

December 22, 2017

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 2018

I present herewith the 83rd 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, 2016 through October 31, 2017. 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 2018. 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 2017, 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 16, 2016.

During 2017, 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 (2018) dwelling unit figures formulated by each municipality in 2017.

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, 2016, through October 31, 2017 and projected for a twelve (12) month period in 2018. 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 2018, 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, 2016, through October 31, 2017, and projected for 2018 and are based upon actual 2016-2017 operating statistics as well as a recent upgraded 2017 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	20,103.0440 MG/Year	55.0768 MGD
2.	BOD	17,783.1544 Tons/Year	97,441.9419 Lbs/Day
	TSS	15,455.3748 Tons/Year	84,686.9852 Lbs/Day
3.	Estimated Industrial Flow	521.4360 MG/Year	1.4286 MGD
4.	Estimated Industrial BOD	3,886.3131 Tons/Year	21,294.8663 Lbs/Day
5.	Estimated Industrial TSS	561.5243 Tons/Year	3,076.8455 Lbs/Day
6.	Estimated Total Operating Expenses in 2018		
			\$24,179,307 STP
			8,978,482 SDWF
			330,094 SDF
			1,135,869 Sewers
			<u>\$34,623,752</u> Total
7.	Estimated Total Dwelling Units in System		
			152,243 JM Members
			47,181 Elizabeth
			<u>199,424</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	32.9068677%
BOD	44.2107598%
Suspended Solids	22.8823725%

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 2018 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 2018

Treatment Plant

	<u>Total for 2018</u>		<u>Domestic & Commercial</u>		<u>Industrial</u>
Flow	20,103.0440	MG/Yr. ¹	19,581.6080	MG/Yr.	521.4360
BOD	17,783.1544	Tons/Yr. ¹	13,896.8413	Tons/Yr.	3,886.3131
Suspended Solids	15,455.3748	Tons/Yr. ¹	14,893.8505	Tons/Yr.	561.5243

(1) Based upon data from November 1, 2016 thru October 31, 2017 (365 days)

Cost Allocation

	<u>Total for 2018</u>		<u>Domestic & Commercial</u>		<u>Industrial</u>
Flow	\$11,018,168.00		\$10,732,377.00		\$285,791.00
BOD	14,803,037.00		11,567,996.00		3,235,041.00
Suspended Solids	7,661,678.00		7,383,314.00		278,364.00
	<u>\$33,482,883.00</u>		<u>\$29,683,687.00</u>		<u>\$3,799,196.00</u>
	100.000000%		88.65331880%		11.34668120%

Elizabeth Contribution

Flow	-	6,025.8450	MG/Yr.
BOD	-	6,042.7329	Tons/Yr.
TSS	-	3,491.3887	Tons/Yr.

Trunk Sewer Flow¹

	<u>Total for 2018</u>		<u>Domestic & Commercial</u>		<u>Industrial</u>
	14,077.1990	MG/Yr. ²	13,723.4420	MG/Yr.	353.757

(1) Based upon data from November 1, 2016 thru October 31, 2017 (365 days)

(2) (20,103.044 - 6,025.8450)

COST ALLOCATION

\$1,135,869.00	\$1,107,324.85	\$28,544.15
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Member municipalities will be assessed \$7.27 (\$1,107,324.85/152,243) for trunk sewer O&M per equivalent dwelling unit.

The estimated cost for treating industrial wastes has been determined to be \$548.08 per MG for flow, \$832.42 per ton of BOD, and \$495.73 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	\$285,791.00	/	521.4360	=	\$548.0845204	/MG
BOD	\$3,235,041.00	/	3,886.3131	=	\$832.4190349	/Ton
Suspended Solids	\$278,364.00	/	561.5243	=	\$495.7292142	/Ton

All industries within the member municipalities (excluding Elizabeth) will be required to pay an additional \$80.69/MG of flow for trunk sewer use ($\$28,544.15/353.757 = \$80.689/\text{MG}$). This brings the total flow cost to \$628.77/MG ($\$548.085 + \80.689) for the indicated industries of member municipalities.

Based upon the user charges for 2018, 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 2017 industrial waste survey of the service area. These are estimates for 2018 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 \$34,623,752.00 for 2018. 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 31.7766848% 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
2018

<u>Municipality</u>	<u>Dwelling Units ¹</u>	<u>User Charges Industrial</u>
East Orange	7,215	\$ -
Hillside	8,565	622,621
Irvington	26,896	958,132
Maplewood	9,568	14,143
Millburn	9,835 ⁴	-
Newark	17,427	-
Roselle Park	4,752	663
South Orange	8,312	-
Summit	14,385 ²	80,639 ³
Union	25,109	469,332
West Orange	20,179	-
Elizabeth	47,181	1,682,209
	<u>199,424</u>	<u>\$ 3,827,739</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 (3754)
- (3) Includes Murray Hill
- (4) Includes Livingston (396)

Table III
Joint Meeting of Essex and Union Counties
Computation of Estimated Percent
Contribution By City of Elizabeth
For Period 11/1/2016-10/31/2017 and Projected Contribution for 2018

Flow:	Treatment Plant	Elizabeth Pumping Station		Joint Meeting	
	20,103.044 MG	6,025.845 MG		14,077.199 MG	
		<i>Industrial</i>	<i>D&C</i>	<i>Industrial</i>	<i>D&C</i>
		149.881	5,875.964	353.757	13,723.442
		\$ 82,147.46	\$ 3,220,524.91	\$ 222,432.89	\$ 8,628,931.17
Unit Charge \$ 548.0845204 Per MG for Elizabeth					
Unit Charge \$ 628.7731004 Per MG for Joint Meeting					
BOD:	17,783.1544 Tons	6,042.7329 Tons		11,740.4215 Tons	
		<i>Industrial</i>	<i>D&C</i>	<i>Industrial</i>	<i>D&C</i>
		1,752.4947	4,290.2382	2,096.9322	9,643.4893
		\$ 1,458,809.95	\$ 3,571,275.94	\$ 1,745,526.28	
Unit Charge	\$832.4190349 Per Ton				
TSS:	15,455.3748 Tons	3,491.3887 Tons		11,963.9861 Tons	
		<i>Industrial</i>	<i>D&C</i>	<i>Industrial</i>	<i>D&C</i>
		191.965	3,299.4237	358.204	11,605.7821
		\$ 95,162.66	\$ 1,635,620.72	\$ 177,572.19	
Unit Charge	\$495.7292142 Per Ton				
			\$ 10,063,541.64	\$ 2,145,531.36	

