



RATE RESOLUTION

WASTEWATER RECYCLING

RATES AND OTHER

CHARGES

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Section 1

CONNECTION TO COLLECTION SYSTEM

1.1 Building Sewers and Connections

a) No unauthorized person shall uncover, make any connections with or opening into, use, alter, or disturb any public or private sewer or appurtenances without first obtaining a written permit from the Authority.

b) All costs and expenses incidental to the installation and connection of the building sewer shall be the responsibility of the owner. Installation and construction of the building sewer shall be in compliance with the UAJA Standard Specifications then in effect.

1.2 Tapping and Permit Fees

a) The Tapping Fees are as follows:

Capacity Component:	\$5986.00	Per EDU
Collection Component Pine Grove Mills	\$2214.00	Per EDU
Collection Component Rt 26	\$2825.00	Per EDU
Ghaner Pump Station collection	\$301.00	Per EDU
Grinder Pump Escrow	\$2331.00	Per EDU
Borough of State College Tap Fee	\$2575.00	Per EDU
Special Purpose Circleville Inter.Tap Fee	\$509.73	Per EDU
Special Purpose Valley Vista Tap Fee	\$584.90	Per EDU

Tapping fees are charged at the time the permit is issued. The capacity component is applied to all new connections.

Tapping fees are based on EDU's according to Section 2.

If more than two inspection trips are required because the lateral repeatedly fails inspection, a \$50.00 fee shall be charged per inspection trip in excess of two per Rate Resolution 1.2b

b) The Permit Fees are as follows:

Residential:	\$150.00
Non-Residential:	\$250.00
Repair/Abandonment:	\$ 25.00
Water Quality:	\$100.00
Water Quality(w/pump station)	\$250.00
Private to Private:	\$ 50.00

Section 2

WASTEWATER RATES AND OTHER FEES

2.1 General

Wastewater rates and other charges are imposed upon the Owner of each property or entity connected to the wastewater collection system. The rate for wastewater collection & treatment will usually be based upon an **Equivalent Dwelling Unit (EDU)**. Some bulk customers of the Authority, by contract or agreement only, may be charged based upon the **Bulk Treatment Rate** in affect at the time.

2.2 EDU Rate

The rate charged per EDU is One Hundred Four (\$104.00) dollars per quarter. Residents of the Pine Grove Mills service area will be billed One Hundred Four(\$104.00) per quarter plus an additional twenty two dollars and forty cents (\$22.40) for debt service.

2.3 Bulk Treatment Rate

The rate charged per one million gallons treated is Five Thousand Two Hundred and Eighty Seven (\$5287.00) dollars.

2.4 Assignment of Equivalent Dwelling Units

An Equivalent Dwelling Unit (EDU) shall apply to each classification of connection as follows:

(a) Residential

Apartment units, each	1
Attached business	
w/o separate sanitary facilities	1/2
w/ separate sanitary facilities	1
Condominiums	1
Daycare in home per 17.5 Population	1
Duplex / Multi-Plex (per unit)	1
Manufactured (mobile home park)	
Per lateral provided, unless capped	1
Rooming Units/Efficiency, each	1/2
(A single bed, one room, one bath apartment with no clothes washer)	
Single Family Homes	1
Townhouses, each	1

(b) Commercial

Automobile Dealer, (bays connected to sewer)	
2 bays or less	2
Each additional bay over 2	1/2
Automobile Dealer/Garage (bays not Connected to sewer)	*

Beauty/Barber shops, per chair	½
Bed & Breakfasts	
up to and including 5 rooms	1.5
6 to 10 rooms	2
Bowling Alleys, per 6 lanes	1 and *
Car Wash (bays connected to sewer)	
2 bays or less	2
Each additional bay over 2	1/2
not connected to sewer	*
Commercial Office Building	1 per Business up to 10 employees *
Fitness Centers,	*
with showers	*
with pool, per filter connected	2 and *
Hospitals per bed	½ and *
Hospital public dining, per 15 seats	1
Hotel/Motel, per room	½
Conference room	1 per 17.5
Restaurant/café seating	1 per 15 seats
Laundromat, per 5 washers	1
Medical Centers,	*
with pools, per filter connected	2
Nursing Homes per bed	½ and *
Nursing Home public dining, /15 seats	1
Personal Care/ Assisted living	½ per living unit and *
Restaurants, per 15 seats	1 and *
Retail food store	*
Each food preparation station	1
Each Bakery	1
Each Bank	1
Each Deli	1
Each Pharmacy	1
Each Photography center	1
Café seating, per 15 seats	1
Retail Stores	*
2 bays or less (if app.)	2
per 15 seats (if app.)	1
Retirement Homes, per unit	1 and *
Retire. Hm. public dining, /15 seats	1
Retire. Hm. industrial washer	1
Veterinary Facilities	*

Shell Buildings, per 3000 sq. ft. 1
(for tapping fee & connection fee only)

Billing for Shell building per quarter 1

- * 1 EDU for up to each 10 employees
-or-
1 EDU for up to each 8 employees with showers

Example 1: up to 10 employees (no showers) = 1 EDU.

Example 2: 11 employees (no showers) = 1.5 EDU's.

Example 3: up to 8 employees (w/showers) = 1 EDU.

Example 4: 9 employees (w/showers) = 1.5 EDU's.

*** Employees that work off site will not be included in EDU count.**

(c) Industrial and Commercial

Per 10 employees 1

[do not include truck drivers]

Per 8 employees with showers 1

[do not include truck drivers]

Cooling Tower with drain to sewer 1

(unless volume warrants higher charge)

(d) Public

Churches 1

w/daycare per 17.5 student & staff 1

Daycare per 17.5 population 1

Fire Hall, Ambulance 1

Library 1

Private Clubs/Organizations

per 15 seats 1

Recreation Field w/sanitary facilities 1

Schools per 17.5 population 1

Swimming Pools

Per filter connection 2 and

Average Patrons x10(gpd)/175(gpd)

(e) Miscellaneous

- 1) Charge to drain pool (pool capacity times current bulk treatment rate—Authority must be notified in advance of draining)
- 2) Where more than one use occurs on any improved property, the sum of Equivalent Dwelling Units for each separate use will apply in establishing wastewater rates and charges.
- 3) Additional classifications for wastewater rates and other charges or modifications of the above schedules for wastewater rates and other charges may be established by this Authority from time to time as deemed necessary.
- 4) Nothing contained herein shall be construed as prohibiting special agreements between this Authority and nonresidential improved properties under conditions and circumstances making special agreements advisable and necessary.

Section 3

INFORMATION REQUIRED

3.1 Addresses

Every owner of an improved property, which is connected to the wastewater collection system, shall provide this Authority with his/her correct mailing address and thereafter shall keep this Authority advised of any address changes. Any changes to the address will only be accepted by the property owner calling the office and speaking to the Account Representative, or sending in written notice of the change. Failure of any property owner to receive bills for wastewater rates and other charges shall not be considered an excuse for nonpayment nor shall such failure result in an extension of the period of time during which the net bill shall be payable or late fees being waived.

Authority rules and regulations specifically require that bills be mailed directly to the owner of record and NOT to a tenant. Any agreement of payment between owner and tenant or bill paying service must be considered a transaction between both parties and in no way concerns this Authority.

3.2 Non-residential yearly reports

Owners of any nonresidential improved property may be responsible for providing this Authority with a yearly report. This report will be used to compute any changes to the wastewater rate or charges to such nonresidential improved property. This information may also be used to compute a surcharge. The report will be due on a yearly basis with the due date being the 10th day of April. If the owner of any nonresidential improved property fails to provide this Authority with complete information required to compute the sewer rate or charge, this Authority may estimate a reasonable applicable wastewater rate or charge for such nonresidential improved property. Such estimated wastewater rate or charge shall be the actual wastewater rate or charge payable until the required information is filed. No rebates will be paid by this Authority if the information filed reveals a lower wastewater rate or charge than that estimated by this Authority. If the resultant rate should be higher than what was estimated, the property owner will be responsible for paying the difference. Industrial users will still be required to send a questionnaire on a quarterly basis.

