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December 12, 1996 (Revised)

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 1997)

I present herewith the 62nd 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, 1995 through October 31, 1996. 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 1997. 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 1996, 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 November 22, 1995.

During 1996, 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 (1997) dwelling unit figures formulated by each municipality in 1996.

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, 366 day period of November 1, 1995, through October 31, 1996 and projected for a twelve (12) month period in 1997. 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 1997, 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 366 day period from November 1, 1995, through October 31, 1996, and projected for 1997 and are based upon actual 1995-1996 operating statistics as well as a recent upgraded 1996 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	25,251.9490 MG/Year	68.9944 MGD
2.	BOD	15,539.3914 Tons/Year	84,914.7071 Lbs/Day
	TSS	15,357.0868 Tons/Year	83,918.5071 Lbs/Day
3.	Estimated Industrial Flow	1,005.1750 MG/Year	2.7464 MGD
4.	Estimated Industrial BOD	2,767.7282 Tons/Year	15,124.1978 Lbs/Day
5.	Estimated Industrial TSS	1,343.6680 Tons/Year	7,342.4481 Lbs/Day
6.	Estimated Total Operating Expenses in 1997		
			\$11,710,008 STP
			3,872,860 SDWF
			2,249,035 SDF
			<u>847,845</u> Sewers
			\$18,679,748 Total

### 7. Estimated Total Dwelling Units in System

146,331	JM Members
<u>47,181</u>	Elizabeth
193,512	Total

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

Flow	28.0479150%
BOD	46.1978315%
Suspended Solids	25.7542535%

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 1997 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 1997 <sup>1</sup>**

**Treatment Plant**

	<b><u>Total for 1997</u></b>	<b><u>Domestic &amp; Commercial</u></b>	<b><u>Industrial</u></b>
Flow	25,251.9490 MG/Yr. <sup>1</sup>	24,246.7740 MG/Yr.	1,005.1750 MG/Yr.
BOD	15,539.3914 Tons/Yr. <sup>1</sup>	12,771.6632 Tons/Yr.	2,767.7282 Tons/Yr.
Suspended Solid	15,357.0868 Tons/Yr. <sup>1</sup>	14,013.4188 Tons/Yr.	1,343.6680 Tons/Yr.

(1) Based upon data from November 1, 1995 thru October 31, 1996 (366 days)

**Cost Allocation**

	<b><u>Total for 1997</u></b>	<b><u>Domestic &amp; Commercial</u></b>	<b><u>Industrial</u></b>
Flow	\$5,001,477.00	\$4,802,389.00	\$199,088.00
BOD	8,237,952.50	6,770,687.00	1,467,265.50
Suspended Solid	4,592,473.50	4,190,655.00	401,818.50
	\$17,831,903.00	\$15,763,731.00	\$2,068,172.00
	100.000000%	88.40184360%	11.59815640%

**Elizabeth Contribution**

Flow	-	6,741.1090 MG/Yr.
BOD	-	6,623.0349 Tons/Yr.
TSS	-	3,629.0538 Tons/Yr.

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

	<b><u>Total for 1997</u></b>	<b><u>Domestic &amp; Commercial</u></b>	<b><u>Industrial</u></b>
	18,510.8400 MG/Yr. <sup>2</sup>	17,701.1260 MG/Yr.	809.714 MG/Yr.

(1) Based upon data from November 1, 1995 thru October 31, 1996 (366 days)

(2) (25,251.949 - 6,741.1090)

**COST ALLOCATION**

\$847,845.00	\$810,757.98	\$37,087.02
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Member municipalities will be assessed \$5.54 (\$810,757.98/146,331) for trunk sewer O&M per equivalent dwelling unit.

The estimated cost for treating industrial wastes has been determined to be \$243.87 per MG for flow, \$530.13 per ton of BOD, and \$299.05 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	\$199,088.00	/	1,005.1750	=	\$198.0630239	/MG
BOD	\$1,467,265.50	/	2,767.7282	=	\$530.1335225	/Ton
Suspended Solids	\$401,818.50	/	1,343.6680	=	\$299.0459697	/Ton

All industries within the member municipalities (excluding Elizabeth) will be required to pay an additional \$45.80/MG of flow for trunk sewer use ( $\$37,087.02/809.714 = \$45.803/\text{MG}$ ). This brings the total flow cost to \$243.87/MG ( $\$198.063 + \$45.803$ ) for the indicated industries of member municipalities.

Based upon the user charges for 1997, 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 1996 industrial waste survey of the service area. These are estimates for 1997 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 \$18,679,748 for 1997. 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 34.8953679% 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**  
**1997**

<u>Municipality</u>	<u>Dwelling Units <sup>1</sup></u>	<u>User Charges Industrial</u>
East Orange	7,238	\$ -
Hillside	8,413	108,379
Irvington	26,710	34,520
Maplewood	9,095	1,425
Millburn	9,702 <sup>4</sup>	-
Newark	16,972	-
Roselle Park	4,736	455
South Orange	6,833	-
Summit	13,398 <sup>2</sup>	123,772 <sup>3</sup>
Union	24,222	1,353,991
West Orange	19,012	14,297
Elizabeth	<u>47,181</u>	<u>468,420</u>
	<u>193,512</u>	<u>\$ 2,105,259</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 (3067)

(3) Includes Murray Hill

(4) Includes Livingston (431)

**Table III**  
**Joint Meeting of Essex and Union Counties**  
**Computation of Estimated Percent**  
**Contribution By City of Elizabeth**

For Period 11/1/95-10/31/96 and Projected Contribution for 1997

Flow:	<u>Treatment Plant</u>	<u>Elizabeth Pumping Station</u>		<u>Joint Meeting</u>	
	25,251.949 MG	6,741.109 MG		18,510.84 MG	
		<u>Industrial</u>	<u>D&amp;C</u>	<u>Industrial</u>	<u>D&amp;C</u>
		174.279	6,566.83	809.714	17,701.126
		\$ 34,518.23	\$ 1,300,646.21	\$ 197,461.42	\$ 4,316,696.43
Unit Charge \$ 198.0630239 Per MG for Elizabeth					
Unit Charge \$ 243.8656406 Per MG for Joint Meeting					
<b>BOD:</b>	15539.3914 Tons	6,623.0349 Tons		8,916.3565 Tons	
		<u>Industrial</u>	<u>D&amp;C</u>	<u>Industrial</u>	<u>D&amp;C</u>
		695.0108	5,928.0241	2,042.3843	6,873.9722
		\$ 368,448.52	\$ 3,142,644.30	\$ 1,082,736.38	
Unit Charge	530.1335225 Per Ton				
<b>TSS:</b>	15,357.0868 Tons	3,629.0538 Tons		11,728.0330 Tons	
		<u>Industrial</u>	<u>D&amp;C</u>	<u>Industrial</u>	<u>D&amp;C</u>
		139.0217	3,490.0321	1,192.5981	10,535.4349
		\$ 41,573.88	\$ 1,043,680.03	\$ 356,641.66	
Unit Charge	299.0459697 Per Ton				
			\$ 5,931,511.17	\$ 1,636,839.46	

City of Elizabeth (Contribution from Pumping Station) \$ 5,931,511.17

City of Elizabeth (Industry Tributary to Joint Meeting Trunk)

<b>Flow:</b>	21.1820 MG/Year at	\$ 198.0630239	4,195.37
<b>BOD:</b>	30.3331 Tons/Year at	530.1335225	16,080.59
<b>TSS:</b>	12.0482 Tons/Year at	299.0459697	3,602.97

Joint Meeting Industrial	1,636,839.46
Subtotal	\$ 7,592,229.56

Total 1997 Budget	\$ 18,679,748.00
Subtotal (above)	(7,592,229.56)
Subtotal (EDU's)	\$ 11,087,518.44

Joint Meeting EDU's (X + Y) + Elmora EDU's (X) = \$ 11,087,518  
 (Y = Additional Assessment to Member Municipalities for Trunk Sewer O&M)  
 146,331 (X + \$5.540575681) + 3905 (X) = \$ 11,087,518

Equivalent Units-Member Municipalities 146,331

Elmora EDU's =	3,905	\$68.4041139270	Per Unit = X
		\$73.9446896080	Per Unit = X+Y

Joint Meeting EDU Assessment	\$ 10,820,400.38
Elmora Area Assessment	\$ 267,118.06