City of Elizabeth (Contribution from Pumping Station) \$ 10,063,541.64

City of Elizabeth (Industry Tributary to Joint Meeting Trunk)

Flow:	17.7980 MG/Year at	\$ 548.0845204	9,754.81
BOD:	36.8862 Tons/Year at	832.4190349	30,704.78
TSS:	11.3553 Tons/Year at	495.7292142	5,629.15

Joint Meeting Industrial	2,145,531.36
Subtotal	\$ 12,255,161.74

Total 2018 Budget	\$ 34,623,752.00
Subtotal (above)	(12,255,161.74)
Subtotal (EDU's)	\$ 22,368,590.26

Joint Meeting EDU's (X + Y) + Elmora EDU's (X) = \$ 22,368,590
 (Y = Additional Assessment to Member Municipalities for Trunk Sewer O&M)
 152,243 (X + \$7.273404032) + 3905 (X) = \$ 22,368,590

Equivalent Units-Member Municipalities 152,243

Elmora EDU's = 3,905 \$136.1609845150 Per Unit = X
 \$143.4343885470 Per Unit = X+Y

Joint Meeting EDU Assessment \$ 21,836,881.62
 Elmora Area Assessment \$ 531,708.64

Total Anticipated Payment from the City of Elizabeth

Pumping Station	\$ 10,063,541.64
Elmora EDU's	531,708.64
Elmora Industrial	46,088.74
	<hr/>
	\$ 10,641,339.02

Total Anticipated Payment from Member Municipalities

EDU's	21,836,881.62
Industrial	2,145,531.36
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	\$ 23,982,412.98

Estimated Percent Contribution of Treatment Plant, Sludge Dewatering and Sludge Drying Facility Budgets by
 City of Elizabeth
 \$ 10,641,339.02 / \$ 33,487,883.00 = 31.7766848%

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

Municipality	Capacity By Contract		Base Year - 1982		Base Year - 1982		Base Year - 1982		Base Year - 1982	
	(MGD)	(Percent)	(GPD) ³	(Percent)	(GPD) ⁴	(Percent)	(GPD)	(Percent)	(GPD)	(Percent)
East Orange	5.50	4.88%	70,747	2.11%	44,022	2.21%	3,007,440	5.79%	218,160	0.64%
Hillside	12.20	10.83%	79,012	2.36%	24,037	1.65%	1,185,120	2.28%	1,833,097	3.48%
Irvington	18.61	16.52%	1,115,672	33.31%	577,328	39.63%	8,612,640	16.57%	10,477,097	19.89%
Maplewood	7.08	6.29%	389,078	11.62%	144,077	9.89%	5,449,680	10.48%	2,934,009	5.57%
Millburn	6.00	5.33%	191,609	5.72%	111,299	7.64%	2,729,520	5.25%	3,602,984	6.84%
Newark	15.50	13.76%	234,484	7.00%	187,506	9.41%	1,959,540	3.77%	1,915,875	5.62%
Roselle Park	9.44	8.38%	106,187	3.17%	47,637	3.27%	1,576,080	3.03%	2,433,594	4.62%
South Orange	7.00	6.22%	410,876	12.27%	61,331	4.21%	2,183,760	4.20%	2,849,728	5.41%
Summit	7.50	6.66%	171,657	5.13%	47,492	3.26%	3,651,120	7.02%	2,481,002	4.71%
Union	10.30	9.14%	329,127	9.83%	171,319	11.76%	14,534,640	27.96%	12,868,551	24.43%
West Orange	13.50	11.99%	250,811	7.48%	103,141	7.08%	7,097,040	13.65%	9,897,671	18.79%
	112.63	100.00%	3,349,260	100.00%	1,456,940	100.01%	51,986,580	100.00%	52,675,200	100.00%
					1,993,643				34,103,880	

(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) 2017 - Infiltration related to base year total = 1.994 MGD / 52.79 MGD = 3.7723054%

- Adjusted for period 11/1/2016 - 10/31/2017; (3.7723054% x 14,077,1990 = 531.73 MG / Year / 365 = 1,456,940 GPD)

(5) 2017 inflow adjusted for period 11/1/2016 - 10/31/2017 - (51.31" / 33.22") x (34,103,880) = 52,675,200 GPD

Table IV - A
 Joint Meeting of Essex and Union Counties
 Adjusted 2017 - Summary of Infiltration and Inflow

Municipality	Phase IIB			Phase IIB			2017		2017	
	SSES Infiltration (GPD)	2016 Infiltration (GPD)	2017 Infiltration Removed (GPD)	2017 Infiltration (GPD)	SSES Inflow (GPD)	2016 Inflow (GPD)	2017 Inflow Removed (GPD)	2017 Inflow (GPD)	2017 Inflow (GPD)	2017 Inflow (GPD)
East Orange	70,747	44,022	-	44,022	3,007,440	218,160	-	-	218,160	218,160
Hillside	79,012	32,980	-	32,980	1,185,120	1,185,120	-	-	1,185,120	1,185,120
Irvington	1,115,672	790,023	-	790,023	8,612,640	7,594,605	812,160	812,160	6,782,445	6,782,445
Maplewood	389,078	197,233	-	197,233	5,449,680	2,113,200	215,280	215,280	1,897,920	1,897,920
Millburn	191,609	152,240	-	152,240	2,729,520	2,333,520	-	-	2,333,520	2,333,520
Newark	234,484	187,506	-	187,506	1,959,540	1,915,875	-	-	1,915,875	1,915,875
Roselle Park	106,187	65,147	-	65,147	1,576,080	1,576,080	-	-	1,576,080	1,576,080
South Orange	410,876	83,906	-	83,906	2,183,760	2,192,400	347,760	347,760	1,844,640	1,844,640
Summit	171,657	64,916	-	64,916	3,651,120	1,604,880	-	-	1,604,880	1,604,880
Union	329,127	234,523	-	234,523	14,534,640	8,331,840	-	-	8,331,840	8,331,840
West Orange	250,811	141,147	-	141,147	7,097,040	6,413,400	-	-	6,413,400	6,413,400
Total	3,349,260	1,993,643	-	1,993,643	51,986,580	35,479,080	1,375,200	1,375,200	34,103,880	34,103,880

