

December 20, 2019

To the Joint Meeting

Ladies and Gentlemen:

ANNUAL REPORT OF THE SEWAGE CONTRIBUTION  
OF THE MUNICIPALITIES ORGANIZED IN  
JOINT MEETING FOR THE PURPOSE OF  
ASSESSMENT FOR THE YEAR 2020

I present herewith the 85th Annual Report for the eleven municipalities organized in Joint Meeting, covering their respective contribution to Section One of the Supplementary Joint Trunk Sewer and to the Treatment Plant, as called for under the terms of the 1926 Contract.

Article X of the 1926 Contract requires that an estimate be made for the purpose of assessing the costs of maintenance and operation each year.

In order that the amount of work necessary for the preparation of this estimate be completed in time for consideration by the Joint Meeting before the date specified by law for the adoption of the new budget, it has been customary to use the twelve-month period immediately prior thereto as the basis of consideration for the assessment purpose only.

You will please note that this is the first of the two Annual Reports prepared each year, and that it covers the twelve-month period from November 1, 2018 through October 31, 2019. Subsequently, at the beginning of each succeeding year, a second and final report is prepared covering the previously completed calendar year, which coincides with the fiscal year of the Joint Meeting.

Pursuant to the Federal Water Pollution Control Act Amendments of 1972, PL 92-500 and as a requirement of our Construction Grant for the expansion in Secondary Treatment, a "User Charge System" is used to apportion the operation and maintenance costs for the Joint Meeting for 2020. During the year 1978, a User Charge System was prepared and adopted by the member municipalities and is entitled "An Ordinance Establishing and Defining User Charges in Connection with the Collection and Treatment of Wastewater and Providing for the Payment of Said User Charges". During the year 2019, this "User Charge System" was utilized by the various municipalities for collection of the charges associated with the operation and maintenance of the trunk sewer system, the treatment plant, and the Sludge Dewatering Facility, the percentage of assessment based upon a report dated December 21, 2018.

During 2019, the various municipalities computed the actual dwelling units for each of their respective towns in accordance with the revised schedule included in the Sewer Use Ordinance. Table II depicts the new (2020) dwelling unit figures formulated by each municipality in 2019.

It should be noted that the methodology used to assess the City of Elizabeth for services rendered by the Joint Meeting is based on quantity and quality of sewage as measured at the Trenton Avenue Pumping Station, plus the Equivalent Dwelling Units (EDU's) tributary to the gravity Joint Meeting sewer through the Elmora Avenue Area in Elizabeth, plus the tributary area from the City of Linden. This methodology was approved by the Joint Meeting and the Elizabeth City Council. The percentage used in this assessment report for the City will be based upon a twelve (12) month, 365 day period of November 1, 2018, through October 31, 2019 and projected for a twelve (12) month period in 2020. This allocation will be assessed and paid in accordance with the member municipalities billing procedure. Then, based on the analysis of the samples taken at the Trenton Avenue Pumping Station, an adjustment is made (on a quarterly basis) to the percent allocation from the City. At the end of 2020, utilizing twelve (12) months of data, the actual percent contribution by the City will be calculated and certified thereto.

The accompanying computations include the total Dwelling Unit number of 47,181 for the City. (This Equivalent Dwelling Unit number was computed by Elson T. Killam Associates during the period November 8, 1979 and December 12, 1979 and revised by the City Engineer on February 9, 1982).

USER CHARGE APPORTIONMENT

Set forth below are the basis factors concerning flow, waste characteristics and projected cost of operations of the Facilities derived for the 365 day period from November 1, 2018, through October 31, 2019, and projected for 2020 and are based upon actual 2018-2019 operating statistics as well as a recent upgraded 2019 industrial waste survey. The industrial waste figures take into consideration actual yearly operational time for each industry (i.e., 5 day or 7 day working week, etc.).

1.	Flow	24,167.5150 MG/Year	66.2124 MGD
2.	BOD	18,275.9198 Tons/Year	100,142.0263 Lbs/Day
	TSS	15,049.7321 Tons/Year	82,464.2855 Lbs/Day
3.	Estimated Industrial Flow	527.1080 MG/Year	1.4441 MGD
4.	Estimated Industrial BOD	3,839.4795 Tons/Year	21,038.2438 Lbs/Day
5.	Estimated Industrial TSS	535.4867 Tons/Year	2,934.1737 Lbs/Day
6.	Estimated Total Operating Expenses in 2020		
			\$25,742,123 STP
			9,505,951 SDWF
			347,283 SDF
			1,562,754 Sewers
			<u>\$37,158,111</u> Total
7.	Estimated Total Dwelling Units in System		
			153,795 JM Members
			47,181 Elizabeth
			<u>200,976</u> Total

In addition to the foregoing, it has been determined that the following cost allocations would fairly represent the actual costs of treatment.

Flow	32.9379837%
BOD	44.2165669%
Suspended Solids	22.8454494%

The basis for these cost allocations is set forth in Appendix A.

Based upon the foregoing allocations, Table I has been prepared which shows the projected and estimated flow and waste characteristics for 2020 and the projected estimated cost allocation between domestic sewage treated from residential and commercial establishments, and the industrial waste treatment reflecting industrial flow from industries in the collection system. This system takes into consideration the fact that the City of Elizabeth does not use the trunk sewer and will accordingly not be charged for its use. The trunk sewer charge is assessed only against member municipalities, and their respective industries.

**Table I**  
**Joint Meeting of Essex & Union Counties**  
**Estimated Flow Waste Characteristics and Cost Allocation for Treatment in 2020**

**Treatment Plant**

	<u>Total for 2020</u>		<u>Domestic &amp; Commercial</u>		<u>Industrial</u>	
Flow	24,167.5150	MG/Yr. <sup>1</sup>	23,640.4070	MG/Yr.	527.1080	MG/Yr.
BOD	18,275.9198	Tons/Yr. <sup>1</sup>	14,436.4403	Tons/Yr.	3,839.4795	Tons/Yr.
Suspended Solids	15,049.7321	Tons/Yr. <sup>1</sup>	14,514.2454	Tons/Yr.	535.4867	Tons/Yr.

(1) Based upon data from November 1, 2018 thru October 31, 2019 (365 days)

**Cost Allocation**

	<u>Total for 2020</u>		<u>Domestic &amp; Commercial</u>		<u>Industrial</u>
Flow	\$11,722,746.00		\$11,467,066.00		\$255,680.00
BOD	15,736,834.00		12,430,776.00		3,306,058.00
Suspended Solids	8,130,777.00		7,841,475.00		289,302.00
	<u>\$35,590,357.00</u>		<u>\$31,739,317.00</u>		<u>\$3,851,040.00</u>
	100.000000%		89.17954100%		10.82045900%

**Elizabeth Contribution**

Flow	-	6,679.8980	MG/Yr.
BOD	-	8,016.2209	Tons/Yr.
TSS	-	3,748.1051	Tons/Yr.

**Trunk Sewer Flow**<sup>1</sup>

	<u>Total for 2020</u>		<u>Domestic &amp; Commercial</u>		<u>Industrial</u>	
	17,487.6170	MG/Yr. <sup>2</sup>	17,145.4740	MG/Yr.	342.143	MG/Yr.

(1) Based upon data from November 1, 2018 thru October 31, 2019 (365 days)

(2) (24,167.515 - 6,679.8980)

**COST ALLOCATION**

\$1,562,754.00	\$1,532,178.92	\$30,575.08
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Member municipalities will be assessed \$9.96 (\$1,532,178.92/153,795) for trunk sewer O&M per equivalent dwelling unit.