Total Anticipated Payment from the City of Elizabeth

Pumping Station	\$ 5,931,511.17
Elmora EDU's	267,118.06
Elmora Industrial	23,878.93
	<hr/>
	\$ 6,222,508.16

Total Anticipated Payment from Member Municipalities

EDU's	10,820,400.38
Industrial	1,636,839.46
	<hr/>
	\$ 12,457,239.84

Estimated Percent Contribution of Treatment Plant, Sludge Dewatering and Sludge Drying Facility Budgets by  
 City of Elizabeth  
 \$ 6,222,508.16 / \$ 17,831,903.00 = 34.8953679%



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

Municipality	Base Year - 1982			Base Year - 1982			Base Year - 1982		
	Capacity By Contract			Phase IIB - SSES <sup>1</sup>			Phase IIB - SSES <sup>2</sup>		
	(MGD)	(Percent)	(MGD)	(GPD) <sup>3</sup>	(Percent)	(GPD) <sup>4</sup>	(Percent)	(GPD)	(Percent)
East Orange	5.50	4.88%	70,747	2.11%	52,086	54,327	2.61%	3,007,440	5.79%
Hillside	12.20	10.83%	79,012	2.36%	31,531	32,980	1.58%	1,185,120	2.28%
Irrington	18.61	16.52%	1,115,672	33.31%	763,727	797,026	38.27%	8,612,640	16.57%
Maplewood	7.08	6.29%	389,078	11.62%	191,181	199,485	9.58%	5,449,680	10.48%
Millburn	6.00	5.33%	191,609	5.72%	145,880	152,240	7.31%	4,283,967	5.25%
Newark	15.50	13.76%	234,484	7.00%	207,146	216,248	10.38%	2,729,520	4.98%
Roselle Park	9.44	8.38%	106,187	3.17%	62,463	65,147	3.13%	3,440,938	3.77%
South Orange	7.00	6.22%	410,876	12.27%	80,424	83,906	4.03%	1,576,080	3.03%
Summit	7.50	6.66%	171,657	5.13%	84,615	88,296	4.24%	3,828,043	4.20%
Union	10.30	9.14%	329,127	9.83%	228,100	238,013	11.43%	4,172,137	7.02%
West Orange	13.50	11.99%	250,811	7.48%	148,475	154,847	7.44%	2,378,160	4.85%
								25,015,616	
								14,246,640	
								11,854,031	
								6,744,600	
								86,023,440	
								48,987,720	

(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:  $3.35 \text{ MGD} / 52.79 \text{ MGD} = 6.346\%$

(4) 1996 - Infiltration related to base year total =  $2.083 \text{ MGD} / 52.79 \text{ MGD} = 3.94582307\%$

- Adjusted for period 11/1/95 - 10/31/96:  $(3.94582307\% \times 18,510.8400 = 730.40 \text{ MG} / \text{Year} / 366 = 1,995,628 \text{ GPD})$

(5) 1996 inflow adjusted for period 11/1/95 - 10/31/96 -  $(58.335\% / 33.22\%) \times (48,987,720) = 86,023,440 \text{ GPD}$

**Table IV - A**  
**Joint Meeting of Essex and Union Counties**  
**Adjusted 1996 - Summary of Infiltration and Inflow**

Municipality	Phase IIB		1996		Phase IIB		1995		1996		1995		1996	
	SSES	Infiltration	(GPD)	Removed	Infiltration	(GPD)	Infiltration	(GPD)	Removed	Infiltration	(GPD)	Inflow	Removed	Inflow
East Orange	70,747	54,327	-	54,327	3,007,440	3,007,440	3,007,440	3,007,440	-	3,007,440	3,007,440	3,007,440	-	3,007,440
Hillside	79,012	32,980	-	32,980	1,185,120	1,185,120	1,185,120	1,185,120	-	1,185,120	1,185,120	1,185,120	-	1,185,120
Irvington	1,115,672	797,026	-	797,026	8,612,640	8,612,640	8,612,640	8,612,640	-	8,612,640	8,612,640	8,612,640	-	8,612,640
Maplewood	389,078	199,485	-	199,485	5,449,680	5,449,680	5,449,680	5,449,680	-	5,449,680	5,449,680	5,449,680	-	5,449,680
Millburn	191,609	152,240	-	152,240	2,729,520	2,729,520	2,729,520	2,729,520	-	2,729,520	2,729,520	2,729,520	-	2,729,520
Newark	234,484	216,248	-	216,248	1,959,540	1,959,540	1,959,540	1,959,540	-	1,959,540	1,959,540	1,959,540	-	1,959,540
Roselle Park	106,187	65,147	-	65,147	1,576,080	1,576,080	1,576,080	1,576,080	-	1,576,080	1,576,080	1,576,080	-	1,576,080
South Orange	410,876	83,906	-	83,906	2,183,760	2,183,760	2,183,760	2,183,760	5,760	2,183,760	2,183,760	2,183,760	5,760	2,183,760
Summit	171,657	91,196	2,900	88,296	3,651,120	3,651,120	3,651,120	3,651,120	80,640	3,651,120	3,651,120	3,651,120	80,640	3,651,120
Union	329,127	238,013	-	238,013	14,534,640	14,534,640	14,534,640	14,534,640	-	14,534,640	14,534,640	14,534,640	-	14,534,640
West Orange	250,811	154,847	-	154,847	7,097,040	7,097,040	7,097,040	7,097,040	-	7,097,040	7,097,040	7,097,040	-	7,097,040
<b>Total</b>	<b>3,349,260</b>	<b>2,085,415</b>	<b>2,900</b>	<b>2,082,515</b>	<b>51,986,580</b>	<b>51,986,580</b>	<b>51,986,580</b>	<b>51,986,580</b>	<b>86,400</b>	<b>49,074,120</b>	<b>49,074,120</b>	<b>49,074,120</b>	<b>86,400</b>	<b>48,987,720</b>

Table V

## Joint Meeting of Essex and Union Counties

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

		Total	Domestic & Commercial	Industrial
Flow		18,510.8400 MG	17,701.1260 MG	809.7140 MG
		\$4,223,159.35	\$4,025,697.93	
Infiltration	3.9458231%	730.41	698.46	\$197,461.42
Inflow	12.9966549%	2,405.79	2,300.55	31.95
				105.24
BOD	at \$530.1335225 Per Ton	8,916.3565 Tons	6,873.9722 Tons	2,042.3843 Tons
		\$4,726,859.48	\$3,644,123.10	\$1,082,736.38
TSS	at \$299.0459697 Per Ton	11,728.0330 Tons	10,535.4349	1,192.5981
		\$3,507,221.00	\$3,150,579.35	\$356,641.66
Total		\$12,457,239.83 <sup>1</sup>	\$10,820,400.38	\$1,636,839.46

(1) Amount anticipated from Members after allocation of 34.8953679% to City of Elizabeth \$ 6,222,508.16

"Base Year - 1982"

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

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

"1995 - 1996"

Infiltration: 2.083 MGD/52.79MGD = X

18,510.8400 730.4 MG / Year  
(November 1, 1995 - October 31, 1996)

Inflow: Rainfall=58.335 Inches X 50 MG X 82.482% 2,405.79 MG / Year

Total D&C	\$10,820,400.38
Less: Infiltration	(158,848.03)
Less: Inflow	(523,205.10)
Net after infiltration and inflow	\$10,138,347.25
Equivalent Dwelling Units	146,331
User Charge Per Unit	\$69.2836599900226

Table VI  
Joint Meeting of Essex and Union Counties  
Estimated Annual Operation Expenses To Member Municipalities  
1997

