

**Willistown Township
Sewer System Privatization**

**Sewer Customers Presentation Related to
Ordinance No. 5 of 2020 Section 4**

April 8, 2021 7pm

**This presentation was compiled
through the contributions of**

Willistown Township residential sewer customers,

residents who are

financial and legal professionals,

and those familiar with local government.

Presentation Overview of the Sewer Customers

Sewer Customer's Core Concerns

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The "Ask" for the Sewer Customers

Q & A

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- 1 - Aqua Economies of Scale Analysis
- 2 - Detailed Analysis of Rate Increase Attributable to Aqua's Initial Investment

Sewer Customers Core Concerns

1. The core concern is there was insufficient public notice, time for public comment, and demonstration of the need to sell the sewer system. This caused a purchase asset agreement to be concluded too quickly resulting in ~50% of the Township bearing a significant financial burden in perpetuity.
2. As presently structured, the Willistown sewer ratepayers will not realize the public benefit to warrant the sale.
3. If the impact on the Willistown sewer ratepayers for Aqua's recovery of the purchase price is minimized to the fullest extent, then the sale could be viewed as more acceptable.

Foundational Information for an Informed Discussion

1. Township Composition – Sewer System and Septic System:

- a. Willistown Township is not a Township where all households (or even a large majority) are connected to the sewer system. It is roughly a 50-50 split between those with a sewer connection and those with a septic system.
- b. There are ~4,300 households and businesses in the Township.
- c. ~2,300 households and businesses are connected to the sewer system.
 - i. 312 have grinder pumps.

2. Sewer Asset Ownership:

- a. The sewer customers do not own the sewer system like the septic system households own their system.
- b. The sewer system is a Township asset.

Foundational Information for an Informed Discussion

3. Funding of the Sewer System:

- a. Every sewer system customer pays the Township quarterly. The receipts are taken into the **sewer fund** (not the general fund).
- b. The sewer customers also paid assessments during initial construction and connection to the sewer. These were also put into the sewer fund.
- c. The Township pays **all** sewer expenses from the sewer fund:
 - i. sewage disposal,
 - ii. routine maintenance,
 - iii. repairs,
 - iv. capital improvements,
 - v. and all debt service of bonds issued for construction of all parts of the sewer.

3. Funding of the Sewer System: continued from prior slide

- e. “Supervisor Shoemaker replied the system was built in 1970 from public bonds issued to the Township, the cost of which has been borne by the ratepayers”. That is, not funds from the general tax revenue fund.
 - i. Source: Willistown Township Board of Supervisors minutes **November 9**, 2020 and information provided in emails by Sally Slook, Township Manager to Henry Yordan.

- f. “Tim Sullivan commented that the ratepayers paid for the system, and residents not on the sewer system have not paid for any portion of the sewer.”
 - a. Tim Sullivan is the Township Special Local Counsel.
 - b. Source: Willistown Township Board of Supervisors minutes **December 14**, 2020.

- g. Said another way, households with a septic system did not historically, and do not currently, have their tax dollars spent on the sewer system either to dispose of the sewage, build, maintain, repair, or make capital improvements.

- h. On the Willistown Community Facebook page there are **erroneous postings causing misinformation:**
 - i. “The sewer system was paid for by all the residents of Willistown through our taxes. Why should a [sic] only the residents who use it benefit from the sale? We should all get the benefit from the \$17 million.”
 - ii. “The Township built the system with bonds every resident paid for. Any benefit from the sale should be shared by all residents.”

4. Why is the Township Selling this Asset?

- a. The Township stated that operating the sewer is not their core competency. Ever increasing environmental regulations require technical knowledge that the Township does not have.
- b. The Township wants to focus their efforts on other Township activities.
- c. The Township does not have a 24/7 service call center. Aqua does.
- d. Cost Savings Considerations for Future Expenditures:
 - i. At the October 29, 2020 Board of Supervisors meeting the position was put forth that **the rate increases under Township ownership would be higher than the rate increases under Aqua ownership** because Aqua will bring its economies of scale to transactions resulting in better (lower) pricing.

4. Why is the Township Selling this Asset? continued from prior slide

ii. The Township is not a for profit entity.

iii. Essential Utilities (Aqua's parent company) is a for-profit company.

