

To: Whom it May Concern

From: Tom Songer II and Associates

Subject: Centre Region Act 537 Plan Update, UAJA User Fees and Tapping Fees, Expansion of Beneficial Reuse

Date: July 17, 2017

### Sustainability

According to the EPA, "Sustainability is based on a simple principle: Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment. To pursue sustainability is to create and maintain the conditions under which humans and nature can exist in productive harmony to support present and future generations."

In order to promote sustainability, the EPA recommends:

1. Conserving, protecting, restoring, and improving the supply and quality of natural resources and environmental media (energy, water, materials, ecosystems, land, and air) over the long term;
2. Aligning and integrating programs, tools, incentives, and indicators to achieve as many positive outcomes as possible in environmental, economic, and social systems; and,
3. Considering the full life cycles of multiple natural resources, processes, and pollutants in order to prevent pollution, reduce waste, and create a sustainable future.

Over the last 30 years, Penn State has reduced water consumption by 25% while increasing student enrollment by 10,000 students and constructing more than 8 million square feet of additional floor area. State College Borough has decreased water usage by more than 15% over the last 15 years while the borough population and building square footage have increased. Both entities have realized substantial water savings because of modern technology that utilizes plumbing fixtures that save water and thereby reduces the volume of sewage that is generated by a customer. If UAJA had educated their customers on how to implement water conservation practices and had reduced water usage by 15%, they could have reduced sewer volume by over 750,000 gal/day and may not have even had to do Beneficial Reuse.

### UAJA Current Billing Practice

The University Area Joint Authority bills almost all of its customers in Patton, College, Harris, and Ferguson Townships based on an antiquated EDU (Equivalent Dwelling Unit) system that is almost 50 years old. UAJA's practice of billing customers is totally unfair with respect to the volume of sewage that is discharged to the sewer system by customers of UAJA. (Please see the UAJA Rate Resolution that indicates how different types of users are charged for sewer service.) Following are some examples of how customers of UAJA are billed for sewer service:

1. A single person living alone in a 1,500sf home, using 50 gallons of water per day, pays the same amount for sewer service as a family of six living in a 4,000sf home, using 300 gallons of water per day. In both situations, the homeowners pay \$104 per quarter to UAJA even though the family of six uses significantly more water per quarter and, therefore, generates much more sewage.
2. A modern 9,000sf office building with water conservation fixtures may use less than 150 gallons of water per day, which is less than one EDU (UAJA defines an EDU as being 175 gallons per day). UAJA may charge 1-8 EDUs or more for sewer service for this building, depending on how many businesses and people occupy the building. UAJA charges a minimum of one EDU per business with 1 to 10 employees. A building that has 10 businesses with one person each would pay 10 EDUs. However, if the same building had one business with 10 employees, the building owner would pay one EDU. This is a difference of nine EDUs and the building has the same number of employees in it.

3. A restaurant pays one EDU per 15 seats without any regard to their hours of operation or whether they are a fast food or fine dining restaurant. There is no consideration for the volume of water used when billing restaurants.
4. Bowling Alleys pays one EDU per 6 lanes. How does the number of bowling lanes equate to the amount of sewage that will be generated? The short answer is that there is no relationship.
5. A car wash pays one EDU per two bays or less, each additional bay over two pays 1/2 EDU. How does the number of car wash bays relate to the volume of sewage that is generated? The answer is there is no relation because some car washes recycle their used water and others do not. The volume of sewage generated depends on how much water is used, which is based on the number of cars that are washed.
6. The Pennsylvania State Building Code requires that water conservation plumbing fixtures be installed in all new construction and renovation. New technology in plumbing fixtures has reduced the amount of water that is used in both residential and nonresidential buildings substantially.
7. UAJA bills the Borough of State College Sewer Authority based on the volume of sewage that is discharged from the Borough sewer system into the UAJA system. UAJA bills some Penn State buildings based on water meter readings. Billing a customer for sewer service based on the amount of water they use meets the intent of the Pennsylvania Municipal Authorities Act, which states that customers should be charged "reasonable and uniform rates." Billing all customers for what they use promotes sustainability of both the sewer and water systems and incentivizes customers to use less water.
8. The current Act 537 Regional Sewer Study, dated November 2006, states in Section 7.1.4, "The Act 537 Plan Update recommends that the UAJA Board evaluate the advantages and disadvantages of a volumetric billing program for the UAJA service area, and provide a report to the COG General Forum in the first quarter of 2006." Was this report ever done? In 1996, AUS Consultants did a rate study for the UAJA (University Area Joint Authority), CHJA (College Harris Joint Authority) and PFJA (Patton Ferguson Joint Authority) and it was recommended that a volumetric billing system be implemented at that time. The UAJA, PFJA and CHJA were combined into one authority, UAJA, which was recommended by the 1996 study.

