

December 21, 2018

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 2019

I present herewith the 84th 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, 2017 through October 31, 2018. 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 2019. 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 2018, 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 22, 2017.

During 2018, 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 (2019) dwelling unit figures formulated by each municipality in 2018.

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, 2017, through October 31, 2018 and projected for a twelve (12) month period in 2019. 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 2019, 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, 2017, through October 31, 2018, and projected for 2019 and are based upon actual 2017-2018 operating statistics as well as a recent upgraded 2018 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	20,979.1390 MG/Year	57.4771 MGD
2.	BOD	17,818.6551 Tons/Year	97,636.4663 Lbs/Day
	TSS	14,526.7083 Tons/Year	79,598.4016 Lbs/Day
3.	Estimated Industrial Flow	491.9720 MG/Year	1.3479 MGD
4.	Estimated Industrial BOD	3,534.4733 Tons/Year	19,366.9770 Lbs/Day
5.	Estimated Industrial TSS	522.5614 Tons/Year	2,863.3501 Lbs/Day
6.	Estimated Total Operating Expenses in 2019		
			\$25,665,670 STP
			9,823,393 SDWF
			354,604 SDF
			1,107,022 Sewers
			<hr/> \$36,950,689 Total
7.	Estimated Total Dwelling Units in System		
			152,249 JM Members
			47,181 Elizabeth
			<hr/> 199,430 Total

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

Flow	32.6094522%
BOD	44.3137590%
Suspended Solids	23.0767888%

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 2019 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 2019

Treatment Plant

	<u>Total for 2019</u>		<u>Domestic & Commercial</u>		<u>Industrial</u>
Flow	20,979.1390	MG/Yr. ¹	20,487.1670	MG/Yr.	491.9720 MG/Yr.
BOD	17,818.6551	Tons/Yr. ¹	14,284.1818	Tons/Yr.	3,534.4733 Tons/Yr.
Suspended Solids	14,526.7083	Tons/Yr. ¹	14,004.1469	Tons/Yr.	522.5614 Tons/Yr.

(1) Based upon data from November 1, 2017 thru October 31, 2018 (365 days)

Cost Allocation

	<u>Total for 2019</u>	<u>Domestic & Commercial</u>	<u>Industrial</u>
Flow	\$11,686,793.00	\$11,412,731.00	\$274,062.00
BOD	15,881,460.50	12,731,245.00	3,150,215.50
Suspended Solids	8,270,413.50	7,972,906.00	297,507.50
	<u>\$35,838,667.00</u>	<u>\$32,116,882.00</u>	<u>\$3,721,785.00</u>
	100.000000%	89.61516900%	10.38483100%

Elizabeth Contribution

Flow	-	5,951.4280 MG/Yr.
BOD	-	6,488.4319 Tons/Yr.
TSS	-	3,599.3898 Tons/Yr.

Trunk Sewer Flow¹

	<u>Total for 2019</u>	<u>Domestic & Commercial</u>	<u>Industrial</u>
	15,027.7110 MG/Yr. ²	14,696.6670 MG/Yr.	331.044 MG/Yr.

(1) Based upon data from November 1, 2017 thru October 31, 2018 (365 days)

(2) (20,979.139 - 5,951.4280)

COST ALLOCATION

\$1,107,022.00	\$1,082,635.52	\$24,386.48
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Member municipalities will be assessed \$7.11 (\$1,082,635.52/152,249) for trunk sewer O&M per equivalent dwelling unit.

The estimated cost for treating industrial wastes has been determined to be \$557.07 per MG for flow, \$891.28 per ton of BOD, and \$569.33 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	\$274,062.00	/	491.9720	=	\$557.0682884	/MG
BOD	\$3,150,215.50	/	3,534.4733	=	\$891.2828681	/Ton
Suspended Solids	\$297,507.50	/	522.5614	=	\$569.3254419	/Ton

All industries within the member municipalities (excluding Elizabeth) will be required to pay an additional \$73.67/MG of flow for trunk sewer use (\$24,386.48/331.044 = \$73.665/MG). This brings the total flow cost to \$630.73/MG (\$557.068 + \$73.665) for the indicated industries of member municipalities.

Based upon the user charges for 2019, 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 2018 industrial waste survey of the service area. These are estimates for 2019 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 \$36,950,689.00 for 2019. 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 32.7933410% 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
2019

<u>Municipality</u>	<u>Dwelling Units ¹</u>	<u>User Charges Industrial</u>
East Orange	7,215	\$ -
Hillside	8,563	852,929
Irvington	26,799	771,330
Maplewood	9,568	13,334
Millburn	9,833 ⁴	-
Newark	17,427	-
Roselle Park	4,752	648
South Orange	8,311	-
Summit	14,739 ²	49,163 ³
Union	24,881	634,755
West Orange	20,161	-
Elizabeth	47,181	1,424,014
	<u>199,430</u>	<u>\$ 3,746,173</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 (3952)
- (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 11/1/2017-10/31/2018 and Projected Contribution for 2019

Flow:	Treatment Plant	Elizabeth Pumping Station		Joint Meeting	
	20,979.139 MG	5,951.428 MG		15,027.711 MG	
		Industrial	D&C	Industrial	D&C
		143.544	5,807.884	331.044	14,696.667
		\$ 79,963.81	\$ 3,235,388.00	\$ 208,800.59	\$ 9,269,682.60
Unit Charge \$ 557.0682884 Per MG for Elizabeth					
Unit Charge \$ 630.7336622 Per MG for Joint Meeting					
BOD:	17,818.6551 Tons	6,488.4319 Tons		11,330.2232 Tons	
		Industrial	D&C	Industrial	D&C
		1,365.4156	5,123.0163	2,131.7972	9,198.426
Unit Charge	\$891.2828681 Per Ton	\$ 1,216,971.53	\$ 4,566,056.66	\$ 1,900,034.32	
TSS:	14,526.7083 Tons	3,599.3898 Tons		10,927.3185 Tons	
		Industrial	D&C	Industrial	D&C
		139.2395	3,460.1503	374.6954	10,552.6231
Unit Charge	\$569.3254419 Per Ton	\$ 79,272.59	\$ 1,969,951.60	\$ 213,323.62	
		\$ 11,147,604.19		\$ 2,322,158.53	