Table V

Joint Meeting of Essex and Union Counties

Cost Allocation - Flow, BOD & TSS with Infiltration / Inflow

	Total	Domestic & Commercial	Industrial
Flow	14,077.1990 MG	13,723.4420 MG	353.7570 MG
	\$8,278,565.21	\$8,056,132.32	
Infiltration	3.7772305%	518.37	\$222,432.89
Inflow	15.0318966%	2,062.89	13.36
		\$1,210,987.36	53.18
BOD	at \$832.4190349 Per Ton	9,643.4893 Tons	2,096.9322 Tons
		\$8,027,424.06	\$1,745,526.28
TSS	at \$495.7292142 Per Ton	11,605.7821 Tons	358.2040 Tons
		\$5,753,325.24	\$177,572.19
Total	\$23,982,412.97 ¹	\$21,836,881.62	\$2,145,531.36

(1) Amount anticipated from Members after allocation of 31.7766848% to City of Elizabeth \$ 10,641,339.02

"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)

"2016 - 2017"

Infiltration: 1.994 MGD / 52.79 MGD = 3.77723054% X 531.73 MG / Year

(November 1, 2016 - October 31, 2017)

Inflow: Rainfall = 51.31 Inches X 50 MG X 82.482% = 2,116.07 MG / Year

Total D&C	\$21,836,881.62
Less: Infiltration	(304,301.01)
Less: Inflow	(1,210,987.36)
Net after infiltration and inflow	\$20,321,593.25
Equivalent Dwelling Units	152,243
User Charge Per Unit	\$133.48129799071

Table VI
 Joint Meeting of Essex and Union Counties
 Estimated Annual Operation Expenses To Member Municipalities
 2018

Municipality	Dwelling Units	User Charge		Domestic & Commercial			Total Cost	Unit Cost
		Dwelling \$	Per Unit	Infiltration Percent ¹	Infiltration Amount	Inflow Percent ²		
East Orange	7,215	\$963,067.57	\$6,725.05	2.21%	\$7,750.32	0.64%	\$977,542.94	\$135.4876
Hillside	8,565	1,143,267.32	5,020.97	1.65%	42,142.36	3.48%	1,190,430.65	138.9878
Irvington	26,896	3,590,112.99	120,594.49	39.63%	240,865.39	19.89%	3,951,572.87	146.9205
Maplewood	9,568	1,277,149.06	30,095.37	9.89%	67,452.00	5.57%	1,374,696.43	143.6765
Millburn	9,835 ³	1,312,788.57	23,248.60	7.64%	82,831.54	6.84%	1,418,868.71	144.2673
Newark	17,427	2,326,178.58	28,634.73	9.41%	68,057.49	5.62%	2,422,870.80	139.0297
Roselle Park	4,752	634,303.13	9,950.64	3.27%	55,947.62	4.62%	700,201.39	147.3488
South Orange	8,312	1,109,496.55	12,811.07	4.21%	65,514.42	5.41%	1,187,822.04	142.9045
Summit	14,385 ⁴	1,920,128.47	9,920.21	3.26%	57,037.50	4.71%	1,987,086.18	138.1360
Union	25,109	3,351,581.91	35,785.80	11.76%	295,844.21	24.43%	3,683,211.92	146.6889
West Orange	20,179	2,693,519.11	21,544.51	7.08%	227,544.52	18.79%	2,942,608.14	145.8253
	152,243	\$20,321,593.26	\$304,331.44	100.01%	\$1,210,987.37	100.00%	\$21,836,912.07	\$143.4346

(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 (3754)

Table VI (Continued)
 Joint Meeting of Essex and Union Counties
 Estimated Annual Operation Expenses To Member Municipalities
 2018

Municipality	Industrial										Total Cost
	BOD (Tons / Year)	BOD ¹ (\$/Year)	TSS (Tons / Year)	TSS ² (\$/Year)	Dry Weather	Infiltration 3.777231%	Inflow 15.031897%	Total	Flow ³ (\$/Year)	Total	
East Oranges	0.0000	\$0.00	0.0000	\$0.00	0.00	0.00	0.00	0.00	\$0.00	0.00	\$0.00
Hillside	616.3351	513,049.07	91.9129	45,563.91	82.65	3.85	15.30	101.80	64,008.47	101.80	622,621.45
Irvington	1,063.8054	885,531.86	40.4221	20,038.42	67.87	3.16	12.57	83.60	52,562.29	83.60	958,132.57
Maplewood	8.4989	7,074.65	3.2380	1,605.17	7.06	0.33	1.31	8.69	5,463.41	8.69	14,143.23
Millburn	0.0000	0.00	0.0000	0.00	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	0.00
Roselle Park	0.1468	122.20	0.2802	138.90	0.52	0.02	0.10	0.64	402.41	0.64	663.51
South Orange	0.0000	0.00	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summit ⁴	32.0245	26,657.80	42.0662	20,853.44	42.78	1.99	7.92	52.69	33,127.54	52.69	80,638.78
Union	376.1215	313,090.70	180.2846	89,372.34	86.35	4.02	15.99	106.35	66,868.76	106.35	469,331.80
West Orange	0.0000	0.00	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2,096.9322	\$1,745,526.28	358.2040	\$177,572.18	287.22	13.36	53.18	353.76	\$222,432.89	353.76	\$2,145,551.35

