

**EASTON AREA JOINT SEWER AUTHORITY
COMMONWEALTH OF PENNSYLVANIA**

RESOLUTION #2022-05-16 *B*

**RESOLUTION APPROVING AN UPDATED
HIGH STRENGTH WASTE SURCHARGE FEE**

WHEREAS, the Easton Area Joint Sewer Authority (the "Authority") is a body corporate and politic organized and operated under the provisions of the Pennsylvania Municipality Authorities Act, 53 Pa. C.S. §5601 et seq., as amended (the "Act");

WHEREAS, the Authority imposes a high strength waste surcharge fee, using a method consisting of a combination of capital basis treatment cost allocations and functional treatment costs allocation;

WHEREAS, the Authority Board reviews and updates the high strength waste surcharge fee from time to time based on the Authority's annual audit, Chapter 94 Report, sewage treatment costs data, the evaluation by the Authority's Consulting Engineer and recommendation of the Authority's Engineering Committee; and

WHEREAS, based on the forgoing, the Authority Board has determined that an update to the current high strength waste surcharge fee is necessary and appropriate.

NOW, THEREFORE, BE IT RESOLVED by the Board of the Easton Area Joint Sewer Authority as follows:

1. The Authority's high strength waste surcharge fee shall be determined, where appropriate, by using the attached Table I - 2020 Allocation of Operation and Maintenance and Capital Costs and the attached Table II - Surcharge Program Cost Update Based on 2020 Data which includes the updated surcharge formula.

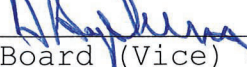
2. The updated high strength waste surcharge fee shall be effective July 1, 2022.


3. All Resolutions or parts of Resolutions inconsistent with this Resolution are hereby repealed insofar, but only insofar, as the same are inconsistent herewith.

4. If any section, subsection, sentence, clause or phrase of this Resolution is, for any reason, held to be illegal or unconstitutional, such decision shall not affect the validity of the remaining portions of this Resolution.

ADOPTED this 16th day of May, 2022.

EASTON AREA JOINT SEWER AUTHORITY

By: 
Board (Vice) Chairman


Stephen Riegel, Secretary

(SEAL)



TABLE I
TO RESOLUTION

2020 Allocation of Operation and Maintenance and Capital Costs

(attached hereto)

TABLE 1
EASTON AREA JOINT SEWER AUTHORITY - SURCHARGE PROGRAM COSTS FOR YEAR 2020
ALLOCATION OF OPERATION & MAINTENANCE (O & M) AND CAPITAL COSTS (Continued)

