,906
OD Commercial A	290,791	150.0%	\$46,454
OD Commercial B	431,178	217.5%	\$99,877
	26,530,010		\$2,711,065

Wastewater Facility

## PROJECTED SEWER BILLING REVENUE for FY 2018

(usage based on Calendar year flows for 2017)

\$12.06 per 100 cu ft

CLASSIFICATION	USAGE	FACTOR	REVENUE
Residential	17,710,000	85%	\$1,815,244
Commercial A	3,728,000	100%	\$449,545
Commercial B	2,020,000	145%	\$353,197
Governmental	1,890,000	100%	\$227,908
Industrial A*	244,000	100%	\$29,423
Industrial B	75,500	100%	\$9,104
OD Residential	38.000	127.5%	\$5,842
OD Commercial A	290,000	150.0%	\$52,455
OD Commercial B	355,000	217.5%	\$93,108
	26,350,500		\$ 3,035,826

TOTAL REQUEST:

\$3,035,826

0000 - Industrial Permits

This account includes fees that are paid by the industrial users to facilitate the Town's Industrial Pretreatment Program.

TOTAL REQUEST:

\$0

0000 - Connection Fees

This account includes fees that are paid by residents and businesses that connect to the Collection System. Presently the fees are \$100 for residential and \$200 for commercial. The following is the anticipated connections:

	Connections	Fee	Total
Residential Connections	40	\$ 100	\$ 4,000
Commercial Connections	5	\$ 200	\$ 1,000
			\$ 5,000

TOTAL REQUEST:

\$5,000

Wastewater Facility

0000 - Interest on De	elinquent User Fees	
This accoun	t includes revenues interest on delinquent user fee accounts.	
	TOTAL REQUEST:	\$30,000
0000 - Sewer Bond/ N	Nisc.	
This account is	ncludes revenues interest on delinquent sewer assessment accounts	
	TOTAL REQUEST:	\$15,000
Sewer Asse	ssments	\$1,158,000
	REVENUE GRAND TOTAL	\$4,243,826

## TOWN OF EAST GREENWICH

# Wastewater Treatment Facility Budget Fiscal Year 2018

## **EXPENDITURES**

Account	Develop		FY 2015		FY 2016		FY 2017 Adopted		FY 2017 Expend.'s		FY 2018 Requested	Percent
Account	Description		Actual	er en	Actual	4557	Budget		6/22/2017	and the	Budget	Increase
20950511	Colonia											
	<u>Salaries</u> Salaries - Staff	¢.	205 44	_	ው <i>ላዕር ሮሚ</i> ፣		<b>•</b> 404.54					
	Longevity	\$	385,446		\$ 406,571		\$ 404,513		,		•	1.9%
	Overtime	\$	13,93		14,64		\$ 14,64		14,623		16,253	11.0%
00000		<u>\$</u>	54,02		60,23	_	\$ 42,42	<u>3</u> \$	53,182	. \$	42,423	<u>0.0%</u>
	Salaries Subtots	ıl \$	453,39	6 5	481,450	}	\$ 461,58	0 \$	436,354	\$	470,680	2.0%
20950535	Operations											
	Contract Services	\$	55,15	1 \$	48,337	, ,	\$ 28,500	0 \$	65,404	\$	32,000	12.3%
00059	Delta Dental	\$	5,002		•		6,17°		6,177		5,580	-9.7%
00065	Electricity	\$	147,211		•		•		162,470		172,000	4.2%
00073	Equipment Maintenance	\$	30,576						27,092	\$	26,000	0.0%
	Health Insurance	\$	73,983		•		-		92,266	\$	99,716	8.1%
00097	Lab and Safety	\$	34,373						41,219	\$	38,760	3.5%
00107	Life Insurance	\$	303	\$	306				606	\$	606	0.0%
00123	Building Insurance	\$	29,591	\$	31,366	\$			33,250	\$	35,245	9.3%
00133	Professional Services	\$	2,436		•	\$			1,000	\$	4,000	0.0%
00143 8	State Retirement	\$	29,386	\$	24,065	\$	-		23,885	\$	23,797	-0.4%
00150 1	Laborer's Retirement	\$	2,940	\$	2,950	\$			3,000	\$	3,000	0.0%
00155 1	FICA	\$	31,255	\$	32,260	\$	32,839		32,839	\$	33,712	2.7%
00171 1	Training/Conferences	\$	150	\$	160	\$	300	\$	243	\$	300	0.0%
00177 V	Vater	\$	1,076	\$	953	\$	1,600	\$	688	\$	1,200	-25.0%
00181 V	Vorkers Compensation	\$	14,288	\$	14,288	\$	15,145	\$	15,145	\$	16,054	6.0%
00202 A	Auto Parts	\$	2,123	\$	2,415	\$	2,500	\$	834	\$	2,500	0.0%
00210 F	Building Maintenance	\$	5,275	\$	5,286	\$	2,000	\$	2,564	\$	4,000	100.0%
00214 (	Chemicals	\$	47,542	\$	50,170	\$	109,410	\$	74,506	\$	89,740	-18.0%
00218 €	lothing Maintenance	\$	2,400	\$	2,400	\$	3,200	\$	2,500	\$	3,200	0.0%
	leating Fuel	\$	23,924	\$	29,818	\$	30,000	\$	21,673	\$	27,500	-8.3%
	anitorial Supplies	\$	322	\$	572	\$	500	\$	62	\$	500	0.0%
	ew Equipment	\$	9,397	\$	1,805	\$	10,000	\$	9,892	\$	10,000	0.0%
00375 P		\$	1,090	\$	1,170	\$	1,170	\$	1,170	\$	1,150	-1.7%
	elephone/ Communications	\$	7,912	\$	3,954	\$	8,460	\$	6,839	\$	8,460	0.0%
	illing and Collection	\$	17,480		15,181		15,468			\$	15,770	2.0%
	ipping Fees	\$	144,535		145,958		151,657		181,161		198,464	30.9%
00940 M	laterials and Supplies	\$	25,252		17,520	<u>\$</u> _	25,000	\$	17,053	<u>\$</u>	25,000	0.0%
	Operations Subtotal	\$	744,973	\$	751,041	\$	828,373	\$	839,006	\$	878,254	6.0%
00943 C	apital Outlay	\$	29,559	\$	31,852	\$	115,000	\$	98,663	\$	148,000	28.7%
<u>D</u>	ebt Service							_				
	Debt Service Subtotal	<b>3</b> 2	,505,676	\$	2,484,272	\$	2,456,832	\$	94,804	\$	2,746,893	11.8%