#### Proposed UAJA Customer Service Charge

UAJA should bill every customer in its service area based on the volume of metered water that the customer uses for its normal consumption within a residential or nonresidential use. Water that is used for irrigation, swimming pools, etc., that does not go to the sewer system can be sub-metered and a sewer charge for this water would not be applied. Many other sewer purveyors throughout our country (including the State College Borough Sewer Authority) bill for sewer service based on the actual metered water that is used by the customer because:

1. Billing for sewer service based on the actual water meter readings promotes sustainability of the water and sewer systems which means that more customers can be accommodated in the future by the same infrastructure and treatment facilities because existing and future customers will use less water. This results in less manpower, electricity, chemicals, etc., being used to serve a growing customer base. All of this contributes to a lowering of our regional carbon footprint.
2. It meets the requirement of the Pennsylvania Municipal Authorities Act that states that rates are to be "reasonable and uniform."
3. All customers of the UAJA sewer system should PAY FOR THE SEWER SERVICE THEY RECEIVE. Customers pay for other utilities based on how much they use, such as water, electric, and natural gas.
4. Proposed UAJA Customer Billing Rate Schedule:
  - A. UAJA bills each customer in College, Harris, Patton and Ferguson Townships based on an antiquated and outdated Equivalent Dwelling Units (EDU) system. A single family detached home is an Equivalent Dwelling Unit and is expected to use 175 gallons of water per day. All residential homes pay \$104 per quarter, regardless of how much water is used. We propose that UAJA use volumetric billing for all residents. Each household would pay a base sewer fee of \$28.05 for the first 3,000 gallons of water used. For each additional 1,000 gallons above 3,000 gallons customers

would pay \$9.35 per 1000 gallons of water used. This is the same billing practice that is used by the Borough of State College.

- B. Currently, if a UAJA customer uses 10,000 gallons of water in a quarter, their sewer bill is \$104. However, under the proposed billing practice, the bill would be \$93.50, a savings of \$10.50. (Go to [www.UAJAPetition.com](http://www.UAJAPetition.com) and use the calculator to see what your bill amount would be using the proposed billing practice) Under this proposed billing practice all customers of UAJA are incentivized to conserve water to reduce their water and sewer bill.
  - C. Our calculations show that the proposed rate schedule as outlined above would provide adequate income to cover UAJA's annual budget for sewer service.
5. UAJA could contract with the State College Borough Water Authority and the College Township Water Authority to do the billing in the same manner that the State College Borough Sewer Authority contracts with the State College Borough Water Authority to do the billing for sewer service within State College Borough. This is a very efficient billing process and customers would see their water and sewer bill along with the amount of water they used and would be financially incentivized to use less water. The charge rates indicated above could be different than what is indicated but whatever rate is charged all customers would PAY FOR THE SEWER SERVICE THEY RECEIVE. Volumetric billing is encouraged by the Natural Resources Defense Council and is used in the local area by State College Borough, Tyrone, Altoona, Lewistown, Williamsport and Harrisburg and many other sewer purveyors throughout the world.
6. Both UAJA and nonresidential customers would see a substantial reduction in billing and reporting costs if the proposed system as outlined above was implemented. Every nonresidential UAJA customer must file an annual report with UAJA that gives details on every business that is occupying a building and how many employees are in each business. UAJA personnel must then take this information and adjust the EDU billing account based on that information. Does this really make any sense?