(1) At \$832.4190349/Ton
 (2) At \$495.7292142/Ton
 (3) At \$628.7731004/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
2018

Domestic & Commercial					
Municipality	Total Assessments ¹	User Charge Domestic Sewage 133.481298	User Charges Industrial	Infiltration / Inflow Charges	Assessment Percentage
East Orange	\$977,542.94	\$963,067.57	\$0.00	\$14,475.37	4.0761%
Hillside	1,813,052.10	1,143,267.32	622,621.45	47,163.33	7.5599%
Irvington	4,909,705.44	3,590,112.99	958,132.57	361,459.88	20.4721%
Maplewood	1,388,839.66	1,277,149.06	14,143.23	97,547.37	5.7911%
Millburn	1,418,868.71	1,312,788.57	0.00	106,080.14	5.9163%
Newark	2,422,870.80	2,326,178.58	0.00	96,692.22	10.1027%
Roselle Park	700,864.90	634,303.13	663.51	65,898.26	2.9224%
South Orange	1,187,822.04	1,109,496.55	0.00	78,325.49	4.9529%
Summit	2,067,724.96	1,920,128.47	80,638.78	66,957.71	8.6218%
Union	4,152,543.72	3,351,581.91	469,331.80	331,630.01	17.3149%
West Orange	2,942,608.14	2,693,519.11	0.00	249,089.03	12.2698%
	<u>\$23,982,443.42</u>	<u>\$20,321,593.26</u>	<u>\$2,145,531.35</u>	<u>\$1,515,318.81</u>	<u>100.0000%</u>
Elizabeth	10,641,306.58				
Total	<u><u>\$34,623,750.00</u></u>				

(1) Reflects anticipated payment of \$10,641,306.58 from the City of Elizabeth which is 31.7766848% of allocation from Treatment Plant, Sludge Dewatering, and Sludge Drying budget. Exact 2018 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 2018 Assessment with 2017 Assessment

Municipality	2017	2018		Comparison	
				Amount	Percentage
East Orange	\$941,419.13	\$977,542.94	(+)	\$36,123.81	3.84%
Hillside	1,751,338.85	1,813,052.10	(+)	61,713.25	3.52%
Irvington	4,847,082.98	4,909,705.44	(+)	62,622.46	1.29%
Maplewood	1,326,502.48	1,388,839.66	(+)	62,337.18	4.70%
Millburn	1,345,523.15	1,418,868.71	(+)	73,345.56	5.45%
Newark	2,318,908.63	2,422,870.80	(+)	103,962.17	4.48%
Roselle Park	660,409.75	700,864.90	(+)	40,455.15	6.13%
South Orange	1,135,762.29	1,187,822.04	(+)	52,059.75	4.58%
Summit	1,999,182.81	2,067,724.96	(+)	68,542.15	3.43%
Union	3,883,480.29	4,152,543.72	(+)	269,063.43	6.93%
West Orange	2,736,295.27	2,942,608.14	(+)	206,312.87	7.54%
	<u>\$22,945,905.63</u>	<u>\$23,982,443.42</u>	(+)	<u>\$1,036,537.79</u>	<u>4.52%</u>
Elizabeth	10,069,924.75	10,641,306.58	(+)	\$ 571,381.83	5.67%
Total	<u>\$33,015,830.38</u>	<u>\$34,623,750.00</u>	(+)	<u>\$1,607,919.62</u>	<u>4.87%</u>

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

City of Elizabeth percentage	
2014	34.17652380%
2015	30.67912420%
2016	28.64359670%
2017	31.53144370%

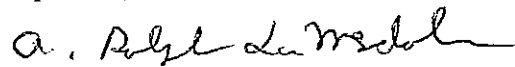
Table III, IV, V, VI, and VII, have been prepared to reflect the Domestic Sewer Usage and Industrial User assessment to each municipality for 2018 as a result of the Agreement with the City of Elizabeth which requires 31.7766848% of the 2018 Treatment Plant, Sludge Dewatering and Sludge Drying Budget to be paid in Quarterly assessments with adjustments made following the determination of the actual percentage of contribution for each quarter. The 31.7766848% 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 2018 are apportioned as follows:

	<u>2018</u>	<u>2017</u>		<u>2018</u>	<u>2017</u>
East Orange	4.0761%	4.1028%	Roselle Park	2.9224%	2.8781%
Hillside	7.5599%	7.6325%	South Orange	4.9529%	4.9497%
Irvington	20.4721%	21.1240%	Summit	8.6218%	8.7126%
Maplewood	5.7911%	5.7810%	Union	17.3149%	16.9245%
Millburn	5.9163%	5.8639%	West Orange	12.2698%	11.9249%
Newark	10.1027%	10.1060%	Total	<u>100.0000%</u>	<u>100.0000%</u>