Domestic & Commercial									
Municipality	Dwelling Units	User Charge		Infiltration		Inflow			
		\$	69.28365999	Percent <sup>1</sup>	Amount	Percent <sup>2</sup>	Amount		
East Orange	7,238	\$501,475.13		2.61%	\$4,145.93	6.14%	\$32,124.79	\$537,745.85	\$74.2948
Hillside	8,413	582,883.43		1.58%	2,509.80	2.42%	12,661.56	598,054.79	71.0870
Irvington	26,710	1,850,566.56		38.27%	60,791.14	15.96%	83,503.53	1,994,861.23	74.6859
Maplewood	9,095	630,134.89		9.58%	15,217.64	11.12%	58,180.41	703,532.94	77.3538
Millburn	9,702 <sup>3</sup>	672,190.07		7.31%	11,611.79	4.98%	26,055.61	709,857.47	73.1661
Newark	16,972	1,175,882.28		10.38%	16,488.43	4.00%	20,928.20	1,213,298.91	71.4883
Roselle Park	4,736	328,127.41		3.13%	4,971.94	3.22%	16,847.20	349,946.55	73.8907
South Orange	6,833	473,415.25		4.03%	6,401.58	4.45%	23,282.63	503,099.46	73.6279
Summit	13,398 <sup>4</sup>	928,262.48		4.24%	6,735.16	4.85%	25,375.45	960,373.09	71.6803
Union	24,222	1,678,188.82		11.43%	18,156.33	29.08%	152,148.04	1,848,493.19	76.3146
West Orange	19,012	1,317,220.95		7.44%	11,818.29	13.78%	72,097.66	1,401,136.90	73.6975
	146,331	\$10,138,347.27		100.00%	\$158,848.03	100.00%	\$523,205.08	\$10,820,400.38	\$73.9447
									\$72.7161 1996
									\$79.2640 1995
									\$80.7878 1994
									\$78.9418 1993

(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 (431)

(4) Includes New Providence (3067)

(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 (431)

(4) Includes New Providence (3067)

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

Municipality	1997									
	Industrial									
	BOD (Tons / Year)	BOD <sup>1</sup> (\$/Year)	TSS (Tons / Year)	TSS <sup>2</sup> (\$/Year)	Dry Weather	Infiltration 3.945823%	Inflow 12.996655%	Total	Flow <sup>3</sup> (\$/Year)	Total Cost
East Orange	0.0000	\$0.00	0.0000	\$0.00	0.00	0.00	0.00	0.00	\$0.00	\$0.00
Hillside	161.8971	85,827.08	35.7817	10,700.37	40.37	1.92	6.32	48.60	11,852.11	108,379.57
Irvington	38.7282	20,531.12	17.8587	5,340.57	29.46	1.40	4.61	35.46	8,648.45	34,520.14
Maplewood	1.3742	728.51	0.6768	202.39	1.68	0.08	0.26	2.03	493.83	1,424.73
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	0.1426	75.60	0.1815	54.28	1.11	0.05	0.17	1.33	324.83	454.70
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>	82.3885	43,676.91	52.9456	15,833.17	218.87	10.40	34.25	263.51	64,261.52	123,771.60
Union	1,750.0265	927,747.71	1081.9702	323,558.83	349.73	16.62	54.73	421.07	102,684.26	1,353,990.80
West Orange	7.8272	4,149.46	3.1836	952.04	31.32	1.49	4.90	37.71	9,196.42	14,297.92
	2,042.3843	\$1,082,736.39	1192.5981	\$356,641.65	672.53	31.95	105.24	809.71	\$197,461.42	\$1,636,839.46

(1) At \$530.1335225/Ton

(2) At \$299.0459697/Ton

(3) At \$243.8656406/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**  
**1997**

<b>Municipality</b>	<b>Domestic &amp; Commercial</b>				
	<b>Total Assessments <sup>1</sup></b>	<b>User Charge Domestic Sewage 69.28365999</b>	<b>User Charges Industrial</b>	<b>Infiltration / Inflow Charges</b>	<b>Assessment Percentage</b>
East Orange	\$537,745.85	\$501,475.13	\$0.00	\$36,270.72	4.3167%
Hillside	706,434.36	582,883.43	108,379.57	15,171.36	5.6709%
Irvington	2,029,381.37	1,850,566.56	34,520.14	144,294.67	16.2908%
Maplewood	704,957.67	630,134.89	1,424.73	73,398.05	5.6590%
Millburn	709,857.47	672,190.07	0.00	37,667.40	5.6984%
Newark	1,213,298.91	1,175,882.28	0.00	37,416.63	9.7397%
Roselle Park	350,401.25	328,127.41	454.70	21,819.14	2.8128%
South Orange	503,099.46	473,415.25	0.00	29,684.21	4.0386%
Summit	1,084,144.69	928,262.48	123,771.60	32,110.61	8.7029%
Union	3,202,483.99	1,678,188.82	1,353,990.80	170,304.37	25.7078%
West Orange	<u>1,415,434.82</u>	<u>1,317,220.95</u>	<u>14,297.92</u>	<u>83,915.95</u>	<u>11.3624%</u>
	\$12,457,239.84	\$10,138,347.27	\$1,636,839.46	\$682,053.11	100.0000%
Elizabeth	6,222,508.16				
<b>Total</b>	<b><u>\$ 18,679,748.00</u></b>				

(1) Reflects anticipated payment of \$6,222,508.16 from the City of Elizabeth which is 34.8953679% of allocation from Treatment Plant, Sludge Dewatering, and Sludge Drying budget. Exact 1997 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 1997 Assessment with 1996 Assessment

Municipality	1996	1997		Comparison	
				Amount	Percentage
East Orange	\$527,217.56	\$537,745.85	(+)	\$10,528.29	2.00%
Hillside	738,655.61	706,434.36	(-)	(32,221.25)	-4.36%
Irvington	1,994,311.14	2,029,381.37	(+)	35,070.23	1.76%
Maplewood	687,874.75	704,957.67	(+)	17,082.92	2.48%
Millburn	683,083.89	709,857.47	(+)	26,773.58	3.92%
Newark	1,202,193.13	1,213,298.91	(+)	11,105.78	0.92%
Roselle Park	344,440.38	350,401.25	(+)	5,960.87	1.73%
South Orange	494,876.86	503,099.46	(+)	8,222.60	1.66%
Summit	1,077,103.35	1,084,144.69	(+)	7,041.34	0.65%
Union	2,897,416.10	3,202,483.99	(+)	305,067.89	10.53%
West Orange	1,401,150.14	1,415,434.82	(+)	14,284.68	1.02%
	\$12,048,322.91	\$12,457,239.84	(+)	\$408,916.93	3.39%
Elizabeth	6,644,781.09	6,222,508.16	(-)	\$ (422,272.93)	-6.35%
<b>Total</b>	<b>\$18,693,104.00</b>	<b>\$18,679,748.00</b>	<b>(-)</b>	<b>(\$13,356.00)</b>	<b>-0.07%</b>

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

1993	31.92015140%
1994	32.84626490%
1995	33.09447430%
1996	37.06967270%
1997	34.89536790%

Table III, IV, V, VI, and VII, have been prepared to reflect the Domestic Sewer Usage and Industrial User assessment to each municipality for 1997 as a result of the Agreement with the City of Elizabeth which requires 34.8953679% of the 1997 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 34.8953679% 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 1996.

### 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 1997 are apportioned as follows:

	<u>1997</u>	<u>1996</u>		<u>1997</u>	<u>1996</u>
East Orange	4.3167%	4.3759%	Roselle Park	2.8128%	2.8588%
Hillside	5.6709%	6.1308%	South Orange	4.0386%	4.1074%
Irvington	16.2908%	16.5526%	Summit	8.7029%	8.9399%
Maplewood	5.6590%	5.7093%	Union	25.7078%	24.0483%
Millburn	5.6984%	5.6695%	West Orange	<u>11.3624%</u>	<u>11.6294%</u>
Newark	9.7397%	9.9781%	<b>Total</b>	<u>100.0000%</u>	<u>100.0000%</u>

Respectfully submitted,

*A. Ralph LaMendola*

A. Ralph LaMendola  
Chief Engineer



**Joint Meeting of Essex and Union Counties  
Annual Report of the Sewer Contribution of the Municipalities  
Appendix A  
1997 Budget**