Item	Actual 2020	Hydraulic Loading		BOD		Suspended Solids		NH3-N	
		%	Amount	%	Amount	%	Amount	%	Amount
<u>1988 Indirectly Allocable Costs</u>									
Mobilization	\$63,013.40	38.1	\$23,978	11.7	\$7,398	34.9	\$21,997	14.4	\$9,088
Sitework	\$919,584.85	38.1	\$349,926	11.7	\$107,956	34.9	\$321,009	14.4	\$132,631
Control Building & Lab Addition	\$231,488.25	38.1	\$88,087	11.7	\$27,176	34.9	\$80,808	14.4	\$33,387
Retaining Wall	\$64,630.25	38.1	\$24,594	11.7	\$7,587	34.9	\$22,561	14.4	\$9,322
New Garage	\$249,331.50	38.1	\$94,877	11.7	\$29,271	34.9	\$87,037	14.4	\$35,961
Underground Piping	\$1,039,060.00	38.1	\$395,390	11.7	\$121,982	34.9	\$362,715	14.4	\$149,863
Electrical Contract 5	\$562,491.70	38.1	\$214,043	11.7	\$66,035	34.9	\$196,355	14.4	\$81,128
Plumbing Contract 6	\$91,030.00	38.1	\$34,639	11.7	\$10,687	34.9	\$31,777	14.4	\$13,129
HVAC Contract 7	\$130,830.00	38.1	\$49,784	11.7	\$15,359	34.9	\$45,670	14.4	\$18,870
Administrative Costs	\$1,898,505.00	38.1	\$722,432	11.7	\$222,878	34.9	\$662,730	14.4	\$273,821
<u>1998 & 2002 thru 2020 Indirectly Allocable Costs</u>									
Mobilization	\$68,207.00	38.1	\$25,955	11.7	\$8,007	34.9	\$23,810	14.4	\$9,837
Sitework	\$97,000.00	38.1	\$36,911	11.7	\$11,387	34.9	\$33,861	14.4	\$13,990
Underground Piping	\$95,700.00	38.1	\$36,416	11.7	\$11,235	34.9	\$33,407	14.4	\$13,803
Electrical Contract	\$1,460,935.52	38.1	\$555,925	11.7	\$171,509	34.9	\$509,984	14.4	\$210,710
HVAC Contract	\$61,294.00	38.1	\$23,324	11.7	\$7,196	34.9	\$21,397	14.4	\$8,840
Sludge Cover	\$74,400.00	0.0	\$0	0.0	\$0	80.0	\$59,520	20.0	\$14,880
Digester Stairs	\$9,675.00	0.0	\$0	0.0	\$0	80.0	\$7,740	20.0	\$1,935
Maintenance Shop	\$61,200.00	25.0	\$15,300	25.0	\$15,300	25.0	\$15,300	25.0	\$15,300
Aeration Basin Coating	\$106,908.00	0.0	\$0	0.0	\$0	80.0	\$85,526	20.0	\$21,382
Grit System	\$121,965.00	0.0	\$0	10.0	\$12,197	90.0	\$109,769	0.0	\$0
Sludge Conveyor System	\$7,230.00	0.0	\$0	0.0	\$0	75.0	\$5,423	25.0	\$1,808
Anerobic Digester No. 1 Rehab	\$115,708.00	0.0	\$0	0.0	\$0	75.0	\$86,781	25.0	\$28,927
Administrative Cost	<u>\$1,286,722.00</u>	<u>38.1</u>	<u>\$489,632</u>	<u>11.7</u>	<u>\$151,057</u>	<u>34.9</u>	<u>\$449,169</u>	<u>14.4</u>	<u>\$185,583</u>
Subtotal - Indirectly Allocable Costs	\$8,816,909.47	38.1	\$3,181,213.64	11.7	\$1,004,214.19	34.9	\$3,274,343.77	14.4	\$1,284,196.21
<u>Annual O & M Costs</u>									
Directly Allocable Costs	\$5,198,205.00		\$1,640,733.20		\$1,106,442.15		\$1,463,150.35		\$987,879.30
Indirectly Allocable Costs	<u>\$2,727,688.00</u>		<u>\$859,374</u>		<u>\$579,526</u>		<u>\$766,361</u>		<u>\$517,426</u>
Total Annual O & M Costs	\$7,920,893		\$2,500,108		\$1,685,968		\$2,229,511		\$1,505,305
<u>Capital Costs</u>									
Directly Allocable Costs	\$24,865,375.03		\$9,461,935		\$2,919,107		\$8,680,009		\$3,586,324
Indirectly Allocable Costs	<u>\$8,816,909.47</u>		<u>\$3,181,214</u>		<u>\$1,004,214</u>		<u>\$3,274,344</u>		<u>\$1,284,196</u>
Total Capital Costs	\$33,682,284.50		\$12,643,149		\$3,923,321		\$11,954,353		\$4,870,520

TABLE I
EASTON AREA JOINT SEWER AUTHORITY - SURCHARGE PROGRAM COSTS FOR YEAR 2020
ALLOCATION OF OPERATION & MAINTENANCE (O & M) AND CAPITAL COSTS (Continued)

