

December 28, 2015

VIA EMAIL to rcampbell@mkclaw.com and FIRST CLASS MAIL  
Mr. Richard C. Campbell  
Miller, Kistler, Campbell, Miller, Williams & Benson, Inc.  
720 South Atherton St.  
State College, Pa. 16801

RE: UAJA Tapping Fees and Quarterly Service Fees

Dear Mr. Campbell:

It was nice talking with you concerning the issues of concern to my client, Thomas F. Songer, II and his associates, in regards to the manner in which UAJA charges for tapping fees and sewer service fees. Since 2003 Mr. Songer and his associates have raised concerns about how UAJA determines quarterly service fees and tapping fees for customers other than single family homes ("SFH"). It may be useful to our discussions to summarize these concerns:

**Tapping Fees**

UAJA's tapping fees may not comply with the Act 57 of 2003 legislation, found in Section 5607(d)(24) of the Municipality Authorities Act ("MAA"), and with the Act 57 Study for UAJA that was done by HRG dated June 2005. Mr. Songer outlined his concerns in a memo dated Nov. 18, 2015, which is attached. In my discussions with counsel for PMAA and others, I concluded that basing tapping fees on estimated EDUs, without either contemporaneous or follow-up review of actual water consumption or flows, presents a serious problem for UAJA and its non-SFH customers.

UAJA estimates a residential, SFH, EDU as comprising 175 gpd of water consumption. I am aware of two professional office buildings where UAJA incorrectly overestimated water consumption and charged 7 EDU's of tapping fees – almost \$33,000 – where estimated water consumption is merely 184 gpd, or just over 1 EDU. There are three serious problems with this

Concentrating in Environmental, Land Use, Municipal, Real Estate, Corporate, Estate Planning and Administration, and General Civil Litigation

**ATTORNEYS**

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practice. First, the MAA does not allow tapping fees to be based upon or expressed in EDUs; rather, they must be based upon design capacity. The MAA says that “design capacity may not be expressed in terms of equivalent dwelling units.” Second, where UAJA makes an incorrect and overly aggressive estimate of EDUs for non-SFH tapping fees, it should refund excess tapping fees when it sees that actual customer usage falls well below the water usage estimate upon which the tapping fees were based. Similarly, UAJA could assess additional tapping fees where a customer’s usage increases beyond the initial estimate, as in the case of an industrial facility that truly doubles or triples its flows over time. Third, UAJA’s practice of overestimating EDUs and associated tapping fees will cause it to “oversell” the design capacity of the plant. In other words, if we add up the total EDUs assessed for tapping fee purposes by UAJA for all its customers, the flows from those EDUs exceed the design capacity of the plant. We feel this violates the MAA’s requirement that the capacity part of the tapping fee per unit of design capacity not exceed the total cost of the facilities divided by the system design capacity.

We believe an appropriate solution is to assess non-SFH tapping fees based on estimated water usage, and not upon an arbitrary, and often wildly overestimated, guess at EDUs. After actual water usage is established, adjustments should be made to match the tapping fee to the actual usage. Charging tapping fees based on seven to ten times the actual water usage exposes UAJA to claims for refunds and perhaps worse.

### **Service Fees**

UAJA charges all customers for sewer service by using an inaccurate and outdated methodology based on EDUs as defined by the UAJA Rate Resolution. The MAA states that rates are to be “uniform and reasonable.” We believe that rates should be based on metered water consumption, and not upon estimated EDUs. Rates based on estimated EDUs have largely been abandoned, not in the least because they result in non-uniform and unreasonable rates, which place the service provider at risk of rate challenges and cause discord among customer groups, who unsurprisingly favor fairness over favoritism in rate structure.

Attached are some helpful documents that were presented to the UAJA Board and discuss the problems with the current method of calculating and assessing service fees and tapping fees:

1. Memo dated Aug. 14, 2015 to UAJA Board of Directors, Cory Miller, Executive Director.
2. Memo dated Aug. 17, 2015 to UAJA Board of Directors, Cory Miller, Executive Director, which is an Executive Summary of the Aug. 14, 2015 Memo.

Some important issues that are worth noting concerning the above memos<sup>1</sup> include:

1. In 1996 Mr. Gary Shambaugh of AUS Consultants completed a “Report on Wastewater Cost of Service and Tariff Rate Design.” Details relating to Mr. Shambaugh’s report are outlined in section 9 of the Aug. 14, 2015 memo to UAJA.

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<sup>1</sup> Mr. Songer’s memo to the UAJA board dated Nov. 18, 2015 on Tapping Fees should take precedence over what was stated in the attached memos to the UAJA Board in regards to Tapping Fees.

2. Attached is a letter from Mr. Shambaugh to Tom Songer dated Aug. 19, 2015, which states in part
  - a. "Based upon the level of annual sewer bills, the equivalent dwelling unit (EDU) basis of billing is becoming an unacceptable billing practice due to the subjectiveness of the methodology and the resultant customer rate discrimination that the method causes. This method was used when metered water use data was not readily available. Customers have a right to be charged fair, just and reasonable rates. The EDU methodology of billing will inherently cause discrimination between or among customers and customer classes."
  - b. "The goal in water and sewer industry is to establish customer rates in proportion to the service provided."
3. UAJA bills some customers such as Penn State and the Borough of State College based on metered water usage and metered sewage flow respectively. It seems as though UAJA has different ways of billing different customers. If true, this practice violates the MAA's mandate that rates are to be "uniform and reasonable."
4. Refer to an attached memo from Mr. Songer to the UAJA Board of Directors asking how an EDU of sewer service relates to these uses:
  - 1) Bowling Alleys per 6 lanes—1 EDU
  - 2) Car Wash, 2 Bays or less—1 EDU, each additional bay over 2—1/2 EDU
  - 3) Restaurant—1 EDU per 15 seats

Other examples are provided in the memo. We feel that UAJA is hard pressed to justify that, within an office building made up of 10 businesses consisting of one person each, the sewer service charged is 1 EDU for each business (10 EDUs total) but a single business in a similar building with 10 employees is only charged 1 EDU of service. The building has 10 employees in either case but the difference in charge is 9 EDUs. While UAJA has not to date responded, we think it far better to address and correct this problem directly rather than ignore it and force judicial review.