The estimated cost for treating industrial wastes has been determined to be \$485.06 per MG for flow, \$861.07 per ton of BOD, and \$540.26 per ton of suspended solids. These estimates are predicated upon the cost allocation to industry and the estimates of flow and strength characteristics of the industrial waste, all as indicated on Table I. These costs were determined as follows:

Flow	\$255,680.00	/	527.1080	=	\$485.0618849	/MG
BOD	\$3,306,058.00	/	3,839.4795	=	\$861.0693194	/Ton
Suspended Solids	\$289,302.00	/	535.4867	=	\$540.2599168	/Ton

All industries within the member municipalities (excluding Elizabeth) will be required to pay an additional \$89.36/MG of flow for trunk sewer use (\$30,576.08/342.143 = \$89.363/MG). This brings the total flow cost to \$574.43/MG (\$485.062 + \$89.363) for the indicated industries of member municipalities.

Based upon the user charges for 2020, a computation has been made to show the budget prepayment for each municipality of the Joint Meeting. These estimates are subject to revision annually, dependent upon the actual number of dwelling units which must be determined for each municipality in accordance with the schedule of dwelling units set forth in the ordinance. In addition thereto, the computation for the industrial user charges has been based upon actual calculations of flow and waste characteristics for the industries in the district as a result of the 2019 industrial waste survey of the service area. These are estimates for 2020 and must be verified on an annual basis to reflect the actual flow and waste characteristics.

The basis for the industrial waste flow and characteristics are set forth in Appendix B of this report. The dwelling unit figures have been compiled by each municipality with the exception of Elizabeth in accordance with the revised Schedule of Dwelling Units incorporated into the User Charge Ordinance.

Table VII sets forth the cost to each municipality to establish the budget requirements of \$37,158,112.00 for 2020. However, it should be noted that in accordance with the Agreement between the Joint Meeting and the City of Elizabeth noted previously, and as a result of the monitoring of the Trenton Avenue Pumping Station, the City would provide for 35.7993453% of the treatment plant, sludge dewatering facility and sludge drying facility budgets initially with adjustments made quarterly. Upon completion and verification of the quality and quantity of the City's contribution as measured at the Trenton Avenue Pumping Station, plus the EDU's from the Elmora Avenue area, plus the City of Linden's contribution, an adjustment will then be made for the member municipalities.

**Table II**  
**Joint Meeting of Essex and Union Counties**  
**Annual Report of the Sewer Contribution of the Municipalities**  
**Municipality Dwelling Units and Industrial User Charge**  
**2020**

<u>Municipality</u>	<u>Dwelling Units <sup>1</sup></u>	<u>User Charges Industrial</u>
East Orange	8,015	\$ -
Hillside	8,566	776,697
Irvington	26,732	639,681
Maplewood	10,019	16,216
Millburn	9,967 <sup>4</sup>	-
Newark	17,427	-
Roselle Park	4,752	599
South Orange	8,295	-
Summit	14,499 <sup>2</sup>	49,739 <sup>3</sup>
Union	24,941	579,889
West Orange	20,582	-
Elizabeth	47,181	1,818,795
	<u>200,976</u>	<u>\$ 3,881,616</u>

(1) Based on actual calculation and verification by Municipalities; City of Elizabeth computed by Elson T. Killam Associates in 1979 and updated by City Engineer on February 9, 1982.

(2) Includes New Providence (3695)

(3) Includes Murray Hill

(4) Includes Livingston (485)

**Table III**  
**Joint Meeting of Essex and Union Counties**  
**Computation of Estimated Percent**  
**Contribution By City of Elizabeth**  
**For Period 11/1/2018-10/31/2019 and Projected Contribution for 2020**

Flow:	Treatment Plant	Elizabeth Pumping Station		Joint Meeting	
		24,167.515 MG	6,679.898 MG		17,487.617 MG
		<i>Industrial</i>	<i>D&amp;C</i>	<i>Industrial</i>	<i>D&amp;C</i>
		170.966	6,508.932	342.143	17,145.474
		\$ 82,929.09	\$ 3,157,234.82	\$ 196,535.61	\$ 9,848,794.70
Unit Charge	\$ 485.0618849 Per MG for Elizabeth				
Unit Charge	\$ 574.4253382 Per MG for Joint Meeting				
<b>BOD:</b>	18,275.9198 Tons	8,016.2209 Tons		10,259.6989 Tons	
		<i>Industrial</i>	<i>D&amp;C</i>	<i>Industrial</i>	<i>D&amp;C</i>
		1,841.7125	6,174.5084	1,956.3785	8,303.3204
Unit Charge	\$861.0693194 Per Ton	\$ 1,585,842.13	\$ 5,316,679.75	\$ 1,684,577.50	
<b>TSS:</b>	15,049.7321 Tons	3,748.1051 Tons		11,301.6270 Tons	
		<i>Industrial</i>	<i>D&amp;C</i>	<i>Industrial</i>	<i>D&amp;C</i>
		191.3903	3,556.7148	336.3324	10,965.2946
Unit Charge	\$540.2599168 Per Ton	\$ 103,400.51	\$ 1,921,550.44	\$ 181,706.91	
			\$ 12,167,636.74	\$ 2,062,820.02	

City of Elizabeth (Contribution from Pumping Station) \$ 12,167,636.74

City of Elizabeth (Industry Tributary to Joint Meeting Trunk)

<b>Flow:</b>	13.9990 MG/Year at	\$ 485.0618849	6,790.38
<b>BOD:</b>	41.3885 Tons/Year at	861.0693194	35,638.37
<b>TSS:</b>	7.764 Tons/Year at	540.2599168	4,194.58

Joint Meeting Industrial	2,062,820.02
Subtotal	\$ 14,277,080.09

Total 2020 Budget	\$ 37,158,111.00
Subtotal (above)	(14,277,080.09)
Subtotal (EDU's)	\$ 22,881,030.91

Joint Meeting EDU's (X + Y) + Elmora EDU's (X) = \$ 22,881,031  
 (Y = Additional Assessment to Member Municipalities for Trunk Sewer O&M)  
 153,795 (X + \$9.962475503) + 3905 (X) = \$ 22,881,031

Equivalent Units-Member Municipalities 153,795

Elmora EDU's = 3,905 \$ 135.3763601140 Per Unit = X  
 \$ 145.3388356170 Per Unit = X+Y

Joint Meeting EDU Assessment \$ 22,352,386.22  
 Elmora Area Assessment \$ 528,644.69

Total Anticipated Payment from the City of Elizabeth

Pumping Station	\$ 12,167,636.74
Elmora EDU's	528,644.69
Elmora Industrial	46,623.33
	<hr/>
	\$ 12,742,904.76

Total Anticipated Payment from Member Municipalities

EDU's	22,352,386.22
Industrial	2,062,820.02
	<hr/>
	\$ 24,415,206.24

Estimated Percent Contribution of Treatment Plant, Sludge Dewatering and Sludge Drying Facility Budgets by  
 City of Elizabeth  
 \$ 12,742,904.76 / \$ 35,595,357.00 = 35.7993453%