- 1) 2019: earned ~23% profit margin (income before taxes \$211,526,000 / total revenues \$889,692,000)
- 2) 2020: earned ~18% profit margin (\$256,000,000 / \$1,462,700,000)
- 3) Source: Essential Utilities Annual Report

iv. Cost of Raising Capital:

- 1) Willistown Township has a **AA+ bond rating** and their bonds are **tax exempt** to the buyers making capital acquisition at a lower rate (less costly) resulting in an overall lower cost of capital.
- 2) Aqua has a **BBB bond rating** and their bonds are **taxable** to the buyers making capital acquisition at a higher rate (more costly). Though Aqua's larger size should reduce the debt rating disadvantage when compared to Willistown.
- 3) It is not certain who has a financing advantage.

4. Why is the Township Selling this Asset? continued from prior slide

- v. There is little doubt that Aqua will bring efficiencies, but it is not clear that these economies of scale will be greater than Aqua's profit margin (they could be smaller).
 - 1) **See Appendix 1 for supporting calculations.**
 - 2) Aqua efficiencies will not have any effect on rate increases granted by PUC (Public Utility Commission) for their \$17,500,000 investment.

- vi. Willistown Will Be Part of the Aqua Customer Base, and **No Longer Just Willistown Sewer Customers**
 - 1) Aqua's sewer rates will be based on all its sewer customers regionwide, not just Willistown.
 - 2) Some Townships have older sewer systems in a state of significant need of repair such as Delaware County, Cheltenham Township, etc. For example, Aqua agreed to spend \$10 million to fix the Cheltenham Township sewer system.
 - 3) Willistown Township sewer customers will be sharing in those costs.

5. Sale of the Sewer System:

- a. The Board of Supervisors approved Ordinance 5 of 2020 **December 14, 2020** to “authorize the execution of an asset purchase agreement” between the Township and Aqua.
- b. The purchase asset agreement was signed **January 20, 2021**.
- c. Aqua will **pay the Township \$17,500,000** for the sewer asset.
- d. Before the sale is finalized the following steps remain:
 - i. The Township needs to
 - 1) obtain Engineering Assessment Report per PUC (Public Utility Commission),
 - 2) retain Utility Evaluation Expert (UEV) per PUC, and
 - 3) submit an application to the PUC within 90 days of signed agreement (~**April 20, 2021**).
 - ii. **The PUC must give Aqua a “certificate of public convenience”** (Title 66 Section 1103) within 6 months of the application filing (~**October 20, 2021**).
- e. Assuming the above are completed successfully, the sale will conclude in ~**November 2021**.

5. Sale of the Sewer System:

f. Metrics of the Sale:

Source: Board of Supervisor Meetings October 29, 2020 Presentation by PFM Financial Advisors slide #10

- i. Willistown Township Sewer Fund (cash on hand): ~\$3,700,000
- ii. Willistown Township Sewer System Debt: ~\$4,000,000.
- iii. Aqua Purchase Price: \$17,500,000
- iv. Estimated Total Expenditures: ~\$5,000,000.
 - i. ~\$4,000,000 pay off sewer system debt
 - ii. ~\$1,000,000 transaction fees for consulting firm, lawyers and contingency
- v. **Estimated Net Proceeds: ~\$16,200,000**

5. Sale of the Sewer System:

g. Service Provider:

- i. It is somewhat analogous to changing service providers for lawn care, internet, heating fuel, etc.
- ii. Today the Township is the service provider for sewer service. In the future Aqua will be the service provider.
- iii. Today the Township bills sewer customers quarterly. In the future Aqua will bill monthly.
- iv. Regardless of who the “service provider” is, when expenses rise, so does the rate charged.

h. The Cost of the \$17,500,000 Purchase Price to the Sewer Customers:

- i. Aqua is not gifting or granting \$17,500,000 to the Township.
- ii. Aqua is making an investment in a business. Aqua is entitled by law to a “reasonable” return.
- iii. Past precedent indicates that the PUC will approve a return that will translate to **a rate increase equal to \$1,050,000 per year in perpetuity by the Willistown sewer customers. This is an additional ~\$456 per household each year just to recover the \$17,500,00 purchase price.** If the high end is approved, then it would be as high as \$1,400,000 which is an additional ~\$608 per household each year. [See Appendix 2 for supporting calculations.](#)

5. Sale of the Sewer System:

- iii. This rate increase **will be above and beyond the amount Aqua will be billing monthly for sewage disposal, routine maintenance, repairs and capital improvements.**
- iv. Aqua estimates a one-time **increase at the end of 2024 of ~43%** solely for the purpose of recouping the purchase price. Keep in mind this will likely not be the only rate increase for equity investment.
Source: Willistown Township Board of Supervisors minutes October 29, 2020
- v. The **sewer ratepayers of Willistown, not the entire Township, will pay increased sewer fees for the purpose of recouping the purchase price.** In total the ratepayers will pay well in excess of the net proceeds of the sale and well in excess of the \$17,500,000 Aqua is paying the Township.
- i. **AQUA IS A CONDUIT:** Aqua pays the Township \$17,500,000 for the sewer system. Aqua recoups their investment only from the sewer customers which are only ~50% of the Township households.