5. The Borough of State College has charged all of its customers based on water meter readings for more than 40 years. The sewer charge is noted on the water bill that is sent to all customers by the State College Borough Water Authority. Customers see on the bill how much water they used and the charges for the water and for the sewer. This is a very efficient billing system and the customer only needs to write one check to pay for both water and sewer and only use one stamp if he is mailing his check.
6. Consumption based rates encourage water conservation. By paying for sewer service based on metered water usage, customers are given incentive to use less water. Reducing water demand means that less water needs to be treated and distributed and less infrastructure needs to be in place to serve a greater customer base. Other laudable and popular effects follow, such as reducing our carbon footprint and making our water and sewer service facilities more sustainable.
7. Water usage in State College Borough has gone down by over 17% in the last 15 years. This is because customers react to the financial incentive offered them to use less water because their sewer bill is based on their water usage. In addition, all new construction and renovation requires that low flow toilets and low flow water fixtures be used. Some

Mr. Richard C. Campbell  
December 28, 2015  
Page 4

customers in older homes and businesses are changing out their old 5 gallon flush toilets for toilets that use as little as 1.28 gallons per flush.

Many local municipalities such as State College, Altoona, Tyrone, Lewistown and Williamsport bill their customers for sewer service based on metered water usage.

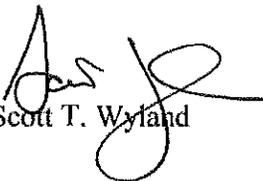
**Proposal for Consideration**

I appreciate your openness to a meeting to discuss these concerns in a productive, positive, and professional way. We strongly prefer such an approach to litigation. I propose that we meet on Jan. 6, 7 or 8 at your office, perhaps with a few members of the UAJA Board.

I look forward to hearing from you.

Very Truly Yours,

***SALZMANN HUGHES, P.C.***

  
Scott T. Wyland

STW/lgk



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To: UAJA Board of Directors  
From: Tom Songer II, Managing Partner  
Subject: Buchanan Centre, Lot 21 at Windmere Park  
Date: Nov. 18, 2015

I sent a memo dated November 3, 2015 to Cory Miller which stated that the anticipated water/sewer usage for the subject building is estimated to be 184gpd. This usage was affirmed by Steve Albright at the State College Borough Water Authority.

Cory responded to my memo of November 3, 2015 and stated in an email to me dated Nov. 9, 2015 that "Based on the form you submitted, the EDU tapping fee assignment would be 7 EDUs." The total tapping fee based on Cory's determination would be: 7EDUs x \$4711 = \$32,977. This \$32,977 tapping fee is for a building that is expected to use slightly more water than a single family home.

After receiving Cory's email I did additional research on this issue and found that in the case of establishing tapping fees all water and sewer authorities must follow Act 57 legislation which is a supplement to the Pa. Municipal Authorities Act. The Pa. Municipal Authorities Act requires that all rates established by an Authority be Reasonable and Uniform. Act 57 was passed by the Pa. State Legislature in 2003 and established a methodology for how water and sewer authorities can charge new customers for tapping fees. In order to set the tapping fees, authorities must have an Act 57 Study done. UAJA had an Act 57 study done in June of 2005 by HRG. Act 57 requires that a Unit of Design Capacity be determined which is different than an EDU. The Unit of Design Capacity in the UAJA Act 57 study was determined to be 234.9gpd. Based on the HRG Act 57 study the maximum tapping fee that could be charged for a single family home was \$4636.93 in 2005. In addition the 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	\$19.74

The tapping for a single family home is currently set at \$4711/home. The non-residential tapping fee should be \$20.05/gpd (\$4711/234.9gpd). Based on the above calculations the tapping fee charge for the subject building should be 184gpd x \$20.05 = \$3689.20 and not \$32,977 as indicated by Cory. At this time I am asking the board to pass a motion that sets the tapping fee for the subject building at \$3689.20.

In addition you may recall that I built a new 11000sf office building in 2013. At that time the tapping fee that was assessed was based on 4EDUs (11000sf/3000sf/EDU). I attended a UAJA Board meeting on Mar. 14, 2013 and presented the board with a memo on this issue and asked to be charged 1 EDU of Tapping Fee for my proposed building based on the anticipated water usage of 145gpd which was affirmed by Steve Albright of the State College Borough Water Authority. The UAJA board denied my request and I paid for 4 EDUs of tapping fee UNDER PROTEST in a letter to Cory Miller dated Mar. 27, 2013. In 2013 the tapping fee was \$4471 for a single family home. Therefore the tapping fee for nonresidential properties should have been \$19.03/gpd (\$4471/234.9gpd). Based on this I should have paid a tapping fee of \$19.03 x 145gpd = \$2759.35. We paid a total tapping fee of \$17,884 (4EDUs x \$4471). At this time I am asking that UAJA refund to the Torron Group \$15,124.65 (\$17,884 - \$2759.35).