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
2018 Budget**

	<u>Treatment Plant</u>	<u>Dewatering Facility</u>	<u>Drying Facility</u>	<u>Sewer</u>	<u>Total</u>
Electric Service	\$ 1,066,415	\$ 124,503	\$ 9,083	\$ -	\$ 1,200,001
Gas Service	408,200	100,000	-	-	508,200
Fuel, Oil & Kerosene	61,000	20,500	-	-	81,500
Water Service	80,000	56,000	3,500	-	139,500
Chemicals	2,292,788	623,900	6,800	9,000	2,932,488
Sludge Disposal	-	3,402,000	-	-	3,402,000
Insurance	618,299	123,660	57,707	24,732	824,398
Administration	2,304,059	1,308,447	10,000	253,760	3,876,266
Labor	5,723,464	1,105,350	139,688	16,869	6,985,371
Benefits	5,174,555	774,372	98,316	64,558	6,111,801
Equipment	469,000	393,500	-	-	862,500
Printing & Stationery	21,000	2,000	-	1,000	24,000
Maintenance, Supplies & Spare Parts	1,955,000	789,750	5,000	601,250	3,351,000
Screening Disposal	180,000	-	-	-	180,000
Reserve Contingency	180,000	-	-	-	180,000
Miscellaneous Expenses	375,727	87,500	-	120,000	583,227
Technical & Professional Services	1,278,300	50,000	-	25,000	1,353,300
Replacement Fund	1,250,000	-	-	-	1,250,000
NJPDES & Miscellaneous Permit Fee	741,500	17,000	-	19,700	778,200
	<u>\$ 24,179,307</u>	<u>\$ 8,978,482</u>	<u>\$ 330,094</u>	<u>\$ 1,135,869</u>	<u>\$ 34,623,752</u>
	69.83%	25.93%	0.95%	3.29%	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	\$ 4,731,064	80%	\$ 3,784,851	10%	\$ 473,106	10%	\$ 473,107
Power	1,066,415	40%	\$ 426,566	5%	\$ 53,321	55%	\$ 586,528
Chlorine	1,056,000	40%	\$ 422,400			60%	\$ 633,600
Maintenance, Equipment, Supplies, Spare Parts, & Replacement Fund	3,854,000	28%	\$ 1,079,120	27%	\$ 1,040,580	45%	\$ 1,734,300
Fuel, Oil & Kerosene	61,000	40%	\$ 24,400	30%	\$ 18,300	30%	\$ 18,300
Administration, Labor & Benefits (Payroll Retirement)	13,202,078	40%	5,280,831	10%	\$ 1,320,208	50%	\$ 6,601,039
Sludge Processing 2	203,750			50%	\$ 101,875	50%	\$ 101,875
Total	<u>\$24,174,307</u>		<u>\$ 11,018,168</u>		<u>\$ 3,007,390</u>		<u>\$ 10,148,749</u>
	100%		45.5780097%		12.4404393%		41.9815510%

(1) General Expenditures
(From the Approved Budget)

(2) Sludge Processing

Insurance	\$ 618,299	Polymer	\$ 170,000
Technical & Professional Services	1,278,300	K2MnO4	33,750
Stationery & Printing	21,000		
Gas	408,200		
Water	80,000		
Miscellaneous	375,727		
Service Contracts	180,000		
Permit Fees	741,500		
Sodium Bisulfite & Misc. Chemicals	1,028,038		
	<u>\$4,731,064</u>		<u>\$ 203,750</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	\$ 24,174,307	\$ 11,018,168	\$ 3,007,390	\$10,148,749
Dewatering Facility	8,978,482		4,489,241	4,489,241
Drying Facility	330,094		165,047	165,047
	<u>\$ 33,482,883</u>	<u>\$ 11,018,168</u>	<u>\$ 7,661,678</u>	<u>\$14,803,037</u>
Subtotal	100.00%	32.9068677%	22.8823725%	44.2107598%
Sewers I	\$ 1,135,869			
Total	<u>\$ 34,623,752</u>			

(1) Joint Meeting Members Only

JOINT MEETING OF ESSEX & UNION COUNTIES

**INDUSTRIAL USER CHARGE - 2018
SUMMARY**

MUNICIPALITY	FLOW (MG)	LOADINGS	
		BOD (tons)	TSS (tons)
HILLSIDE	101.799	616.33512813	91.91284650
IRVINGTON	83.595	1063.80540570	40.42206597
MAPLEWOOD	8.689	8.49889785	3.23797998
MURRAY HILL	15.613	0.52451094	1.79361708
ROSELLE PARK	0.640	0.14678400	0.28022400
SUMMIT	37.073	31.49996316	40.27258398
UNION	106.348	376.12151502	180.28459572
<i>MEMBERS TOTAL</i>	353.757	2096.93220480	358.20391323
<i>ELIZABETH</i>	167.679	1789.38085623	203.32031790
GRAND TOTAL	521.436	3886.31306103	561.52423113

MUNICIPALITY	FLOW	COSTS		
		BOD	TSS	TOTAL
HILLSIDE	\$64,008.47	\$513,049.09	\$45,563.88	\$622,621.45
IRVINGTON	\$52,562.29	\$885,531.87	\$20,038.40	\$958,132.56
MAPLEWOOD	\$5,463.41	\$7,074.64	\$1,605.16	\$14,143.22
MURRAY HILL	\$9,817.03	\$436.61	\$889.15	\$11,142.80
ROSELLE PARK	\$402.41	\$122.19	\$138.92	\$663.52
SUMMIT	\$23,310.51	\$26,221.17	\$19,964.30	\$69,495.97
UNION	\$66,868.76	\$313,090.71	\$89,372.34	\$469,331.81
<i>MEMBERS TOTAL</i>	\$222,432.89	\$1,745,526.28	\$177,572.14	\$2,145,531.31
<i>ELIZABETH</i>	\$91,902.26	\$1,489,514.69	\$100,791.82	\$1,682,208.77
GRAND TOTAL	\$314,335.15	\$3,235,040.97	\$278,363.97	\$3,827,740.08

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2018
COST FACTORS

	FLOW	BOD	TSS
MEMBER MUNICIPALITIES	\$628.7731004	\$832.4190349	\$495.7292142
ELIZABETH	\$548.0845204	\$832.4190349	\$495.7292142