**Table IV**  
**Joint Meeting of Essex and Union Counties**  
**Percent Allocation of Infiltration / Inflow**

Municipality	Capacity By Contract (MGD)	Capacity By Contract (Percent)	Base Year - 1982 Phase IIB - SSES <sup>1</sup>				Base Year - 1982 Phase IIB - SSES <sup>2</sup>				
			Infiltration (GPD) <sup>3</sup>	(Percent)	SSES - November 2019 (GPD) <sup>4</sup>	(Percent)	Inflow (GPD)	(Percent)	SSES - November 2019 (GPD) <sup>5</sup>	(Percent)	
					39,995					372,422	
East Orange	5.50	4.88%	70,747	2.11%	44,022	2.21%	3,007,440	5.79%	218,160	0.64%	
					29,860				2,030,862		
Hillside	12.20	10.83%	79,012	2.36%	32,980	1.65%	1,185,120	2.28%	1,185,120	3.49%	
					717,194				11,626,541		
Irvington	18.61	16.52%	1,115,672	33.31%	790,023	39.63%	8,612,640	16.57%	6,782,445	19.98%	
					178,982				3,252,871		
Maplewood	7.08	6.29%	389,078	11.62%	197,233	9.89%	5,449,680	10.48%	1,897,920	5.59%	
					138,263				3,997,715		
Millburn	6.00	5.33%	191,609	5.72%	152,240	7.64%	2,729,520	5.25%	2,333,520	6.87%	
					170,295				3,281,967		
Newark	15.50	13.76%	234,484	7.00%	187,506	9.41%	1,959,540	3.77%	1,915,875	5.64%	
					59,178				2,700,058		
Roselle Park	9.44	8.38%	106,187	3.17%	65,147	3.27%	1,576,080	3.03%	1,576,080	4.64%	
					76,189				3,072,479		
South Orange	7.00	6.22%	410,876	12.27%	83,906	4.21%	2,183,760	4.20%	1,792,800	5.28%	
					58,997				2,752,429		
Summit	7.50	6.66%	171,657	5.13%	64,916	3.26%	3,651,120	7.02%	1,604,880	4.73%	
					212,824				14,105,473		
Union	10.30	9.14%	329,127	9.83%	234,523	11.76%	14,534,640	27.96%	8,229,600	24.24%	
					128,129				10,998,081		
West Orange	13.50	11.99%	250,811	7.48%	141,147	7.08%	7,097,040	13.65%	6,413,400	18.90%	
					1,809,906				58,190,898		
	112.63	100.00%	3,349,260	100.00%	1,993,643	100.01%	51,986,580	100.00%	33,949,800	100.00%	

(1) Identified by Hazen & Sawyer Phase IIB SSES (pg. S-2) with trunk sewer infiltration allocated based on contract capacity.

(2) Identified by Hazen & Sawyer Phase IIB SSES (pg. S-3)

(3) "Base Year - 1982" Infiltration: 3.35 MGD / 52.79 MGD = 6.346%

(4) 2019 - Infiltration related to base year total = 1.994 MGD / 52.79 MGD = 3.77723054%

- Adjusted for period 11/1/2018 - 10/31/2019; (3.77723054% x 17,487.6170 = 660.54 MG / Year / 365 = 1,809,906 GPD)

(5) 2019 inflow adjusted for period 11/1/2018 - 10/31/2019 - (56.94" / 33.22") x (33,949,800) = 58,190,898 GPD

**Table IV - A**  
**Joint Meeting of Essex and Union Counties**  
**Adjusted 2019 - Summary of Infiltration and Inflow**

<b>Municipality</b>	<b>Phase IIB</b>		<b>2019</b>		<b>Phase IIB</b>		<b>2019</b>	
	<b>SSES</b>	<b>2018</b>	<b>Infiltration</b>	<b>2019</b>	<b>SSES</b>	<b>2018</b>	<b>Inflow</b>	<b>2019</b>
	<b>Infiltration</b>	<b>Infiltration</b>	<b>Removed</b>	<b>Infiltration</b>	<b>Inflow</b>	<b>Inflow</b>	<b>Removed</b>	<b>Inflow</b>
	<b>(GPD)</b>	<b>(GPD)</b>	<b>(GPD)</b>	<b>(GPD)</b>	<b>(GPD)</b>	<b>(GPD)</b>	<b>(GPD)</b>	<b>(GPD)</b>
East Orange	70,747	44,022	-	44,022	3,007,440	218,160	-	218,160
Hillside	79,012	32,980	-	32,980	1,185,120	1,185,120	-	1,185,120
Irvington	1,115,672	790,023	-	790,023	8,612,640	6,782,445		6,782,445
Maplewood	389,078	197,233	-	197,233	5,449,680	1,897,920		1,897,920
Millburn	191,609	152,240	-	152,240	2,729,520	2,333,520	-	2,333,520
Newark	234,484	187,506	-	187,506	1,959,540	1,915,875	-	1,915,875
Roselle Park	106,187	65,147	-	65,147	1,576,080	1,576,080	-	1,576,080
South Orange	410,876	83,906	-	83,906	2,183,760	1,821,600	28,800	1,792,800
Summit	171,657	64,916	-	64,916	3,651,120	1,604,880	-	1,604,880
Union	329,127	234,523	-	234,523	14,534,640	8,245,440	15,840	8,229,600
West Orange	250,811	141,147	-	141,147	7,097,040	6,413,400	-	6,413,400
<b>Total</b>	<b>3,349,260</b>	<b>1,993,643</b>	<b>-</b>	<b>1,993,643</b>	<b>51,986,580</b>	<b>33,994,440</b>	<b>44,640</b>	<b>33,949,800</b>

**Table V**  
**Joint Meeting of Essex and Union Counties**  
**Cost Allocation - Flow, BOD & TSS with Infiltration / Inflow**

			<u>Total</u>		<u>Domestic &amp; Commercial</u>		<u>Industrial</u>
Flow			17,487.6170 MG		17,145.4740 MG		342.1430 MG
			\$9,475,078.23		\$9,278,542.62		
Infiltration	3.7772305%		660.54		647.62	\$350,469.74	12.92
Inflow	13.4281303%		2,348.26		2,302.32	\$1,245,936.64	45.94
BOD	at	\$861.0693194 Per Ton	10,259.6989 Tons		8,303.3204 Tons		1,956.3785 Tons
			\$8,834,311.95		\$7,149,734.45		\$1,684,577.50
TSS	at	\$540.2599168 Per Ton	11,301.6270 Tons		10,965.2946 Tons		336.3324 Tons
			\$6,105,816.06		\$5,924,109.15		\$181,706.91
Total			\$24,415,206.24 <sup>1</sup>		\$22,352,386.22		\$2,062,820.02

(1) Amount anticipated from Members after allocation of 35.7993453% to City of Elizabeth \$ 12,742,904.76

"Base Year - 1982"

Infiltration: 3.35 MGD / 52.79 MGD = 6.34590% (Per H&S Phase IIB Report)

Inflow: 113 MGD (Excluding Elizabeth) / 137 MGD (Total) = 82.4817518% 1 inch of rain = 50 MG of inflow (Per H&S Phase IIB Report)

"2018 - 2019"

Infiltration: 1.994 MGD/52.79MGD = 3.77723054% X 17,487.6170 660.55 MG / Year  
(November 1, 2018 - October 31, 2019)

Inflow: Rainfall = 56.94 Inches X 50 MG X 82.482% 2,348.26 MG / Year

Total D&C	\$22,352,386.22
Less: Infiltration	(350,469.74)
Less: Inflow	(1,245,936.64)
Net after infiltration and inflow	<u>\$20,755,979.84</u>
Equivalent Dwelling Units	153,795
User Charge Per Unit	\$134.95874274196