	<b>Treatment Plant</b>	<b>Dewatering Facility</b>	<b>Drying Facility</b>	<b>Sewer</b>	<b>Total</b>
Electric Service	\$ 1,548,000	\$ 144,000	\$ 108,000	\$ -	\$ 1,800,000
Gas Service	91,000	10,000	957,000	-	1,058,000
Fuel, Oil & Kerosene	198,800	66,200	60,000	-	325,000
Water Service	71,000	44,000	22,000	-	137,000
Chemicals	360,500	581,500	36,800	2,000	980,800
Sludge Disposal	-	838,000	300,000	-	1,138,000
Insurance	296,500	82,000	30,000	10,000	418,500
Administration	1,012,975	511,625	10,000	32,550	1,567,150
Labor	3,750,000	737,000	277,500	17,500	4,782,000
Benefits	1,353,290	300,800	82,370	12,550	1,749,010
Equipment	95,000	30,000	20,000	-	145,000
Printing & Stationery	13,250	6,890	5,300	1,060	26,500
Maintenance, Supplies & Spare Parts	1,144,780	337,720	20,600	683,000	2,186,100
Screening Disposal	152,000	-	-	-	152,000
Reserve Contingency	46,188	-	-	-	46,188
Miscellaneous Expenses	91,225	50,125	23,465	32,685	197,500
Technical & Professional Services	350,000	78,000	20,000	2,000	450,000
Replacement Fund	625,000	50,000	25,000	50,000	750,000
NJPDES & Miscellaneous Permit Fee	510,500	5,000	251,000	4,500	771,000
	<b>\$ 11,710,008</b>	<b>\$ 3,872,860</b>	<b>\$ 2,249,035</b>	<b>\$ 847,845</b>	<b>\$ 18,679,748</b>
	62.69%	20.73%	12.04%	4.54%	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 <sup>1</sup>	\$ 1,583,975	80%	\$ 1,267,180	10%	\$ 158,398	10%	\$ 158,397
Power	1,548,000	40%	\$ 619,200	5%	\$ 77,400	55%	\$ 851,400
Chlorine	135,000	40%	\$ 54,000			60%	\$ 81,000
Maintenance, Equipment, Supplies, Spare Parts, & Replacement Fund	1,910,968	28%	\$ 535,071	27%	\$ 515,961	45%	\$ 859,936
Fuel, Oil & Kerosene	198,800	40%	\$ 79,520	30%	\$ 59,640	30%	\$ 59,640
Administration, Labor & Benefits (Payroll Retirement)	6,116,265	40%	2,446,506	10%	\$ 611,627	50%	\$ 3,058,132
Sludge Processing <sup>2</sup>	217,000			50%	\$ 108,500	50%	\$ 108,500
<b>Total</b>	<b>\$11,710,008</b>		<b>\$ 5,001,477</b>		<b>\$ 1,531,526</b>		<b>\$ 5,177,005</b>
	100%		42.7111322%		13.0787784%		44.2100894%

83,650

(1) General Expenditures  
(From the Approved Budget)

(2) Sludge Processing

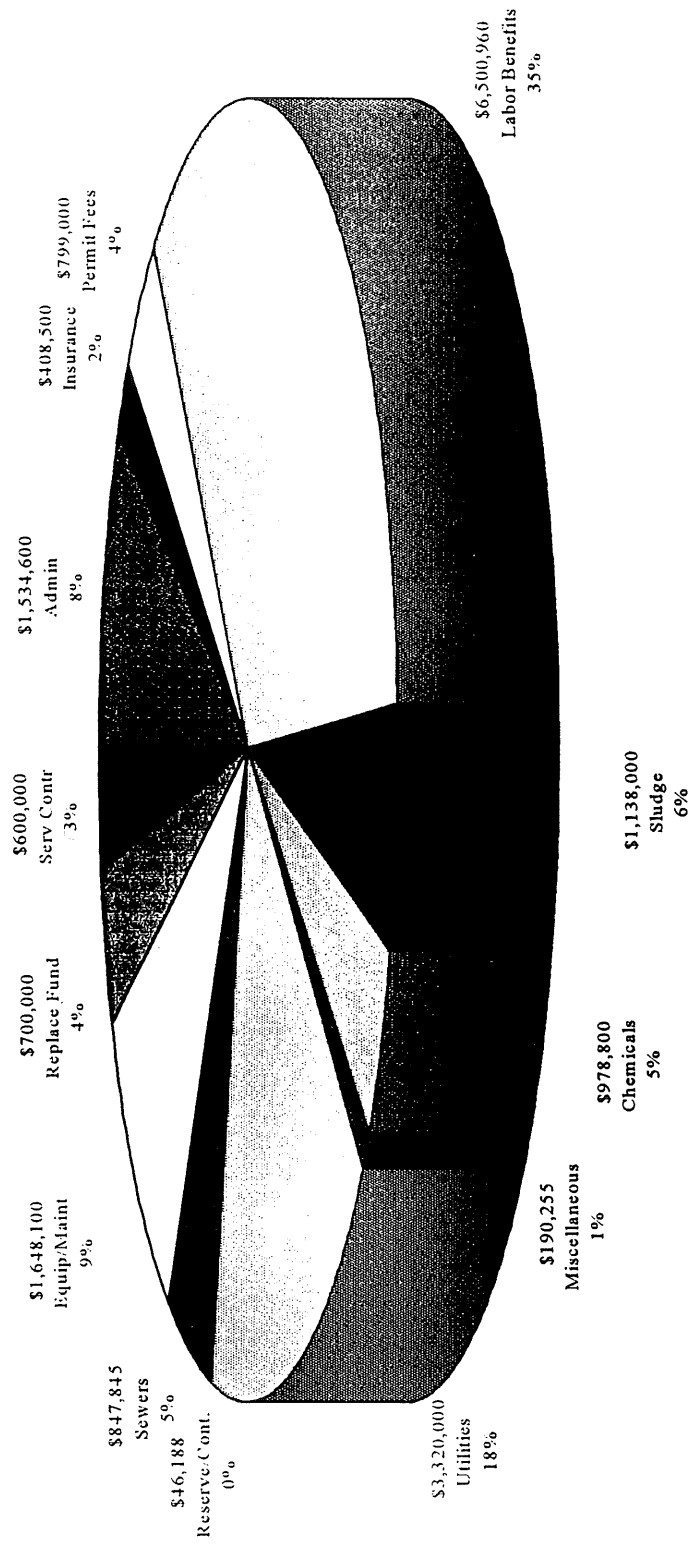
Insurance	\$ 296,500	Polymer	\$ 202,000
Technical & Professional Services	350,000	K2MnO4	15,000
Stationery & Printing	13,250		
Gas	91,000		
Water	71,000		
Miscellaneous	91,225		
Service Contracts	152,000		
Permit Fees	510,500		
Weed Killer, Bug Spray & Deodorant	8,500		
	<u>\$1,583,975</u>		<u>\$ 217,000</u>

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

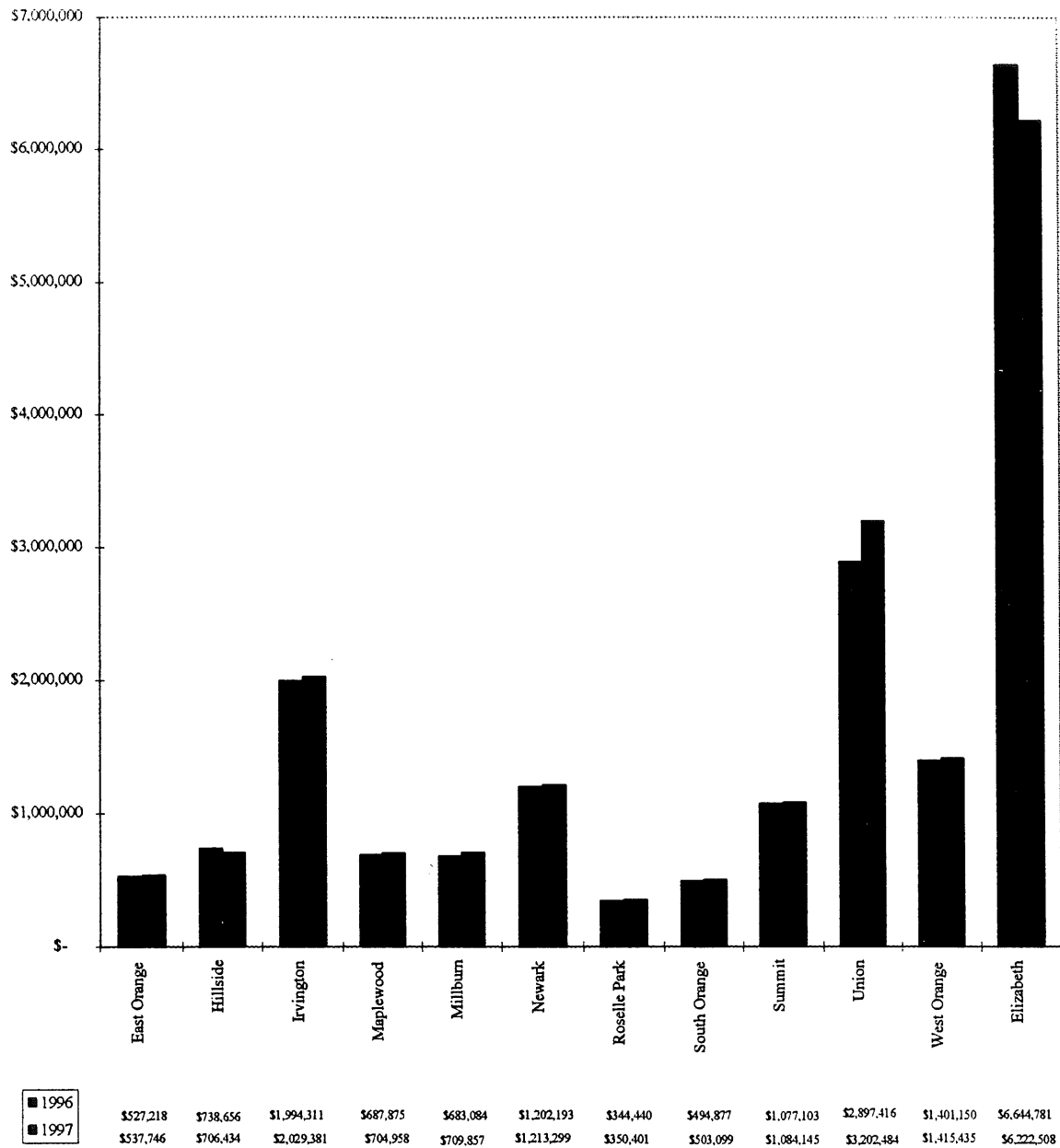
	Estimated			
	Total Cost	Cost Flow	Cost TSS	Cost BOD
Treatment Plant	\$ 11,710,008	\$ 5,001,477	\$ 1,531,526	\$ 5,177,005
Dewatering Facility	3,872,860		1,936,430	1,936,430
Drying Facility	2,249,035		1,124,518	1,124,518
	<u>\$ 17,831,903</u>	<u>\$ 5,001,477</u>	<u>\$ 4,592,474</u>	<u>\$ 8,237,953</u>
Subtotal	100.00%	28.0479150%	25.7542535%	46.1978315%
Sewers <sup>1</sup>	\$ 847,845			
Total	<u>\$ 18,679,748</u>			