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2018

Municipality: HILLSIDE

IU #	INDUSTRY	SITE	Concentration		Cost Factors			ANNUAL PAYMENT
			BOD (mg/l)	TSS (mg/l)	Flow per MG (\$628.7731004)	BOD per Ton (\$832.4190349)	TSS per Ton (\$495.7292142)	
1042	GEC Marconi / BAE	1	2	11	7.522	0.0627	0.3450	
	Totals:				7.522	0.0627	0.3450	
	Cost Analysis:				\$4,729.63	\$52.22	\$171.04	\$4,952.90
1050	Manhattan Drug Co.	4	484	244	0.547	1.1040	0.5566	
	Totals:				0.547	1.1040	0.5566	
	Cost Analysis:				\$343.94	\$918.99	\$275.90	\$1,538.83
1094	AAK Food Service (Formerly Oasis Foods)	3 99	2356 220	776 188	8.997 0.865	88.3912 0.7936	29.1136 0.6781	
	Totals:				9.862	89.1848	29.7917	
	Cost Analysis:				\$6,200.96	\$74,239.09	\$14,768.61	\$95,208.66
1090	Union Beverages	1 2	1599 132	165 99	73.797 1.429	492.0659 0.7866	50.7760 0.5899	
	Totals:				75.226	492.8524	51.3660	
	Cost Analysis:				\$47,300.09	\$410,259.74	\$25,463.61	\$483,023.44
1091	Hillside Beverage	2 99	1174 220	40 188	4.428 0.155	21.6775 0.1422	0.7386 0.1215	
	Totals:				4.583	21.8198	0.8601	
	Cost Analysis:				\$2,881.67	\$18,163.24	\$426.38	\$21,471.28
1092	A&H Products	1 99	607 220	394 188	2.722 0.156	6.8899 0.1431	4.4722 0.1223	
	Totals:				2.878	7.0330	4.5945	
	Cost Analysis:				\$1,809.61	\$5,854.41	\$2,277.62	\$9,941.65
1093	Sam Hak Foods	1 99	909 220	937 188	1.112 0.069	4.2151 0.0633	4.3449 0.0541	
	Totals:				1.181	4.2784	4.3990	
	Cost Analysis:				\$742.58	\$3,561.40	\$2,180.71	\$6,484.69
HILLSIDE TOTALS					101.7990	616.3351	91.9128	
					\$64,008.47	\$513,049.09	\$45,563.88	\$622,621.45

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2018

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	
					\$628.73	\$32.41	\$495.72	
2066	Wayne County Foods	1	1982	95	0.154	1.2728	0.0610	
		99	220	188	0.445	0.4082	0.3489	
	Totals:				0.599	1.6810	0.4099	
	Cost Analysis:				\$376.64	\$1,399.33	\$203.18	\$1,979.15
2072	Clean-Tex Services	1	207	97	45.168	38.9886	18.2700	
		99	220	188	0.344	0.3156	0.2697	
	Totals:				45.512	39.3042	18.5397	
	Cost Analysis:				\$28,616.72	\$32,717.52	\$9,190.66	\$70,524.91
2076	International Vitamin	1	921	98	3.226	12.3897	1.3183	
	Totals:				3.226	12.3897	1.3183	
	Cost Analysis:				\$2,028.42	\$10,313.40	\$653.54	\$12,995.36
2078	City Barrel	1	29	9	0.425	0.0514	0.0160	
		99	220	188	0.045	0.0413	0.0353	
	Totals:				0.470	0.0927	0.0512	
	Cost Analysis:				\$295.52	\$77.15	\$25.40	\$398.07
3055	Maplewood Beverage	2	7275	142	33.289	1,009.880	19.7117	
		99	220	188	0.499	0.4578	0.3912	
	Totals:				33.788	1,010.338	20.1029	
	Cost Analysis:				\$21,244.99	\$841,024.46	\$9,965.62	\$872,235.06
IRVINGTON TOTALS					83.5950	1,063.8054	40.4221	
					\$52,562.29	\$885,531.87	\$20,038.40	\$958,132.56

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JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2018

Municipality: MAPLEWOOD

IU #	INDUSTRY	SITE	Concentration		Cost Factors			ANNUAL PAYMENT
			BOD (mg/l)	TSS (mg/l)	Flow per MG	BOD per Ton	TSS per Ton	
					\$628,778,1004	\$832,419,0349	\$495,729,2142	
3020	Gleason Cleaners	1	172	41	0.509	0.3651	0.0870	
		99	220	188	0.104	0.0954	0.0815	
	Totals:				0.613	0.4605	0.1686	
	Cost Analysis:				\$385.44	\$383.32	\$83.56	\$852.31
3033	NJ Transit - Hilton Gar.	3a	158	200	2.781	1.8323	2.3194	
		4	433	39	3.113	5.6209	0.5063	
	Totals:				5.894	7.4532	2.8256	
	Cost Analysis:				\$3,705.99	\$6,204.15	\$1,400.74	\$11,310.88
3046	UniClean	1	51	13	2.010	0.4275	0.1090	
		99	220	188	0.172	0.1578	0.1348	
	Totals:				2.182	0.5853	0.2438	
	Cost Analysis:				\$1,371.98	\$487.18	\$120.86	\$1,980.02
MAPLEWOOD TOTALS					8.6890	8.4989	3.2380	
					\$5,463.41	\$7,074.64	\$1,605.16	\$14,143.22

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2018

Municipality: MURRAY HILL

IU #	INDUSTRY	SITE	Cost Factors					ANNUAL PAYMENT
			Concentration	Flow per MG	BOD per Ton	TSS per Ton		
				\$628.7731004	\$832.4190349	\$495.7292142		
			BOD (mg/l)	TSS (mg/l)	FLOW (MG)	BOD (Tons)	TSS (Tons)	
5010	Alcatel-Lucent USA	1	8	28	14.964	0.4992	1.7472	
	Totals:				14.964	0.4992	1.7472	
	Cost Analysis:				\$9,408.96	\$415.54	\$866.14	\$10,690.64
5021	FRC-Electrical Ind	3	3	12	0.630	0.0079	0.0315	
	4(99)		220	188	0.019	0.0174	0.0149	
	Totals:				0.649	0.0253	0.0464	
	Cost Analysis:				\$408.07	\$21.07	\$23.01	\$452.16
MURRAY HILL TOTALS					15.6130	0.5245	1.7936	
					\$9,817.03	\$436.61	\$889.15	\$11,142.80