3.3 Volume surcharges

This Authority reserves the right to impose a volume surcharge and/or to revise the Equivalent Dwelling Unit classification for any improved property discharging domestic and/or industrial wastewater into the wastewater collection system in excess of a total flow of 175 gallons per day, per EDU. The volume surcharge will be based upon the EDU treatment rate currently in place.

Section 4

INVOICING

4.1 Invoicing

Invoicing is done in arrears and will be done according to the following table.

Quarter	Bill mail Date	Due Date
Jan. Feb. Mar.	Mid- April	Mid - May
April May June	Mid - July	Mid - August
July August Sept.	Mid - October	Mid - November
Oct. Nov. Dec.	Mid - January	Mid - February

4.2 Pro-rating

Owners of improved properties that connect to the sewer in the middle of a quarter will be charged from the date of connection. With permission from the University Area Joint Authority, owners of improved properties that disconnect sewer service by plugging the lateral will stop being billed as of the date that UAJA Personnel inspects the disconnection.

4.3 Delinquent payments

If wastewater rates and charges are not paid by provided due date each billing, an additional sum of 10% shall be added to the net bill, which net bill, plus such additional sum, shall constitute the gross bill. Payment made on or mailed and postmarked by the due date will be considered on time. When an account has a delinquent amount of \$150.00 or more, the property owner will be sent a certified letter requesting payment in full within 10 days. All costs associated with certified letters will be charged back to the customer's account. If the property owner fails to pay the balance on the account after receiving the certified letter, and it becomes necessary for this Authority to post the property for water termination, a fee of \$35.00 will be charged to the property owner's account. At the point of posting, the property owner is notified that the full amount due and owing, together with penalties, interest and legal fees must be paid in full within five (5) days of the notice. In the event the full amount due is not paid, the water utility serving this property shall be directed to discontinue water service to the posted property pursuant to: (1) the Act of 1957, July 10, P.L. 622, as amended and the Act of 1978, November 26, No. 299, as amended. In addition, the property owner will be assessed charges from the Water Utility for termination of service.

4.4 Payments returned by bank

In the event a payment of wastewater charges or other charges rendered by this Authority are returned by a banking institution for any reason, a charge of \$37.00 for each instance shall be added on the property owner's account. In the event the banking institution levies a charge against the Authority for processing a returned check, said charge will be levied against the account for which service is being rendered. The Authority may also demand payment of the account by cash, certified check, bank draft, cashier's check, bank/postal money order. The account, which was paid by the returned check, shall be considered delinquent until full payment is rendered.

Section 5

5.1 Liens for Wastewater Rate and Other Charges:

Wastewater rates and other charges imposed by this Rate Resolution shall be a lien on the improved property connected to and served by the wastewater collection system. Any wastewater rates and other charges which are delinquent shall be filed as a lien against the improved property connected to and served by the wastewater collection system. Such liens shall be filed and collected in the manner provided by law for the filing and collection of municipal claims.

Section 6

INDUSTRIAL PRETREATMENT

6.1 UAJA Industrial Pretreatment Program

UAJA is required by the US Environmental Protection Agency to comply with various requirements under the Clean Water Act and Other acts, which impose duties and obligations for controlling industrial users, also known as an Industrial Pretreatment Program. In order to perform the duties required in administering an Industrial Pretreatment Program, UAJA has the legal authority to perform inspections and sampling, issue permits and orders, collect permit fees, require reporting and record keeping, control rates and quantities of discharges, require that certain discharges be held, seek equitable relief, and impose penalties and fees as deemed appropriate.

6.2 Prohibited Wastes

(a) No person shall discharge or cause to be discharged any storm water, surface water, spring water, ground water, roof runoff, subsurface drainage, building foundation drainage, cellar drainage, drainage from roof leader connections, uncontaminated cooling water, HVAC or other uncontaminated condensate drainage, or unpolluted process waters into any Sewer.

(b) This Authority reserves the right to refuse permission to connect to the Sewage Collection System, to compel discontinuance of use of the Sewage Collection System or the Sewage Disposal System, or to compel pretreatment of Industrial wastes by any Industrial Establishment, in order to comply with provisions of the Service Agreement and to prevent discharge deemed harmful or to have a deleterious effect upon any Sewer, the Sewage Collection System or the Sewage disposal System.

(c) No Sanitary Sewage or Industrial Wastes shall be discharged to the Sewage Collection System:

- 1) Having a temperature higher than 150°F.
- 2) Containing more than 100 ppm of fats, wax, tar, oil and/or grease, whether emulsified or not, or containing substances which may solidify or become viscous at temperature between 32° F and 150°F.
- 3) Containing any gasoline, benzene, naphtha, fuel oil or other flammable or explosive liquids, solids or gases.
- 4) Containing any ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, cloths, feathers, tar, plastics, wood, paunch manure, whole blood, hair, fleshings, entrails, cotton, wool or other fibers, paper dishes, cups or milk containers, either whole or ground by garbage grinders, or any other solid or viscous substances capable of causing obstructions or other interferences with property operation of the Sewage Collection System or Sewers or the Sewage Disposal System.
- 5) Having a pH lower than 6.0 or higher than 10; being corrosive; or having any other property capable of causing damage or hazards to structures, equipment or operating personnel of the Sewage Collection System, Sewers or the Sewage Disposal System.

- 6) Containing toxic or poisonous solids, liquids or gases in sufficient quantity either singly or by interaction with other wastes, to injure or interfere with any sewage treatment process, to constitute hazards to humans or animals or to create any hazard in waters which receive treated effluent from the Sewage Disposal System. Toxic wastes shall include, but not by way of limitation, wastes containing cyanide, chromium, copper, cadmium, nickel, and/or mercury ions.
- 7) Sludge, water, solids or other materials pumped from septic tanks.
- 8) Any waters or wastes containing strong acid iron pickling wastes or concentrated plating solutions, whether neutralized or not.
- 9) Materials which exert or cause:
 - a) unusual concentrations of inert suspended solids (such as, but not limited to, Fullers earth, lime slurries and lime residues) or of dissolved solids (such as, but not limited to, sodium chloride and sodium sulfate);
 - b) excessive discoloration (such as, but not limited to, dye wastes and vegetable tanning solutions);
 - c) unusual B.O.D., chemical oxygen demand or chlorine requirements in such quantities as to constitute a significant load on the Sewage Disposal System; or
 - d) unusual volume of flow or concentration of wastes constituting slugs.
- 10) Containing radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the Authority.
- 11) Notwithstanding the above provisions, any waste containing phenols or any other substance or having other characteristics which are prohibited by the Authority.

(d) In addition, no commercial entity shall discharge any waste exceeding the following Default Concentration Limits unless they have been granted an Industrial Wastewater Discharge Permit, a Local Limits Waiver, or a Conditional Waiver within the previous 24 months.

DEFAULT CONCENTRATION LIMITS FOR INDUSTRIAL USERS

Pollutant	Default IU Limit	Units
Arsenic	0.032	mg/l
Cadmium	0.0026	mg/l
Copper	0.60	mg/l
Cyanide	0.054	mg/l
Hexavalent Chromium	0.18	mg/l
Lead	0.066	mg/l
Mercury	0.00050	mg/l
Methylene Chloride	0.20	mg/l
Molybdenum	0.054	mg/l
Nickel	0.29	mg/l
Selenium	0.032	mg/l
Silver	0.10	mg/l
Thallium	0.010	mg/l
Zinc	0.60	mg/l

Any user unsure of whether their discharge exceeds these limits shall contact UAJA to obtain an Application for a Local Limits Waiver. This Application will be evaluated to determine whether there is a significant risk of exceeding these parameters based on the types of processes and other possible sources of pollution at that site.

However, knowingly exceeding any of these limits without written permission of the Authority is prohibited.