(1) Joint Meeting Members Only

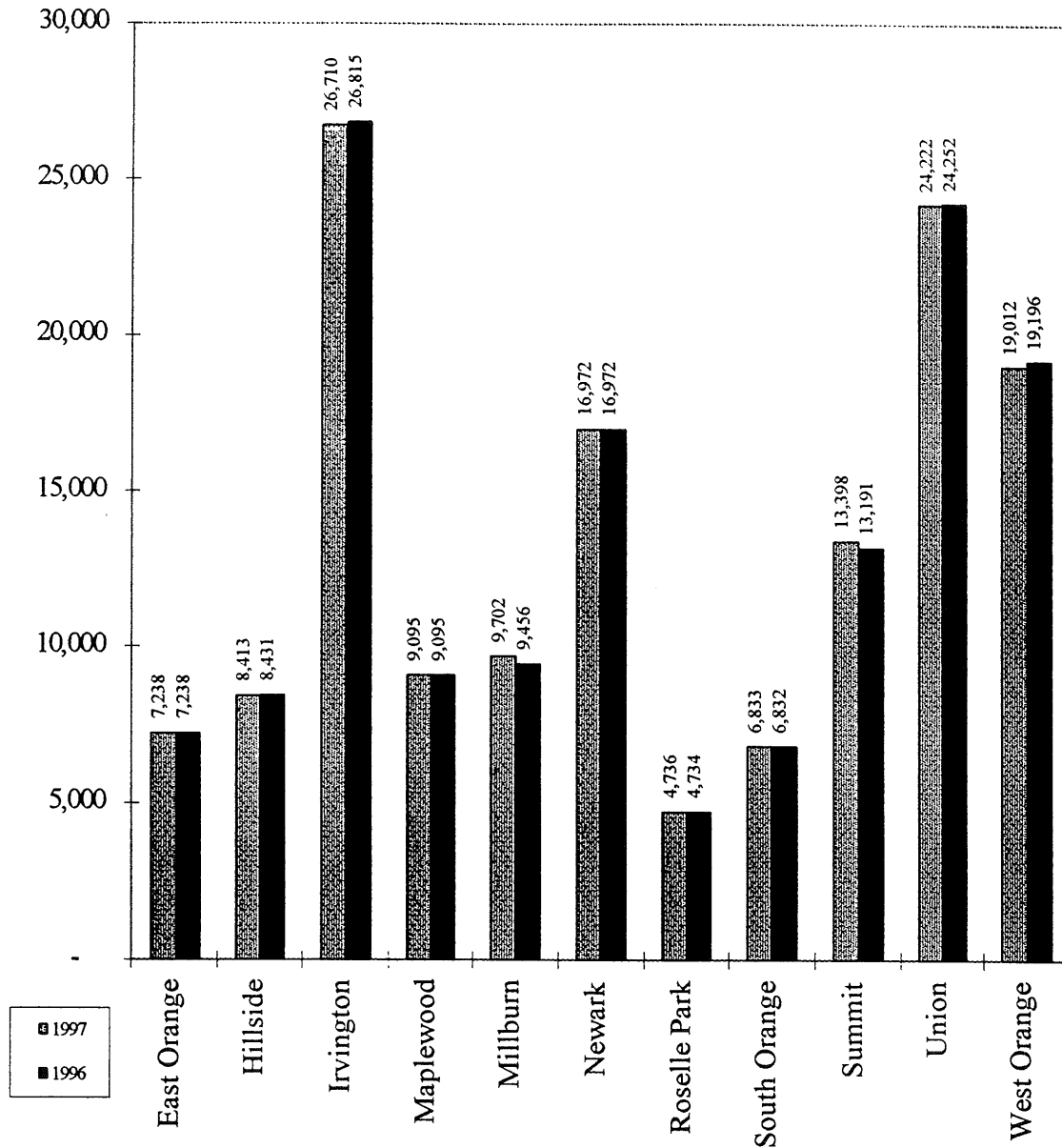
# Joint Meeting of Essex & Union Counties 1997 O&M Budget



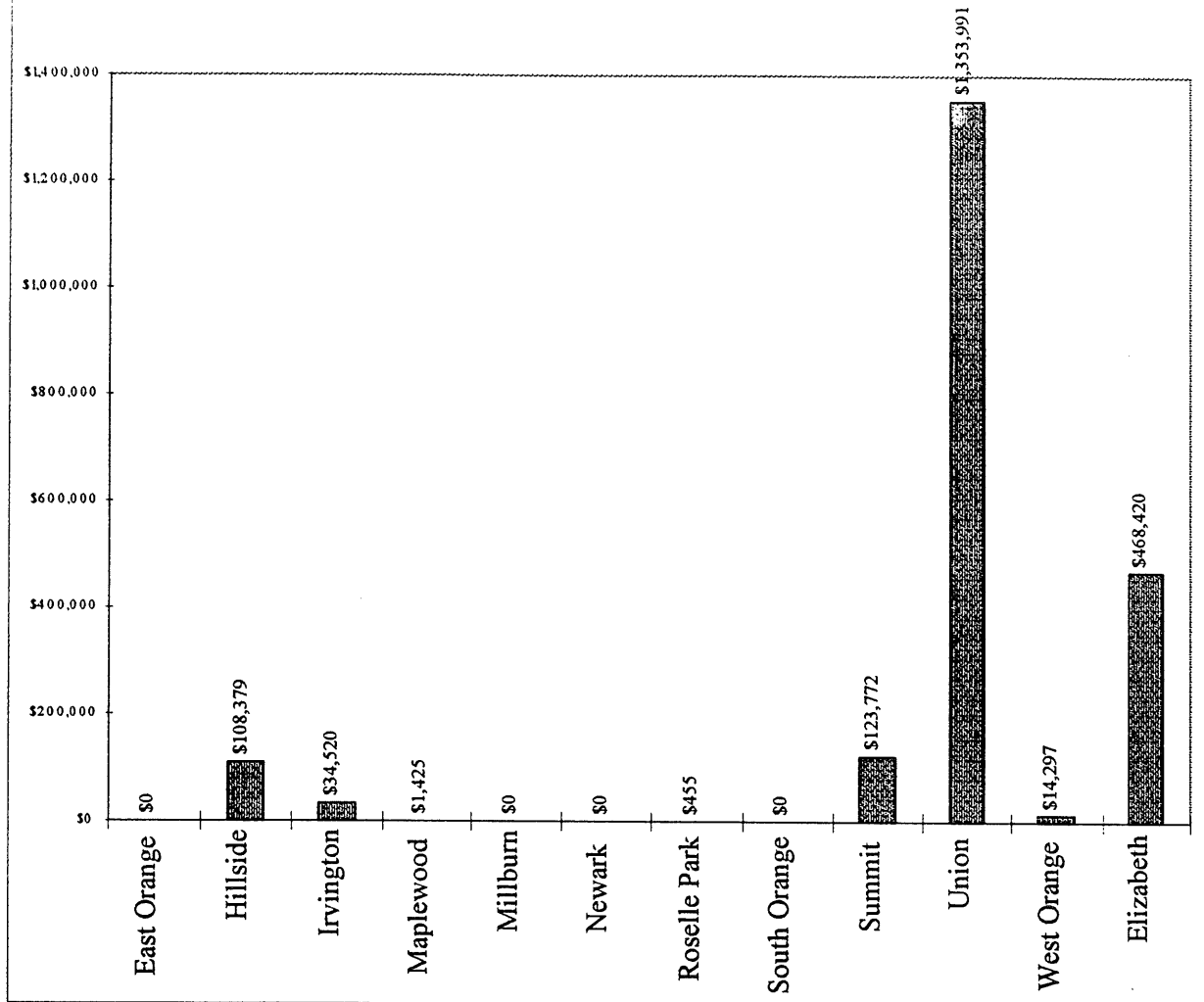
Joint Meeting of Essex & Union Counties  
1997 O&M Expenses  
Total Assessment