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2018

Municipality: ROSELLE PARK

IU #	INDUSTRY	SITE	Concentration		Cost Factors			ANNUAL PAYMENT
			BOD (mg/l)	TSS (mg/l)	Flow per MG	BOD per Ton	TSS per Ton	
6005	Hexacon Electric	2	55	105	0.640	0.1468	0.2802	
	Totals:				0.640	0.1468	0.2802	
	Cost Analysis:				\$402.41	\$122.19	\$138.92	\$663.52
ROSELLE PARK TOTALS					0.6400	0.1468	0.2802	
					\$402.41	\$122.19	\$138.92	\$663.52

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2018

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	
					\$628,773.1004	\$832,419.349	\$495,729.2142	
5511	Novartis Groundwater	4	1	2	0.796	0.0033	0.0066	
	Totals:				0.796	0.0033	0.0066	
	Cost Analysis:				\$500.50	\$2.76	\$3.29	\$506.56
5513	Celgene Corporation	1	410	682	10.197	17.4338	28.9997	
	Totals:				10.197	17.4338	28.9997	
	Cost Analysis:				\$6,411.60	\$14,512.24	\$14,375.98	\$35,299.81
5514	Celgene West 556	03A	119	94	23.418	11.6207	9.1794	
		99	220	188	2.6620	2.4421	2.0869	
	Totals:				26.080	14.0628	11.2663	
	Cost Analysis:				\$16,398.40	\$11,706.17	\$5,585.03	\$33,689.60
SUMMIT TOTALS					37.0730	31.5000	40.2726	
					\$23,310.51	\$26,221.17	\$19,964.30	\$69,495.97

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2018

Municipality: UNION

IU #	INDUSTRY	SITE	Concentration		Cost Factors			ANNUAL PAYMENT
			BOD (mg/l)	TSS (mg/l)	Flow per MG (\$628.7731004)	BOD per Ton (\$832.4190349)	TSS per Ton (\$495.7292142)	
7015	ACuPowder	3 (99) 4	220 104	188 112	0.014 1.873	0.0128 0.8123	0.0110 0.8748	
	Totals:				1.887	0.8251	0.8857	
	Cost Analysis:				\$1,186.49	\$686.85	\$439.09	\$2,312.43
7035	American Products							
7070	Durex	1	99	228	3.148	1.2996	2.9930	
	Totals:				3.148	1.2996	2.9930	
	Cost Analysis:				\$1,979.38	\$1,081.80	\$1,483.71	\$4,544.89
7077	Evoqua Water Tech	4	185	256	1.699	1.3107	1.8137	
	Totals:				1.699	1.3107	1.8137	
	Cost Analysis:				\$1,068.29	\$1,091.05	\$899.11	\$3,058.44
7080	Foremost Mfg	2	8	233	12.078	0.4029	11.7351	
	Totals:				12.078	0.4029	11.7351	
	Cost Analysis:				\$7,594.32	\$335.40	\$5,817.43	\$13,747.16
7092	International Paint	01A 99	5 220	5 188	6.200 0.023	0.1293 0.0211	0.1293 0.0180	
	Totals:				6.223	0.1504	0.1473	
	Cost Analysis:				\$3,912.86	\$125.17	\$73.02	\$4,111.05
7145	**1011 Morris Avenue Urban Renewal	5	4	6	15.325 15.325	0.2556 0.2556	0.3834 0.3834	
	Cost Analysis:				\$9,635.95	\$212.78	\$190.08	\$10,038.81
7155	Tessler & Weiss	22	94	239	1.061	0.4159	1.0574	
	Totals:				1.061	0.4159	1.0574	
	Cost Analysis:				\$667.13	\$346.20	\$524.20	\$1,537.52
7191	Cintas (Location 111)	1	417	364	26.418	45.9380	40.0994	
	Totals:				26.418	45.9380	40.0994	
	Cost Analysis:				\$16,610.93	\$38,239.66	\$19,878.42	\$74,729.01
7192	Merril Corporation	1	196	244	1.091	0.8917	1.1101	
	Totals:				1.091	0.8917	1.1101	
	Cost Analysis:				\$685.99	\$742.26	\$550.29	\$1,978.55
7193	Lioni Latticini	1 99	3312 220	583 188	7.930 0.288	109.5215 0.2642	19.2787 0.2258	
	Totals:				8.218	109.7858	19.5045	
	Cost Analysis:				\$5,167.26	\$91,387.76	\$9,668.94	\$106,223.95

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2018

Municipality: UNION

IU #	INDUSTRY	SITE	Concentration		Cost Factors			ANNUAL PAYMENT
			BOD (mg/l)	TSS (mg/l)	Flow per MG (\$625,773/1004)	BOD per Ton (\$632,419/349)	TSS per Ton (\$495,729/242)	
7194	BASF Corporation	1	11	357	0.103	0.0047	0.1533	
		99	220	188	0.968	0.8880	0.7589	
		Totals:			1.071	0.8928	0.9122	
		Cost Analysis:			\$673.42	\$743.16	\$452.21	
7195	Deep Foods	1	2230	981	20.889	194.2489	85.4521	
		3	1360	295	1.338	7.5881	1.6459	
		4	2275	649	0.718	6.8115	1.9431	
		5(99)	220	188	0.62	0.5688	0.4861	
		6(99)	220	188	0.056	0.0514	0.0439	
		2(99)	220	188	0.409	0.3752	0.3206	
		Totals:			24.030	209.6438	89.8918	
Cost Analysis:			\$15,109.42	\$174,511.52	\$44,561.98	\$234,182.91		
7196	Cintas Corporation	1	254	593	3.871	4.1001	9.5722	
		99	220	188	0.228	0.2092	0.1787	
		Totals:			4.099	4.3093	9.7510	
Cost Analysis:			\$2,577.34	\$3,587.10	\$4,833.85	\$10,998.30		
UNION TOTALS					106.3480	376.1215	180.2846	
					\$66,868.76	\$313,090.71	\$89,372.34	\$469,331.81

* American Products -ZERO Industrial Wastewater Discharge removed from Industrial User Charge.