City of Elizabeth (Contribution from Pumping Station) \$ 11,147,604.19

City of Elizabeth (Industry Tributary to Joint Meeting Trunk)

Flow:	17.3840 MG/Year at	\$ 557.0682884	9,684.08
BOD:	37.2605 Tons/Year at	891.2828681	33,209.65
TSS:	8.6265 Tons/Year at	569.3254419	4,911.29

Joint Meeting Industrial	2,322,158.53
Subtotal	\$ 13,517,567.74

Total 2019 Budget	\$ 36,950,689.00
Subtotal (above)	(13,517,567.74)
Subtotal (EDU's)	\$ 23,433,121.26

Joint Meeting EDU's (X + Y) + Elmora EDU's (X) = \$ 23,433,121
 (Y = Additional Assessment to Member Municipalities for Trunk Sewer O&M)
 152,249 (X + \$7.110953241) + 3905 (X) = \$ 23,433,121

Equivalent Units-Member Municipalities 152,249

Elmora EDU's = 3,905 \$ 143.1310484520 Per Unit = X
 \$ 150.2420016930 Per Unit = X+Y

Joint Meeting EDU Assessment \$ 22,874,194.52
 Elmora Area Assessment \$ 558,926.74

Total Anticipated Payment from the City of Elizabeth

Pumping Station	\$ 11,147,604.19
Elmora EDU's	558,926.74
Elmora Industrial	47,805.02
	<hr/>
	\$ 11,754,335.95

Total Anticipated Payment from Member Municipalities

EDU's	22,874,194.52
Industrial	2,322,158.53
	<hr/>
	\$ 25,196,353.05

Estimated Percent Contribution of Treatment Plant, Sludge Dewatering and Sludge Drying Facility Budgets by
 City of Elizabeth
 \$ 11,754,335.95 / \$ 35,843,667.00 = 32.7933410%

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 ¹		Base Year - 1982 Phase IIB - SSES ²		Base Year - 1982 Phase IIB - SSES ²		Base Year - 1982 Phase IIB - SSES ²	
			Infiltration (GPD) ³	(Percent)	SSES - November 2018 (GPD) ⁴	(Percent)	Inflow (GPD)	(Percent)	SSES - November 2018 (GPD) ⁵	(Percent)
					34,369				304,276	
East Orange	5.50	4.88%	70,747	2.11%	44,022	2.21%	3,007,440	5.79%	218,160	0.64%
					25,660				1,659,254	
Hillside	12.20	10.83%	79,012	2.36%	32,980	1.65%	1,185,120	2.28%	1,185,120	3.49%
					616,306				9,484,848	
Irvington	18.61	16.52%	1,115,672	33.31%	790,023	39.63%	8,612,640	16.57%	6,782,445	19.95%
					153,804				2,652,905	
Maplewood	7.08	6.29%	389,078	11.62%	197,233	9.89%	5,449,680	10.48%	1,897,920	5.58%
					118,814				3,261,456	
Millburn	6.00	5.33%	191,609	5.72%	152,240	7.64%	2,729,520	5.25%	2,333,520	6.86%
					146,340				2,681,431	
Newark	15.50	13.76%	234,484	7.00%	187,506	9.41%	1,959,540	3.77%	1,915,875	5.64%
					50,853				2,206,000	
Roselle Park	9.44	8.38%	106,187	3.17%	65,147	3.27%	1,576,080	3.03%	1,576,080	4.64%
					65,472				2,548,310	
South Orange	7.00	6.22%	410,876	12.27%	83,906	4.21%	2,183,760	4.20%	1,821,600	5.36%
					50,698				2,244,034	
Summit	7.50	6.66%	171,657	5.13%	64,916	3.26%	3,651,120	7.02%	1,604,880	4.72%
					182,886				11,533,955	
Union	10.30	9.14%	329,127	9.83%	234,523	11.76%	14,534,640	27.96%	8,245,440	24.26%
					110,105				8,966,629	
West Orange	13.50	11.99%	250,811	7.48%	141,147	7.08%	7,097,040	13.65%	6,413,400	18.86%
					1,555,307				47,543,098	
	112.63	100.00%	3,349,260	100.00%	1,993,643	100.01%	51,986,580	100.00%	33,994,440	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) 2018 - Infiltration related to base year total = 1.994 MGD / 52.79 MGD = 3.77723054%

- Adjusted for period 11/1/2017 - 10/31/2018; (3.77723054% x 15,027.7110 = 567.63 MG / Year / 365 = 1,555,307 GPD)

(5) 2018 inflow adjusted for period 11/1/2017 - 10/31/2018 - (46.46" / 33.22") x (33,994,440) = 47,543,098 GPD

Table IV - A
Joint Meeting of Essex and Union Counties
Adjusted 2018 - Summary of Infiltration and Inflow

Municipality	Phase IIB SSES Infiltration (GPD)	2017 Infiltration (GPD)	2018 Infiltration Removed (GPD)	2018 Infiltration (GPD)	Phase IIB SSES Inflow (GPD)	2017 Inflow (GPD)	2018 Inflow Removed (GPD)	2018 Inflow (GPD)
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	1,844,640	23,040	1,821,600
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	8,331,840	86,400	8,245,440
West Orange	250,811	141,147	-	141,147	7,097,040	6,413,400	-	6,413,400
Total	3,349,260	1,993,643	-	1,993,643	51,986,580	34,103,880	109,440	33,994,440