Item	Actual 2020	Hydraulic Loading		BOD		Suspended Solids		NH3-N	
		%	Amount	%	Amount	%	Amount	%	Amount
CAPITAL COST ALLOCATION									
1988 Directly Allocable Costs									
Aerobic Digester I	\$483,471.50	0.0	\$0	30.0	\$145,041	40.0	\$193,389	30.0	\$145,041
Blower Building	\$279,473.00	0.0	\$0	30.0	\$83,842	40.0	\$111,789	30.0	\$83,842
Secondary Clarifiers 5, 6 & 7	\$974,725.70	25.0	\$243,681	25.0	\$243,681	25.0	\$243,681	25.0	\$243,681
Flow Division Box 2 & 3	\$225,039.25	20.0	\$45,008	30.0	\$67,512	20.0	\$45,008	30.0	\$67,512
Secondary Sludge Wet Well	\$74,239.05	10.0	\$7,424	30.0	\$22,272	20.0	\$14,848	40.0	\$29,696
Chlorine Building	\$107,190.25	90.0	\$96,471	5.0	\$5,360	0.0	\$0	5.0	\$5,360
Sludge Dewatering	\$1,141,852.00	0.0	\$0	0.0	\$0	100.0	\$1,141,852	0.0	\$0
Oxidation Ditch I	\$3,216,284.95	10.0	\$321,628	30.0	\$964,885	10.0	\$321,628	50.0	\$1,608,142
Sludge Pump House	\$201,838.00	10.0	\$20,184	30.0	\$60,551	20.0	\$40,368	40.0	\$80,735
Sludge Sump and Valve Pits	\$63,595.35	0.0	\$0	0.0	\$0	100.0	\$63,595	0.0	\$0
1998 & 2002 thru 2020 Directly Allocable Costs									
Influent Screen Building	\$410,800.00	30.0	\$123,240	30.0	\$123,240	40.0	\$164,320	0.0	\$0
Upgrade Digester No. 1	\$37,539.41	0.0	\$0	30.0	\$11,262	40.0	\$15,016	30.0	\$11,262
Primary Sludge Pump Station	\$242,714.56	25.0	\$60,679	25.0	\$60,679	25.0	\$60,679	25.0	\$60,679
Upgrade Digester No. 2	\$345,357.00	20.0	\$69,071	30.0	\$103,607	20.0	\$69,071	30.0	\$103,607
Digester Boiler Building	\$422,321.16	0.0	\$0	0.0	\$0	80.0	\$337,857	20.0	\$84,464
Secondary Sludge Dewatering	\$110,484.00	10.0	\$11,048	30.0	\$33,145	20.0	\$22,097	40.0	\$44,194
SCADA System	\$904,996.00	25.0	\$226,249	25.0	\$226,249	25.0	\$226,249	25.0	\$226,249
Grit System	\$749,418.00	0.0	\$0	10.0	\$74,942	90.0	\$674,476	0.0	\$0
Sludge Conveyor System	\$148,850.00	0.0	\$0	0.0	\$0	75.0	\$111,638	25.0	\$37,213
Aerobic Digester No. 1 Rehab	\$906,473.70	0.0	\$0	0.0	\$0	75.0	\$679,855	25.0	\$226,618
Primary Clarifier Project	\$1,098,727.09	0.0	\$0	15.0	\$164,809	85.0	\$933,918	0.0	\$0
Chlorine Contact Tank Project	\$218,000.00	100.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Digester Gas System Upgrades	\$671,768.50	0.0	\$0	10.0	\$67,177	80.0	\$537,415	10.0	\$67,177
Centrifuge System	\$1,851,912.95	0.0	\$0	0.0	\$0	100.0	\$1,851,913	0.0	\$0
Oxidation Ditch Improvements	\$653,386.00	50.0	\$326,693	25.0	\$163,347	0.0	\$0	25.0	\$163,347
Digester No. 2 and Return Lift Station	\$1,121,678.59	40.0	\$448,671	10.0	\$112,168	40.0	\$448,671	10.0	\$112,168
WWTP Equipment Upgrade Project	\$1,853,381.13	60.0	\$1,112,029	10.0	\$185,338	20.0	\$370,676	10.0	\$185,338
Wastewater Pumping Station Upgrades	\$6,079,207.89	100.0	\$6,079,208	0.0	\$0	0.0	\$0	0.0	\$0
Second Street PS - Force Main Repairs	<u>\$270,650.00</u>	<u>100.0</u>	<u>\$270,650</u>	<u>0.0</u>	<u>\$0</u>	<u>0.0</u>	<u>\$0</u>	<u>0.0</u>	<u>\$0</u>
Subtotal - Directly Allocable Costs	\$24,865,375.03	38.1	\$9,461,935	11.7	\$2,919,107	34.9	\$8,680,009	14.4	\$3,586,324

TABLE I
EASTON AREA JOINT SEWER AUTHORITY - SURCHARGE PROGRAM COSTS FOR YEAR 2020
ALLOCATION OF OPERATION & MAINTENANCE (O & M) AND CAPITAL COSTS (Continued)