If you do not agree with what I have stated then I respectfully ask that you have your attorney respond to this memo with his opinion on my requests.



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To: UAJA Board of Directors, C/O Cory Miller, Executive Director  
From: Thomas F. Songer II and Associates  
Date: Aug. 14, 2015  
Subject: UAJA Service & Tapping Fees

### Introduction

This document has been prepared based on information provided by the following individuals:

- A. Cory Miller of University Area Joint Authority (UAJA)
- B. Steve Albright of the State College Borough Water Authority (SCBWA)
- C. Adam Brumbaugh of the College Township Water Authority (CTWA)
- D. Scott Wyland of Salzmann Hughes, PC, Counsel for the author who filed a Right to Know Request with UAJA

Over the past 13 plus years the author, along with his associates, has raised concerns to the UAJA Board and COG representatives relative to the UAJA Rate Resolution and how UAJA charges customers for sewer service and tapping fees. UAJA has been in existence for more than 45 years and is a mature sewer system. The goal of this document is to look at the available facts and propose a methodology that UAJA could adopt to bill all of its customers for sewer service and tapping fees. According to the Municipal Authorities Act, a utility rate structure should be "uniform and reasonable". In addition, we believe that the UAJA rate structure should be fair to all customers of the system, easy to understand, and should provide a financial incentive to customers to conserve water.

Following is a summary of information that was provided by the sources described above.

#### 1. For 2014 Total Sewage Flow at UAJA = 1787.8MG = 4.90MGD

##### a. Total Sewage Flow from Borough of State College

- 1) YBC Meter (downtown) 568.6MG
- 2) South Meter 61.1MG
- 3) North Meter 36.4MG
- 4) Total 666.1MG = 1.82MGD
- 5) Flow from Townships, PSU/MNMC = 4.90MGD - 1.82MGD = 3.08MGD

##### b. EDUs per municipality

- 1) Patton 7207
- 2) Ferguson 8240
- 3) College 6699
- 4) Harris 2132
- 5) Total 24278 EDUs in townships

##### c. EDUs by Class

- 1) Single Family Homes 10659
- 2) Multi Family 7666
- 3) Nonresidential 5953
- 4) Total 24278 EDUs in townships

- d. There is a total of 13619 (7666 + 5953) commercial EDUs. Per the SCBWA (State College Borough Water Authority) and CTWA (College Township Water Authority) the number of commercial accounts in each water system is 1581 and 354 respectively for a total of 1935 accounts.
- e. Avg. Flow/EDU from townships = 3080000gal/day/24278 EDUs =124GPD/EDU
- f. The above information in items a, b and c was provided by Cory Miller in emails dated 1/22/15 and 3/18/15.
- g. It is not known if the above flows and EDUs include buildings served by the Penn State water system which includes buildings on the north side of campus and the Mt. Nittany Medical Centre that discharge directly into the UAJA system or if UAJA has any special agreements with other customers. See paragraph 4 below.
2. SCBWA--Water Usage in the Borough and Townships for 2014 (information provided by Steve Albright)
- |    |          |                 |
|----|----------|-----------------|
| a. | SCB      | 1.670MGD        |
| b. | College  | 0.178MGD        |
| c. | Ferguson | 1.003MGD        |
| d. | Harris   | 0.257MGD        |
| e. | Patton   | <u>0.807MGD</u> |
| f. | Total    | <u>3.915MGD</u> |
3. CTWA---Total Water Usage for 2013 was 0.517MGD (information provided by Adam Brumbaugh, College Twp.).
4. PSU--The Penn State Water System (PSU) serves approximately 40 Penn State buildings and the Mt. Nittany Medical Center (MNMN) that discharge sewage directly into the UAJA system. (Information received from UAJA from a Right to Know request made by attorney Scott Wyland of Salzmann Hughes, PC.) For 2014 UAJA billed PSU based on water meter readings totaling 8.32MG = 0.023MGD. PSU was billed based on a bulk treatment rate of \$5287/MG when the actual total cost of service was 8321/MG as noted in section 6e below. In addition, it is noted on the UAJA sewer bills to PSU that on average only 30% of the total water that was metered and served the PSU buildings was actually used to determine the sewer bill. The question needs to be asked, what was 70% of the water used for that apparently did not go into the sewer? There are handwritten notes on the sewer bills to Penn State that discounts the actual water meter readings to determine the sewer bill. The Mt. Nittany Medical Centre used a total of 24.95MG = 0.068MGD. The Mt. Nittany Medical Centre was billed based on the number of EDUs determined by the number of employees and for a surcharge of flow when appropriate. The Mt. Nittany Medical Centre's bill is based totally on EDUs but section 3.3 of the rate resolution states that: "The volume surcharge will be based upon the EDU treatment rate currently in place." It doesn't appear as though the Rate Resolution was followed in billing the Mt. Nittany Medical Centre. The total flow from the PSU and MNMC was 0.023MGD + 0.068MGD = 0.091MGD.
5. Total Water Usage: SCBWA (2014) and CTWA (2013) and PSU/MNMC = 3.915 + 0.517 + 0.91 = 4.523MGD
6. Summary of Water Meters Compared to Sewer Meters
- a. Total Water Usage in Townships, PSU/MNMC = 4.523MGD - 1.670MGD = 2.853MGD. Per 1.a.5 above the UAJA flow from townships was determined to be 3.08MGD. The difference is 0.227MGD (3.080 - 2.853). The reason why the sewer flow is greater than water usage is probably attributed to infiltration and inflow.
- b. Total Water Usage from SCB =1.67MGD. Total Sewage Flow from SCB to UAJA = 1.82MGD. According to Mark Whitfield of the State College Borough approximately 0.60MGD of sewage from SCB is treated at the Penn State treatment plant along University Drive.