**Table VI**  
**Joint Meeting of Essex and Union Counties**  
**Estimated Annual Operation Expenses To Member Municipalities**  
**2020**

<b>Domestic &amp; Commercial</b>								
<b>Municipality</b>	<b>Dwelling Units</b>	<b>User Charge</b>	<b>Infiltration</b>		<b>Inflow</b>		<b>Total Cost</b>	<b>Unit Cost</b>
		<b>\$ 134,958,742.74</b> <b>Per Unit</b>	<b>Percent <sup>1</sup></b>	<b>Amount</b>	<b>Percent <sup>2</sup></b>	<b>Amount</b>		
East Orange	8,015	\$1,081,694.32	2.21%	\$7,745.38	0.64%	\$7,973.99	\$1,097,413.69	\$136.9200
Hillside	8,566	1,156,056.59	1.65%	5,782.75	3.49%	43,483.19	1,205,322.53	140.7101
Irvington	26,732	3,607,717.11	39.63%	138,891.16	19.98%	248,938.14	3,995,546.41	149.4668
Maplewood	10,019	1,352,151.64	9.89%	34,661.46	5.59%	69,647.86	1,456,460.96	145.3699
Millburn	9,967 <sup>3</sup>	1,345,133.79	7.64%	26,775.89	6.87%	85,595.85	1,457,505.53	146.2331
Newark	17,427	2,351,926.01	9.41%	32,979.20	5.64%	70,270.83	2,455,176.04	140.8835
Roselle Park	4,752	641,323.95	3.27%	11,460.36	4.64%	57,811.46	710,595.77	149.5361
South Orange	8,295	1,119,482.77	4.21%	14,754.78	5.28%	65,785.45	1,200,023.00	144.6682
Summit	14,499 <sup>4</sup>	1,956,766.81	3.26%	11,425.31	4.73%	58,932.80	2,027,124.92	139.8114
Union	24,941	3,366,006.00	11.76%	41,215.24	24.24%	302,015.04	3,709,236.28	148.7204
West Orange	20,582	2,777,720.84	7.08%	24,813.26	18.90%	235,482.02	3,038,016.12	147.6055
	153,795	\$20,755,979.83	100.01%	\$350,504.79	100.00%	\$1,245,936.63	\$22,352,421.25	\$145.3391

(1) See Table IV - Infiltration for November of the Prior Year

(2) See Table IV - Inflow for November of the Prior Year

(3) Includes Livingston (396)

(4) Includes New Providence (3952)

\$150.2422 2019  
\$143.4346 2018  
\$136.1075 2017  
\$137.9068 2016

**Table VI (Continued)**  
**Joint Meeting of Essex and Union Counties**  
**Estimated Annual Operation Expenses To Member Municipalities**  
**2020**

Municipality	Industrial									
	BOD (Tons / Year)	BOD <sup>1</sup> (\$/Year)	TSS (Tons / Year)	TSS <sup>2</sup> (\$/Year)	Flow (MG / Year)			Flow <sup>3</sup> (\$/Year)	Total Cost	
					Dry Weather	Infiltration 3.777231%	Inflow 13.428130%			
East Orange	0.0000	\$0.00	0.0000	\$0.00	0.00	0.00	0.00	0.00	\$0.00	\$0.00
Hillside	797.4598	686,668.17	54.8453	29,630.72	87.05	3.97	14.12	105.15	60,397.95	776,696.84
Irvington	676.9069	582,863.76	25.8199	13,949.46	61.79	2.82	10.02	74.63	42,867.64	639,680.86
Maplewood	11.4787	9,883.96	3.8299	2,069.14	6.15	0.28	1.00	7.42	4,263.38	16,216.48
Millburn	0.0000	0.00	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Newark	0.0000	0.00	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Roselle Park	0.1567	134.93	0.2029	109.62	0.51	0.02	0.08	0.62	353.85	598.40
South Orange	0.0000	0.00	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summit <sup>4</sup>	14.9695	12,889.78	14.1448	7,641.87	42.10	1.92	6.83	50.85	29,207.23	49,738.88
Union	455.4069	392,136.91	237.4896	128,306.11	85.68	3.91	13.90	103.49	59,445.55	579,888.57
West Orange	0.0000	0.00	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	<u>1,956.3785</u>	<u>\$1,684,577.51</u>	<u>336.3324</u>	<u>\$181,706.92</u>	<u>283.28</u>	<u>12.92</u>	<u>45.94</u>	<u>342.14</u>	<u>\$196,535.61</u>	<u>\$2,062,820.04</u>

(1) At \$861.0693194/Ton

(2) At \$540.2599168/Ton

(3) At \$574.4253382/MG

(4) Includes Murray Hill

**Table VII**  
**Joint Meeting of Essex and Union Counties**  
**Summary of Estimated Annual Operational and Maintenance Expenses To Member Municipalities**  
**2020**

<b>Municipality</b>	<b>Total Assessments <sup>1</sup></b>	<b>Domestic &amp; Commercial</b>			<b>Assessment Percentage</b>
		<b>User Charge Domestic Sewage 134,958,742.7</b>	<b>User Charges Industrial</b>	<b>Infiltration / Inflow Charges</b>	
East Orange	\$1,097,413.69	\$1,081,694.32	\$0.00	\$15,719.37	4.4948%
Hillside	1,982,019.37	1,156,056.59	776,696.84	49,265.94	8.1180%
Irvington	4,635,227.27	3,607,717.11	639,680.86	387,829.30	18.9850%
Maplewood	1,472,677.44	1,352,151.64	16,216.48	104,309.32	6.0318%
Millburn	1,457,505.53	1,345,133.79	0.00	112,371.74	5.9697%
Newark	2,455,176.04	2,351,926.01	0.00	103,250.03	10.0559%
Roselle Park	711,194.17	641,323.95	598.40	69,271.82	2.9129%
South Orange	1,200,023.00	1,119,482.77	0.00	80,540.23	4.9151%
Summit	2,076,863.80	1,956,766.81	49,738.88	70,358.11	8.5064%
Union	4,289,124.85	3,366,006.00	579,888.57	343,230.28	17.5674%
West Orange	<u>3,038,016.12</u>	<u>2,777,720.84</u>	<u>0.00</u>	<u>260,295.28</u>	<u>12.4430%</u>
	<u>\$24,415,241.29</u>	<u>\$20,755,979.83</u>	<u>\$2,062,820.04</u>	<u>\$1,596,441.42</u>	<u>100.0000%</u>
Elizabeth	12,742,870.71				
<b>Total</b>	<b><u>\$37,158,112.00</u></b>				

(1) Reflects anticipated payment of \$12,742,870.71 from the City of Elizabeth which is 35.7993453% of allocation from Treatment Plant, Sludge Dewatering, and Sludge Drying budget. Exact 2020 percent contribution to be calculated at the end of fiscal year. Quarterly adjustments to be made in accordance with Agreement between Elizabeth and Joint Meeting.