Item	Actual 2020	Hydraulic Loading		BOD		Suspended Solids		NH3-N	
		%	Amount	%	Amount	%	Amount	%	Amount
<u>Indirectly Allocable Costs</u>									
Solicitor Services/Outside Legal	\$25,228.00	31.6	\$7,963	21.3	\$5,370	28.1	\$7,101	19.0	\$4,794
Board/Officer Compensation	\$10,800.00	31.6	\$3,409	21.3	\$2,299	28.1	\$3,040	19.0	\$2,052
Administrative/Recording Secretary	\$18,617.00	31.6	\$5,876	21.3	\$3,963	28.1	\$5,240	19.0	\$3,538
Auditor / CPA	\$14,700.00	31.6	\$4,640	21.3	\$3,129	28.1	\$4,138	19.0	\$2,794
Accountant	\$18,406.00	31.6	\$5,810	21.3	\$3,918	28.1	\$5,181	19.0	\$3,498
Administrative Meeting Office	\$26,037.00	31.6	\$8,218	21.3	\$5,542	28.1	\$7,329	19.0	\$4,948
Fringe Benefits	\$2,821.00	31.6	\$890	21.3	\$600	28.1	\$794	19.0	\$536
Consulting Engineer- General Services	\$58,138.00	31.6	\$18,350	21.3	\$12,375	28.1	\$16,364	19.0	\$11,049
Consulting Engineer- Pretreatment Services	\$38,979.00	31.6	\$12,303	21.3	\$8,297	28.1	\$10,972	19.0	\$7,408
Contract Lab Services	\$59,044.00	31.6	\$18,636	21.3	\$12,568	28.1	\$16,619	19.0	\$11,221
Liability and Vehicle Insurance	\$18,859.00	31.6	\$5,953	21.3	\$4,014	28.1	\$5,308	19.0	\$3,584
Debt Service - Bonds	\$1,856,288.00	31.6	\$585,909	21.3	\$395,112	28.1	\$522,494	19.0	\$352,773
Bond Fees	\$1,500.00	31.6	\$473	21.3	\$319	28.1	\$422	19.0	\$285
Contingencies	\$3,955.00	31.6	\$1,248	21.3	\$842	28.1	\$1,113	19.0	\$752
Capital Costs	\$562,392.00	31.6	\$177,510	21.3	\$119,706	28.1	\$158,298	19.0	\$106,878
Permits and Licensing	<u>\$6,924.00</u>	<u>31.6</u>	<u>\$2,185</u>	<u>21.3</u>	<u>\$1,474</u>	<u>28.1</u>	<u>\$1,949</u>	<u>19.0</u>	<u>\$1,316</u>
Subtotal - Indirectly Allocable Costs	\$2,722,688.00	31.6	\$859,374.46	21.3	\$579,526.35	28.1	\$766,361.06	19.0	\$517,426.13

TABLE 1
EASTON AREA JOINT SEWER AUTHORITY - SURCHARGE PROGRAM COSTS FOR YEAR 2020
ALLOCATION OF OPERATION & MAINTENANCE (O & M) AND CAPITAL COSTS

ITEM	Actual	Hydraulic Loading		BOD		Suspended Solids		NH3-N	
	2020	%	Amount	%	Amount	%	Amount	%	Amount
<u>ANNUAL O & M COST ALLOCATION</u>									
<u>Directly Allocable Costs</u>									
Salaries/Wages	\$1,346,392.00	30.0	\$403,918	25.0	\$336,598	25.0	\$336,598	20.0	\$269,278
Health, Disability, Workers Comp. Other Benefits	\$455,770.00	30.0	\$136,731	25.0	\$113,943	25.0	\$113,943	20.0	\$91,154
Social Security	\$103,186.00	30.0	\$30,956	25.0	\$25,797	25.0	\$25,797	20.0	\$20,637
Pension Contributions	\$243,309.00	30.0	\$72,993	25.0	\$60,827	25.0	\$60,827	20.0	\$48,662
Training and Dues	\$6,674.00	30.0	\$2,002	25.0	\$1,669	25.0	\$1,669	20.0	\$1,335
Office and Safety Supplies	\$6,593.00	30.0	\$1,978	25.0	\$1,648	25.0	\$1,648	20.0	\$1,319
Laboratory and Other Supplies	\$26,055.00	30.0	\$7,817	25.0	\$6,514	25.0	\$6,514	20.0	\$5,211
Heating Fuel	\$12,567.00	30.0	\$3,770	25.0	\$3,142	25.0	\$3,142	20.0	\$2,513
Vehicle Fuel and Maintenance	\$5,165.00	30.0	\$1,550	25.0	\$1,291	25.0	\$1,291	20.0	\$1,033
Clothing and Uniforms	\$9,843.00	30.0	\$2,953	25.0	\$2,461	25.0	\$2,461	20.0	\$1,969
Auditing Services	\$9,150.00	30.0	\$2,745	25.0	\$2,288	25.0	\$2,288	20.0	\$1,830
Computer and Data Contracted Services	\$14,167.00	30.0	\$4,250	25.0	\$3,542	25.0	\$3,542	20.0	\$2,833
Telephone	\$43,159.00	30.0	\$12,948	25.0	\$10,790	25.0	\$10,790	20.0	\$8,632
Engineering Services - Contract Lab	\$74,449.00	30.0	\$22,335	25.0	\$18,612	25.0	\$18,612	20.0	\$14,890
Indirect Costs	\$499,371.00	30.0	\$149,811	25.0	\$124,843	25.0	\$124,843	20.0	\$99,874
Repairs and Maintenance	\$435,601.00	30.0	\$130,680	25.0	\$108,900	25.0	\$108,900	20.0	\$87,120
Insurances - Property, Casualty	\$204,000.00	30.0	\$61,200	25.0	\$51,000	25.0	\$51,000	20.0	\$40,800
Electricity	\$488,882.00	40.0	\$195,553	25.0	\$122,221	15.0	\$73,332	20.0	\$97,776
Water	\$27,342.00	30.0	\$8,203	25.0	\$6,836	25.0	\$6,836	20.0	\$5,468
Solid Waste	\$345,078.00	15.0	\$51,762	30.0	\$103,523	50.0	\$172,539	5.0	\$17,254
Chemicals	\$841,452.00	40.0	\$336,581	0.0	\$0	40.0	\$336,581	20.0	\$168,290
Subtotal - Directly Allocable Costs	\$5,198,205.00	31.6	\$1,640,733.20	21.3	\$1,106,442.15	28.1	\$1,463,150.35	19.0	\$987,879.30