(e) Where necessary all Owners shall install suitable pre-treatment facilities in order to comply with subsections (c) and (d) of this Section. Plans, specifications and any other pertinent information relating to proposed facilities for preliminary treatment and handling of wastes shall be submitted for approval of this Authority and no construction of any such facility shall be commenced until approval thereof first shall have been obtained, in writing, from this Authority, and until approval thereof first

shall have been obtained from any governmental regulatory body having jurisdiction. Whenever facilities for preliminary treatment and handling of wastes shall have been provided by any Owner, such facilities continuously shall be maintained, at the expense of such Owner, in satisfactory operating condition; and this Authority shall have access to such facilities at reasonable times for purposes of inspection and testing.

- (f) No person shall install or operate in any Improved Property connected to the Sewage Collection System any garbage grinder equipped with a motor of $\frac{3}{4}$ horsepower or greater, without prior written approval of this Authority.
- (g) Nothing contained in this Section 5 shall be construed as prohibiting any special agreement or arrangement between this Authority and any person whereby Industrial Wastes of unusual strength or character may be admitted into the Sewage Collection System owned by this Authority, either before or after preliminary treatment.

6.3 Industrial waste permitting

- a) Industrial users proposing to connect to or discharge to the wastewater collection/treatment facility may be required to obtain a Wastewater Discharge Permit before connecting to the wastewater collection/treatment facility.
- b) The Authority may establish a system of rates and charges for implementation of the Industrial Pretreatment Program, which shall be applicable to industrial users within its service area. Rates and charges for implementation of the IPP may be changed from time to time by resolution, subject to approval by the Board of the UAJA.

6.4 Industrial wastewater inspections

Monitoring by Authority personnel will be composed of both announced and unannounced inspections and sampling. The frequency of monitoring may vary depending on circumstances as determined by the Authority. All industrial users will be inspected and sampled at least once per year. All inspections will be done in accordance with the guidelines set by the industrial pretreatment program in effect. Whenever facilities for preliminary treatment and handling of wastes shall have been provided by any owner, such facilities continuously shall be maintained, at the expense of the owner, in satisfactory operating condition; and this Authority shall have access to such facilities at reasonable times for purposes of inspection and testing.

6.5 Enforcement

The Authority may take such actions as provided for by applicable law to enforce the provisions of the Industrial Pretreatment Program. Such actions include, but are not limited to the imposition of penalties of up to \$25,000.00 per day and seeking injunctive relief under the provisions of the Publicly Owned Treatment Works Penalty Law, 35 P.S. 752.1 *et seq.*

SECTION 7

DEFINITIONS

7.1 Definitions

Unless the context specifically and clearly indicates otherwise, the meaning of terms and phrases in this Resolution shall be as follows:

- a) Abandonment Permit – required when service is no longer to be provided. This is the only mechanism that will be used to either reduce EDU's or stop the billing process. Inspection is required for confirmation of completion.
- b) Authority - The University Area Joint Authority a Pennsylvania municipal authority, its officers, Board members, employees and agents.
- c) Equivalent Dwelling Unit – a unit of measurement that estimates an average use of wastewater facilities. Roughly the average amount of wastewater generated by a typical family in one day.
- d) Improved Property - a property upon which there is erected a structure intended for continuous or periodic habitation, occupancy or use by human beings or animals from which structure domestic and/or industrial wastes shall be or may be discharged.

e) Industrial User - an improved property used, in whole or in part, for manufacturing, processing, cleaning, laundering or assembling any product, commodity or article or from which any process waste, as distinct from domestic waste, shall be discharged.

f) Industrial Pretreatment Program -The enforcement of the provisions of the regulations and controls of Industrial Users to the extent required by the federal pretreatment regulations set forth in 40 C.F.R. Part 403 and including similar provisions in ordinances of the contributing Municipalities authorized to be administered by and enforced by this Authority.

g) Industrial Waste: - Any solid, liquid or gaseous substance, or form of energy, which is produced as a result, whether directly or indirectly, of any industrial, manufacturing, trade or business process or activity, or in the course of developing, recovering, or processing of natural resources and which is discharged into the wastewater collection system; but not non-contact cooling water or sanitary sewage. Any wastewater which contains industrial waste and which is discharged from an industrial, manufacturing, trade or business premises is considered industrial waste for the purpose of this Resolution.

h) Non-contact cooling water - the water from any use such as air conditioning, cooling or refrigeration, or to which the only pollutant added is heat.

i) Non-residential - improved properties consisting of commercial, industrial, schools, professional offices, churches, institutions, etc.

j) Owner - any person vested with ownership, legal or equitable, sole or partial, of any improved property.

k) Private to Private Permit - A private to private permit is required when the connection of a detached or accessory use structure (ie: shed, shop, garage, out-building) to the primary use structure (residential) is desired. The definition of "detached" shall be described as a structure on the recorded building lot, with a separate use, that does not share either a common wall, or roof, or foundation with the primary use structure on that building lot. The private to private lateral shall be constructed following the same requirements for the primary building lateral and shall connect to that lateral at a place and in a manner which will allow future maintenance activity to be properly and efficiently conducted. Inspection prior to backfill is required.

l) Repair Permit - a repair permit is required anytime excavation is made to repair or relocate any existing sewer lateral piping anywhere on the property from the building to the property line. Inspection prior to backfill is required.

m) Wastewater - industrial or domestic wastes from dwellings, commercial buildings, industrial facilities, and institutions, together with any groundwater, surface water, and stormwater that may be present, whether treated or untreated, which enters the wastewater collection system.

n) Wastewater Collection System - all facilities, as of any particular time, for collecting, pumping, treating and disposing of domestic and/or industrial wastes, acquired, constructed, owned and operated by this Authority.

SECTION 8

Sewer Tapping Fee Calculations

CAPACITY PART

Exhibit 1a - Summary of Capacity Part Calculations

HISTORICAL TRENDED COSTS

Project Completion	Total							Trended	Capacity
Year	Historical Cost	Grants	Net Cost	ENR Index	Trend Factor		Cost	Cost	
1967	\$ 244,931	\$ -	\$ 244,931	1074	12464	11.61	\$ 2,842,477	\$ 2,842,477	
1968	1,508,256	251,600	1,256,656	1155	12464	10.79	13,561,005	13,561,005	
1969	786,805	257,900	528,905	1269	12464	9.82	5,194,856	5,194,856	
1970	6,509,489	886,266	5,623,223	1381	12464	9.03	50,751,520	50,751,520	
1971	3,656	-	3,656	1581	12464	7.88	28,823	28,823	
1972	1,088	-	1,088	1753	12464	7.11	7,736	7,736	
1974	92,170	-	92,170	2020	12464	6.17	568,716	568,716	
1975	49,531	-	49,531	2212	12464	5.63	279,093	279,093	
1976	108,570	-	108,570	2401	12464	5.19	563,605	563,605	
1977	14,975	-	14,975	2576	12464	4.84	72,457	72,457	
1978	18,575	-	18,575	2776	12464	4.49	83,400	83,400	
1979	183,793	-	183,793	3003	12464	4.15	762,836	762,836	
1980	143,207	-	143,207	3237	12464	3.85	551,416	551,416	
1981	6,815	-	6,815	3535	12464	3.53	24,029	24,029	
1982	99	-	99	3825	12464	3.26	323	323	
1983	1,055	-	1,055	4066	12464	3.07	3,234	3,234	
1984	4,736	-	4,736	4146	12464	3.01	14,238	14,238	
1985	95,971	-	95,971	4195	12464	2.97	285,145	285,145	
1986	169,656	-	169,656	4295	12464	2.90	492,338	492,338	
1987	232,802	-	232,802	4406	12464	2.83	658,567	658,567	
1988	736,093	-	736,093	4519	12464	2.76	2,030,242	2,030,242	
1989	981,229	-	981,229	4615	12464	2.70	2,650,062	2,650,062	
1990	8,091,034	-	8,091,034	4732	12464	2.63	21,311,633	21,311,633	
1991	18,019,993	-	18,019,993	4835	12464	2.58	46,453,194	46,453,194	
1992	5,933,112	-	5,933,112	4985	12464	2.50	14,834,565	14,834,565	
1993	1,117,936	-	1,117,936	5210	12464	2.39	2,674,463	2,674,463	
1994	456,565	-	456,565	5408	12464	2.30	1,052,261	1,052,261	
1995	411,257	-	411,257	5471	12464	2.28	936,923	936,923	
1996	106,350	-	106,350	5620	12464	2.22	235,862	235,862	
1997	296,887	-	296,887	5826	12464	2.14	635,153	635,153	
1998	1,631,664	-	1,631,664	5920	12464	2.11	3,435,314	3,435,314	
1999	1,714,730	260,000	1,454,730	6059	12464	2.06	2,992,533	2,992,533	
2000	2,752,597	-	2,752,597	6221	12464	2.00	5,514,928	5,514,928	
2001	3,609,790	105,000	3,504,790	6343	12464	1.97	6,886,915	6,886,915	
2002	12,444,054	-	12,444,054	6538	12464	1.91	23,723,262	23,723,262	
2003	16,854,836	-	16,854,836	6694	12464	1.86	31,383,131	31,383,131	
2004	16,266,860	-	16,266,860	7129	12464	1.75	28,440,194	28,440,194	
2006	62,320	-	62,320	7751	12464	1.61	100,214	100,214	
2007	1,858,303	-	1,858,303	7967	12464	1.56	2,907,228	2,907,228	
2008	5,395,900	-	5,395,900	8310	12464	1.50	8,093,201	8,093,201	
2009	77,500	-	77,500	8570	12464	1.45	112,714	112,714	
2010	68,140	-	68,140	8802	12464	1.42	96,489	96,489	
2011	396,062	100,000	296,062	9070	12464	1.37	406,848	406,848	
2012	1,638,099	-	1,638,099	9308	12464	1.34	2,193,518	2,193,518	
2013	236,875	-	236,875	9547	12464	1.31	309,250	309,250	
2014	205,872	-	205,872	9806	12464	1.27	261,675	261,675	
2015	7,528,858	25,000	7,503,858	10035	12464	1.24	9,320,188	9,320,188	
2016	370,927	-	370,927	10338	12464	1.21	447,208	447,208	
2017	67,448	-	67,448	10737	12464	1.16	78,296	78,296	
2018	93,821	-	93,821	11062	12464	1.13	105,712	105,712	
2019	846,198	-	846,198	11281	12464	1.10	934,935	934,935	
2020	22,790,475	-	22,790,475	11466	12464	1.09	24,774,157	24,774,157	
Total Historical & Trended Cost	\$ 143,237,964	\$ 1,885,766	\$ 141,352,198				\$ 322,078,081	\$ 322,078,081	