8. Considerations:

- a. If 100% of the Willistown Township households and businesses were connected to the sewer system, then the entire township would shoulder the financial burden of repaying the \$17,500,000+ to Aqua, and everyone would benefit from the projects that the Township selects to fund using the net proceeds.
- b. But **THIS IS NOT THE SITUATION IN WILLISTOWN TOWNSHIP** which is roughly 50-50 sewer and septic.
- c. It is a question of equity (fairness, justice).
- d. The Township is not **legally** required to use the proceeds from the sale to benefit the sewer customers (because the Township owns the sewer system, not the households and businesses that pay for the sewer system).
- e. The Township is **not legally prevented** from using the proceeds from the sale to benefit the sewer customers.
 - i. DELCORA (Delaware County Sewer Authority) is stabilizing the rate by distributing 100% of the net proceeds to their sewer customers by offsetting the rate increase for the recovery of the purchase price by Aqua. (Source: Philadelphia Inquirer).

8. Considerations: continued from prior slide

- f. The Township's plan was to place the **full financial burden of paying back the \$17,500,000+ to Aqua solely on the sewer customers** while using the net proceeds for **projects that will benefit the entire Township.**
- g. A resident inquired: **"Why should ~50% of the Township households and businesses shoulder the financial burden for projects that benefit all of the Township residents and businesses?"**

9. Resolution 23 of 2020:

Source: Willistown Township **December 14**, 2020 Board of Supervisors Meeting Minutes

- a. The Township agreed to **set up two funds**: the “Customer Benefit Fund” and the “Capital Replacement Fund”.
 - i. Customer Benefit Fund: will be used to offset the rate increase imposed by Aqua for the recovery of the \$17,500,000+ purchase price.
 - ii. Capital Replacement Fund: will be used to pay for a new grinder pump and installation for the 312 residents with grinder pumps.

- b. The Township agreed to the **formation of a committee of sewer customers** that will **work together on an agreed dollar amount for the funds**.
 - i. **The final dollar amount to put in the funds has not been determined.**
 - ii. The Township and consultants have calculated
 - 1) ~\$2,600,000 - 3,000,000 of the net proceeds for the Customer Benefit Fund.
 - 2) ~\$500,000 - \$700,000 of the net proceeds for the Capital Replacement Fund.

10. Precedent of a Prior Transaction:

- a. In 2018 when the Valley Creek trunk sewer system was privatized, the Willistown Township equity (~\$3,000,000) was transferred into the sewer fund, not into the general fund.
- b. The net proceeds received by the current privatization should **follow the precedent** and be transferred into the equivalent of the sewer revenue fund.
 - i. The Township will no longer have a sewer fund as the Township will no longer be collecting sewer revenue.
 - ii. The equivalent of the sewer revenue fund in the future will be the “Customer Benefit Fund” and the “Capital Replacement Fund”.
 - iii. The Customer Benefit and Capital Replacement Funds will exist solely for the benefit of the sewer customers just as the sewer revenue fund is only used for the sewer.

Summary Conclusions of the Sewer Customers

1. The **full net proceeds** should be allocated to the “Customer Benefit Fund” and “Capital Replacement Fund”. These funds will be used to stabilize the sewer rate and to address grinder pump concerns until the funds are exhausted.
2. The **Township has the responsibility to justify** why any amount less than the full net proceeds is equitable.
3. The Township does not have a legal obligation, but a **fiduciary obligation**, to sequester the net proceeds of the sale into these two funds.
4. It is an **issue of equity and fairness** to the ~half of the Township that will be paying higher sewer rates for the rest of time to reimburse Aqua for the purchase price.
5. The Township needs to **follow precedent** that was established by the Valley Creek trunk sale in 2018.

The “Ask” for the Six Member Committee

1. **Act as a fiduciary for the sewer customers.**
2. Use a **well-formed conscience** to render a recommendation to the Board of Supervisors **based on principle and equity.**
3. Guide your recommendations via the principle that **the ends do not justify the means** no matter how beneficial the ends may be.
 - a. The “ends”: The entire Township will enjoy the benefits of the \$17,500,000 transaction. “funds will be available for the Township to accomplish it many goals” (Source: BOS Meetings October 29, 2020 Presentation by PFM Financial Advisors).
 - b. The “means”: inflicting the financial burden of paying back \$17,500,000+ to Aqua solely by the current and future sewer customers which comprise only ~50% of the Township.
4. **The committee’s recommendation to the Board of Supervisors be announced in a public forum with explanation.**
5. If this Committee (or the Board of Supervisors), does **not agree to execute this proposal, then provide a detailed justification.**
6. We ask to participate in further discussion at future meetings and be given the opportunity to respond to other proposals that may be put forth.