7. Financial Considerations

- a. The Municipal Authorities Act, Chapter 56 Section 5607, (d) (9) states that every authority has the power "To fix, alter, charge and collect rates and other charges in the area served by its facilities at reasonable and uniform rates to be determined exclusively by it for the purpose of providing for the payment of the expenses of the authority, the construction, improvement, repair, maintenance and operation of its facilities and properties....." The keywords in this statement are that rates are to be **reasonable and uniform**.
- b. UAJA's 2015 budget for income states that the total income for 2014 was \$9.353M from the township users and \$3.382M from State College Borough (SCB) for a total annual budgeted income of \$12.735M.
- c. UAJA bills SCB \$5287/MG under a bulk sales agreement.
- d. UAJA 2015 Budget states that projected revenue in 2014 from Townships is \$9.353M for 24278 EDUs. This equates to approximately \$385/EDU/yr. UAJA currently charges \$416/EDU/yr.
- e. UAJA actually collected \$9.353M from the Township service area in 2014. If UAJA treats 3.08MGD from the townships this equals 1124MG per year. The UAJA average treatment charge per MG is then  $\$9.353M/1124MG = \$8321/MG$  which is \$3034/MG ( $\$8321 - \$5287$ ) more than the Borough is paying UAJA for service. UAJA does not maintain the SCB system or pay for improvements to the system or debt service on the system. SCB pays about 63% of what UAJA customers pay for treatment and service.
- f. Within the UAJA rate resolution (Page 5, Section 3.3), an EDU is defined as 175gpd which equates to 63875 gal/yr = 15968gal/qtr. Basically an EDU is expected to use 16000 gal/qtr of water or 64000gal/yr.
- g. Based on a treatment rate of \$8321/MG, if the average EDU uses 16000gal/qtr then an EDU should pay  $\$8321/MG \times 0.064MG/yr = \$533/yr = \$133 /qtr$  (rounded down). UAJA bills \$416/EDU which equates to a treatment rate of \$6500/MG ( $\$416/.064MG$ ) for sewer service for a single family home. Another way of stating this is that a typical home that uses 16000 gal of water per quarter is paying \$533 - \$416 = \$117/yr less than they should be paying based on a current treatment rate of \$8321/MG as noted in paragraph 6e above. The above calculations indicate that the commercial accounts consisting of apartments and nonresidential users are subsidizing the typical single family home account.
- h. Commercial Water Usage Summary
- |                  |                 |
|------------------|-----------------|
| 1) College Twp.  | 0.108MGD        |
| 2) Ferguson Twp. | 0.485MGD        |
| 3) Harris Twp.   | 0.041MGD        |
| 4) Patton Twp.   | 0.472MGD        |
| 5) CTWA          | 0.181MGD        |
| 6) PSU/MNMC      | <u>0.086MGD</u> |
| 7) Total         | 1.373MGD        |
- 8) Average water usage per commercial account = 1.287MGD (does not include PSU/MNMC water usage) divided by 13619 = 95gpd/EDU. There are 1935 commercial accounts in the townships. Multi-family and non-residential properties are considered to be commercial accounts. The average commercial account uses 665gpd (1287000 gal/1935 accounts).
- i. Residential Water Usage Summary
- |                  |                 |
|------------------|-----------------|
| 1) College Twp.  | 0.070MGD        |
| 2) Ferguson Twp. | 0.518MGD        |
| 3) Harris Twp.   | 0.215MGD        |
| 4) Patton Twp.   | 0.335MGD        |
| 5) CTWA          | <u>0.338MGD</u> |
| 6) Total         | 1.476MGD        |
- 7) Average water usage per home (EDU) = 1.476MGD divided by 10659 homes (EDUs) = 138gpd/home (EDU).
- j. Based on information received from the SCBWA, there are 1628 homes that use in excess of 64000 gal of water per year. The total volume of water that these homes use in excess of 64000 gal/yr totals 137MG. This does not include homes in the CTWA service area because this information was not available. Some homes use more than 200000gal/yr but they only pay for 1EDU of sewer service.

These homes pay for all of the water they consume and they pay to heat their hot water but they don't pay for the full cost of sewer service they receive from UAJA. If they are using water for watering lawns or gardens or for swimming pools then they can submeter this water if they choose to do so and subtract this flow from the base meter flow to determine their sewer bill.