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

			<u>Total</u>	<u>Domestic & Commercial</u>	<u>Industrial</u>
Flow			15,027.7110 MG \$8,876,718.79	14,696.6670 MG \$8,667,918.20	331.0440 MG \$208,800.59
Infiltration	3.7772305%		567.63	555.13	12.5
Inflow	12.7501121%		1,916.05	1,873.84	42.21
BOD	at	\$891.2828681 Per Ton	11,330.2232 Tons \$10,098,433.83	9,198.4260 Tons \$8,198,399.51	2,131.7972 Tons \$1,900,034.32
TSS	at	\$569.3254419 Per Ton	10,927.3185 Tons \$6,221,200.43	10,552.6231 Tons \$6,007,876.81	374.6954 Tons \$213,323.62
Total			\$25,196,353.05 ¹	\$22,874,194.52	\$2,322,158.53

(1) Amount anticipated from Members after allocation of 32.7933410% to City of Elizabeth \$ 11,754,335.95

"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)

"2017 - 2018"

Infiltration: 1.994 MGD/52.79MGD = 3.77723054% X 15,027.7110 567.63 MG / Year
(November 1, 2017 - October 31, 2018)

Inflow: Rainfall = 46.46 Inches X 50 MG X 82.482% 1,916.05 MG / Year

Total D&C	\$22,874,194.52
Less: Infiltration	(327,409.03)
Less: Inflow	(1,105,168.39)
Net after infiltration and inflow	<u>\$21,441,617.10</u>
Equivalent Dwelling Units	152,249
User Charge Per Unit	\$140.83256441750

Table VI
Joint Meeting of Essex and Union Counties
Estimated Annual Operation Expenses To Member Municipalities
2019

Domestic & Commercial								
Municipality	Dwelling Units	User Charge		Infiltration		Inflow		Unit Cost
		\$ 140.83256442	Per Unit	Percent ¹	Amount	Percent ²	Amount	
East Orange	7,215	\$1,016,106.95		2.21%	\$7,235.74	0.64%	\$7,073.08	\$142.8158
Hillside	8,563	1,205,949.25		1.65%	5,402.25	3.49%	38,570.38	145.9678
Irvington	26,799	3,774,171.89		39.63%	129,752.20	19.95%	220,481.09	153.9015
Maplewood	9,568	1,347,485.98		9.89%	32,380.75	5.58%	61,668.40	150.6621
Millburn	9,833 ³	1,384,806.61		7.64%	25,014.05	6.86%	75,814.55	151.0867
Newark	17,427	2,454,289.10		9.41%	30,809.19	5.64%	62,331.50	146.1772
Roselle Park	4,752	669,236.35		3.27%	10,706.28	4.64%	51,279.81	153.8768
South Orange	8,311	1,170,459.44		4.21%	13,783.92	5.36%	59,237.03	149.6186
Summit	14,739 ⁴	2,075,731.17		3.26%	10,673.53	4.72%	52,163.95	145.0959
Union	24,881	3,504,055.04		11.76%	38,503.30	24.26%	268,113.85	153.1559
West Orange	20,161	2,839,325.33		7.08%	23,180.56	18.86%	208,434.76	152.3208
	152,249	\$21,441,617.11		100.01%	\$327,441.77	100.00%	\$1,105,168.40	\$22,874,227.28
								\$150.2422
(1) See Table IV - Infiltration for November of the Prior Year								\$143.4346 2018
(2) See Table IV - Inflow for November of the Prior Year								\$136.1075 2017
(3) Includes Livingston (396)								\$137.9068 2016
(4) Includes New Providence (3754)								\$130.4775 2015

Table VI (Continued)
Joint Meeting of Essex and Union Counties
Estimated Annual Operation Expenses To Member Municipalities
2019

Industrial										
Municipality	BOD (Tons / Year)	BOD ¹ (\$/Year)	TSS (Tons / Year)	TSS ² (\$/Year)	Flow (MG / Year)			Flow ³ (\$/Year)	Total Cost	
					Dry Weather	Infiltration 3.777231%	Inflow 12.750112%			Total
East Orange	0.0000	\$0.00	0.0000	\$0.00	0.00	0.00	0.00	0.00	\$0.00	\$0.00
Hillside	856.2596	763,169.51	64.5977	36,777.11	70.12	3.17	10.71	84.00	52,982.26	852,928.88
Irvington	787.3289	701,732.76	25.8561	14,720.54	72.63	3.29	11.09	87.00	54,876.35	771,329.65
Maplewood	7.4797	6,666.53	3.1791	1,809.94	6.43	0.29	0.98	7.70	4,856.65	13,333.12
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	0.1741	155.17	0.1869	106.41	0.51	0.02	0.08	0.61	387.27	648.85
South Orange	0.0000	0.00	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summit ⁴	11.1160	9,907.50	14.8341	8,445.43	40.78	1.85	6.23	48.85	30,810.08	49,163.01
Union	469.4389	418,402.85	266.0415	151,464.19	85.87	3.89	13.12	102.88	64,887.99	634,755.03
West Orange	0.0000	0.00	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2,131.7972	\$1,900,034.32	374.6954	\$213,323.62	276.33	12.50	42.21	331.04	\$208,800.59	\$2,322,158.53