Total Capacity Costs (Historical)	\$ 322,078,081
Less Outstanding Debt Related to Facilities	\$ 95,706,144
Total Trended Adjusted Cost	\$ 226,371,938

CAPACITY PART

Capacity (Gallons Per Day) - (Equals UAJA max discharge) ¹	8,000,000
Cost per Gallon	\$28.30
Gallons per Residential User Maximum Capacity Part	90 GPD x 2.44= 220
Maximum Capacity Part	\$6,226.00

1) UAJA's WQM Permit provides for an AAF of 9.0 MGD, however UAJA's NPDES permit for Spring Creek only allows 6.0 MGD to be discharged. The NPDES permit for Beneficial Reuse/Wetland Discharge authorizes an additional discharge of 3.0 MGD however, the installed Beneficial Reuse Facilities are rated for 2.0 MGD. Therefore, the 1.0 MGD balance of capacity in the permit is only available with additional expense which is not included in the numerator of the equation therefore, the 1.0 MGD was not included as capacity in the denominator.

Exhibit 1b - Summary of Collection Part Calculations

COLLECTION PART

HISTORICAL TRENDED COSTS

Project Completion Year	Total Historical Cost	Grants	Net Cost	ENR Index	Trend Factor	Trended Cost	Collection Cost	
1970	\$ 6,151,547	\$ 807,531	\$ 5,344,016	1,381	12,464	9.03	\$ 48,231,581	\$ 48,231,581
1999	110,782	-	110,782	6,060	12,464	2.06	227,853	227,853
2003	152,455	-	152,455	6,695	12,464	1.86	283,824	283,824
2005	1,314,124	1,314,124	-	7,446	12,464	1.67	-	-
2006	1,402,896	1,402,896	-	7,751	12,464	1.61	-	-
2007	785,055	785,055	-	7,967	12,464	1.56	-	-
2008	522,182	504,192	17,990	8,310	12,464	1.50	26,983	26,983
2009	1,157,316	1,157,316	-	8,570	12,464	1.45	-	-
2010	990,316	990,316	-	8,802	12,464	1.42	-	-
2011	108,562	108,562	-	9,070	12,464	1.37	-	-
2012	676,520	676,520	-	9,308	12,464	1.34	-	-
2013	2,640,435	2,640,435	-	9,547	12,464	1.31	-	-
2014	1,124,345	1,124,345	-	9,806	12,464	1.27	-	-
2015	62,741	-	62,741	10,034	12,464	1.24	77,935	77,935
2016	854,761	11,097,741	5,687,984	10,338	12,464	1.21	6,857,712	6,857,712
2017	1,314,494	-	1,314,494	10,737	12,464	1.16	1,525,925	1,525,925
2018	2,562,590	-	2,562,590	11,062	12,464	1.13	2,887,373	2,887,373
2019	1,229,296	-	1,229,296	11,281	12,464	1.10	1,358,208	1,358,208
2020	1,631,158	-	1,631,158	11,466	12,464	1.09	1,773,134	1,773,134
<i>Total Historical & Trended Cost</i>	<i>\$ 24,791,576</i>	<i>\$ 11,511,293</i>	<i>\$ 5,625,243</i>				<i>\$ 63,250,528</i>	<i>\$ 63,250,528</i>

REPLACEMENT COSTS

Description	Total Replacement Cost ¹	Grants	Net Cost	ENR Index	Trend Factor	Trended Cost	Collection Cost	
Sewer Collection System	\$ 145,679,079	\$ 137,265,050	\$ 8,414,029	10132	12464	1.23	\$ 10,350,617	\$ 10,350,617
<i>Total Replacement Cost</i>	<i>\$ 145,679,079</i>	<i>\$ 137,265,050</i>	<i>\$ 8,414,029</i>					<i>\$ 10,350,617</i>

Total Collection Costs (Historical and Replacement)	\$ 73,601,145
Less Outstanding Debt Related to Facilities	\$ 1,714,524
Total Trended Adjusted Cost	\$ 71,886,621

COLLECTION PART

Capacity (Gallons Per Day) - (Equals UAJA max discharge) ²	8,000,000
Cost per Gallon	\$8.99
Gallons per Residential User Maximum Capacity Part	90 GPD x 2.44=
Maximum Collection Part	\$1,978.00

TOTAL MAXIMUM TAPPING FEE - CAPACITY AND COLLECTION PARTS, HYDRAULIC CAPACITY (PER HOUSEHOLD) \$8,204.00

1) Replacement cost is based on engineer's estimate and comprehensive report by Industrial Appraisal Company dated May 1, 2015; historical is not ascertainable. 2015 Replacement costs trended to current value using ENR Index.

2) UAJA's WQM Permit provides for an AAF of 9.0 MGD, however UAJA's NPDES permit for Spring Creek only allows 6.0 MGD to be discharged. The NPDES permit for Beneficial Reuse/Wetland Discharge authorizes an additional discharge of 3.0 MGD however, the installed Beneficial Reuse Facilities are rated for 2.0 MGD. Therefore, the 1.0 MGD balance of capacity in the permit is only available with additional expense which is not included in the numerator of the equation therefore, the 1.0 MGD was not included as capacity in the denominator.