# **Joint Meeting of Essex & Union Counties 1997 Equivalent Dwelling Units**



Joint Meeting of Essex & Union Counties  
1997 Industrial User Charges



APPENDIX B  
Joint Meeting of Essex & Union Counties  
User Charge Report

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Municipality	Flow per MG	BOD per Ton	TSS per Ton
Elizabeth	198.0630239	530.1335225	299.0459697
Hillside	243.8656406	530.1335225	299.0459697
Irvington	243.8656406	530.1335225	299.0459697
Maplewood	243.8656406	530.1335225	299.0459697
Millburn	243.8656406	530.1335225	299.0459697
Murray Hill	243.8656406	530.1335225	299.0459697
Roselle Park	243.8656406	530.1335225	299.0459697
Summit	243.8656406	530.1335225	299.0459697
Union	243.8656406	530.1335225	299.0459697
West Orange	243.8656406	530.1335225	299.0459697



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Joint Meeting of Essex & Union Counties  
User Charge Report

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Municipality: Elizabeth

Flow per MG	BOD per Ton	TSS per Ton
198.0630239	530.1335225	299.0459697

## IU #: 0010 Apex Chemical Corporation

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	35.300	21.727	0.2990	0.0440	0.0271	
Totals:			0.2990	0.0440	0.0271	
Cost Analysis:			59.2208	23.3259	8.1041	90.6509

## IU #: 0025 Interbake Foods

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
	450.647	259.800	33.7450	63.4135	36.5582	
Totals:			33.7450	63.4135	36.5582	
Cost Analysis:			6,683.6367	33,617.6221	10,932.5824	51,233.8412

## IU #: 0030 Concord Beverage

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	1,792.857	100.111	41.8850	313.1412	17.4855	
Totals:			41.8850	313.1412	17.4855	
Cost Analysis:			8,295.8698	166,006.6474	5,228.9683	179,531.4855

## IU #: 0037 Deb El Foods Corp

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	851.250	136.000	6.2790	22.2886	3.5609	
Totals:			6.2790	22.2886	3.5609	
Cost Analysis:			1,243.6377	11,815.9340	1,064.8728	14,124.4446

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Joint Meeting of Essex & Union Counties  
User Charge Report

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Municipality: Elizabeth

Flow per MG	BOD per Ton	TSS per Ton
198.0630239	530.1335225	299.0459697

IU #: 0055 Emkay Chemical Company

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	545.125	38.500	1.4030	3.1893	0.2252	
Totals:			1.4030	3.1893	0.2252	
Cost Analysis:			277.8824	1,690.7548	67.3452	2,035.9824

IU #: 0058 Exact Anodizing Corp.

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
	7.714	149.143	4.3250	0.1391	2.6898	
Totals:			4.3250	0.1391	2.6898	
Cost Analysis:			856.6226	73.7416	804.3738	1,734.7380

IU #: 0062 Garcia Laundry

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	739.167	282.833	2.1690	6.6856	2.5582	
Totals:			2.1690	6.6856	2.5582	
Cost Analysis:			429.5987	3,544.2607	765.0194	4,738.8788

IU #: 0067 Purepac Pharmaceutical Co.

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	1,573.667	55.000	2.8390	18.6301	0.6511	
99	153.000	149.000	18.3430	11.7030	11.3971	
Totals:			21.1820	30.3331	12.0482	
Cost Analysis:			4,195.3710	16,080.5932	3,602.9657	23,878.9298

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Joint Meeting of Essex & Union Counties  
User Charge Report

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Municipality: Elizabeth

-----	Cost Factors	-----
Flow per MG	BOD per Ton	TSS per Ton
-----	-----	-----
198.0630239	530.1335225	299.0459697

IU #: 0078 Magnolia Beef Company

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
-----	-----	-----	-----	-----	-----	-----
1	315.667	274.875	1.6380	2.1561	1.8775	
	Totals:		1.6380	2.1561	1.8775	
	Cost Analysis:		324.4272	1,143.0209	561.4588	2,028.9069

IU #: 0095 OK Towel & Uniform Supply Co

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
-----	-----	-----	-----	-----	-----	-----
1	352.778	128.444	15.2470	22.4296	8.1665	
	Totals:		15.2470	22.4296	8.1665	
	Cost Analysis:		3,019.8669	11,890.6829	2,442.1589	17,352.7087

IU #: 0100 Papetti's Hygrade Egg Company

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
-----	-----	-----	-----	-----	-----	-----
4	631.786	181.867	27.1330	71.4831	20.5772	
5	315.538	127.923	5.0680	6.6685	2.7035	
	Totals:		32.2010	78.1516	23.2807	
	Cost Analysis:		6,377.8274	41,430.7830	6,961.9995	54,770.6099

IU #: 0105 Jersey Pride Foods

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
-----	-----	-----	-----	-----	-----	-----
2	1,806.538	468.417	7.9530	59.9121	15.5346	
	Totals:		7.9530	59.9121	15.5346	
	Cost Analysis:		1,575.1952	31,761.4126	4,645.5595	37,982.1674

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Joint Meeting of Essex & Union Counties  
User Charge Report

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Municipality: Elizabeth

Flow per MG	BOD per Ton	TSS per Ton
198.0630239	530.1335225	299.0459697

IU #: 0115 Pharmacaps, Inc.

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	3,234.400	205.000	7.3550	99.2002	6.2874	
Totals:			7.3550	99.2002	6.2874	
Cost Analysis:			1,456.7535	52,589.3515	1,880.2216	55,926.3266

IU #: 0120 Phelps Dodge Magnet Wire Co.

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	34.733	21.556	1.0460	0.1515	0.0940	
Totals:			1.0460	0.1515	0.0940	
Cost Analysis:			207.1739	80.3152	28.1103	315.5995

IU #: 0148 Superior Powder Coating

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	62.036	105.704	1.1790	0.3050	0.5197	
Totals:			1.1790	0.3050	0.5197	
Cost Analysis:			233.5163	161.6907	155.4142	550.6212

IU #: 0155 Stone Container

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	248.625	138.750	3.2400	3.3591	1.8746	
2	147.286	139.571	0.4630	0.2844	0.2695	
Totals:			3.7030	3.6435	2.1441	
Cost Analysis:			733.4274	1,931.5415	641.1845	3,306.1533

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Joint Meeting of Essex & Union Counties  
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Municipality: Elizabeth

Flow per MG	BOD per Ton	TSS per Ton
198.0630239	530.1335225	299.0459697

IU #: 0165 Wakefern Food Corp.