# TOWN OF EAST GREENWICH Wastewater Treatment Facility Budget

Gra	nd	To	tals

anu Iutais						
Salaries Total	\$ 453,396	\$ 481,450	\$ 461,580	\$ 436,354	\$ 470,680	2.0%
Operations Total	\$ 744,973	\$ 751,041	\$ 828,373	\$ 839,006	\$ 878,254	6.0%
Capital Outlay	\$ 29,559	\$ 31,852	\$ 115,000	\$ 98,663	\$ 148,000	28.7%
Debt Service Total	\$ 2,505,676	\$ 2,484,272	\$ 2,456,832	\$ 94,804	\$ 2,746,893	11.8%
Grand Total Department	\$ 3,733,604	\$ 3,748,615	\$ 3,861,785	\$ 1,468,827	\$ 4,243,826	9.9%

Wastewater Facility

#### 20950511-Salaries

00002 - Salaries - Staff

Currently the wastewater facility is staffed by six full time employees. Proposed budget reflects a pay increases of 2% for FY 2018. To appropriately reflect all employees directly and indirectly that are involved with the operations of the sewer department, portions of the Town Manager's, Finance Director and the Public Works Director's salaries have been added to this account.

Wastewater Staffing	Quantity	Base Salary		<u>Total</u>
Town Manager	100%	\$ 12,000.0	\$	12,000.00
Finance Director	100%	\$ 9,000.00	\$	9,000.00
Public Works Director	100%	\$ 9,000.00	\$	9,000.00
Superintendent	100%	\$ 90,582.59	\$	90,582.59
Assistant Superintendent	100%	\$ 64,299.02	\$	64,299.02
Forman	100%	\$ 54,410.26	\$	54,410.26
Plant Operator II	100%	\$ 54,410.26	\$	54,410.26
Plant Operater	100%	\$ 48,384,29	\$	48,384.29
Sewer Consrt Mgr	100%	\$ 69,916.63	\$	69,916.63
			\$ 4	112,003.04

TOTAL REQUEST:

\$412,003

Wastewater Facility

0004	-Lor	ıaev	itν

In accordance with union contracts, monies from this account are used to pay employees various amounts of money depending on years of service.

#### Percent of Base Salary

#### Laborer's

Years of Service	<u>NEA</u>	<u>International</u>
3-5	2.0%	3.0%
6-10	3.0%	4.0%
11-15	3.5%	4.5%
16-20	4.0%	5.0%
21-25	4.5%	5.5%
26+	5.0%	6.0%

Longevity pay is disbursed on the first pay period of December.