Exhibit 2a - Detailed Historical Cost Breakdown - Capacity

HISTORICAL TRENDED COSTS

Project Completion Year	Total Historical Cost	Grants	Net Cost	ENR Index	Trend Factor	Trended Cost/ Capacity Cost
CAPACITY						
1967	\$ 244,931	\$ -	\$ 244,931	1074	12464	11.61 \$ 2,842,477
1968	1,508,256	251,600	1,256,656	1155	12464	10.79 13,561,005
1969	786,805	257,900	528,905	1269	12464	9.82 5,194,856
1970	6,509,489	886,266	5,623,223	1381	12464	9.03 50,751,520
1971	3,656	-	3,656	1581	12464	7.88 28,823
1972	1,088	-	1,088	1753	12464	7.11 7,736
1974	92,170	-	92,170	2020	12464	6.17 568,716
1975	49,531	-	49,531	2212	12464	5.63 279,093
1976	108,570	-	108,570	2401	12464	5.19 563,605
1977	14,975	-	14,975	2576	12464	4.84 72,457
1978	18,575	-	18,575	2776	12464	4.49 83,400
1979	183,793	-	183,793	3003	12464	4.15 762,836
1980	143,207	-	143,207	3237	12464	3.85 551,416
1981	6,815	-	6,815	3535	12464	3.53 24,029
1982	99	-	99	3825	12464	3.26 323
1983	1,055	-	1,055	4066	12464	3.07 3,234
1984	4,736	-	4,736	4146	12464	3.01 14,238
1985	95,971	-	95,971	4195	12464	2.97 285,145
1986	169,656	-	169,656	4295	12464	2.90 492,338
1987	232,802	-	232,802	4406	12464	2.83 658,567
1988	736,093	-	736,093	4519	12464	2.76 2,030,242
1989	981,229	-	981,229	4615	12464	2.70 2,650,062
1990	8,091,034	-	8,091,034	4732	12464	2.63 21,311,633
1991	18,019,993	-	18,019,993	4835	12464	2.58 46,453,194
1992	5,933,112	-	5,933,112	4985	12464	2.50 14,834,565
1993	1,117,936	-	1,117,936	5210	12464	2.39 2,674,463
1994	456,565	-	456,565	5408	12464	2.30 1,052,261
1995	411,257	-	411,257	5471	12464	2.28 936,923
1996	106,350	-	106,350	5620	12464	2.22 235,862
1997	296,887	-	296,887	5826	12464	2.14 635,153
1998	1,631,664	-	1,631,664	5920	12464	2.11 3,435,314
1999	1,714,730	260,000	1,454,730	6059	12464	2.06 2,992,533
2000	2,752,597	-	2,752,597	6221	12464	2.00 5,514,928
2001	3,609,790	105,000	3,504,790	6343	12464	1.97 6,886,915
2002	12,444,054	-	12,444,054	6538	12464	1.91 23,723,262
2003	16,854,836	-	16,854,836	6694	12464	1.86 31,383,131
2004	16,266,860	-	16,266,860	7129	12464	1.75 28,440,194
2006	62,320	-	62,320	7751	12464	1.61 100,214
2007	1,858,303	-	1,858,303	7967	12464	1.56 2,907,228
2008	5,395,900	-	5,395,900	8310	12464	1.50 8,093,201
2009	77,500	-	77,500	8570	12464	1.45 112,714
2010	68,140	-	68,140	8802	12464	1.42 96,489
2011	396,062	100,000	296,062	9070	12464	1.37 406,848
2012	1,638,099	-	1,638,099	9308	12464	1.34 2,193,518
2013	236,875	-	236,875	9547	12464	1.31 309,250
2014	205,872	-	205,872	9806	12464	1.27 261,675
2015	7,528,858	25,000	7,503,858	10035	12464	1.24 9,320,188
2016	370,927	-	370,927	10338	12464	1.21 447,208
2017	67,448	-	67,448	10737	12464	1.16 78,296
2018	93,821	-	93,821	11062	12464	1.13 105,712
2019	846,198	-	846,198	11281	12464	1.10 934,935
2020	22,790,475	-	22,790,475	11466	12464	1.09 24,774,157
<i>Total Historical & Trended Cost</i>	\$ 143,237,964	\$ 1,885,766	\$ 141,352,198			\$ 322,078,081

Exhibit 2b - Detailed Historical/Replacement Cost Breakdown - Collection

HISTORICAL TRENDED COSTS

Project Completion Year	Total Historical Cost	Grants	Net Cost	ENR Index	Trend Factor	Trended Cost/Collection Cost
COLLECTION						
1970	\$ 6,151,547	\$ 807,531	\$ 5,344,016	1381	12464	9.03 \$ 48,231,581
1999	\$ 110,782	\$ -	\$ 110,782	6060	12464	2.06 \$ 227,853
2003	\$ 152,455	\$ -	\$ 152,455	6695	12464	1.86 \$ 283,824
2005	\$ 1,314,124	\$ 1,314,124	\$ -	7446	12464	1.67 \$ -
2006	\$ 1,402,896	\$ 1,402,896	\$ -	7751	12464	1.61 \$ -
2007 ¹	\$ 785,055	\$ 785,055	\$ -	7967	12464	1.56 \$ -
2008 ¹	\$ 522,182	\$ 504,192	\$ 17,990	8310	12464	1.50 \$ 26,983
2009	\$ 1,157,316	\$ 1,157,316	\$ -	8570	12464	1.45 \$ -
2010	\$ 990,316	\$ 990,316	\$ -	8802	12464	1.42 \$ -
2011	\$ 108,562	\$ 108,562	\$ -	9070	12464	1.37 \$ -
2012	\$ 676,520	\$ 676,520	\$ -	9308	12464	1.34 \$ -
2013 ¹	\$ 2,640,435	\$ 2,640,435	\$ -	9547	12464	1.31 \$ -
2014 ¹	\$ 1,124,345	\$ 1,124,345	\$ -	9806	12464	1.27 \$ -
2015	\$ 62,741	\$ -	\$ 62,741	10034	12464	1.24 \$ 77,935
2016	\$ 854,761	\$ 11,097,741	\$ 5,687,984	10338	12464	1.21 \$ 6,857,712
2017	\$ 1,314,494	\$ -	\$ 1,314,494	10737	12464	1.16 \$ 1,525,925
2018	\$ 2,562,590	\$ -	\$ 2,562,590	11062	12464	1.13 \$ 2,887,373
2019	\$ 1,229,296	\$ -	\$ 1,229,296	11281	12464	1.10 \$ 1,358,208
2020	\$ 1,631,158	\$ -	\$ 1,631,158	11466	12464	1.09 \$ 1,773,134
<i>Total Historical & Trended Cost</i>	\$ 17,199,277	\$ 11,511,293	\$ 5,687,984			\$ 63,250,528