**Table VIII**  
**Joint Meeting of Essex and Union Counties**  
**Comparison of 2020 Assessment with 2019 Assessment**

<b>Municipality</b>	<b>2019</b>	<b>2020</b>		<b>Comparison</b>	
				<b>Amount</b>	<b>Percentage</b>
East Orange	\$1,030,415.77	\$1,097,413.69	(+)	\$66,997.92	6.50%
Hillside	2,102,850.76	1,982,019.37	(-)	(120,831.39)	-5.75%
Irvington	4,895,734.83	4,635,227.27	(-)	(260,507.56)	-5.32%
Maplewood	1,454,868.25	1,472,677.44	(+)	17,809.19	1.22%
Millburn	1,485,635.21	1,457,505.53	(-)	(28,129.68)	-1.89%
Newark	2,547,429.79	2,455,176.04	(-)	(92,253.75)	-3.62%
Roselle Park	731,871.29	711,194.17	(-)	(20,677.12)	-2.83%
South Orange	1,243,480.39	1,200,023.00	(-)	(43,457.39)	-3.49%
Summit	2,187,731.66	2,076,863.80	(-)	(110,867.86)	-5.07%
Union	4,445,427.22	4,289,124.85	(-)	(156,302.37)	-3.52%
West Orange	3,070,940.65	3,038,016.12	(-)	(32,924.53)	-1.07%
	<u>\$25,196,385.82</u>	<u>\$24,415,241.29</u>	(-)	<u>(\$781,144.53)</u>	<u>-3.10%</u>
Elizabeth	11,754,302.19	12,742,870.71	(+)	\$ 988,568.52	8.41%
<b>Total</b>	<b><u>\$36,950,688.01</u></b>	<b><u>\$37,158,112.00</u></b>	<b>(+)</b>	<b><u>\$207,423.99</u></b>	<b><u>0.56%</u></b>

Note: City of Elizabeth percentage contribution of Treatment Plant, Sludge Dewatering, and Sludge Drying Budget:

City of Elizabeth percentage	
2016	28.64359670%
2017	31.53144370%
2018	31.77668480%
2019	32.79334100%

Table III, IV, V, VI, and VII, have been prepared to reflect the Domestic Sewer Usage and Industrial User assessment to each municipality for 2020 as a result of the Agreement with the City of Elizabeth which requires 35.7993453% of the 2020 Treatment Plant, Sludge Dewatering and Sludge Drying Budget to be paid in Quarterly assessments with adjustments made following the determination of the actual percentage of contribution for each quarter. The 35.7993453% figure is an estimate based upon actual monitoring of quality and quantity at the Trenton Avenue Pumping Station, etc., in accordance with the Agreement. The actual percentage of contribution will be determined following the completion of the annual audit of expenses. In addition, these tables reflect the costs associated with Infiltration / Inflow for the member municipalities, the percentages of which were determined from the Phase IIB SSES Reports, adjusted as a result of rehabilitation work, and updated in 2017.

**Summary and Certification**

On the basis of the measured usage of Section One of the Supplementary Joint Trunk Sewer and the Treatment Plant, including the Sludge Dewatering and Sludge Drying Facilities, and an estimate of Dwelling Units and Waste Characteristics for the municipalities organized in Joint Meeting, and in accordance with the provisions of the 1926 contract, I hereby certify that the estimated maintenance and operating costs of the Joint Meeting for the 2020 are apportioned as follows:

	<u>2020</u>	<u>2019</u>		<u>2020</u>	<u>2019</u>
East Orange	4.4948%	4.0895%	Roselle Park	2.9129%	2.9047%
Hillside	8.1180%	8.3458%	South Orange	4.9151%	4.9352%
Irvington	18.9850%	19.4303%	Summit	8.5064%	8.6827%
Maplewood	6.0318%	5.7741%	Union	17.5674%	17.6431%
Millburn	5.9697%	5.8962%	West Orange	12.4430%	12.1881%
Newark	10.0559%	10.1103%	<b>Total</b>	<b><u>100.0000%</u></b>	<b><u>100.0000%</u></b>

Respectfully submitted,



A. Ralph LaMendola, P.E., BCEE



**Joint Meeting of Essex and Union Counties  
Annual Report of the Sewer Contribution of the Municipalities  
Appendix A  
2020 Budget**

	<b>Treatment Plant</b>	<b>Dewatering Facility</b>	<b>Drying Facility</b>	<b>Sewer</b>	<b>Total</b>
Electric Service	\$ 929,028	\$ 57,850	\$ 13,122	\$ -	\$ 1,000,000
Gas Service	800,000	100,000	-	-	900,000
Fuel, Oil & Kerosene	83,800	28,100	-	-	111,900
Water Service	84,000	73,000	3,000	-	160,000
Chemicals	3,243,038	839,900	6,800	9,000	4,098,738
Sludge Disposal	-	3,700,000	-	-	3,700,000
Insurance	669,303	133,861	62,468	26,772	892,404
Administration	2,518,397	1,447,397	10,000	280,048	4,255,842
Labor	5,682,913	1,009,949	135,037	344,692	7,172,591
Benefits	4,998,644	880,144	111,856	95,292	6,085,936
Equipment	490,000	250,000	-	-	740,000
Printing & Stationery	21,000	2,000	-	1,000	24,000
Maintenance, Supplies & Spare Parts	1,912,000	826,750	5,000	641,250	3,385,000
Screening Disposal	232,000	-	-	-	232,000
Reserve Contingency	250,000	-	-	-	250,000
Miscellaneous Expenses	450,000	87,500	-	120,000	657,500
Technical & Professional Services	1,001,500	50,000	-	25,000	1,076,500
Replacement Fund	1,600,000	-	-	-	1,600,000
NJPDES & Miscellaneous Permit Fee	776,500	19,500	-	19,700	815,700
	<b>\$ 25,742,123</b>	<b>\$ 9,505,951</b>	<b>\$ 347,283</b>	<b>\$ 1,562,754</b>	<b>\$ 37,158,111</b>
	69.28%	25.58%	0.93%	4.21%	100.00%

**Joint Meeting of Essex and Union Counties**  
**Annual Report of the Sewer Contribution of the Municipalities**  
**Appendix A (Continued)**  
**Operations and Management Cost Allocations**  
**(Treatment Plant)**

	Estimated Total Cost	Percent Flow	Cost Flow	Percent SS	Cost SS	Percent BOD	Cost BOD
General Expenditures 1	\$ 5,145,341	80%	\$ 4,116,273	10%	\$ 514,534	10%	\$ 514,534
Power	929,028	40%	\$ 371,611	5%	\$ 46,451	55%	\$ 510,966
Chlorine	1,827,000	40%	\$ 730,800			60%	\$ 1,096,200
Maintenance, Equipment, Supplies, Spare Parts, & Replacement Fund	4,252,000	28%	\$ 1,190,560	27%	\$ 1,148,040	45%	\$ 1,913,400
Fuel, Oil & Kerosene	83,800	40%	\$ 33,520	30%	\$ 25,140	30%	\$ 25,140
Administration, Labor & Benefits (Payroll Retirement)	13,199,954	40%	5,279,982	10%	\$ 1,319,995	50%	\$ 6,599,977
Sludge Processing 2	300,000			50%	\$ 150,000	50%	\$ 150,000
Total	<u>\$25,737,123</u>	100%	<u>\$ 11,722,746</u>		<u>\$ 3,204,160</u>		<u>\$ 10,810,217</u>
			45.5480047%		12.4495656%		42.0024297%

(1) General Expenditures  
(From the Approved Budget)

(2) Sludge Processing

Insurance	\$ 669,303	Polymer	\$ 250,000
Technical & Professional Services	1,001,500	K2MnO4	50,000
Stationery & Printing	21,000		
Gas	800,000		
Water	84,000		
Miscellaneous	450,000		
Service Contracts	232,000		
Permit Fees	776,500		
Sodium Bisulfite & Misc. Chemicals	1,111,038		
	<u>\$5,145,341</u>		<u>\$ 300,000</u>