TABLE II
TO RESOLUTION

Surcharge Program Cost Update Based on 2020 Data

(attached hereto)

TABLE II
EASTON AREA JOINT SEWER AUTHORITY
SURCHARGE PROGRAM COST UPDATE BASED ON 2020 DATA

EXPENDITURE ⁽¹⁾	BOD-5	TSS	NH3-N
- Annual Operational Cost	\$1,685,968	\$2,229,511	\$1,505,305
- Capital Amortization ⁽²⁾	194,353	592,192	241,275
TOTAL	\$1,880,321	\$2,821,704	\$1,746,580

2020 AVERAGE DAILY VALUES FOR:

Plant Flow	=	5.28 MGD
BOD-5 Influent	=	311 mg/l
TSS Influent	=	229 mg/l
NH3-N Influent	=	36.9 mg/l

2020 ANNUAL PLANT LOADINGS FOR:

BOD-5	=	311 mg/l	x 8.34 x 5.28 x 365	=	4,999	x 10x3 lbs./year
TSS	=	229 mg/l	x 8.34 x 5.28 x 365	=	3,681	x 10x3 lbs./year
NH3-N	=	36.9 mg/l	x 8.34 x 5.28 x 365	=	593	x 10x3 lbs./year

2020 TREATMENT COSTS FOR:

BOD-5	=	\$1,880,321	/	4,999	10x3 lbs./year	=	\$376.17	/10x3 lbs.
TSS	=	\$2,821,704	/	3,681	10x3 lbs./year	=	\$766.63	/10x3 lbs.
NH3-N	=	\$1,746,580	/	593	10x3 lbs./year	=	\$2,944.89	/10x3 lbs.

UPDATED SURCHARGE

$$\text{FORMULA (SF)}^{(3)} = 0.00834 \times Q1 \times [(BOD-5 - 250) \times \$376.17 + (TSS - 250) \times \$766.63 + (NH3-N - 25) \times \$2,944.89]$$

WHERE:

- SF is the surcharge amount when concentrations for BOD-5, TSS and NH3-N exceed normal domestic levels listed below.
- The factor "0.00834" is a constant to convert concentration expressed as mg/l to 10x3 pounds per million gallons.
- Q1 is the industrial user's wastewater volume for the time period, expressed in million gallons
- BOD-5, TSS and NH3-N represent respectively, five-day biological oxygen demand, total suspended solids and ammonia-nitrogen with all concentrations expressed in mg/l
- The values 250, 250 and 25 are constants which express the waste load concentration of BOD-5, TSS and NH3-N, respectively, determined to be normal values for domestic sewage.

(1) See Table I for the development of the cost factors for the three conventional pollutants.

(2) This cost represents the amount necessary to recover the total capital cost allocation over a twenty-five year period at a three percent interest per year.

(3) If BOD-5 values are less than 250 mg/l, TSS values are less than 250 mg/l or NH3-N values are less than 25 mg/l, any negative values calculated are set equal to zero and not considered as part of this equation.