	Starting	Longevity Pay Date	Years of Service	Longevity	Proposed Base	1	Longevity
Name	Date	12/1/2017	(years)	Percent	Salary		Pay
O'Neil S.	04/15/91	12/01/17	26.63	5.0%	\$90,582.59	\$	4,529.13
Perrotta D.	09/22/03	12/01/17	14.19	3.5%	\$64,299.02	\$	2,250.47
Meumier E	03/06/00	12/01/17	17.74	4.0%	\$54,410.26	\$	2,720.51
Savastano I	09/11/00	12/01/17	17.22	5.0%	\$54,410.26	\$	2,720.51
Jennings T.	02/04/11	12/01/17	6.83	5.0%	\$48,384.29	\$	1,935.37
Bamberry, I	01/29/07	12/01/17	10.84	3.0%	\$69,916.63	\$	2,097.50
						\$	16,253.49

**Total Requested** 

\$16,253

00008 - Overtime

TOTAL REQUEST:

\$42,423

Wastewater Facility

20950535-C	Operations
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00057 - Contract Services

This account is utilized for many different types of services including technical services to repair, calibrate and troubleshoot the complex instrumentation and advanced computer-controlled, electrical system at the wastewater facility. Additionally, this account covers expenses incurred with troubleshooting the UV disenfection unit. The facility has 6 programmable controller panels, a large assortment of meters, digital controls, various equipment motor controls, etc. It is imperative to maintain this equipment to assure the quality of the treated effluent. Additionally, emergency service calls for various equipment are included in this amount.

TOTAL REQUEST:

\$32,000

00059 - Delta Dental

TOTAL REQUEST:

\$ 5,580

00065 -Electricity

This account provides funding for all electrical equipment at the treatment facility. Requesting an increase due to market increases and use.

TOTAL REQUEST:

\$172,000

00073 -Equipment Maintenance

The wastewater facility is equipped with many complicated features which require routine preventive maintenance. To insure that the mechanical integrity of the facility is preserved for the total design life of twenty years, it is necessary to increase, as needed, the values within this account every year in the future.

Electrical equipment (PLC parts, digital controls, metar centrols, etc.) has been accounted.

Electrical equipment (PLC parts, digital controls, motor controls, etc.) has been especially vulnerable to failure. It is difficult to predict what will happen next.

TOTAL REQUEST:

\$26,000

00093 - Health Insurance

TOTAL REQUEST:

\$99,716

Wastewater Facility

#### 00097 - Lab and Safety

This account is used to cover the cost of elements that need to be tested from the waste water as specified by RIDEM.

ORGANIC SAMPLING-Wastewater Facility						
Analyte		Cost	Amou	nt	Total	
BOD	\$	13.00	416	\$	5,408.00	
CBOD	\$	13.00	52	\$	676.00	
TSS	\$	7.00	416	\$	2,912.00	
Fecal	\$	11.00	156	\$	1,716.00	
Entero	\$	25.00	156	\$	3,900.00	
Nitrite	\$	5.00	52	\$	260.00	
Nitrate	\$	5.00	52	\$	260.00	
TKN	\$	12.00	208	\$	2,496.00	
Amonia	\$	10.00	208	\$	2,080.00	
Oil & Grease	\$	25.00	23	\$	575.00	
		su	b-total	\$	20,283	
OTHER SAMPLING-Wastewater Facility						

Analyte	Cost	Amoun	t	Tota.
Bioassay	\$ 1,790.00	3	\$	5,370.00
Bioassay	\$ 1,550.00	1	\$	1,550.00
Sludge (quarterly)	\$ 250.00	4	\$	1,000.00
Sludge (annually)	\$ 1,000.00	1	\$	1,000.00
Local Limits	\$ 751.00	7	\$	5,257.00
	\$ -	0	\$	•
		sub-total	\$	14,177.00

LAB SUPPLIES	
Product	Total
Ph Buffers	\$ 600.00
Delonized water kits	\$ 600.00
Ph Probe	\$ 300.00
Chem wipes	\$ 200.00
Sludge Tins	\$ 100.00
Misc.	\$ 2,000.00
Annual Calibration	\$ 500.00
	\$ 4,300.00

TOTAL REQUEST:

\$ 38,760

00107 - Life Insurance

Currently, 6 full-time employees are assigned to the Sewer Department. Three employees are members of NEARI; three employees are members of the Laborer's International.

TOTAL REQUEST:

\$606

Wastewater Facility

types of damag	Monies from this account are spent insuring the wastewater facility against essentially all types of damage including but not limited to fire, smoke, earthquake, vandalism, etc. Also, includes boiler/mechanical insurance.					
				TOTAL REQUEST:	\$35,245	
00133 - Professional Services	S					
This account will cover va	arious profe	essional	services ne	ecessary to operate the treatment plant.		
Various Engineering Servi	ces Total	<u>\$</u> \$	4,000 4,000			
				TOTAL REQUEST:	\$4,000	
00052 - State Retirement						

TOTAL REQUEST:

\$23,797

00150 - Laborer's Retirement

00123 - Building Insurance

The Town will need to contribute funds toward the Laborer's Union retirement Fund for this Fiscal Year.