- k. Based on the above analysis, the average commercial EDU uses 95gpd while the average residential EDU (single family home) uses 138gpd. Single family homes are using  $138/95 \times 100 = 145\%$  of the water that a commercial EDU is using.
  - l. There are 10659 single family residential EDUs paying \$416/yr. The total income from these residential EDUs is \$4.43M/yr. This means that the remainder of the income totals \$5.25M (\$9.68M - \$4.43M) and must come from the commercial accounts. Based on the above water usage figures, the commercial accounts are generating a total of 1.374MGD or 501MG/yr of sewage based on water meter readings and are paying \$5.25M in revenue. This works out to a treatment rate of \$10479 per MG ( $\$5.25M / 501MG$ ) which indicates that the commercial customer is paying \$3979 ( $\$10479 - \$6500$ ) more per MG of sewage generated than the single family home customer. This is totally unfair.
8. Sewer Service Charges should be Uniform and Reasonable as dictated by the Municipal Authorities Act
- a. There is no justification for charging commercial customers based on an EDU basis that is totally arbitrary and hasn't been adjusted to take into account water conservation devices that are mandatory under current building codes. Furthermore, the current UAJA rate resolution is outdated and does not meet the requirement of the Municipal Authorities Act which, as stated in section 7a above, mandates that rates are to be reasonable and uniform. In addition, rates and tapping fees should be fair to all users and should encourage users to conserve water.
    - 1) Fifty years ago, toilets used 5 gal per flush. Today it is mandatory that all toilets use no more than 1.6 gal of water per flush. Thus each flush uses 3.4gal less water than a 5 gal flush toilet. If a typical household has 10 flushes per day, then the water savings is 34 gal. If a typical home (EDU) with a 5gal flush toilet used 150gpd, a new home would be expected to use 116gpd on average.
    - 2) Within an office environment, if on average each employee used the toilet 3.5 times a day then they would use 17.5 gal of water with a 5 gal toilet. Ten (10) employees would use 175gal. UAJA states that each 10 employees counts as 1 EDU. In a new office building being built under current code standards, the toilets use 1.6 gal per flush thus 3.5 flushes uses 5.6gal of water which is 11.9 gallons less than a 5.0 gal flush toilet uses. Thus it would take 31 employees to generate the same amount of sewage using 1.6 gal flush toilets as 10 employees with 5 gal flush toilets generate. Since most of the water used in an office building is for toilet usage, the opportunity to conserve water is very high. As a matter of fact 1.28 gal flush toilets are becoming the norm.  $3.5 \text{ flushes} \times 1.28 \text{ gal} = 4.5 \text{ gal/employee per day}$ . This equates to 39 employees per EDU.
    - 3) UAJA's method of charging 1 EDU for every business in a building is totally unfair as many businesses have one or two people. If a business has 10 employees under the current system, they pay 1 EDU and if there are 10 businesses in a building with one person each, they pay 10 EDUs. That is a difference of 9 EDUs. How is this fair?
    - 4) Check out the UAJA rate resolution for many examples of how the method of establishing an EDU charge is unfair and unreasonable:
      - (a) How does the number of automobile bays impact how much sewage is generated. Two (2) bays or fewer pay 2 EDUs and every bay greater than 2 pays 1/2.
      - (b) Bowling alleys pay 1 EDU per 6 lanes. What is the rationale for this determination?
      - (c) Restaurants pay 1EDU per 15 seats without taking into account for such things as how long they are open or if it is primarily paper service. How are seats that are occasionally used for a meetings taken into account?
      - (d) Retail Food stores charge 1 EDU for each food prep station, each deli, each bakery, each pharmacy, etc.
      - (e) Cooling tower with drain to sewer charges 1 EDU (unless volume warrants higher charge). Has a higher charge ever been made for this service?

- (f) Medical offices see a lot of patients who may use the restroom facilities. Sewer service is based on the number of employees in the practice and doesn't take into account the patients who use the restroom facilities.
- (g) Large retail stores like Walmart, Lowes, Giant Food Store, etc., have a lot of customers who use their restroom facilities but their sewer charge is based on the number of employees plus item (d) above.
- (h) Section 3.3 Volume Surcharges of the Rate Resolution states: "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." In order to implement this surcharge, UAJA would have to check all of the water bills and compare them to the number of EDUs that are being billed to see if a surcharge should be billed. This is not practical and would take a tremendous amount of staff time to accomplish. UAJA is billing PSU and the MNMC based on water usage as noted above. If UAJA used volumetric billing this would be unnecessary.

9. Report on Wastewater Cost of Service and Tariff Rate Design March 1996 by Gary Shambaugh

- a. Under the Right to Know request, UAJA forwarded a copy of a report dated March 1996 that was commissioned by David Allison who was the Executive Director of the University Area Joint Authority, the Patton-Ferguson Joint Authority and the College-Harris Joint Authority. The report was prepared by Gary Shambaugh, Executive Vice President and John R. Palko, Vice President of AUS Consultants.
- b. Mr. Shambaugh's cover letter to David Allison dated March 7, 1996 stated in part: "The main objective of the report was to determine the cost of providing service to each class of customer in the various service areas and determine if the current billing methods are fair, just, and equitable. Based upon the results of our study, we are recommending a method of billing which would meet the tests of uniformity and equity as required by the Municipality Authorities Act."
- c. On page 1-23, under Customer Rate Design-PFJA and CHJA, Mr. Shambaugh stated: "As our studies progressed, it became apparent that a rate structure recognizing both capacity and volume would better address uniformity and equitability concerns than would the capacity based EDU rate structure. Accordingly, we have included both volume and capacity considerations in our preliminary rate design for the PFJA and CHJA. Our preliminary rates include both a customer charge and a volume charge. The customer charge includes the capacity cost and the customer cost components of the revenue requirement, while the volume charge includes the volume cost component of the revenue requirement. The use of both a customer charge and a volume charge will ease the movement from an EDU based rate to a volume/capacity based rate structure and will also aid in assuring revenue stability for the Authorities."
- d. In speaking with Mr. Shambaugh, I learned that David Allison retired about the time the study was completed. None of Mr. Shambaugh's recommendations regarding customer charges and volume charges were implemented.
- e. On page 1-26 under Closure, Mr. Shambaugh stated: "The studies discussed in this report have shown that the customer group revenue levels generated by the presently effective rate resolutions are not in agreement with the cost of service requirements determined herein. In general, residential customers continue to receive a "break" in that PFJA and CHJA are generating more revenues from the commercial, industrial, and public customers than the cost of service study would indicate."