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
98	349.011	311.832	13.8520	20.1599	18.0123	
Totals:			13.8520	20.1599	18.0123	
Cost Analysis:			2,743.5690	10,687.4388	5,386.5057	18,817.5135

	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
Elizabeth Totals:	195.4610	725.3439	151.0699	
Cost Analysis:	38,713.5967	384,529.1167	45,176.8447	468,419.5582

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Joint Meeting of Essex & Union Counties  
User Charge Report

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Municipality: Hillside

-----	Cost Factors	-----
Flow per MG	BOD per Ton	TSS per Ton
-----	-----	-----
243.8656406	530.1335225	299.0459697

IU #: 1003 Accufleet

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	193.500	50.600	2.1740	1.7542	0.4587	
Totals:			2.1740	1.7542	0.4587	
Cost Analysis:			530.1639	929.9602	137.1724	1,597.2965

IU #: 1010 Ariston, Inc

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	208.000	226.667	0.5510	0.4779	0.5208	
Totals:			0.5510	0.4779	0.5208	
Cost Analysis:			134.3700	253.3508	155.7431	543.4639

IU #: 1012 Atlantic Metal Products

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	17.225	31.600	5.6660	0.4070	0.7466	
2	27.967	19.457	4.3690	0.5095	0.3545	
99	153.000	149.000	0.8920	0.5691	0.5542	
Totals:			10.9270	1.4856	1.6553	
Cost Analysis:			2,664.7199	787.5664	495.0108	3,947.2970

IU #: 1015 Bristol-Myers Products R&amp;D

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	124.444	121.111	9.4320	4.8946	4.7635	
Totals:			9.4320	4.8946	4.7635	
Cost Analysis:			2,300.1407	2,594.7915	1,424.5055	6,319.4377

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Municipality: Hillside

Flow per MG	BOD per Ton	TSS per Ton
243.8656406	530.1335225	299.0459697

IU #: 1020 Bristol-Myers Products - Pilot

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
5	205.600	122.545	0.2310	0.1980	0.1180	
Totals:			0.2310	0.1980	0.1180	
Cost Analysis:			56.3330	104.9664	35.2874	196.5868

IU #: 1025 Certified Processing

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
	807.333	15.100	2.7560	9.2783	0.1735	
Totals:			2.7560	9.2783	0.1735	
Cost Analysis:			672.0937	4,918.7379	51.8845	5,642.7160

IU #: 1032 McCain Citrus, Inc.

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
3	3,852.086	286.356	8.6550	139.0270	10.3350	
99	153.000	149.000	0.2040	0.1302	0.1268	
Totals:			8.8590	139.1572	10.4618	
Cost Analysis:			2,160.4057	73,771.8966	3,128.5591	79,060.8615

IU #: 1035 ECD, Inc.

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	24.567	988.571	3.4530	0.3537	14.2344	
Totals:			3.4530	0.3537	14.2344	
Cost Analysis:			842.0681	187.5082	4,256.7400	5,286.3162

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Municipality: Hillside

Flow per MG	BOD per Ton	TSS per Ton
243.8656406	530.1335225	299.0459697

IU #: 1037 Fabric Wash

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	360.167	46.429	1.3930	2.0921	0.2697	
Totals:			1.3930	2.0921	0.2697	
Cost Analysis:			339.7048	1,109.0923	80.6527	1,529.4499

IU #: 1045 Hillside Industrial Complex

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
	39.000	79.857	8.3610	1.3597	2.7842	
Totals:			8.3610	1.3597	2.7842	
Cost Analysis:			2,038.9606	720.8226	832.6038	3,592.3870

IU #: 1050 Manhattan Drug Company, Inc.

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
2	437.111	176.667	0.4640	0.8458	0.3418	
Totals:			0.4640	0.8458	0.3418	
Cost Analysis:			113.1537	448.3869	102.2139	663.7545

	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
Hillside Totals:	48.6010	161.8971	35.7817	
Cost Analysis:	11,852.1140	85,827.0799	10,700.3732	108,379.5671



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Municipality: Irvington

-----	Cost Factors	-----
Flow per MG	BOD per Ton	TSS per Ton
-----	-----	-----
243.8656406	530.1335225	299.0459697

## IU #: 2008 Archon Vitamin Corporation

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
-----	-----	-----	-----	-----	-----	-----
2	113.250	100.500	0.1920	0.0907	0.0805	
3	467.000	80.000	0.0890	0.1733	0.0297	
	Totals:		0.2810	0.2640	0.1102	
	Cost Analysis:		68.5262	139.9552	32.9549	241.4364

## IU #: 2035 Industrial Retaining Ring

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
-----	-----	-----	-----	-----	-----	-----
2	218.182	450.111	1.1780	1.0718	2.2111	
	Totals:		1.1780	1.0718	2.2111	
	Cost Analysis:		287.2737	568.1971	661.2205	1,516.6914

## IU #: 2036 Intergel

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
-----	-----	-----	-----	-----	-----	-----
1	348.000	120.000	1.0450	1.5165	0.5229	
	Totals:		1.0450	1.5165	0.5229	
	Cost Analysis:		254.8396	803.9475	156.3711	1,215.1582

## IU #: 2040 Jabel, Incorporated

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
-----	-----	-----	-----	-----	-----	-----
1	221.313	93.625	0.9120	0.8417	0.3561	
	Totals:		0.9120	0.8417	0.3561	
	Cost Analysis:		222.4055	446.2134	106.4903	775.1091

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Municipality: Irvington

-----	Cost Factors	-----
Flow per MG	BOD per Ton	TSS per Ton
-----	-----	-----
243.8656406	530.1335225	299.0459697

IU #: 2050 Max Marx Color Corporation

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
2	482.000	120.286	9.7190	19.5346	4.8750	
Totals:			9.7190	19.5346	4.8750	
Cost Analysis:			2,370.1302	10,355.9463	1,457.8491	14,183.9256

IU #: 2055 Revlon, Incorporated

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
	148.943	382.000	1.7640	1.0956	2.8099	
99	153.000	149.000	5.0360	3.2130	3.1290	
Totals:			6.8000	4.3086	5.9389	
Cost Analysis:			1,658.2864	2,284.1333	1,776.0041	5,718.4238

IU #: 2057 Sal's Cleaners

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	175.375	56.000	2.6790	1.9592	0.6256	
Totals:			2.6790	1.9592	0.6256	
Cost Analysis:			653.3161	1,038.6376	187.0832	1,879.0368

IU #: 2060 Standard Uniform Service

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	172.286	60.071	12.8500	9.2318	3.2189	
Totals:			12.8500	9.2318	3.2189	
Cost Analysis:			3,133.6735	4,894.0867	962.5991	8,990.3592

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Municipality: Irvington

-----	Cost Factors	-----
Flow per MG	BOD per Ton	TSS per Ton
-----	-----	-----
243.8656406	530.1335225	299.0459697

	Flow (MG) -----	BOD (Tons) -----	TSS (Tons) -----	Annual Payment -----
Irvington Totals:	35.4640	38.7282	17.8587	
Cost Analysis:	8,648.4511	20,531.1171	5,340.5723	34,520.1404

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Municipality: Maplewood

Flow per MG	BOD per Ton	TSS per Ton
243.8656406	530.1335225	299.0459697

IU #: 3020 Gleason Cleaners

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	208.364	95.909	1.5330	1.3320	0.6131	
Totals:			1.5330	1.3320	0.6131	
Cost Analysis:			373.8460	706.1379	183.3451	1,263.3290

IU #: 3045 Universal Chain Company

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
	20.564	31.027	0.4920	0.0422	0.0637	
Totals:			0.4920	0.0422	0.0637	
Cost Analysis:			119.9819	22.3716	19.0492	161.4028

	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
Maplewood Totals:	2.0250	1.3742	0.6768	
Cost Analysis:	493.8279	728.5095	202.3943	1,424.7317

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Municipality: Murray Hill

Flow per MG	Cost Factors	
	BOD per Ton	TSS per Ton
243.8656406	530.1335225	299.0459697

## IU #: 5010 Lucent Technologies

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	15.638	23.300	57.4870	3.7486	5.5855	
Totals:			57.4870	3.7486	5.5855	
Cost Analysis:			14,019.1041	1,987.2585	1,670.3213	17,676.6839

## IU #: 5015 Electrical Industries, Inc.

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
	7.186	8.329	13.1420	0.3938	0.4564	
Totals:			13.1420	0.3938	0.4564	
Cost Analysis:			3,204.8822	208.7666	136.4846	3,550.1334

## IU #: 5020 Fablok Mills, Incorporated

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	214.600	110.700	10.0870	9.0267	4.6564	
Totals:			10.0870	9.0267	4.6564	
Cost Analysis:			2,459.8727	4,785.3563	1,392.4777	8,637.7066