**Joint Meeting of Essex and Union Counties**  
**Annual Report of the Sewer Contribution of the Municipalities**  
**Appendix A (Continued)**  
**Operations and Management Allocations**

	Estimated			
	Total Cost	Cost Flow	Cost TSS	Cost BOD
Treatment Plant	\$ 25,737,123	\$ 11,722,746	\$ 3,204,160	\$ 10,810,217
Dewatering Facility	9,505,951		4,752,976	4,752,976
Drying Facility	<u>347,283</u>		<u>173,642</u>	<u>173,642</u>
Subtotal	\$ 35,590,357	\$ 11,722,746	\$ 8,130,777	\$ 15,736,834
	100.00%	32.9379837%	22.8454494%	44.2165669%
Sewers 1	\$ 1,562,754			
Total	<u>\$ 37,158,112</u>			

(1) Joint Meeting Members Only

**JOINT MEETING OF ESSEX & UNION COUNTIES**

**INDUSTRIAL USER CHARGE - 2020  
SUMMARY**

<b>MUNICIPALITY</b>	<b>FLOW (MG)</b>	<b>LOADINGS</b>	
		<b>BOD (tons)</b>	<b>TSS (tons)</b>
HILLSIDE	105.145	797.45975784	54.84534537
IRVINGTON	74.627	676.90691766	25.81985604
MAPLEWOOD	7.422	11.47866726	3.82991148
MURRAY HILL	14.220	0.17789220	0.41508180
ROSELLE PARK	0.616	0.15669192	0.20292888
SUMMIT	36.626	14.79160299	13.72974168
UNION	103.487	455.40689679	237.48955644
<i>MEMBERS TOTAL</i>	342.143	1956.37842666	336.33242169
<i>ELIZABETH</i>	184.965	1883.10098073	199.15431276
<b>GRAND TOTAL</b>	527.108	3839.47940739	535.48673445

<b>MUNICIPALITY</b>	<b>FLOW</b>	<b>COSTS</b>		
		<b>BOD</b>	<b>TSS</b>	<b>TOTAL</b>
HILLSIDE	\$60,397.95	\$686,668.13	\$29,630.74	\$776,696.82
IRVINGTON	\$42,867.64	\$582,863.78	\$13,949.43	\$639,680.85
MAPLEWOOD	\$4,263.38	\$9,883.93	\$2,069.15	\$16,216.46
MURRAY HILL	\$8,168.33	\$153.18	\$224.25	\$8,545.76
ROSELLE PARK	\$353.85	\$134.92	\$109.63	\$598.40
SUMMIT	\$21,038.90	\$12,736.60	\$7,417.63	\$41,193.13
UNION	\$59,445.55	\$392,136.91	\$128,306.09	\$579,888.55
<i>MEMBERS TOTAL</i>	\$196,535.61	\$1,684,577.44	\$181,706.93	\$2,062,819.97
<i>ELIZABETH</i>	\$89,719.47	\$1,621,480.48	\$107,595.09	\$1,818,795.04
<b>GRAND TOTAL</b>	\$286,255.08	\$3,306,057.92	\$289,302.02	\$3,881,615.02

**JOINT MEETING OF ESSEX & UNION COUNTIES**

**INDUSTRIAL USER CHARGE - 2020  
COST FACTORS**

	<b>FLOW</b>	<b>BOD</b>	<b>TSS</b>
<b>MEMBER MUNICIPALITIES</b>	\$574.4253382	\$861.0693194	\$540.2599168
<b>ELIZABETH</b>	\$485.0618849	\$861.0693194	\$540.2599168

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2020

Municipality: HILLSIDE

IU #	INDUSTRY	SITE	Concentration		Cost Factors			ANNUAL PAYMENT
			BOD (mg/l)	TSS (mg/l)	Flow per MG \$574.4253382	BOD per Ton \$861.0693194	TSS per Ton \$540.2599168	
1042	*GEC Marconi / BAE	1				0.0000	0.0000	
	Totals:					0.0000	0.0000	
	Cost Analysis:				\$0.00	\$0.00	\$0.00	\$0.00
1050	Manhattan Drug Co.	4	379	370	0.900	1.4224	1.3886	
	Totals:				0.900	1.4224	1.3886	
	Cost Analysis:				\$516.98	\$1,224.77	\$750.21	\$2,491.97
1094	AAK Foodservice	3	1847	460	11.699	90.1056	22.4410	
	(Formerly Oasis Foods)	99	190	153	1.169	0.9262	0.7458	
	Totals:				12.868	91.0318	23.1869	
	Cost Analysis:				\$7,391.71	\$78,384.67	\$12,526.93	\$98,303.31
1090	Union Beverage	1	1947	71	84.264	684.1386	24.9480	
		99	190	153	0.772	0.6117	0.4925	
	Totals:				85.036	684.7502	25.4406	
	Cost Analysis:				\$48,846.83	\$589,617.41	\$13,744.53	\$652,208.78
1091	Hillside Beverage	2	698	50	3.315	9.6488	0.6912	
		99	190	153	0.021	0.0166	0.0134	
	Totals:				3.336	9.6655	0.7046	
	Cost Analysis:				\$1,916.28	\$8,322.65	\$380.65	\$10,619.58
1092	A&H Products	1	811	244	2.204	7.4536	2.2425	
		99	190	153	0.161	0.1276	0.1027	
	Totals:				2.365	7.5812	2.3452	
	Cost Analysis:				\$1,358.52	\$6,527.94	\$1,267.04	\$9,153.50
1093	Sam Hak Foods	1	1219	717	0.583	2.9635	1.7431	
		99	190	153	0.057	0.0452	0.0364	
	Totals:				0.640	3.0087	1.7795	
	Cost Analysis:				\$367.63	\$2,590.69	\$961.38	\$3,919.70
<b>HILLSIDE TOTALS</b>					105.1450	797.4598	54.8453	
					<b>\$60,397.95</b>	<b>\$686,668.13</b>	<b>\$29,630.74</b>	<b>\$776,696.82</b>

\*GEC Marconi/BAE - Did not discharge during this Assessment period.

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2020

Municipality: IRVINGTON

IU #	Cost Factors	SITE	Concentration		Cost Factors			ANNUAL PAYMENT
			BOD (mg/l)	TSS (mg/l)	Flow per MG	BOD per Ton	TSS per Ton	
					\$574.4253382	\$861.0693194	\$540.2599168	
2066	Wayne County Foods	1	5040	326	0.169	3.5518	0.2297	
		99	190	153	0.184	0.1458	0.1174	
	Totals:				0.353	3.6976	0.3471	
	Cost Analysis:				\$202.77	\$3,183.91	\$187.54	\$3,574.22
2072	Clean-Tex Services	1	151	52	40.416	25.4487	8.7638	
		99	190	153	0.676	0.5356	0.4313	
	Totals:				41.092	25.9843	9.1951	
	Cost Analysis:				\$23,604.29	\$22,374.32	\$4,967.74	\$50,946.35
2076	International Vitamin	1	1272	118	3.212	17.0372	1.5805	
	Totals:				3.212	17.0372	1.5805	
	Cost Analysis:				\$1,845.05	\$14,670.23	\$853.88	\$17,369.16
2078	City Barrel	1	23	8	0.406	0.0389	0.0135	
		99	190	153	0.086	0.0681	0.0549	
	Totals:				0.492	0.1071	0.0684	
	Cost Analysis:				\$282.62	\$92.20	\$36.96	\$411.78
3050	Maplewood Beverage	2	5272	118	28.630	629.4088	14.0877	
		99	190	153	0.848	0.6719	0.5410	
	Totals:				29.478	630.0807	14.6287	
	Cost Analysis:				\$16,932.91	\$542,543.13	\$7,903.31	\$567,379.34
<b>IRVINGTON TOTALS</b>					74.6270	676.9069	25.8199	
					\$42,867.64	\$582,863.78	\$13,949.43	\$639,680.85