(1) At \$891.2828681/Ton

(2) At \$569.3254419/Ton

(3) At \$630.7336622/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
2019

Domestic & Commercial					
Municipality	Total Assessments ¹	User Charge	User Charges Industrial	Infiltration / Inflow Charges	Assessment Percentage
		Domestic Sewage 140.8325644			
East Orange	\$1,030,415.77	\$1,016,106.95	\$0.00	\$14,308.82	4.0895%
Hillside	2,102,850.76	1,205,949.25	852,928.88	43,972.63	8.3458%
Irvington	4,895,734.83	3,774,171.89	771,329.65	350,233.29	19.4303%
Maplewood	1,454,868.25	1,347,485.98	13,333.12	94,049.15	5.7741%
Millburn	1,485,635.21	1,384,806.61	0.00	100,828.60	5.8962%
Newark	2,547,429.79	2,454,289.10	0.00	93,140.69	10.1103%
Roselle Park	731,871.29	669,236.35	648.85	61,986.09	2.9047%
South Orange	1,243,480.39	1,170,459.44	0.00	73,020.95	4.9352%
Summit	2,187,731.66	2,075,731.17	49,163.01	62,837.48	8.6827%
Union	4,445,427.22	3,504,055.04	634,755.03	306,617.15	17.6431%
West Orange	3,070,940.65	2,839,325.33	0.00	231,615.32	12.1881%
	\$25,196,385.81	\$21,441,617.11	\$2,322,158.53	\$1,432,610.17	100.0000%
Elizabeth	11,754,302.19				
Total	\$36,950,688.00				

(1) Reflects anticipated payment of \$11,754,302.19 from the City of Elizabeth which is 32.793341% of allocation from Treatment Plant, Sludge Dewatering, and Sludge Drying budget. Exact 2019 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 2019 Assessment with 2018 Assessment

Municipality	2018	2019		Comparison	
				Amount	Percentage
East Orange	\$977,542.94	\$1,030,415.77	(+)	\$52,872.83	5.41%
Hillside	1,813,052.10	2,102,850.76	(+)	289,798.66	15.98%
Irvington	4,909,705.44	4,895,734.83	(-)	(13,970.61)	-0.28%
Maplewood	1,388,839.66	1,454,868.25	(+)	66,028.59	4.75%
Millburn	1,418,868.71	1,485,635.21	(+)	66,766.50	4.71%
Newark	2,422,870.80	2,547,429.79	(+)	124,558.99	5.14%
Roselle Park	700,864.90	731,871.29	(+)	31,006.39	4.42%
South Orange	1,187,822.04	1,243,480.39	(+)	55,658.35	4.69%
Summit	2,067,724.96	2,187,731.66	(+)	120,006.70	5.80%
Union	4,152,543.72	4,445,427.22	(+)	292,883.50	7.05%
West Orange	2,942,608.14	3,070,940.65	(+)	128,332.51	4.36%
	\$23,982,443.41	\$25,196,385.81	(+)	\$1,213,942.40	5.06%
Elizabeth	10,641,339.02	11,754,302.19	(+)	\$ 1,112,963.17	10.46%
Total	\$34,623,782.43	\$36,950,688.00	(+)	\$2,326,905.57	6.72%

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

City of Elizabeth percentage	
2015	30.67912420%
2016	28.64359670%
2017	31.53144370%
2018	31.77668480%

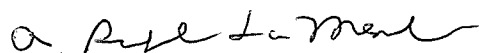
Table III, IV, V, VI, and VII, have been prepared to reflect the Domestic Sewer Usage and Industrial User assessment to each municipality for 2019 as a result of the Agreement with the City of Elizabeth which requires 32.7933410% of the 2019 Treatment Plant, Sludge Dewatering and Sludge Drying Budget to be paid in Quarterly assessments with adjustments made following the determination of the actual percentage of contribution for each quarter. The 32.7933410% 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 2019 are apportioned as follows:

	<u>2019</u>	<u>2018</u>		<u>2019</u>	<u>2018</u>
East Orange	4.0895%	4.0761%	Roselle Park	2.9047%	2.9224%
Hillside	8.3458%	7.5599%	South Orange	4.9352%	4.9529%
Irvington	19.4303%	20.4721%	Summit	8.6827%	8.6218%
Maplewood	5.7741%	5.7911%	Union	17.6431%	17.3149%
Millburn	5.8962%	5.9163%	West Orange	12.1881%	12.2698%
Newark	10.1103%	10.1027%	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
2019 Budget**

	Treatment Plant	Dewatering Facility	Drying Facility	Sewer	Total
Electric Service	\$ 929,028	\$ 57,850	\$ 13,122	\$ -	\$ 1,000,000
Gas Service	495,700	100,000	-	-	595,700
Fuel, Oil & Kerosene	61,000	20,500	-	-	81,500
Water Service	80,000	56,000	3,500	-	139,500
Chemicals	2,781,788	673,900	6,800	9,000	3,471,488
Sludge Disposal	-	3,912,300	-	-	3,912,300
Insurance	645,097	129,019	60,209	25,804	860,129
Administration	2,304,059	1,308,447	10,000	253,760	3,876,266
Labor	5,709,965	1,113,377	145,160	16,869	6,985,371
Benefits	5,827,806	859,250	110,813	67,639	6,865,508
Equipment	501,000	399,500	-	-	900,500
Printing & Stationery	21,000	2,000	-	1,000	24,000
Maintenance, Supplies & Spare Parts	1,746,000	1,036,750	5,000	568,250	3,356,000
Screening Disposal	232,000	-	-	-	232,000
Reserve Contingency	243,000	-	-	-	243,000
Miscellaneous Expenses	375,727	87,500	-	120,000	583,227
Technical & Professional Services	1,412,500	50,000	-	25,000	1,487,500
Replacement Fund	1,600,000	-	-	-	1,600,000
NJPDES & Miscellaneous Permit Fee	700,000	17,000	-	19,700	736,700
	\$ 25,665,670	\$ 9,823,393	\$ 354,604	\$ 1,107,022	\$ 36,950,689
	69.46%	26.59%	0.96%	2.99%	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	\$ 5,033,062	80%	\$ 4,026,450	10%	\$ 503,306	10%	\$ 503,306
Power	929,028	40%	\$ 371,611	5%	\$ 46,451	55%	\$ 510,966
Chlorine	1,456,000	40%	\$ 582,400			60%	\$ 873,600
Maintenance, Equipment, Supplies, Spare Parts, & Replacement Fund	4,090,000	28%	\$ 1,145,200	27%	\$ 1,104,300	45%	\$ 1,840,500
Fuel, Oil & Kerosene	61,000	40%	\$ 24,400	30%	\$ 18,300	30%	\$ 18,300
Administration, Labor & Benefits (Payroll Retirement)	13,841,830	40%	5,536,732	10%	\$ 1,384,183	50%	\$ 6,920,915
Sludge Processing 2	249,750			50%	\$ 124,875	50%	\$ 124,875
Total	<u>\$25,660,670</u>		<u>\$ 11,686,793</u>		<u>\$ 3,181,415</u>		<u>\$ 10,792,462</u>
	100%		45.5436004%		12.3980200%		42.0583796%