TOTAL HISTORICAL COSTS (ROUNDED) \$ 63,250,528

REPLACEMENT COSTS

Project Completion Year	Project Description	Units	Cost/Unit *	Total Replacement Cost *	Grants/Contributed Facilities/Assessments	Collection Replacement Cost *
COLLECTION						
1970	North Meter Pit Building and Structures	1	\$ 42,922	\$ 42,922	\$ 42,922	\$ -
1970	South Meter Pit Building and Structures	1	\$ 42,922	\$ 42,922	\$ 42,922	\$ -
1970	Land ² Land - Maylie	1	\$ 491,292	\$ 592,325	\$ 444,244	\$ 148,081
1972	Land ² Land - ROW	1	\$ 186,278	\$ 224,586	\$ 168,439	\$ 56,146
1974	Harris Drive Pumps and Controls	180 gpm	\$ 248,948	\$ 248,948	\$ 248,948	\$ -
1974	Harris Drive Wetwell and Structures	1	\$ 360,546	\$ 360,546	\$ 360,546	\$ -
1974	Outer Drive Pumps and Controls	180 gpm	\$ 248,948	\$ 248,948	\$ 248,948	\$ -
1974	Outer Drive Wetwell and Structures	1	\$ 360,546	\$ 360,546	\$ 360,546	\$ -
1974	Kaywood Pumps and Controls	180 gpm	\$ 248,948	\$ 248,948	\$ 248,948	\$ -
1974	Kaywood Wetwell and Structures	1	\$ 360,546	\$ 360,546	\$ 360,546	\$ -
1979	Whitehall Road Pumps and Controls	60 gpm	\$ 180,273	\$ 180,273	\$ 180,273	\$ -
1979	Whitehall Road Wetwell and Structures	1	\$ 291,870	\$ 291,870	\$ 291,870	\$ -
1980	Gravity Sewer Four Foot Diameter Brick or Concrete	5386	\$ 4,200	\$ 27,273,229	\$ 26,262,144	\$ 1,011,084
1980	Gravity Sewer Five Foot Diameter Concrete	50	\$ 5,000	\$ 301,412	\$ 226,059	\$ 75,353
1980	Gravity Sewer Air Release Manholes	45	\$ 4,000	\$ 217,017	\$ 162,763	\$ 54,254
1980	Gravity Sewer 8" Diameter Gravity Sewer	780344	\$ 100	\$ 94,082,101	\$ 94,082,101	\$ -
1980	Gravity Sewer 10" Diameter Gravity Sewer	17002	\$ 105	\$ 2,152,337	\$ -	\$ 2,152,337
1980	Gravity Sewer 12" Diameter Gravity Sewer	13041	\$ 110	\$ 1,729,516	\$ -	\$ 1,729,516
1980	Forcemain 1.5" Diameter Forcemain ¹	375	\$ 39	\$ 17,633	\$ 13,224	\$ 4,408
1980	Forcemain 2" Diameter Forcemain ¹	414	\$ 39	\$ 19,466	\$ 14,600	\$ 4,867
1980	Forcemain 3" Diameter Forcemain ¹	4120	\$ 42	\$ 208,626	\$ 156,469	\$ 52,156
1980	Land ² Pump Station/Meter Pit Sites	1	\$ 1,246,030	\$ 1,502,274	\$ 1,126,706	\$ 375,569
1980	Land ² Forcemain and Gravity Sewer Easements	1	\$ 6,764,160	\$ 8,155,203	\$ 6,116,403	\$ 2,038,801
1986	North Meter Pit Metering Equipment	1	\$ 291,870	\$ 291,870	\$ 291,870	\$ -
1986	South Meter Pit Metering Equipment	1	\$ 291,870	\$ 291,870	\$ 291,870	\$ -
1986	Haymarket Pumps and Controls	83 gpm	\$ 188,857	\$ 188,857	\$ 188,857	\$ -
1986	Haymarket Wetwell and Structures	1	\$ 309,039	\$ 309,039	\$ 309,039	\$ -
1988	Persia Pumps and Controls	69 gpm	\$ 188,857	\$ 188,857	\$ 188,857	\$ -
1988	Persia Wetwell and Structures	1	\$ 309,039	\$ 309,039	\$ 309,039	\$ -
1988	Scenery Park Pumps and Controls	68 gpm	\$ 188,857	\$ 188,857	\$ 188,857	\$ -
1988	Scenery Park Wetwell and Structures	1	\$ 309,039	\$ 309,039	\$ 309,039	\$ -
1990	Piney Ridge Pumps and Controls	174 gpm	\$ 248,948	\$ 248,948	\$ 248,948	\$ -
1990	Piney Ridge Wetwell and Structures	1	\$ 360,546	\$ 360,546	\$ 360,546	\$ -
1990	Piney Ridge Generator	1	\$ 51,507	\$ 51,507	\$ 51,507	\$ -
1991	Aspen Heights Pumps and Controls	111 gpm	\$ 206,026	\$ 206,026	\$ 206,026	\$ -
1991	Aspen Heights Wetwell and Structures	1	\$ 300,455	\$ 300,455	\$ 300,455	\$ -
1992	St. Ives Place Pumps and Controls	90 gpm	\$ 197,442	\$ 197,442	\$ 197,442	\$ -
1992	St. Ives Place Wetwell and Structures	1	\$ 326,208	\$ 326,208	\$ 326,208	\$ -
1994	Land ² Land - ROW	1	\$ 30,349	\$ 36,590	\$ 27,443	\$ 9,148
1995	Graysdale 2A Pumps and Controls	76 gpm	\$ 188,857	\$ 188,857	\$ 188,857	\$ -
1995	Graysdale 2A Wetwell and Structures	1	\$ 309,039	\$ 309,039	\$ 309,039	\$ -
1999	Graysdale 2B Pumps and Controls	76 gpm	\$ 188,857	\$ 188,857	\$ 188,857	\$ -
1999	Graysdale 2B Wetwell and Structures	1	\$ 309,039	\$ 309,039	\$ 309,039	\$ -
1999	Graysdale 2B Generator	1	\$ 42,922	\$ 42,922	\$ 42,922	\$ -
1999	Fox Hill Road Pumps and Controls	167 gpm	\$ 240,364	\$ 240,364	\$ 240,364	\$ -
1999	Fox Hill Road Wetwell and Structures	1	\$ 343,377	\$ 343,377	\$ 343,377	\$ -
1999	Fox Hill Road Generator	1	\$ 60,091	\$ 60,091	\$ 60,091	\$ -
2003	Claster's Meter Pit Building and Structures	1	\$ 70,392	\$ 70,392	\$ -	\$ 70,392
2004	Marywood Pumps and Controls (146 gpm)	1	\$ 223,195	\$ 223,195	\$ 223,195	\$ -
2004	Marywood Wetwell and Structures	1	\$ 326,208	\$ 326,208	\$ 326,208	\$ -
2004	Marywood Generator	1	\$ 51,507	\$ 51,507	\$ 51,507	\$ -
2013	Land ² Land - Top of Hill	1	\$ 28,716	\$ 34,621	\$ 25,966	\$ 8,655
<i>Total Replacement Cost</i>				\$ 145,055,817	\$ 137,265,050	\$ 7,790,767

SUBTOTAL REPLACEMENT COSTS (ROUNDED) \$ 7,790,767.43
 Engineering, Permitting, & Construction Administration (6%) \$ 467,446.05
 Legal and Financing Costs (2.0%) \$ 155,815.35
 TOTAL REPLACEMENT COSTS (Year 2015 Value) \$ 8,414,028.82

* Replacement Values shown above are 2015 dollars and not yet trended to current value.

1) Total value of projects completed has been reduced to account for projects assessed via a Special Purpose Fee.

2) Land values obtained from comprehensive report by Industrial Appraisal Company dated May 1, 2015 and has been adjusted by the same formula used for other components. HRG does not certify land values.

Exhibit 4 - Derivation of Organic Based Tapping Fee Charge

A. Determination of Conversion Factor Based Upon Historic UAJA Loadings

Avg. Historic BOD Loading (Years 2016 - 2020) (Per Chapter 94 Report) **0.3432 lb/day/EDU**
2.91 EDUs/1 lb BOD

B. Verification of Above Conversion Factor Based Upon Industry Standards

BOD = 0.17 lb/day/capita (Per DEP Domestic Wastewater Facilities Manual)
Capita per Household = 2.44 (Analysis of 2019 Census Data Statistics for UAJA's Service Area)

Lbs/day/EDU = 0.17 lb/day/cap * 2.44 people per household = 0.41 lb/day/EDU
2.41 EDUs/1 lb BOD

(UAJA historic loading data appears appropriate when compared to standard industry approximations.)

C. Verification Based Upon Capacity of AWTF

UAJA Influent BOD Loading Capacity Per Day = 50,000 lb.
UAJA Permitted Capacity = 9,000,000 gpd
Gallons/ lb. BOD = 180.00
Gallons per Residential User (EDU) = 90 * 2.44 = 220
No. of EDUs in 1lb. BOD = 0.82 EDUs/1 lb BOD
No. of lb. BOD/ EDU = **1.22 lb/day/EDU**

Facilities have been installed and permitted to handle historic BOD loadings shown above.