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2020

Municipality: MAPLEWOOD

IU #	INDUSTRY	SITE	Concentration		Cost Factors			ANNUAL PAYMENT
			BOD (mg/l)	TSS (mg/l)	Flow per MG (\$574.4253382)	BOD per Ton (\$861.0693194)	TSS per Ton (\$540.2599168)	
3020	Gleason Cleaners	1	219	49	0.381	0.3479	0.0778	
		99	190	153	0.099	0.0784	0.0632	
		Totals:			0.480	0.4264	0.1410	
	Cost Analysis:				\$275.72	\$367.14	\$76.18	\$719.05
3033	NJ Transit - Hilton Gar.	3a	325	374	2.020	2.7376	3.1504	
		4	659	31	2.731	7.5049	0.3530	
		Totals:			4.751	10.2425	3.5034	
	Cost Analysis:				\$2,729.09	\$8,819.48	\$1,892.74	\$13,441.32
3046	UniClean	1	80	9	2.019	0.6735	0.0758	
		99	190	153	0.172	0.1363	0.1097	
		Totals:			2.191	0.8098	0.1855	
	Cost Analysis:				\$1,258.57	\$697.31	\$100.22	\$2,056.10
<b>MAPLEWOOD TOTALS</b>					7.4220	11.4787	3.8299	
					\$4,263.38	\$9,883.93	\$2,069.15	\$16,216.46



JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2020

Municipality: MURRAY HILL

IU #	INDUSTRY	SITE	Concentration		Cost Factors			ANNUAL PAYMENT
			BOD (mg/l)	TSS (mg/l)	Flow per MG \$574.4253382	BOD per Ton \$861.0693194	TSS per Ton \$540.2599168	
5010	Nokia	1	3	7	14.220	0.1779	0.4151	
	Totals:				14.220	0.1779	0.4151	
	Cost Analysis:				\$8,168.33	\$153.18	\$224.25	\$8,545.76
5021	*FRC-Electrical Ind	3				0.0000	0.0000	
		4(99)				0.0000	0.0000	
	Totals:				0.000	0.0000	0.0000	
	Cost Analysis:				\$0.00	\$0.00	\$0.00	\$0.00
<b>MURRAY HILL TOTALS</b>					14.2200	0.1779	0.4151	
					\$8,168.33	\$153.18	\$224.25	\$8,545.76

\*FRC Electrical Ind. Ceased Operations as of June 2019.

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2020

Municipality: ROSELLE PARK

IU #	INDUSTRY	SITE	Concentration		Cost Factors			ANNUAL PAYMENT
			BOD (mg/l)	TSS (mg/l)	Flow per MG \$574.4253382	BOD per Ton \$861.0693194	TSS per Ton \$540.2599168	
6005	Hexacon Electric	2	61	79	0.616	0.1567	0.2029	
	Totals:				0.616	0.1567	0.2029	
	Cost Analysis:				\$353.85	\$134.92	\$109.63	\$598.40
<b>ROSELLE PARK TOTALS</b>					0.6160	0.1567	0.2029	
					\$353.85	\$134.92	\$109.63	\$598.40

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2020

Municipality: SUMMIT

IU #	INDUSTRY	SITE	Concentration		Cost Factors			ANNUAL PAYMENT
			BOD (mg/l)	TSS (mg/l)	Flow per MG	BOD per Ton	TSS per Ton	
					\$574.4253382	\$861.0693194	\$540.2599168	
5511	Novartis Groundwater	4	1	1	0.987	0.0041	0.0041	
	Totals:				0.987	0.0041	0.0041	
	Cost Analysis:				\$566.96	\$3.54	\$2.22	\$572.73
5514	Celgene West 556	03A	93	88	33.250	12.8947	12.2014	
		99	190	153	2.389	1.8928	1.5242	
	Totals:				35.639	14.7875	13.7256	
	Cost Analysis:				\$20,471.94	\$12,733.05	\$7,415.41	\$40,620.40
<b>SUMMIT TOTALS</b>					36.6260	14.7916	13.7297	
					\$21,038.90	\$12,736.60	\$7,417.63	\$41,193.13

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2020

Municipality: UNION

IU #	INDUSTRY	SITE	Concentration		Cost Factors			ANNUAL PAYMENT
			BOD (mg/l)	TSS (mg/l)	Flow per MG	BOD per Ton	TSS per Ton	
					\$574.4253382	\$861.0693194	\$540.2599168	
7015	ACuPowder	3 (99)	190	153	0.016	0.0127	0.0102	
		4	150	301	1.904	1.1910	2.3898	
	Totals:				1.920	1.2036	2.4001	
	Cost Analysis:				\$1,102.90	\$1,036.41	\$1,296.65	\$3,435.96
7070	Durex	1	93	170	3.902	1.5132	2.7661	
	Totals:				3.902	1.5132	2.7661	
	Cost Analysis:				\$2,241.41	\$1,303.00	\$1,494.43	\$5,038.84
7077	Evoqua Water Tech	4	413	679	0.212	0.3651	0.6003	
	Totals:				0.212	0.3651	0.6003	
	Cost Analysis:				\$121.78	\$314.38	\$324.30	\$760.46
7080	Foremost Mfg	2	7	120	6.237	0.1821	3.1210	
	Totals:				6.237	0.1821	3.1210	
	Cost Analysis:				\$3,582.69	\$156.76	\$1,686.15	\$5,425.60
7092	International Paint	01A	2	2	3.804	0.0317	0.0317	
		99	190	153	0.019	0.0151	0.0121	
	Totals:				3.823	0.0468	0.0438	
	Cost Analysis:				\$2,196.03	\$40.28	\$23.69	\$2,260.00
7197	1011 Morris Avenue Urban Renewal	1	2	10	5.253	0.0438	0.2191	
					5.253	0.0438	0.2191	
	Cost Analysis:				\$3,017.46	\$37.72	\$118.34	\$3,173.52
7191	Cintas (Location 111)	1	418	451	26.634	46.4247	50.0898	
	Totals:				26.634	46.4247	50.0898	
	Cost Analysis:				\$15,299.24	\$39,974.85	\$27,061.49	\$82,335.59
7192	Toppan Merrill Corporation	1	445	577	0.401	0.7441	0.9648	
	Totals:				0.401	0.7441	0.9648	
	Cost Analysis:				\$230.34	\$640.74	\$521.27	\$1,392.35
7193	Lioni Latticini	1	2695	581	10.088	113.3705	24.4409	
		99	190	153	0.345	0.2733	0.2201	
	Totals:				10.433	113.6438	24.6610	
	Cost Analysis:				\$5,992.98	\$97,855.19	\$13,323.36	\$117,171.53
7194	BASF Corporation	1	21	576	0.096	0.0084	0.2306	
		99	190	153	1.157	0.9167	0.7382	
	Totals:				1.253	0.9251	0.9688	
	Cost Analysis:				\$719.75	\$796.57	\$523.38	\$2,039.71
7195	Deep Foods	7	1759	908	39.139	287.0857	148.1943	
		99	190	153	0.746	0.5911	0.4760	
	Totals:				39.885	287.6768	148.6703	
	Cost Analysis:				\$22,910.95	\$247,709.66	\$80,320.60	\$350,941.22
7196	Cintas (Location 15F)	1	178	207	3.241	2.4057	2.7976	
		99	190	153	0.293	0.2321	0.1869	
	Totals:				3.534	2.6378	2.9845	
	Cost Analysis:				\$2,030.02	\$2,271.34	\$1,612.43	\$5,913.78