### Tapping Fees

UAJA has not complied with Pennsylvania Act 57 Legislation that requires sewer and water authorities to charge non-residential customers a tapping fee based on the projected volume of water that will be used within a non-residential building. UAJA had an Act 57 Study done by their consultant, HRG in June of 2005. Page 1 of the HRG Act 57 Study states: "The Non-Residential Tapping Fee per gallon per day required is as follows"

Capacity Part	\$15.50
Collection Part	\$4.24
Total	\$19.75

(Note: For 2017, the total tapping fee should be \$5,008 per unit/234gpd/unit of capacity = \$21.40/gal/day.)

Based on the above, if someone built a 9,000sf office building that had an expected daily water usage of 150 gallons per day, the building owner should pay a tapping fee of \$21.40/gal/day x 150gpd = \$3,210. Under UAJA's current policy, UAJA would charge one EDU per 3,000sf of office space in the building; therefore, the UAJA Tapping Fee would be: 3 EDUs x \$5,008 = \$15,024. UAJA would overcharge the owner of the proposed office building \$11,814 (\$15,024 - \$3,210). In our opinion, UAJA has been overcharging many non-residential customers for tapping fees since June of 2005 when the Act 57 Study was completed. This money is, in part, what has been used to pay for the Beneficial Reuse Treatment system.

UAJA has never followed the State law (Act 57) and the Act 57 Study that was done by their consultant. To knowingly not follow a State law and a study that was done in accordance with Act 57 is not legal. The UAJA Board is condoning the UAJA Tapping Fee Charges when they know that it does not meet the Act 57 requirements and what their own consultant recommended.

## Beneficial Reuse

According to information that we have received, the UAJA Beneficial Reuse project has cost more than \$50,000,000 and has created essentially 1MGD of additional capacity. UAJA plans to extend the Beneficial Reuse Sewer Lines out to the Mountain View Country Club and Tussey Mountain Ski Resort so that UAJA can sell these entities Beneficial Reuse Water for irrigation of the golf course and to make snow in the wintertime. More than four miles of force main must be constructed at an estimated cost of more than \$2,000,000. Where is the justification for this kind of expenditure and for the costs to date?

Penn State has successfully utilized the "Living Filter" for the ultimate disposal of their treated sewage for more than 45 years. The "Living Filter" system utilizes spray irrigation to promote forest and agricultural growth and replenish the groundwater. This system is very efficient and is sustainable.

## Summary

After reviewing the above information, it is our opinion that the Centre Region COG should mandate within the update of the Regional Act 537 Plan that UAJA should do the following:

1. Adopt a Rate Resolution that charges a uniform rate for sewer service to all customers based on water meter readings and educate all customers on the benefits of replacing old plumbing fixtures with new plumbing fixtures that will use less water and thereby create less sewage which will help insure the sustainability of our water and sewer systems.
2. Charge Tapping Fees based on the Pennsylvania Act 57 Study that was done by UAJA's consultant in June of 2005.
3. Before a Beneficial Reuse force main is extended to Mountain View and Tussey Mountain do a cost benefit analysis to ensure that this project makes good, financial sense.

My associates and I have attended many UAJA meetings over the past 13 years and have presented our concerns in writing and verbally to the UAJA Board. The UAJA Board has refused to meet with us and has never responded to any of our documents that have been presented to them.

If anyone disagrees with anything stated in this document, please send your response to: Tom Songer II, 1951 Pine Hall Road, Suite 150, State College, PA 16801 or email your comments to [tfsonger@torrongroup.com](mailto:tfsonger@torrongroup.com).