(1) General Expenditures
(From the Approved Budget)

Insurance	\$ 645,097
Technical & Professional Services	1,412,500
Stationery & Printing	21,000
Gas	495,700
Water	80,000
Miscellaneous	375,727
Service Contracts	232,000
Permit Fees	700,000
Sodium Bisulfite & Misc. Chemicals	1,071,038
	<u>\$5,033,062</u>

(2) Sludge Processing

Polymer	\$ 216,000
K2MnO4	33,750
	<u>\$ 249,750</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	\$ 25,660,670	\$ 11,686,793	\$ 3,181,415	\$10,792,462
Dewatering Facility	9,823,393		4,911,697	4,911,697
Drying Facility	354,604		177,302	177,302
	<u>\$ 35,838,667</u>	<u>\$ 11,686,793</u>	<u>\$ 8,270,414</u>	<u>\$15,881,461</u>
Subtotal	100.00%	32.6094522%	23.0767888%	44.3137590%
Sewers 1	\$ 1,107,022			
Total	<u>\$ 36,950,689</u>			

(1) Joint Meeting Members Only

JOINT MEETING OF ESSEX & UNION COUNTIES

**INDUSTRIAL USER CHARGE - 2019
SUMMARY**

MUNICIPALITY	FLOW (MG)	LOADINGS	
		BOD (tons)	TSS (tons)
HILLSIDE	84.001	856.25964765	64.59770352
IRVINGTON	87.004	787.32889713	25.85610585
MAPLEWOOD	7.700	7.47970398	3.17913711
MURRAY HILL	13.319	0.62019993	1.64113686
ROSELLE PARK	0.614	0.17410584	0.18690774
SUMMIT	35.529	10.49581494	13.19300013
UNION	102.877	469.43888007	266.04150474
<i>MEMBERS TOTAL</i>	331.044	2131.79724954	374.69549595
<i>ELIZABETH</i>	160.928	1402.67608971	147.86595654
GRAND TOTAL	491.972	3534.47333925	522.56145249

MUNICIPALITY	FLOW	COSTS		
		BOD	TSS	TOTAL
HILLSIDE	\$52,982.26	\$763,169.55	\$36,777.12	\$852,928.93
IRVINGTON	\$54,876.35	\$701,732.76	\$14,720.54	\$771,329.65
MAPLEWOOD	\$4,856.65	\$6,666.53	\$1,809.96	\$13,333.14
MURRAY HILL	\$8,400.74	\$552.77	\$934.34	\$9,887.86
ROSELLE PARK	\$387.27	\$155.18	\$106.41	\$648.86
SUMMIT	\$22,409.34	\$9,354.74	\$7,511.11	\$39,275.19
UNION	\$64,887.99	\$418,402.83	\$151,464.20	\$634,755.02
<i>MEMBERS TOTAL</i>	\$208,800.59	\$1,900,034.37	\$213,323.68	\$2,322,158.64
<i>ELIZABETH</i>	\$89,647.89	\$1,250,181.17	\$84,183.85	\$1,424,012.90
GRAND TOTAL	\$298,448.48	\$3,150,215.54	\$297,507.53	\$3,746,171.54

JOINT MEETING OF ESSEX & UNION COUNTIES

**INDUSTRIAL USER CHARGE - 2019
COST FACTORS**

	FLOW	BOD	TSS
MEMBER MUNICIPALITIES	\$630.7336622	\$891.2828681	\$569.3254419
ELIZABETH	\$557.0682884	\$891.2828681	\$569.3254419

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2019

Municipality: HILLSIDE

IU #	INDUSTRY	SITE	Concentration	BOD (mg/l)	TSS (mg/l)	Cost Factors			ANNUAL PAYMENT
						Flow per MG \$630.7336622	BOD per Ton \$891.2828681	TSS per Ton \$569.3254419	
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	613	311		0.619	1.5823	0.8028	
	Totals:					0.619	1.5823	0.8028	
	Cost Analysis:					\$390.42	\$1,410.27	\$457.03	\$2,257.73
1094	AAK Foodservice (Formerly Oasis Foods)	3	2457	769		9.811	100.5205	31.4612	
		99	212	171		1.009	0.8920	0.7195	
	Totals:					10.820	101.4125	32.1807	
	Cost Analysis:					\$6,824.54	\$90,387.19	\$18,321.30	\$115,533.03
1090	Union Beverage	1	2683	91		63.667	712.3134	24.1597	
		2	555	373		1.229	2.8443	1.9116	
	Totals:					64.896	715.1577	26.0713	
	Cost Analysis:					\$40,932.09	\$637,407.84	\$14,843.06	\$693,182.99
1091	Hillside Beverage	2	1661	54		4.141	28.6821	0.9325	
		99	212	171		0.074	0.0654	0.0528	
	Totals:					4.215	28.7475	0.9852	
	Cost Analysis:					\$2,658.54	\$25,622.17	\$560.92	\$28,841.63
1092	A&H Products	1	671	263		2.460	6.8833	2.6979	
		99	212	171		0.156	0.1379	0.1112	
	Totals:					2.616	7.0212	2.8091	
	Cost Analysis:					\$1,650.00	\$6,257.84	\$1,599.32	\$9,507.16
1093	Sam Hak Foods	1	713	532		0.766	2.2775	1.6993	
		99	212	171		0.069	0.0610	0.0492	
						0.835	2.3385	1.7485	
						\$526.66	\$2,084.25	\$995.48	\$3,606.39
HILLSIDE TOTALS						84.0010	856.2596	64.5977	
						\$52,982.26	\$763,169.55	\$36,777.12	\$852,928.93