Determination of Organic Tapping Fee Charge

Organic Loading per EDU = 2.91 EDUs/1 lb BOD

Max Tapping Fee/EDU - Capacity Part = \$6,226.00 *2.91 EDUs/lb.
Capacity Part : Cost per Pound BOD₅ (non-residential) = \$ 18,141.00 /lb

Max Tapping Fee/EDU - Collection Part = \$1,978.00 *2.91 EDUs/lb.
Collection Part : Cost per Pound BOD₅ (non-residential) = \$ 5,763.00 /lb

Total Residential Tapping Fee = \$ 23,904.00 /lb

HRG

Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

AN EMPLOYEE-OWNED COMPANY

WASTEWATER COLLECTION, CONVEYANCE, AND TREATMENT FACILITIES CAPITAL CHARGES STUDY PURSUANT TO ACT 57 OF 2003



Submitted to:

UNIVERSITY AREA JOINT AUTHORITY
1576 Spring Valley Road
State College, Pennsylvania 16801

Submitted by:

HERBERT, ROWLAND & GRUBIC, INC.
2568 Park Center Boulevard
State College, PA 16801
814.238.7117

R001178.0703

October 25, 2021

CAPITAL CHARGES STUDY

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SUMMARY OF CAPITAL CHARGES FEES OCTOBER 2021

The University Area Joint Authority (UAJA) wastewater collection, conveyance and treatment system was originally constructed in 1970. At that time, the original facilities were owned by the College-Harris Joint Authority (CHJA) and the Patton-Ferguson Joint Authority (PFJA). The system consists of the treatment plant, pumping stations, and the associated collection and conveyance piping.

UAJA's treatment facility is permitted to treat wastewater flows based upon its current Water Quality Management (WQM) Permit issued by the Pennsylvania Department of Environmental Protection (DEP). The permit authorizes UAJA to treat an average annual flow of 9.0 million gallons per day (MGD). The DEP has issued two (2) National Pollutant Discharge Effluent Permits for the Authority; the first allows for 6.0 MGD of treated wastewater to be discharged to Spring Creek while the second permit allows for an additional 3.0 MGD to be discharged through Beneficial Reuse (BR) and wetland discharge. Discharging a full 3.0 MGD to Beneficial Reuse/wetlands is the maximum rate currently approved by DEP under Act 537 planning, and associated permitting, to handle planned growth in the service region. Beneficial Reuse facilities currently installed at the plant have the capacity to handle 2.0 MGD. As growth in the Centre Region continues, the Authority plans to construct additional BR facilities to handle up to 3.0 MGD. Based upon currently installed facilities, the rated capacity of the plant is 8.0 MGD.

Act 57 of 2003 provides for the imposition of three separate fees that are designed to allow Municipal Authorities and Municipalities to recover certain, specific costs and equity in the system. With the exception of assessments, these are the only initial charges that are allowed. However, the Authority may also require financial security including the funding of an escrow account in order to insure payment of review and inspection fees. Sewer rents and other charges that recover operating, maintenance, and debt service costs are largely unaffected by Act 57 except that certain conditions are applied to the collection and amount of reservation of capacity fees.

The three fees authorized by Act 57 are summarized below:

	Maximum Amount of Charge per EDU
1 Connection Fee	Actual Cost
2 Customer Facilities Fee	Actual Cost
3 Tapping Fee	
a) Capacity Part	\$6,226.00
b) Collection Part	\$1,978.00
c) Special Purpose Part *	As Applicable
d) Reimbursement Part *	As Applicable
Total Residential Tapping Fee	\$8,204.00

*APPLIES ONLY TO CERTAIN SPECIFIC NEW CONNECTIONS.

The above Residential Tapping Fee is the maximum allowed by Act 57. The maximum tapping fee for a Non-Residential connection will be based upon either the number of gallons per day (hydraulic capacity) or the pounds BOD₅ per day (organic capacity) required by the new connection.

The maximum tapping fee for a Non-Residential connection based upon gallons per day is computed as follows:

Non-Residential Tapping Fee (Hydraulic)	
Capacity Part	\$28.30
Collection Part	\$8.99
Total (per gpd)	\$37.29

The maximum tapping fee for a Non-Residential connection based upon pounds of BOD₅ per day is computed as follows:

Non-Residential Tapping Fee (Organic)	
Capacity Part	\$ 18,141.00
Collection Part	\$ 5,763.00
Total (per lb. BOD₅)	\$ 23,904.00

Of the resulting fees, the Authority may choose to apply the higher of the two charges (either hydraulic or organic) to the Non-Residential user. Under certain circumstances, the Authority may elect to charge Non-Residential users a tapping fee based upon other regulated parameters of the Authority's wastewater.

The Special Purpose Part and Reimbursement Part will be applied as applicable.

The Act allows for the imposition of a Reservation of Capacity Fee, however, the Authority has chosen not to enact the Fee at this time.

SCHEDULE A: CALCULATION OF CONNECTION FEE

The connection fee covers the cost of the facilities installed between the sewer main and the property line of the property being connected. Construction of these facilities is generally the responsibility of the property owner with the prior approval of the Authority. All costs associated with the installation of these facilities are to be paid by the property owner. If the Authority incurs costs associated with the installation of these facilities, the fee will be calculated using an actual cost method as illustrated below. The illustration provides examples of costs the Authority might incur that are chargeable to the property owner under the definition of this fee but is not all-inclusive.

In lieu of payment of a connection fee, the Authority may require the construction and dedication of these facilities by the property owner. In this case, the Authority's only cost will be for inspection, and the cost of inspection may be charged based on the Authority's rate resolution in effect at the time of connection.

\$	Direct Materials Cost
+	Direct Subcontract Costs
+	Equipment Rental Charges
+	Direct Labor Costs
+	Fringe Benefits, Employment Taxes, and other Employment Costs
+	Cost of Inspection ⁽¹⁾
+	Application and Administrative Costs
+	Planning Module Review ⁽²⁾
+	Miscellaneous Engineering
+	Miscellaneous Legal Expenses
<hr/>	
=	Total Connection Fee

(1) Includes the cost of inspection for all facilities installed by property owner or subcontractor hired by the Authority.

(2) If required.

SCHEDULE B: CALCULATION OF CUSTOMER FACILITIES FEE

The customer facilities fee covers the cost of facilities from the property line to the proposed dwelling or building. The property owner generally provides the construction of these facilities. In most instances, the Authority's only cost will be for inspection, and the cost of inspection may be charged based on the Authority's rate resolution in effect at the time of connection.

In some instances, the Authority may determine that the installation of special facilities is necessary to accommodate flow from a particular property. An example would be the installation of a grinder pump when gravity flow to the sewer main is not possible. The Authority may elect to install such facilities; however, all costs of these facilities are chargeable to the property owner as illustrated below:

\$	Direct Materials Cost
+	Direct Subcontract Costs
+	Equipment Rental Charges
+	Direct Labor Costs
+	Fringe Benefits, Employment Taxes, and other Employment Costs
+	Other Direct Costs
<hr/>	
=	Total Customer Facilities Fee

CALCULATION OF TAPPING FEE: SUMMARY

The tapping fee is based on the Authority's equity in the system and payment of the tapping fee constitutes the new user's "buy-in" to the system. The capital costs associated with the construction of the Authority's facilities are updated to reflect current costs in accordance with one of the methods allowed by the Act. Facilities funded by others and dedicated to the Authority are not included in the computation of this fee. Outstanding debt related to the facilities must be subtracted except when calculating the initial tapping fee for a new system. The estimated cost of future capacity facilities has not been included in this calculation.

The tapping fee is comprised of up to four components, which are separately calculated. In lieu of the payment of a tapping fee, the Authority may require the construction and dedication of only such capacity, collection, or other special purpose facilities to supply service to the property owner or owners.

Capacity Part	\$6,226.00
+ Collection Part	\$1,978.00
+ Special Purpose Part *	As Applicable
+ Reimbursement Part *	As Applicable
= Tapping Fee	\$8,204.00

* Applies only to certain specific new connections.

SCHEDULE C: CALCULATION OF TAPPING FEE CAPACITY PART

Capacity Part: This part of the tapping fee includes those costs associated with construction of the wastewater treatment facility, major pump stations, force mains, interceptors, and Beneficial Reuse Transmission mains. Collection lines and appurtenances are included in the Collection Part.

As outlined by Act 57 of 2003, this study computes the value of the system based on historical costs trended to current values using the generally accepted Engineering News Record (ENR) construction index. Pursuant to the requirements of Act 57, the calculation of this fee requires a downward adjustment to reflect funds or facilities contributed by other parties, federal and state grants, and capital contributions from developers to arrive at the net historical cost. Outstanding debt must also be deducted from the cost of facilities since this is not the initial tapping fee for a system exclusively serving new users. This methodology is used for the costs associated with all capacity facilities.