10. Tapping Fees

- a. Tapping fees should be determined based on the system that the State College Borough uses which determines the number of EDUs that the commercial project is expected to generate based on a water usage figure of 1EDU = 175gpd. The SCBWA or CTWA should determine the number of EDUs for a project based on historical water usage records of similar projects and UAJA should accept this calculation for determining the number of EDUs of tapping fees that should be paid for by the applicant. It is noted that UAJA accepts this calculation for projects done in the Borough of State College. The

owner of the project should sign an agreement that indicates that after the project is totally completed and stabilized for a year that the water usage for the project will be reviewed. If more or less water is being used than was estimated, the owner should agree to pay an additional tapping fee or receive a refund after the building is stabilized but in no case should any connection pay less than one (1) EDU of tapping fee. In the future, if the use of the building is expected to use more water, then an additional tapping fee should be charged.

- b. Using UAJA's method of determining tapping fees, new commercial projects maybe paying for more EDUs than they will ever use. For example if a new 12000 sf office building is proposed, UAJA charges a tapping fee of 1EDU per 3000sf for a total of 4EDUs of tapping fee. This office building will probably use less than two EDUs or 350 gal of water per day. There is no uniform relationship between the square footage of a building and how much water they will use but there is historical water usage data that can be looked at based on the use and size of the building.
- c. UAJA has a finite number of EDUs that they should collect tapping fees on. Once these EDUs have been sold, UAJA should not be able to keep selling EDUs. In addition it should be determined if users who paid for tapping fees are using the capacity for which they paid. The users who paid for EDUs that they will never use should be reimbursed by UAJA for these EDUs. A full accounting of how many EDUs are available for future growth should be provided along with how many EDUs of tapping fees UAJA has sold to date.

**11. Proposal for UAJA Service Charges**

- a. UAJA should adopt a rate resolution that does away with the EDU system and adopt a system that bills customers based on a customer charge and a volume charge. The following proposal establishes a minimum customer charge that every customer will pay which is based on a proposed rate of \$104/qtr or \$416/yr for up to 16000gal/qtr or 64000 gal/yr of water used. This is the same rate that existing single family homes are paying. A volume charge for customers who use in excess of 16000gal/qtr could be billed at the rate of \$9.50/1000gal which is the current rate that State College charges its customers for sewer service. The primary difference between the proposed UAJA service charge schedule and the current State College Borough charge is that the minimum customer charge for UAJA would be based on a minimum water usage of 16000gal/qtr and for State College the minimum charge is based on 3000gal/qtr.
- b. It has been determined that the excess volume charge for each class of service would be:
  - 1) Excess single family home water usage (greater than 64000gal/yr) within the SCBWA service area is 137MG/yr (37534gpd) based on information received from Steve Albright. The CTWA was not able to provide information on how much water in excess of 64000gal/yr is used within their system by single family homes so this would have to be determined.
  - 2) There are 1935 commercial accounts in the townships. The total water used by the commercial accounts is 1.287MGD. Assuming that each account uses a minimum of 64,000gal/yr, the total base flow of water used by the commercial accounts would be:  $1935 \times 64,000\text{gal/yr} = 123\text{MG/yr} = 0.34\text{MGD}$ . The total water used by the commercial accounts is  $1.287\text{MGD} \times 365 \text{ days/yr} = 470\text{MG/yr} = 1.287\text{MGD}$ . The excess water used over the base is:  $470\text{MG/yr} - 123\text{MG/yr} = 347 \text{ MG/yr}$ . The actual excess water usage may be more as some commercial accounts may use less than 64000gal/yr.
- c. Projected Income if recommendations in 8.a and 8.b are implemented:
 

1) Base Revenue from Single Family Homes: 10659 homes x \$416/home	=	\$4,434,144/yr
2) Base Revenue from Commercial Accounts: 1935 accts. x \$416/acct.	=	\$ 804,960/yr
3) Additional Revenue from Residential Accounts: 137MG x \$9500/MG	=	\$1,301,500/yr
4) Additional Revenue from Commercial Accounts: 347MG x \$9500/MG	=	<u>\$3,296,500/yr</u>
5) Total Projected Revenue		\$9,837,104/yr
6) Total Budgeted Revenue 2014		<u>\$9,353,160/yr</u>
7) Excess Revenue Projected over 2014 Budget		\$ 483,944/yr

  - 8) Excess Revenue can be used to pay down debt service early and to buy back EDUs from owners who overpaid for tapping fees.