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2020

Municipality: UNION

IU #	INDUSTRY	SITE	Concentration		Cost Factors			ANNUAL PAYMENT
			BOD (mg/l)	TSS (mg/l)	Flow per MG	BOD per Ton	TSS per Ton	
					\$574.4253382	\$861.0693194	\$540.2599168	
					FLOW (MG)	BOD (Tons)	TSS (Tons)	
					103,4870	455,4069	237,4896	
					\$59,445.55	\$392,136.91	\$128,306.09	\$579,888.55
	<b>UNION TOTALS</b>							

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2020

Municipality: ELIZABETH

IU #	INDUSTRY	SITE	Cost Factors					ANNUAL PAYMENT
			Concentration		Flow per MG	BOD per Ton	TSS per Ton	
			BOD (mg/l)	TSS (mg/l)	\$485.0618849	\$661.0693194	\$540.2599168	
0192	Wild Flavors Inc.	1	1203	114	0.082	0.4114	0.0390	
	Totals:				0.082	0.4114	0.0390	
	Cost Analysis:				\$39.78	\$354.20	\$21.06	\$415.04
0037	Deb-EI Foods	2	3521	734	19.117	280.6867	58.5129	
		99	190	153	0.372	0.2947	0.2373	
	Totals:				19.489	280.9814	58.7503	
	Cost Analysis:				\$9,453.37	\$241,944.49	\$31,740.42	\$283,138.27
0062	Garcia Uniforms, Inc.	2	767	174	2.762	8.8340	2.0041	
		99	190	153	0.116	0.0919	0.0740	
	Totals:				2.878	8.9259	2.0781	
	Cost Analysis:				\$1,396.01	\$7,685.78	\$1,122.69	\$10,204.49
0193	Actavis (formerly Purepac)	3	709	133	13.999	41.3885	7.7640	
	Totals:				13.999	41.3885	7.7640	
	Cost Analysis:				\$6,790.38	\$35,638.34	\$4,194.57	\$46,623.29
0070	LORCO	2	7306	79	27.699	843.8783	9.1249	
	Totals:				27.699	843.8783	9.1249	
	Cost Analysis:				\$13,435.73	\$726,637.70	\$4,929.81	\$745,003.24
0075	Mastercraft Electroplating	99	190	153	0.024	0.0190	0.0153	
	Totals:				0.024	0.0190	0.0153	
	Cost Analysis:				\$11.64	\$16.37	\$8.27	\$36.29
0078	*Magnolia Beef	1				0.0000	0.0000	
		99				0.0000	0.0000	
	Totals:				0.000	0.0000	0.0000	
	Cost Analysis:				\$0.00	\$0.00	\$0.00	\$0.00
0093	The Mills at Jersey Gardens	4	7	14	9.648	0.2816	0.5633	
	Totals:				9.648	0.2816	0.5633	
	Cost Analysis:				\$4,679.88	\$242.50	\$304.30	\$5,226.68
0098	Olympia Trails	1	787	178	1.702	5.5856	1.2633	
		99	190	153	0.397	0.3145	0.2533	
	Totals:				2.099	5.9001	1.5166	
	Cost Analysis:				\$1,018.14	\$5,080.44	\$819.37	\$6,917.95
0100	Michaels Foods - North Avenue Facility	4	2705	311	33.862	381.9583	43.9146	
		4a	2986	192	4.073	50.7154	3.2610	
		4b	455	72	2.822	5.3543	0.8473	
		99	190	153	0.769	0.6093	0.4906	
	Totals:				41.526	438.6373	48.5135	
	Cost Analysis:				\$20,142.68	\$377,697.15	\$26,209.91	\$424,049.74

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2020

Municipality: ELIZABETH

IU #	INDUSTRY	SITE	Concentration		Cost Factors			ANNUAL PAYMENT
			BOD (mg/l)	TSS (mg/l)	Flow per MG	BOD per Ton	TSS per Ton	
					\$485.0618849	\$861.0693194	\$540.2599168	
0105	Michaels Foods - Papetti Plaza Facility	2	1288	283	38.806	208.4255	45.7953	
		2a	620	199	6.230	16.1070	5.1698	
		2b	637	138	2.525	6.7071	1.4530	
		3	384	225	0.433	0.6934	0.4063	
	Totals:				47.994	231.9330	52.8245	
	Cost Analysis:				\$23,280.06	\$199,710.39	\$28,538.95	\$251,529.41
0148	Superior Powder Coating	1	226	101	2.814	2.6520	1.1852	
		99	190	153	0.531	0.4207	0.3388	
	Totals:				3.345	3.0727	1.5240	
	Cost Analysis:				\$1,622.53	\$2,645.79	\$823.33	\$5,091.66
0195	Duro Hilex Poly LLC	1	296	153	3.970	4.9003	2.5329	
		2	134	118	2.020	1.1287	0.9940	
		3	247	258	0.620	0.6386	0.6670	
	Totals:				6.610	6.6676	4.1939	
	Cost Analysis:				\$3,206.26	\$5,741.25	\$2,265.79	\$11,213.30
0165	Wakefern Food Corp.	2	149	144	1.075	0.6679	0.6455	
		3a	195	333	5.625	4.5740	7.8109	
		4	310	232	0.459	0.5933	0.4441	
		99 (7)	190	153	0.068	0.0539	0.0434	
	Totals:				7.227	5.8891	8.9439	
	Cost Analysis:				\$3,505.54	\$5,070.94	\$4,832.02	\$13,408.51
0178	**Smithfield Packaged Meats	3	618	246	1.202	3.0976	1.2330	
		99	190	153	0.149	0.1181	0.0951	
	Totals:				1.351	3.2157	1.3281	
	Cost Analysis:				\$655.32	\$2,768.92	\$717.52	\$4,141.76
0189	Prince Donut Co.	3	3687	575	0.762	11.7156	1.8271	
		99	190	153	0.232	0.1838	0.1480	
	Totals:				0.994	11.8994	1.9751	
	Cost Analysis:				\$482.15	\$10,246.21	\$1,067.07	\$11,795.43
0194	***Erie Street	2				0.0000	0.0000	
	Totals:					0.0000	0.0000	
	Cost Analysis:				\$0.00	\$0.00	\$0.00	\$0.00
<b>ELIZABETH TOTALS</b>					184.9650	1,883.1010	199.1543	
					\$89,719.47	\$1,621,480.48	\$107,595.09	\$1,818,795.04

\*Magnolia Beef - Ceased Operations as of June 2018.

\*\*Smithfield Packaged Meats (Formerly 814 Americas)

\*\*\* Erie Street Facility did not discharge during this Assessment period.