Values have been established using the actual costs of the facilities and all associated project costs including engineering, legal, financial, and other costs. A breakdown of historical costs and grants is included in Exhibit 2a. Since this is not the initial tapping fee for a system exclusively serving new users, outstanding debt has been subtracted. Costs associated with the construction of future facilities have not been included in the fee.

The calculation of the Capacity part of the tapping fee is illustrated below. Detailed costs and calculations are included in Exhibit 1a.

Total Adjusted and Trended Cost of Capacity Facilities - Outstanding Debt	=	Cost per Unit of Design Capacity
System Design Capacity (gpd)		
\$322,078,081.22 - \$95,706,143.50 8,000,000	=	\$28.30 per gpd

Act 57 establishes the maximum capacity for a residential connection. It is based on 90 gallons per day per capita applied to the average number of persons per household as determined by the most recent United States census. This calculation uses a capacity per residential dwelling unit (EDU) of 220 gpd based on the 90 gallons per person per day multiplied by the 2019 Census statistic of 2.44 persons per household in Centre County.

The maximum Capacity Part of the Tapping Fee per EDU is calculated as follows:

Number of Units of Design Capacity (gpd per EDU)	x	Cost per Unit of Design Capacity	=	Capacity Part of Tapping Fee
220	x	\$28.30	=	\$6,226.00 per EDU

The maximum Capacity Part of the Tapping Fee for a Non-Residential connection based upon gallons per day is \$37.29 or if an organic fee is to be determined, it will be calculated as follows:

BOD Loading =	0.3432	lb/day/EDU	
	2.91	EDUs/1 lb BOD	
Max Tapping Fee/EDU - Capacity Part =	\$6,226.00	*2.91 EDUs/lb.	
Capacity Part : Cost per Pound BOD₅ (non-residential	\$ 18,141.00	/lb	

SCHEDULE D: CALCULATION OF TAPPING FEE COLLECTION PART

Collection Part: This part includes costs associated with the construction of the sewage collection system including sewer mains, manholes, small pumping stations, associated forcemains and appurtenances.

As outlined by Act 57 of 2003, this study computes the value of the system based on historical costs trended to current values using the generally accepted Engineering News Record (ENR) construction index. Reliable historical cost records were not available for all facilities. To the extent that historical cost is not ascertainable, reasonable estimates of current replacement costs were prepared by Herbert, Rowland and Grubic, Inc. (HRG) in 2016 and trended to current value. Pursuant to the requirements of Act 57, the calculation of this fee requires a downward adjustment to reflect funds or facilities contributed by other parties, federal and state grants, and capital contributions from developers to arrive at the net historical cost. Outstanding debt must also be deducted from the cost of facilities since this is not the initial tapping fee for a system exclusively serving new users. This methodology is used for the costs associated with all collection facilities.

A breakdown of historical and replacement costs, in addition to grants is included in Exhibit 2b. Since this is not the initial tapping fee for a system exclusively serving new users, outstanding debt has been subtracted. Costs associated with the construction of future facilities have not been included in the fee.

The calculation of the Collection Facilities Part of the Tapping Fee is illustrated below.

Total Adjusted and Trended Cost of Collection Facilities - Outstanding Debt	=	Cost per Unit of Design Capacity
System Design Capacity (gpd)		
\$73,601,144.89 - \$1,714,524	=	\$8.99 per gpd
8,000,000		

Act 57 establishes the maximum capacity for a residential connection. It is based on 90 gallons per day per capita applied to the average number of persons per household as determined by the most recent United States census. This calculation uses a capacity per residential dwelling unit (EDU) of 220 gpd based on the 90 gallons per person per day multiplied by the 2019 Census statistic of 2.44 persons per household in Centre County.

The maximum Collection Part of the Tapping Fee per EDU is calculated as follows:

Number of Units of Design Capacity (gpd per EDU)	x	Cost per Unit of Design Capacity	=	Capacity Part of Tapping Fee
220	x	\$8.99	=	\$1,978.00 per EDU

The maximum Collection Part of the Tapping Fee for a Non-Residential connection based upon gallons per day is \$6.93 or if an organic fee is to be determined, it will be calculated as follows:

BOD Loading =	0.3432	lb/day/EDU	
	2.91	EDUs/1 lb BOD	
Max Tapping Fee/EDU - Collection Part =	\$1,978.00	*2.91 EDUs/lb.	
Collection Part : Cost per Pound BOD₅ (non-residential)	\$ 4,443.47	/lb	

SCHEDULE E: CALCULATION OF TAPPING FEE SPECIAL PURPOSE PART

The Special Purpose Part is generally applicable only to a particular group of customers. This fee is designed to recover the cost of facilities that serve a special purpose or specific area, such as pump stations. Fees would be separately calculated for each applicable group and applied to new users as appropriate.

All costs associated with the installation of these facilities are to be paid by the users of these facilities through the imposition and collection of a special purpose part. If the Authority incurs costs associated with the installation of these facilities, the fee will be calculated using an actual cost method as illustrated below. The illustration provides examples of costs the Authority might incur that are chargeable to the users under the definition of this fee, but is not all-inclusive.

\$	Direct Materials Cost
+	Direct Subcontract Costs
+	Equipment Rental Charges
+	Direct Labor Costs
+	Fringe Benefits, Employment Taxes, and other Employment Costs
+	Cost of Inspection
+	Application and Administrative Costs
+	Planning Module Review
+	Miscellaneous Engineering
+	Miscellaneous Legal Expenses
=	Total Cost of Special Purpose Facilities

$$\frac{\text{Cost of Special Purpose Facilities}}{\text{Design Capacity of Special Purpose Facilities}} = \text{Special Purpose Part of Tapping Fee}$$

The Authority currently charges the following Special Purpose Fees:

Special Purpose Part	\$ 584.90 Valley Vista Interceptor
	\$ 509.73 Circleville Interceptor

The Authority may continue to collect these fees until they have been imposed on the total number of design capacity units used in the original calculations for the Special Purpose Part. These fees have not been updated as part of the 2021 Study.

**SCHEDULE F:
CALCULATION OF TAPPING FEE
REIMBURSEMENT PART**

Where appropriate, a reimbursement component may be included in the tapping fee charged to new connections for facilities constructed by others for which a reimbursement is due to the person constructing the facilities. This reimbursement must be defined in a written agreement between the Authority and the entity constructing the facilities. Typically, such agreements reimburse the cost of the capacity available for use by future connections.

The Authority does not currently assess a Reimbursement Part.

SCHEDULE G: CALCULATION OF RESERVATION OF CAPACITY FEE

Act 57 specifically authorizes a municipality to collect a fee for reserving capacity under certain circumstances: "... no reservation of capacity fee or other similar charge shall be imposed or collected from a property owner who has applied for service unless the charge is based on debt and fixed operating expenses. A Reservation of Capacity Fee or other similar charge may not exceed 60% of the average bill for a residential customer in the same service area for the same billing period. Any Authority opting to collect a reservation of capacity fee or other similar charge may not collect the Tapping Fee until the time as the building permit fee is due."

The Authority has chosen not to enact a Reservation of Capacity Fee at this time.

CERTIFICATE OF CONSULTING ENGINEER
(As required under the Pennsylvania Municipal Authorities Act)

I, the undersigned Consulting Engineer to the University Area Joint Authority (the "Authority") hereby certify that the replacement costs used in the computation of capital charges for the Authority are based upon reasonable written estimates of Year 2015 replacement costs and have been used only to the extent that historical cost is not ascertainable. I deem the assumptions upon which such computations have been made to be reasonable for such purposes. I further certify:

- (i) Herbert, Rowland & Grubic, Inc. is the consulting engineer to the Authority.
- (ii) I am a registered professional engineer, duly qualified and licensed under the laws of the Commonwealth of Pennsylvania.
- (iii) I am familiar with Section 5607(d) of the Pennsylvania Municipal Authorities Act, 53, PA.C.S. Chapter 56, pertaining to the enumerated fees.

Herbert, Rowland & Grubic, Inc.

Adrienne M Vicari

By: Adrienne M. Vicari, PE
PE # 073697