- 9) Excess revenue projected will be greater than what is indicated because it does not take into account single family homes within the College Township Water Authority service area that will pay more if they use more than 16000gal of water per qtr. In addition the excess water usage for commercial accounts may be greater than the estimate of 347MG if some commercial accounts use less than 16000gal/qtr. Water records would need to be examined to determine how much this income would be.
- 10) Excess revenue will provide a contingency fund if customers implement water conservation practices to reduce their bills. Revenues can be monitored quarterly to determine if conservation practices are being implemented. When and if necessary rates could be adjusted.
- 11) This proposed billing methodology needs to be presented to the customers via a letter and media so that customers understand that the intent is to reduce water consumption within the region which will extend the life of the current water and sewer treatment systems and provide for growth without having to expand the water and sewer treatment plants and infrastructure. In addition, the billing system will be uniform and reasonable and all customers will pay a fair charge for the service they are receiving from UAJA.
- 12) Service bills can be sent out by SCBWA and CTWA along with the water bills as is now done in State College Borough, and this will save postage and labor costs.
- 13) UAJA can bill any customers who are on well water the same way they are billing them now or a water meter could be installed and UAJA could read the water meter and bill the customer in accordance with the amount of water used.
- 14) Adopt the methodology for tapping fees that the Borough of State College uses to determine the number of EDUs of tapping fee that a customer should pay.
- 15) A consultant could be retained to prepare a formal rate study to evaluate how customers should be charged for sewer service including tapping fees, but this may not be necessary if the above methodology is approved by the UAJA Board.
- 16) We have requested in the past that a special committee consisting of three (3) people from the private sector and three (3) people from the UAJA Board along with the Executive Director meet to discuss this proposal and agree on a methodology for billing UAJA customers. Why can't this be done?

## 12. Summary

- a. The current system that UAJA uses to bill customers for sewer service and for tapping fees is outdated and does not encourage water conservation. The Centre Region operates under a regional form of government and sewer rates within the Centre Region should be reasonable and uniform as mandated by the Municipal Authorities Act. UAJA should establish a billing system that encourages water conservation and the wise use of its resources that collect and treat the sewage that is generated within the Center Region.
- b. UAJA bills Penn State based on water usage going through a water meter. UAJA bills the Borough of State College for the volume of sewage going through three (3) meters. Why can't all customers outside of the Borough of State College be billed based on the volume of water being used as determined by their water meter?
- c. As is evidenced by the Report on Wastewater Cost of Service and Tariff Rate Design done by Gary Shambaugh in 1996, the rate structure for the UAJA, PFJA and CHJA should have been changed at that time to meet the objective of the study which was to provide a rate structure that is "fair, just, and equitable" and meets the requirements of the Municipal Authorities Act.
- d. Customers historically pay for services like electric, water, and gas based on metered usage. Sewer service charges in many municipalities are based on metered water usage. People buy Energy Star Homes because they use less energy and are less costly to heat and cool. Cars that get good gas mileage are more popular than gas guzzlers. People are being encouraged to lessen their carbon footprint and using less water means that less water needs to be pumped and treated and distributed and less sewage will be generated.
- e. What has been presented above is a regional proposal for how UAJA should bill its customers for sewer service and tapping fees. We have a Regional COG that should endorse what has been proposed as it

is basically the same methodology that has served sewer customers within the Borough of State College for more than 50 years.

- f. Based on information within this document it is believed that the annual UAJA budget can be met by charging all customers in accordance with a minimum customer charge of \$104/qtr per connection and a volume charge of \$9.50/1000 gals for water usage in excess of 16000gal/qtr. These proposed rates are reasonable and uniform and meet the intent of the Municipal Authorities Act.
- g. If UAJA would adopt this regional approach to billing for sewer service and tap fees, it will encourage water conservation and will financially incentivize customers to use less water which will provide sewer capacity for growth within the Centre Region without having to increase the physical plant of the UAJA treatment system for many years to come. Using less water will also benefit the water purveyors in that they will not have to increase the size of their physical plant and use more chemicals, etc., to serve more customers.
- h. If sewer rates need to be raised in the future due to inflation and a reduction in water usage so be it. Conserving water is the right thing to do and the proposed rate schedule will provide a financial incentive to encourage all customers to conserve water. Furthermore all customers will pay a reasonable, uniform and fair charge for the service they are receiving from UAJA. This issue should have been addressed long ago based on Mr. Shambaugh's 1996 report. To knowingly overcharge customers for sewer service and tapping fees is not right. The UAJA Board has an obligation to all of their customers to have a rate system for service charges and tapping fees that is uniform, reasonable, fair and equitable.
- i. This document was based on the best available information that the author was able to obtain. All of the information in this document can and should be checked.

### 13. Recommendations

- a. It is recommended that a special committee be appointed consisting of three (3) UAJA board members and the Executive Director along with Pat Ward, PE, Steve Balkey, PE and Thomas F. Songer II with the goals of the committee being:
  - 1) Develop a plan of action to educate, encourage and financially incentivize customers of UAJA to conserve water on a regional basis. The State College Borough Water Authority, College Township Water Authority, Penn State, Clearwater Conservancy and others can be engaged to help develop a regional water conservation plan.
  - 2) Develop a methodology for billing all UAJA customers based on a customer charge and volume charge based on the volume of water consumed by users of the UAJA system.
  - 3) Develop a methodology for billing all UAJA customers for tapping fees based on the expected volume of water that the customer will be discharging into the UAJA system.
  - 4) Have a public hearing on the new rate structure, adopt the rate structure and notify all UAJA customers with their 4th quarter bills of the new rate structure that will take effect in the first quarter of 2017.
  - 5) Complete items 1), 2), and 3) above by Aug. 31, 2016 and item 4) with the 4th quarter sewer bills. The new rate structure should take effect as of Jan. 1, 2017 and customers would see their first bill based on the new rate structure for the first quarter of 2017 in April of 2017.

My associates and I would welcome the opportunity to work with representatives of UAJA to address the recommendations that are noted above. If the proposed recommendations are not acceptable to UAJA then I respectfully request an explanation for why they are not.