Thank you for your support and involvement!

We'd like to thank all of the sewer customers that sent us emails and spoke with us about the various aspects of the sewer privatization. We could not have done this without your ideas, information and perspective. Due to time and space limitations, we could not include every idea or comment that we received.

It is our hope that you feel we adequately represented your interests and helped to make your voice heard.

The sewer customers "Ask" is that you to talk with your neighbors, educate them and encourage them to email us to be added to our distribution list so we can easily keep them informed of developments and future meetings.

If you have neighbors without internet, please pass this information along. Offer to send an email on their behalf or encourage them to reach the Board of Supervisors via "old-fashioned" letters.

NeighborSewerInfo@yahoo.com

**Questions
or
Comments?**

Appendix 1: Aqua Economies of Scale Analysis

Economies of Scale Analysis Notes:

- A. The Township has frequently asserted that Aqua will bring economies of scale that will result in better rates for the sewer customers.
- B. The following example brings this assertion into question.
- C. In the analysis below the same rate (4%) for the cost of debt is used for both Aqua and the Township.
 - i. However, Willistown's rate may well be lower given the Township's municipal tax-free status and AA+ bond rating (which is significantly better than Aqua's BBB bond rating).
 - ii. A lower cost of debt for Willistown would result in a lower sewer rate increase than calculated below.

Economies of Scale Analysis:

1. Under Willistown management of the sewer, assume a capital expenditure or operating expense increase of **\$1,000,000**.
2. Under Aqua management of the sewer, **ASSUME** the same investment expenditure or operating expense increase would cost **33.3% (one-third) less** to reflect that Aqua is a larger company that can generate economies of scale. The \$1,000,000 would thus be **\$666,667**.

Appendix 1: Aqua Economies of Scale Analysis

4. **Willistown** would fund the expenditure by **issuing \$1,000,000 in long term bonds at 4%** and would need to **increase the sewer rate by 4% (\$40,000)** to service the debt incurred to fund the expenditure.
5. **Aqua** would fund the expenditure of **\$666,667 with one-half debt capital and one-half equity capital** (consistent with the capitalization of its parent company, Essential Utilities). **The blended cost of capital would be no less than 6%** (average of debt cost of 4% and equity return allowed by PUC of at least 8%). **Aqua would be granted a rate increase of 6% of the expenditure (\$40,000) by the PUC.**
6. **Even though Aqua used its purchasing power to achieve a substantially reduced cost (33.3% less), the rate increase required (\$40,000) is identical to that of Willistown's.**
 - a. Because Aqua is a private for-profit company, its blended cost of capital (debt and equity) is higher than Willistown, which funds its expenditures with less expensive debt capital only.

7. CONCLUSION:

While Aqua's economies of scale may result in significantly lower costs, the benefits of those lower costs accrue to the shareholders of Essential Utilities (the equity owners), NOT to the sewer customers of Willistown Township.

Appendix 2: Detailed Analysis of Rate Increase Attributable to Aqua's Initial Investment

The Pennsylvania Utility Commission (the "PUC") will generally grant a petitioner (Aqua) **annual** sewer rate increases sufficient to generate a "reasonable" rate of return on the equity investment in a sewer system.

In practice, the **PUC has granted returns in the 8% to 12% range annually** as "reasonable" for capital (equity) investments.

Essential Utilities, Aqua's parent company, has historically a **debt-to-equity ratio of about half bonds and half equity**.

Calculation Assumptions:

1. Aqua will fund the Willistown purchase half with bonds and half with equity,
2. bonds have a cost of 4%,
3. PUC will grant the minimal 8% annual return for the capital (equity) investment.

Appendix 2: Detailed Analysis of Rate Increase Attributable to Aqua's Initial Investment

The Low Outcome for the Total Rate Increase Related to the Initial Investment:

1. the annual rate increase to the Willistown ratepayers will **be at least \$1,050,000**.
 - a. This is 6% of \$17,500,000
 - b. 6% is the average of the cost of 4% on the bonds and 8% on the equity investment.
2. **The Willistown ratepayers as a group will be paying an additional \$1,050,000 per year in sewer fees in perpetuity.**
3. This is equivalent to what is called a stable-payment perpetual annuity.