	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
Murray Hill Totals:	80.7160	13.1691	10.6983	
Cost Analysis:	19,683.8590	6,981.3814	3,199.2835	29,864.5239

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Municipality: Roselle Park

Flow per MG	BOD per Ton	TSS per Ton
243.8656406	530.1335225	299.0459697

IU #: 6005 Hexacon Electric Company

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	4.357	13.200	1.1410	0.0207	0.0628	
99	153.000	149.000	0.1910	0.1219	0.1187	
Totals:			1.3320	0.1426	0.1815	
Cost Analysis:			324.8290	75.5970	54.2768	454.7029

	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
Roselle Park Totals:	1.3320	0.1426	0.1815	
Cost Analysis:	324.8290	75.5970	54.2768	454.7029

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Municipality: Summit

Flow per MG	BOD per Ton	TSS per Ton
243.8656406	530.1335225	299.0459697

## IU #: 5505 Celanese Research Company

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	77.222	86.111	27.3650	8.8120	9.8263	
Totals:			27.3650	8.8120	9.8263	
Cost Analysis:			6,673.3833	4,671.5366	2,938.5154	14,283.4353

## IU #: 5510 Ciba-Geigy Corporation

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
99	87.125	39.313	139.1000	50.5366	22.8031	
	153.000	149.000	15.0970	9.6320	9.3802	
Totals:			154.1970	60.1686	32.1833	
Cost Analysis:			37,603.3502	31,897.3919	9,624.2862	79,125.0282

## IU #: 5515 Columbia Cleaners Inc.

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	37.375	71.000	0.4320	0.0673	0.1279	
2	51.286	32.833	0.8020	0.1715	0.1098	
Totals:			1.2340	0.2388	0.2377	
Cost Analysis:			300.9302	126.5959	71.0832	498.6093

	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
Summit Totals:	182.7960	69.2194	42.2473	
Cost Analysis:	44,577.6636	36,695.5243	12,633.8848	93,907.0728

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Municipality: Union

----- Cost Factors -----		
Flow per MG	BOD per Ton	TSS per Ton
-----	-----	-----
243.8656406	530.1335225	299.0459697

IU #: 7015 ACuPowder International

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
-----	-----	-----	-----	-----	-----	-----
3a	148.000	95.857	0.1900	0.1173	0.0759	
4a	87.714	49.857	0.7490	0.2740	0.1557	
Totals:			0.9390	0.3913	0.2316	
Cost Analysis:			228.9898	207.4412	69.2590	505.6901

IU #: 7025 Allied Processing Corp.

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
-----	-----	-----	-----	-----	-----	-----
1	26.850	21.244	0.3080	0.0345	0.0273	
Totals:			0.3080	0.0345	0.0273	
Cost Analysis:			75.1106	18.2896	8.1640	101.5642

IU #: 7035 American Products Company

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
-----	-----	-----	-----	-----	-----	-----
1	286.714	424.571	1.8790	2.2465	3.3267	
Totals:			1.8790	2.2465	3.3267	
Cost Analysis:			458.2235	1,190.9450	994.8362	2,644.0047

IU #: 7045 TransTechnology / Breeze

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
-----	-----	-----	-----	-----	-----	-----
1	100.000	81.000	2.8420	1.1851	0.9599	
Totals:			2.8420	1.1851	0.9599	
Cost Analysis:			693.0662	628.2612	287.0542	1,608.3816



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Municipality: Union

Flow per MG	BOD per Ton	TSS per Ton
243.8656406	530.1335225	299.0459697

## IU #: 7060 Champion Envelope Corporation

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	342.300	212.000	1.6790	2.3966	1.4843	
Totals:			1.6790	2.3966	1.4843	
Cost Analysis:			409.4504	1,270.5180	443.8739	2,123.8423

## IU #: 7065 Culligan Water Conditioning

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
	4.071	22.014	3.5920	0.0610	0.3297	
Totals:			3.5920	0.0610	0.3297	
Cost Analysis:			875.9654	32.3381	98.5955	1,006.8990

## IU #: 7070 Durex, Incorporated

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	28.571	41.429	12.7570	1.5199	2.2039	
Totals:			12.7570	1.5199	2.2039	
Cost Analysis:			3,110.9940	805.7499	659.0674	4,575.8113

## IU #: 7080 Foremost Manufacturing Co.

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
2	32.333	287.333	18.7920	2.5337	22.5162	
Totals:			18.7920	2.5337	22.5162	
Cost Analysis:			4,582.7231	1,343.1993	6,733.3789	12,659.3013

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Municipality: Union

----- Cost Factors -----		
Flow per MG	BOD per Ton	TSS per Ton
-----	-----	-----
243.8656406	530.1335225	299.0459697

IU #: 7092 Interlux/Courtauld Coating

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
-----	-----	-----	-----	-----	-----	-----
2	90.667	77.500	6.5110	2.4617	2.1042	
Totals:			6.5110	2.4617	2.1042	
Cost Analysis:			1,587.8092	1,305.0297	629.2525	3,522.0914

IU #: 7105 Stonco Lighting

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
-----	-----	-----	-----	-----	-----	-----
52.000	148.500	2.4010	0.5206	1.4868		
Totals:			2.4010	0.5206	1.4868	
Cost Analysis:			585.5214	275.9875	444.6215	1,306.1305

IU #: 7110 NEI/DoAll

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
-----	-----	-----	-----	-----	-----	-----
1	84.000	17.522	1.5930	0.5580	0.1164	
Totals:			1.5930	0.5580	0.1164	
Cost Analysis:			388.4780	295.8145	34.8090	719.1014

IU #: 7145 Schering Corporation

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
-----	-----	-----	-----	-----	-----	-----
5	82.239	42.818	200.8040	68.8630	35.8535	
Totals:			200.8040	68.8630	35.8535	
Cost Analysis:			48,969.1961	36,506.5848	10,721.8447	96,197.6255

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Municipality: Union

Flow per MG	BOD per Ton	TSS per Ton
243.8656406	530.1335225	299.0459697

IU #: 7150 SS Studios, Incorporated

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
1	163.667	52.667	0.4760	0.3249	0.1045	
Totals:			0.4760	0.3249	0.1045	
Cost Analysis:			116.0800	172.2404	31.2503	319.5707

IU #: 7167 Turbo Braze Corporation

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
	23.080	37.000	1.7850	0.1718	0.2754	
Totals:			1.7850	0.1718	0.2754	
Cost Analysis:			435.3002	91.0769	82.3573	608.7344

IU #: 7170 Tuscan Dairy Farms, Incorp

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
2a	2,426.688	1,471.875	164.7110	1,666.7579	1,010.9498	
Totals:			164.7110	1,666.7579	1,010.9498	
Cost Analysis:			40,167.3535	883,604.2367	302,320.4633	1,226,092.0535

	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
Union Totals:	421.0690	1,750.0265	1,081.9702	
Cost Analysis:	102,684.2614	927,747.7129	323,558.8276	1,353,990.8020

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Municipality: West Orange

----- Cost Factors -----		
Flow per MG	BOD per Ton	TSS per Ton
-----	-----	-----
243.8656406	530.1335225	299.0459697

IU #: 8030 Organon, Incorporated

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
-----	-----	-----	-----	-----	-----	-----
1	78.770	24.270	22.7230	7.4638	2.2997	
Totals:			22.7230	7.4638	2.2997	
Cost Analysis:			5,541.3590	3,956.8106	687.7160	10,185.8856

IU #: 8040 Turtle Back Zoo

Site	BOD (mg/L)	TSS (mg/L)	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
-----	-----	-----	-----	-----	-----	-----
	5.814	14.143	14.9880	0.3634	0.8839	
Totals:			14.9880	0.3634	0.8839	
Cost Analysis:			3,655.0582	192.6505	264.3267	4,112.0355

	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
-----	-----	-----	-----	-----
West Orange Totals:	37.7110	7.8272	3.1836	
Cost Analysis:	9,196.4172	4,149.4611	952.0427	14,297.9210

	Flow (MG)	BOD (Tons)	TSS (Tons)	Annual Payment
-----	-----	-----	-----	-----
Grand Totals:	1,005.1750	2,767.7282	1,343.6680	
Cost Analysis:	236,175.0200	1,467,265.5000	401,818.5000	2,105,259.0200