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

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2019

Municipality: IRVINGTON

IU #	Cost Factors	SITE	Cost Factors					ANNUAL PAYMENT
			Concentration	Flow per MG	BOD per Ton	TSS per Ton		
				\$630.7336622	\$891.2828681	\$569.3254419		
			BOD (mg/l)	TSS (mg/l)	FLOW (MG)	BOD (Tons)	TSS (Tons)	
2066	Wayne County Foods	1	3687	209	0.127	1.9526	0.1107	
		99	212	171	0.493	0.4358	0.3515	
	Totals:				0.620	2.3884	0.4622	
	Cost Analysis:				\$391.05	\$2,128.77	\$263.16	\$2,782.98
2072	Clean-Tex Services	1	174	64	47.398	34.3910	12.6496	
		99	212	171	1.047	0.9256	0.7466	
	Totals:				48.445	35.3166	13.3962	
	Cost Analysis:				\$30,555.89	\$31,477.11	\$7,626.78	\$69,659.78
2076	International Vitamin	1	1043	54	3.101	13.4872	0.6983	
	Totals:				3.101	13.4872	0.6983	
	Cost Analysis:				\$1,955.91	\$12,020.92	\$397.55	\$14,374.37
2078	City Barrel	1	13	3	0.442	0.0240	0.0055	
		99	212	171	0.112	0.0990	0.0799	
	Totals:				0.554	0.1230	0.0854	
	Cost Analysis:				\$349.43	\$109.60	\$48.62	\$507.65
3050	Maplewood Beverage	2	5225	77	33.759	735.5495	10.8397	
		99	212	171	0.525	0.4641	0.3744	
	Totals:				34.284	736.0137	11.2140	
	Cost Analysis:				\$21,624.07	\$655,996.36	\$6,384.44	\$684,004.87
IRVINGTON TOTALS					87.0040	787.3289	25.8561	
					\$54,876.35	\$701,732.76	\$14,720.54	\$771,329.65

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2019

Municipality: MAPLEWOOD

			Cost Factors					
			Concentration		Flow per MG	BOD per Ton	TSS per Ton	
					\$630.7336622	\$891.2828681	\$569.3254419	
IU #	INDUSTRY	SITE	BOD (mg/l)	TSS (mg/l)	FLOW (MG)	BOD (Tons)	TSS (Tons)	ANNUAL PAYMENT
3020	Gleason Cleaners	1	137	35	0.484	0.2765	0.0706	
		99	212	171	0.099	0.0875	0.0706	
		Totals:			0.583	0.3640	0.1412	
		Cost Analysis:			\$367.72	\$324.45	\$80.41	\$772.57
3033	NJ Transit - Hilton Gar.	3a	262	197	3.108	3.3956	2.5532	
		4	368	38	1.871	2.8712	0.2965	
		Totals:			4.979	6.2668	2.8497	
		Cost Analysis:			\$3,140.42	\$5,585.47	\$1,622.39	\$10,348.28
3046	UniClean	1	85	8	1.966	0.6968	0.0656	
		99	212	171	0.172	0.1521	0.1226	
		Totals:			2.138	0.8489	0.1882	
		Cost Analysis:			\$1,348.51	\$756.61	\$107.17	\$2,212.29
MAPLEWOOD TOTALS					7.7000	7.4797	3.1791	
					\$4,856.65	\$6,666.53	\$1,809.96	\$13,333.14

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2019

Municipality: MURRAY HILL

IU #	INDUSTRY	SITE	Concentration	BOD (mg/l)	TSS (mg/l)	Cost Factors			ANNUAL PAYMENT
						Flow per MG \$630.7336622	BOD per Ton \$891.2828681	TSS per Ton \$569.3254419	
5010	Alcatel-Lucent USA	1		11	30	12.733	0.5841	1.5929	
	Totals:					12.733	0.5841	1.5929	
	Cost Analysis:					\$8,031.13	\$520.57	\$906.88	\$9,458.57
5021	FRC-Electrical Ind	3		6	13	0.561	0.0140	0.0304	
		4(99)		212	171	0.025	0.0221	0.0178	
	Totals:					0.586	0.0361	0.0482	
	Cost Analysis:					\$369.61	\$32.21	\$27.46	\$429.28
MURRAY HILL TOTALS						13.3190	0.6202	1.6411	
						\$8,400.74	\$552.77	\$934.34	\$9,887.86

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2019

Municipality: ROSELLE PARK

			Cost Factors					
			Concentration		Flow per MG	BOD per Ton	TSS per Ton	
					\$630.7336622	\$891.2828681	\$569.3254419	
IU #	INDUSTRY	SITE	BOD (mg/l)	TSS (mg/l)	FLOW (MG)	BOD (Tons)	TSS (Tons)	ANNUAL PAYMENT
6005	Hexacon Electric	2	68	73	0.614	0.1741	0.1869	
	Totals:				0.614	0.1741	0.1869	
	Cost Analysis:				\$387.27	\$155.18	\$106.41	\$648.86
ROSELLE PARK TOTALS					0.6140	0.1741	0.1869	
					\$387.27	\$155.18	\$106.41	\$648.86