The Higher Outcome for the Total Rate Increase Related to the Initial Investment:

1. The PUC grants a 12% annual return on the ~50% of the investment funded by equity capital.
2. 8% is the average of the cost of 4% on the bonds and 12% on the equity investment.
3. **The Willistown ratepayers as a group will be paying an additional \$1,400,000 per year in sewer fees in perpetuity.**
 - a. This is 8% of \$17,500,000.

For the remainder of the analysis the “**low outcome**” will be used.

Appendix 2: Detailed Analysis of Rate Increase Attributable to Aqua's Initial Investment

There is a **formula to calculate the present value of a stable payment perpetual annuity**. Present value is simply a mechanism to express the value of a series of annual payments in the future as an upfront amount. It is a method to “total” all those payments, adjusting for the time value of money (adjusting for the fact that dollars paid or received in the future are worth less or more than today).

Formula: $PV = PMT/DR$

Where:

PV = present value

PMT = the amount of the annual stable payment

DR = the discount rate that adjusts for the time value of money

The appropriate discount rate to use to adjust for the time value of money is subjective; it depends on what one thinks the prevailing interest rates will be during the life of the annuity. The **longest US Treasury bond is the 30-year bond which currently yields about 2.40% and is the most appropriate discount rate to use** because the market yield on this bond represents the “market consensus” of the rates that will prevail over the next 30 years.

Appendix 2: Detailed Analysis of Rate Increase Attributable to Aqua's Initial Investment

Today's value of the \$1,050,000 is \$43,750,000.

$$\text{PV } \$1,050,000 / .024 = \$43,750,000$$

Where .024 is the 30-year bond rate (2.40%) as the discount rate of the annuity.

Take note that **further increases will be allowed for future investments in the system.**

Appendix 2: Detailed Analysis of Rate Increase Attributable to Aqua's Initial Investment

Based on these calculations, a perpetual series of payments of \$1,050,000 will have a total value, in 2021 dollars, of \$43,750,000.

This amount is substantially **HIGHER** than the ~\$16,200,000 the proposal asks to be set aside to stabilize the Willistown sewer customer's rates. [NB: a simplified assumption is made that the entire net proceeds goes towards rate stabilization (Customer Benefit Fund), but recognize that a small amount of the net proceeds goes towards addressing grinder pump concerns (Capital Replacement Fund).]

The sewer ratepayers will be paying substantial amounts of increased rates **after the funds in the Customer Benefit Fund are exhausted.**

\$43,750,000 is the amount that would have to be set aside today, invested at 2.4%, in order to have enough money in the Customer Benefit Fund to cover the annual additional payments of \$1,050,000 in perpetuity. Even this amount assumes zero transaction costs, but there will be costs for managing and auditing the funds that will further erode the funds.

Appendix 2: Detailed Analysis of Rate Increase Attributable to Aqua's Initial Investment

In order for the ~\$16,200,00 to completely eliminate the burden of higher sewer rates to allow Aqua to recover their \$17,500,000, **the funds in the Customer Benefit Fund would have to be invested earning 6.48%, or nearly three times prevailing market interest rates.** It would be an unrealistic investment assumption.

Finally, **Aqua's rate increase at the end of 2024 could well be higher than Aqua's estimate of ~43%.** Based on the methodology advanced herein, **the rate increase will be close to 60%.**

Even if the increase is ~43%, it will amount to a total of \$755,000. \$755,000 is 43% of the approximate sewer fees paid by all sewer users of \$1,756,000 (based on Township numbers presented at the October 29 BOS meeting). Using the methodology used here to value that annuity, **the value of the \$755,000 annual increase is \$31,500,000, well in excess of the ~\$16,200,000 the proposal is requesting for sequester.**

Appendix 2: Detailed Analysis of Rate Increase Attributable to Aqua's Initial Investment

Conclusion:

The net proceeds (~\$16,200,000 *) that the proposal asks to be set aside to stabilize sewer rates will assist ratepayers but will NOT absorb the entire value of the rate increase for the purpose of Aqua recouping their \$17,500,000 investment.

Sewer users will pay higher rates under Aqua management of the sewer than under Willistown Township management.

Setting aside the entire net proceeds of this sale for rate stabilization is the only equitable solution.

For more discussion of this subject, access:

[How to Calculate the Present Value of a Perpetual Annuity | The Motley Fool](#)

* A simplified assumption is made that the entire net proceeds goes towards rate stabilization (Customer Benefit Fund), but recognize that a small amount of the net proceeds goes towards addressing grinder pump concerns (Capital Replacement Fund).