## **Thomas F. Songer II and Associates**

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To: UAJA Board of Directors, C/O Cory Miller, Executive Director  
From: Thomas F. Songer II and Associates  
Date: Aug. 17, 2015  
Subject: UAJA Service & Tapping Fees, Executive Summary of Document dated Aug. 14, 2015

As a follow-up to the document dated August 14, 2015, following is a summary of the budgeted income that I have designated based on volumetric billing being adopted at the same base EDU charge as currently exists which is \$104/qtr/EDU or \$416/yr/EDU and all additional flow in excess of 16,000gal/qtr would be billed at the current rate that State College Borough charges which is \$9.50 per 1000 gal.

### 1. Projected UAJA Income

a. Base Revenue from Single Family Homes: 10659 homes x \$416/home	=	\$4,434,144/yr
b. Base Revenue from Commercial Accounts: 1935 accts. x \$416/acct.	=	\$ 804,960/yr
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e. Total Projected Revenue		\$9,837,104/yr
f. Total Budgeted Revenue 2014		<u>\$9,353,160/yr</u>
g. Excess Revenue Projected over 2014 Budget		\$ 483,944/yr

### 2. Tapping fees

- a. Tapping Fees should be determined based on the system that the State College Borough uses which determines the number of EDUs that the commercial project is expected to generate based on a water usage figure of 1EDU = 175gpd. The SCBWA or CTWA should determine the number of EDUs for the project based on historical records of similar projects and UAJA should accept this calculation. It is noted that UAJA accepts this calculation for projects done in the Borough. The owner of the project should sign an agreement that indicates that after the project is totally completed and stabilized for a year that the water usage for the project will be reviewed. If more or less water is being used than was estimated, the owner agrees to pay an additional charge or receive a refund.

### 3. Summary

- a. The current system that UAJA uses to bill customers for sewer service and for tapping fees is outdated and does not encourage water conservation. The Centre Region operates under a regional form of government and sewer rates within the Centre Region should be reasonable and uniform as mandated by the Municipal Authorities Act. UAJA should establish a billing system that encourages water conservation and the wise use of its resources that collect and treat the sewage that is generated within the Center Region.
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mileage are more popular than gas guzzlers. People are being encouraged to lessen their carbon footprint and using less water means that less water needs to be pumped and treated and distributed and less sewage will be generated.

- e. What has been presented above is a regional proposal for how UAJA should bill its customers for sewer service and tapping fees. We have a Regional COG that should endorse what has been proposed as it is basically the same methodology that has served sewer customers within the Borough of State College for more than 50 years.
- f. Based on information within this document it is believed that the annual UAJA budget can be met by charging all customers in accordance with a minimum customer charge of \$104/qtr per connection and a volume charge of \$9.50/1000 gals for water usage in excess of 16000gal/qtr. These proposed rates are reasonable and uniform and meet the intent of the Municipal Authorities Act.
- g. If UAJA would adopt this regional approach to billing for sewer service and tap fees, it will encourage water conservation and will financially incentivize customers to use less water which will provide sewer capacity for growth within the Centre Region without having to increase the physical plant of the UAJA treatment system for many years to come. Using less water will also benefit the water purveyors in that they will not have to increase the size of their physical plant and use more chemicals, etc., to serve more customers.
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- i. This document was based on the best available information that the author was able to obtain. All of the information in this document can and should be checked.

#### 4. Recommendations

- a. It is recommended that a special committee be appointed consisting of three (3) UAJA board members and the Executive Director along with Pat Ward, PE, Steve Balkey, PE and Thomas F. Songer II with the goals of the committee being:
  - 1) Develop a plan of action to educate, encourage and financially incentivize customers of UAJA to conserve water on a regional basis. The State College Borough Water Authority, College Township Water Authority, Penn State, Clearwater Conservancy and others can be engaged to help develop a regional water conservation plan.
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My associates and I would welcome the opportunity to work with representatives of UAJA to address the recommendations that are noted above. If the proposed recommendations are not acceptable to UAJA then I respectfully request an explanation for why they are not.



GARY D. SHAMBAUGH  
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August 19, 2015

Mr. Tom Songer II  
Torrion Group  
1951 Pine Hall Road  
Suite 150  
State College, PA 16801

Dear Mr. Songer:

I am in receipt of your inquiry with respect to metered sewer rates and the industry's current position with regard to volumetric sewer billing, I will briefly respond.

Based upon the level of annual sewer bills, the equivalent dwelling unit (EDU) basis of billing is becoming an unacceptable billing practice due to the subjectiveness of the methodology and the resultant customer rate discrimination that the method causes. This method was used when metered water use data was not readily available. Customers have a right to be charged fair, just and reasonable rates. The EDU methodology of billing will inherently cause discrimination between or among customers and customer classes.

The Capital Region Water (formerly the Harrisburg Authority) is being pushed towards metered sewer rates for their wholesale customers. They currently employ an EDU methodology with arbitrarily assigned annual water use by EDU.

Many state regulatory Commissions recognize the relevance of metered water use in establishing metered sewer rates. A recent Virginia Commission case adopted metered water use, from a fully allocated water cost of service study, as a basis to design sewer rates. AUS Consultants was involved in that case and presented the sewer rate design methodology.

The goal in the water and sewer industry is to establish customer rates in proportion to the service provided. The recent Virginia case demonstrates the desires of the regulators and more importantly the customers. AUS Consultants is seeing this trend nationwide as water and sewer bills become a bigger portion of residential and commercial customer budgets.

Hopefully, my brief response will be sufficient at this time. Should you wish to discuss the inherent subsidization of the EDU methodology, please give me a call.

Respectfully submitted,  
AUS Consultants

By: Gary D. Shambaugh