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2019

Municipality: SUMMIT

IU #	INDUSTRY	SITE	Concentration	BOD (mg/l)	TSS (mg/l)	Cost Factors			ANNUAL PAYMENT
						Flow per MG \$630.7336622	BOD per Ton \$891.2828681	TSS per Ton \$569.3254419	
5511	Novartis Groundwater	4		1	2	0.756	0.0032	0.0063	
	Totals:					0.756	0.0032	0.0063	
	Cost Analysis:					\$476.83	\$2.81	\$3.59	\$483.23
5513	*Celgene Corporation	1					0.0000	0.0000	
	Totals:						0.0000	0.0000	
	Cost Analysis:					\$0.00	\$0.00	\$0.00	\$0.00
5514	Celgene West 556	03A	62	85		32.371	8.3692	11.4739	
		99	212	171		2.402	2.1235	1.7128	
	Totals:					34.773	10.4927	13.1867	
	Cost Analysis:					\$21,932.50	\$9,351.93	\$7,507.52	\$38,791.95
SUMMIT TOTALS						35.5290	10.4958	13.1930	
						\$22,409.34	\$9,354.74	\$7,511.11	\$39,275.19

*Celgene Corporation - Ceased Industrial Discharge as of December 2017.

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2019

Municipality: UNION

IU #	INDUSTRY	SITE	Cost Factors					ANNUAL PAYMENT
			Concentration	Flow per MG	BOD per Ton	TSS per Ton		
				\$630.7336622	\$891.2828681	\$569.3254419		
			BOD (mg/l)	TSS (mg/l)	FLOW (MG)	BOD (Tons)	TSS (Tons)	
7015	ACuPowder	3 (99)	212	171	0.016	0.0141	0.0114	
		4	108	116	2.204	0.9926	1.0661	
	Totals:				2.220	1.0067	1.0775	
	Cost Analysis:				\$1,400.23	\$897.29	\$613.46	\$2,910.98
7070	Durex	1	68	111	3.482	0.9874	1.6117	
	Totals:				3.482	0.9874	1.6117	
	Cost Analysis:				\$2,196.21	\$880.01	\$917.59	\$3,993.82
7077	Evoqua Water Tech	4	428	583	0.230	0.4105	0.5592	
	Totals:				0.230	0.4105	0.5592	
	Cost Analysis:				\$145.07	\$365.87	\$318.34	\$829.28
7080	Foremost Mfg	2	8	175	10.655	0.3555	7.7755	
	Totals:				10.655	0.3555	7.7755	
	Cost Analysis:				\$6,720.47	\$316.81	\$4,426.78	\$11,464.06
7092	International Paint	01A	2	2	3.676	0.0307	0.0307	
		99	212	171	0.017	0.0150	0.0121	
	Totals:				3.693	0.0457	0.0428	
	Cost Analysis:				\$2,329.30	\$40.72	\$24.36	\$2,394.37
7145	1011 Morris Avenue Urban Renewal	1	3	19	8.383	0.1049	0.6642	
					8.383	0.1049	0.6642	
	Cost Analysis:				\$5,287.44	\$93.47	\$378.14	\$5,759.05
7155	*Tessier & Weiss	22				0.0000	0.0000	
	Totals:					0.0000	0.0000	
	Cost Analysis:				\$0.00	\$0.00	\$0.00	\$0.00
7191	Cintas (Location 111)	1	481	606	25.462	51.0709	64.3430	
	Totals:				25.462	51.0709	64.3430	
	Cost Analysis:				\$16,059.74	\$45,518.63	\$36,632.10	\$98,210.47
7192	Merril Corporation	1	269	197	0.907	1.0174	0.7451	
	Totals:				0.907	1.0174	0.7451	
	Cost Analysis:				\$572.08	\$906.80	\$424.20	\$1,903.07
7193	Lloni Latticini	1	3330	673	9.043	125.5720	25.3784	
		99	212	171	0.380	0.3359	0.2710	
	Totals:				9.423	125.9079	25.6493	
	Cost Analysis:				\$5,943.40	\$112,219.59	\$14,602.82	\$132,765.81

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2019

Municipality: UNION

					Cost Factors			
					Flow per MG	BOD per Ton	TSS per Ton	
					\$630.7336622	\$891.2828681	\$569.3254419	
					Concentration			
IU #	INDUSTRY	SITE	BOD (mg/l)	TSS (mg/l)	FLOW (MG)	BOD (Tons)	TSS (Tons)	ANNUAL PAYMENT
7194	BASF Corporation	1	19	382	0.115	0.0091	0.1832	
		99	212	171	0.992	0.8770	0.7074	
		Totals:			1.107	0.8861	0.8906	
		Cost Analysis:			\$698.22	\$789.75	\$507.01	\$1,994.98
7195	Deep Foods	1	2278	1284	27.828	264.3454	148.9989	
		3	1036	243	2.751	11.8847	2.7876	
		4	1075	400	1.049	4.7024	1.7497	
		5(99)	212	171	0.662	0.5852	0.4721	
		6(99)	212	171	0.051	0.0451	0.0364	
		2(99)	212	171	0.779	0.6887	0.5555	
		Totals:			33.120	282.2514	154.6002	
		Cost Analysis:			\$20,889.90	\$251,665.88	\$88,017.80	\$360,473.58
7196	Cintas Corporation	1	313	476	4.003	5.2248	7.9456	
		99	212	171	0.192	0.1697	0.1369	
		Totals:			4.195	5.3945	8.0825	
		Cost Analysis:			\$2,645.93	\$4,808.02	\$4,601.60	\$12,055.54
UNION TOTALS					102.8770	469.4389	266.0415	
					\$64,887.99	\$418,402.83	\$151,464.20	\$634,755.02

*Tessler & Weiss - Ceased Operations as of November 2017.