** 1011 Morris Avenue Urban Renewal - Former Merck, Sharp, and Dohme, property sold in June 2017.

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2018

Municipality: ELIZABETH

IU #	INDUSTRY	SITE	Cost Factors					ANNUAL PAYMENT
			Concentration	Flow per MG	BOD per Ton	TSS per Ton		
				\$648.0845204	\$832.4190349	\$495.7292142		
			BOD (mg/l)	TSS (mg/l)	FLOW (MG)	BOD (Tons)	TSS (Tons)	
0192	Wild Flavors Inc.	1	813	70	0.080	0.2712	0.0234	
	Totals:				0.080	0.2712	0.0234	
	Cost Analysis:				\$43.85	\$225.77	\$11.58	\$281.19
0037	Deb-El Foods	1	2950	568	9.058	111.4270	21.4544	
	Totals:				9.058	111.4270	21.4544	
	Cost Analysis:				\$4,964.55	\$92,753.94	\$10,635.58	\$108,354.08
0062	Garcia Uniforms, Inc.	2	641	232	2.616	6.9925	2.5308	
		99	220	188	0.108	0.0991	0.0847	
	Totals:				2.724	7.0916	2.6155	
	Cost Analysis:				\$1,492.98	\$5,903.16	\$1,296.58	\$8,692.71
0067	Actavis (formerly Purepac)	3	497	153	17.798	36.8862	11.3553	
	Totals:				17.798	36.8862	11.3553	
	Cost Analysis:				\$9,754.81	\$30,704.76	\$5,629.15	\$46,088.72
0070	LORCO	2	9005	65	22.056	828.2215	5.9783	
	Totals:				22.056	828.2215	5.9783	
	Cost Analysis:				\$12,088.55	\$689,427.38	\$2,963.61	\$704,479.54
0075	Mastercraft Electroplating	99	220	188	0.024	0.0220	0.0188	
	Totals:				0.024	0.0220	0.0188	
	Cost Analysis:				\$13.15	\$18.33	\$9.33	\$40.81
0078	Magnolia Beef	1	367	139	0.166	0.2540	0.0962	
		99	220	188	0.161	0.1477	0.1262	
	Totals:				0.327	0.4017	0.2224	
	Cost Analysis:				\$179.22	\$334.42	\$110.27	\$623.91
0093	OENJ	4	9	21	9.666	0.3628	0.8465	
	Totals:				9.666	0.3628	0.8465	
	Cost Analysis:				\$5,297.78	\$301.97	\$419.61	\$6,019.37
0098	Olympia Trails	1	625	144	1.917	4.9962	1.1511	
		99	220	188	0.522	0.4789	0.4092	
	Totals:				2.439	5.4751	1.5603	
	Cost Analysis:				\$1,336.78	\$4,557.55	\$773.51	\$6,667.84
0100	Michaels Foods - North Avenue Facility	4	3658	418	33.245	507.1146	57.9480	
		4a	2386	293	3.639	36.2067	4.4462	
		4b	662	113	2.756	7.6080	1.2987	
		99	220	188	1.190	1.0917	0.9329	
	Totals:				40.830	552.0210	64.6258	
	Cost Analysis:				\$22,378.29	\$459,512.79	\$32,036.88	\$513,927.96

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2018

Municipality: ELIZABETH

IU #	INDUSTRY	SITE	Cost Factors					ANNUAL PAYMENT
			Concentration	Flow per MG	BOD per Ton	TSS per Ton		
				\$548.0845204	\$832.4190349	\$495.7292142		
			BOD (mg/l)	TSS (mg/l)	FLOW (MG)	BOD (Tons)	TSS (Tons)	
0105	Michaels Foods - Papetti Plaza Facility	2	1280	391	34.482	184.0511	56.2219	
		2a	828	197	3.485	12.0329	2.8629	
		2b	849	144	2.063	7.3037	1.2388	
		3	481	274	0.315	0.6318	0.3599	
		Totals:				40.3450	204.0195	60.6835
	Cost Analysis:			\$22,112.47	\$169,829.72	\$30,082.56	\$222,024.76	
0148	Superior Powder Coating	1	163	66	2.689	1.8277	0.7401	
		99	220	188	0.484	0.4440	0.3794	
		Totals:			3.173	2.2718	1.1195	
		Cost Analysis:			\$1,739.07	\$1,891.06	\$554.97	\$4,185.10
0195	Duro Hilex Poly LLC	1	631	129	4.230	11.1303	2.2754	
		2	108	127	1.992	0.8971	1.0549	
		3	404	636	3.739	6.2990	9.9163	
		Totals:			9.961	18.3264	13.2467	
	Cost Analysis:			\$5,459.47	\$15,255.25	\$6,566.76	\$27,281.48	
0165	Wakefern Food Corp.	2	194	314	0.847	0.6852	1.1090	
		3a	268	678	5.093	5.6917	14.3992	
		4	285	387	0.457	0.5431	0.7375	
		99 (7)	220	188	0.046	0.0422	0.0361	
		Totals:			6.443	6.9623	16.2818	
	Cost Analysis:			\$3,531.31	\$5,795.52	\$8,071.39	\$17,398.21	
0178	814 Americas	3	364	167	1.601	2.4301	1.1149	
		99	220	188	0.027	0.0248	0.0212	
		Totals:			1.628	2.4549	1.1361	
	Cost Analysis:			\$892.28	\$2,043.50	\$563.19	\$3,498.98	
0189	Prince Donut Co.	3	3697	580	0.846	13.0424	2.0461	
		99	220	188	0.132	0.1211	0.1035	
		Totals:			0.978	13.1634	2.1496	
	Cost Analysis:			\$536.03	\$10,957.50	\$1,065.63	\$12,559.16	
0194	*Erie Street	2	4	4	0.149	0.0025	0.0025	
		Totals:			0.149	0.0025	0.0025	
	Cost Analysis:			\$81.66	\$2.07	\$1.23	\$84.97	
ELIZABETH TOTALS					167.6790	1,789.3809	203.3203	
					\$91,902.26	\$1,489,514.69	\$100,791.82	\$1,682,208.77

*Erie Street (Former MGP Site) - Phase 2 discharge approval granted on 4/13/17.