TOTAL REQUEST:

\$3,000

00155 - FICA

 Total Salaries (plus OT and Longevity)
 FICA factor
 FICA Cost

 \$440,680
 7.65%
 \$ 33,712

TOTAL REQUEST:

\$33,712

Wastewater Facility

00171	- Training	and Co	nferences

#### Training and Conferences

This account is utilized by the staff of the facility for training sessions as well as meetings of proffessional organizations such as the Narragansett Water Pollution Control Association, New England Interstate Environmental Training Center and Water Pollution Control Federation.

Monies from this account are also used for membership dues of the above mentioned associations.

	TOTAL REQUEST:	\$300
00177 - Water		
Water usage from KCWA.		
	TOTAL REQUEST:	\$1,200
00181 - Workers Compensation		
	TOTAL REQUEST:	\$16,054
00202 - Auto Parts		100000
	TOTAL DECLIEST.	003 C#

Wastewater Facility

00210 - Building Maintenance

Building maintenance costs are for the following: grounds upkeep, fertilizer, lime, lawn mower equipment, paint, window maintenance equipment, etc.

TOTAL REQUEST:

\$4,000

00214 - Chemicals

This account is utilized for the purchase of chemicals neccessary to treat the wastewater at the treatment facility. Hypochlorite is used for odor control and backup disinfection purposes. Methanol and Magnesium Hydroxide are used in the denitrification process. The coagulant is used in the secondary treatment process.

The wastewater facility consumes the following amounts of chemical:

Chemical	Cost	Amount/Day	# of Days	Total
Coagulant	5.80 /gal	45 gals/day	120	\$ 31,320.00
Hypochlorite	1.20 /gal	17 gals/day	365	\$ 7,446.00
Methanol	1.55 /gal	45 gals/day	210	\$ 14,647.50
Magnesium Hydroxide	\$3.65 /gal	10 gals/day	155	\$ 5,657.50
Magnesium Hydroxide	\$3.65 /gal	40 gals/day	210	\$ 30,660.00
		Total		\$ 89.731.00

TOTAL REQUEST:

\$89,740

00218 - Clothing Maintenance

This account covers the expense of obtaining work clothing and shoes. Presently, each employee in the Laborer's Union is paid \$850 annualy for such purchases and the NEARI employees are paid \$350 annually. This account also includes shop rags, safety clothing

TOTAL REQUEST:

\$3,200

00242 - Heating Fuel

This account is utilized for heating of the operations building and Water Street pumping station and also fuel for the emergency generator. The account is decreasing due to new thermostats and circulators.

TOTAL REQUEST:

\$27,500

Wastewater Facility

#### 00938 - Tipping Fees

This account covers the cost of sludge disposal.

Average trips per week	5.5			
Average tons per trip	1.05			
Disposal Cost				
			Cost	Total
<u>Month</u>	Dry Tons	Ē	er Ton	Cost
July 2017 to March 2018	208	\$	436.53	\$ 90,754.59
April 2018 to June 2018	69	\$	451.81	\$ 31,310.43
	277			\$ 122,065.02
Transportation Cost				
			Cost	Total
<b>Month</b>	<u>Loads</u>	Pe	r Load	Cost
July 2017 to March 2018	198	\$	286.88	\$ 56,802.24
April 2018 to June 2018	66	\$	296.92	\$ 19,596.72
	264			\$ 76,398.96

TOTAL REQUEST:

\$198,464

00940 - Materials and Supplies

This account is utilized for the purchase of machinery parts, hoses, and office supplies, etc. Equipment is aging and increasing parts replacement may become necessary. Additionally, all parts for the UV disenfection unit are from this account should be noted that purchases made from this account enable in-house personnel to conduct tasks, which would normally be contracted out.

TOTAL REQUEST:

\$25,000

Wastewater Facility

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The capital requirement is as follows:

	<u>Qty</u>	<u>Each</u>	<u>Total</u>	
Grinder Pumps	2	\$ 4,000	\$ 8,000	)
Scum Pump	1	\$ 40,000	\$ 40,000	)
Boiler	1	\$ 100,000	\$ 100,000	)
	0	\$ -	\$ -	
	0	\$ -	\$ -	
	0	\$ -	\$	
			\$148,000,00	)

TOTAL REQUEST:

\$148,000

0000 - Debt Service

This account covers debt service issued under the RI Infrastructure Bank for the Sewer Expansion Program and the upgrade of the sewer plant. The following number reflects principal, interest and associated fees.

TOTAL REQUEST:

\$2,746,893

EXPENDITURE GRAND TOTAL

\$4,243,826