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2019

Municipality: ELIZABETH

IU #	INDUSTRY	SITE	Concentration	Cost Factors			ANNUAL PAYMENT	
				Flow per MG \$557.0682884	BOD per Ton \$891.2828681	TSS per Ton \$569.3254419		
			BOD (mg/l)	TSS (mg/l)	FLOW (MG)	BOD (Tons)	TSS (Tons)	
0192	Wild Flavors Inc.	1	1216	90	0.142	0.7200	0.0533	
	Totals:				0.142	0.7200	0.0533	
	Cost Analysis:				\$79.10	\$641.76	\$30.34	\$751.21
0037	Deb-EI Foods	1	3202	591	10.152	135.5530	25.0193	
	Totals:				10.152	135.5530	25.0193	
	Cost Analysis:				\$5,655.36	\$120,816.03	\$14,244.12	\$140,715.51
0062	Garcia Uniforms, Inc.	2	628	159	2.998	7.8510	1.9878	
		99	212	171	0.109	0.0964	0.0777	
	Totals:				3.107	7.9474	2.0655	
	Cost Analysis:				\$1,730.81	\$7,083.38	\$1,175.94	\$9,990.13
0193	Actavis (formerly Purepac)	3	514	119	17.384	37.2605	8.6265	
	Totals:				17.384	37.2605	8.6265	
	Cost Analysis:				\$9,684.08	\$33,209.66	\$4,911.26	\$47,805.00
0070	LORCO	2	5813	54	29.225	708.4201	6.5809	
	Totals:				29.225	708.4201	6.5809	
	Cost Analysis:				\$16,280.32	\$631,402.73	\$3,746.67	\$651,429.72
0075	Mastercraft Electroplating	99	212	171	0.024	0.0212	0.0171	
	Totals:				0.024	0.0212	0.0171	
	Cost Analysis:				\$13.37	\$18.91	\$9.74	\$42.02
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	OENJ	4	7	17	2.829	0.0826	0.2005	
	Totals:				2.829	0.0826	0.2005	
	Cost Analysis:				\$1,575.95	\$73.60	\$114.18	\$1,763.72
0098	Olympia Trails	1	582	159	1.850	4.4898	1.2266	
		99	212	171	0.458	0.4049	0.3266	
	Totals:				2.308	4.8947	1.5532	
	Cost Analysis:				\$1,285.71	\$4,362.59	\$884.27	\$6,532.57
0100	Michaels Foods - North Avenue Facility	4	2463	248	28.758	295.3651	29.7404	
		4a	1124	166	3.438	16.1142	2.3799	
		4b	494	87	2.404	4.9522	0.8721	
		99	212	171	0.923	0.8160	0.6582	
	Totals:				35.523	317.2474	33.6505	
	Cost Analysis:				\$19,788.74	\$282,757.19	\$19,158.11	\$321,704.03

JOINT MEETING OF ESSEX & UNION COUNTIES

INDUSTRIAL USER CHARGE - 2019

Municipality: ELIZABETH

IU #	INDUSTRY	SITE	Concentration	BOD (mg/l)	TSS (mg/l)	Cost Factors			ANNUAL PAYMENT
						Flow per MG \$557,0682884	BOD per Ton \$891.2828681	TSS per Ton \$569.3254419	
				BOD (mg/l)	TSS (mg/l)	FLOW (MG)	BOD (Tons)	TSS (Tons)	
0105	Michaels Foods - Papetti Plaza Facility	2	1012	323		30.685	129.4919	41.3299	
		2a	1075	244		4.271	19.1458	4.3457	
		2b	679	237		1.837	5.2013	1.8155	
		3	227	329		0.445	0.4212	0.6105	
	Totals:					37.2380	154.2603	48.1016	
	Cost Analysis:					\$20,744.11	\$137,489.58	\$27,385.46	\$185,619.15
0148	Superior Powder Coating	1	278	74		3.046	3.5311	0.9399	
		99	212	171		0.708	0.6259	0.5049	
	Totals:					3.754	4.1570	1.4448	
	Cost Analysis:					\$2,091.23	\$3,705.07	\$822.55	\$6,618.86
0195	Duro Hilex Poly LLC	1	271	112		5.319	6.0108	2.4842	
		2	82	86		2.018	0.6900	0.7237	
		3	284	296		1.138	1.3477	1.4047	
	Totals:					8.475	8.0486	4.6125	
	Cost Analysis:					\$4,721.15	\$7,173.57	\$2,626.03	\$14,520.76
0165	Wakefern Food Corp.	2	117	52		1.016	0.4957	0.2203	
		3a	205	424		6.385	5.4582	11.2892	
		4	459	490		0.476	0.9111	0.9726	
		99 (7)	212	171		0.077	0.0681	0.0549	
	Totals:					7.954	6.9331	12.5370	
	Cost Analysis:					\$4,430.92	\$6,179.32	\$7,137.64	\$17,747.88
0178	**Smithfield Packaged Meats	3	301	156		1.488	1.8677	0.9680	
		99	212	171		0.020	0.0177	0.0143	
	Totals:					1.508	1.8854	0.9822	
	Cost Analysis:					\$840.06	\$1,680.40	\$559.21	\$3,079.67
0189	Prince Donut Co.	3	3922	593		0.921	15.0627	2.2775	
		99	212	171		0.198	0.1750	0.1412	
	Totals:					1.119	15.2378	2.4186	
	Cost Analysis:					\$623.36	\$13,581.15	\$1,377.00	\$15,581.51
0194	Erie Street	2	9	3		0.186	0.0070	0.0023	
	Totals:					0.186	0.0070	0.0023	
	Cost Analysis:					\$103.61	\$6.22	\$1.32	\$111.16
ELIZABETH TOTALS						160.9280	1,402.6761	147.8660	
						\$89,647.89	\$1,250,181.17	\$84,183.85	\$1,424,012.90

*Magnolia Beef - Ceased Operations as of June 2018.

**Smithfield Packaged Meats (Formerly 814 Americas)