

Lehigh County Regional Wastewater System – Administrative Order Public Meeting

November 13, 2014

Public Feedback: Questions & Answers

How much will all the rehab work cost?

Estimated costs are about \$50 million for the projects we already have envisioned, but it could be significantly more as we continue studying the issue and understanding the sources of I&I. That's why it's important to take a long-term view of this project. We will always be finding new sources of I&I that need to be removed as the system ages, and the cost is significant to complete this work. We need to balance the need to do the work with the rate impact to customers, and also be careful to fully evaluate what projects will have the greatest impact on the overall goal of eliminating overflows.

What will the impact be on citizens' sewer rates?

Rate increases are unavoidable. This is a significant project with regional impacts. At this time, it isn't clear exactly where rates will go over time, as that will depend on when projects are authorized and how much borrowing is needed to fund them, but in general it will require additional revenue to pay for the cost of maintaining the system.

We have been fortunate that we have been able to fund approximately \$13 million in repairs so far without significant changes in sewer rates, but we expect to need additional revenue to keep the work moving forward in the years ahead.

It is also important to note that the way repair work is prioritized and scheduled will have a big impact on rates. If the projects can be phased in according to the age the pipes in place, the rate impact will be phased in as well.

How does the Allentown concession lease impact the project? How does the Allentown work get funded? Who's responsible for ensuring the work gets done? Who authorizes what work gets done and what money gets spent?

This will work as a partnership between the City and LCA.

Through the lease, the City retains ownership of the city sewer system and continues to be responsible for achieving compliance with the administrative order for the city's portion of the regional system and the treatment plant at Kline's Island. However, the City has delegated responsibility to LCA for implementing the projects and improvements that are necessary to achieve compliance. LCA will collect revenues on the city's behalf to pay for these improvements.

If it's going to take more time to eliminate overflows, what's the environmental impact in the meantime when overflows keep occurring?

The environmental impact of overflows during storm events is truly minimal. The water that overflows during these events is very heavily diluted by rainwater and is typically washed away and further diluted by the water flowing throughout the watershed as a result of the ongoing storm. However, that doesn't diminish the fact that some raw sewage enters the environment when overflows happen. We try to mitigate the risk by treating the area with antiseptic, monitoring water quality at our water and sewer plants and reporting all the details of each incident to DEP so they can help us further mitigate any additional risks.

Why don't you just build a new pipeline and replace the one you have since it's leaking so bad?

The regional pipelines or interceptors are just a small part of the problem. The interceptor system is approximately 17 miles long, but there is approximately 600 miles of small sewer lines that run through the adjoining communities.

Building a new water-tight interceptor would not eliminate the high flows that are coming from the communities they serve and would actually make the problem worse because the high peak flows would simply travel faster to the wastewater plant, increasing the risk of overflows.

In addition to addressing the interceptors and the communities' systems, we also need to address the homeowner portion of the system – service laterals & unauthorized connections – which contributes up to 40% of the rainwater into the system during storms.

Why do all communities have to pay if my borough/township has already done all their required work?

Costs are allocated through a complex series of agreements between all the municipalities served by the system. Repairs to an individual borough or township system are paid for through the rates directly. Work completed on the regional system – the interceptors and the treatment plant in Allentown – provide benefit to the entire system and costs are allocated proportionately based on the flow contributed by each municipality into the system.

Why don't you just stop allowing new connections to the system so the flows stop increasing?

The capacity of the sewer system is determined both by the ability of the network of sewer pipes to carry the wastewater and the capacity of the treatment plant to treat the wastewater that comes in. On a regular day, the system has about 8 million gallons per day of unused capacity available for new customers to use.

Adding a new customer to the system does not impact the system's ability to address peak flows that occur during rain events. Remember that the system can handle peak flows of up to 200% over normal flows without facing overflows. Adding new customers to the system does not change the system's capacity to address these high flows. What we need to be focusing on is how to get the system tightened up to eliminate I&I so peak flows don't exceed that buffer capacity.

We've been saying for decades that the sewer system is overflowing when it rains – why didn't anyone do anything about it?

For many decades, sewer systems were designed and permitted to allow for overflows as a mechanism to address peak flows caused by storm events and to protect the system from damage caused by these peak flows. The regulations at the time allowed for this and recognized that the primary cause of the overflows is rainwater, with a minimal environmental impact anticipated as a result of having that rainwater discharged out to the streams during a heavy storm. Regulations have changed, and now the systems, like the one here in Lehigh County, that were designed based on the old rules, need to be updated to meet new regulations that no longer allow this overflow process to address peak flows. So, communities all across the country are in the same situation as we are here in Lehigh County, trying to fund and carefully plan improvements to remove rainwater from our sewer systems.

What happens if EPA says no to the extension?

We won't know the exact impact of EPA's decision until a decision is announced. The outcome may include more restrictive compliance requirements and/or fines. However, at this time, we believe we have illustrated a strong commitment to continuing this important work, and have developed a clear plan to do so. As a result, we are hopeful that EPA will consider extending the deadline on the administrative order so that we can continue working on this path.

What is full capacity of the Kline's Island Wastewater Treatment Plant in millions gallons per day?

During normal conditions, the plant treats about 32 million gallons per day, and is permitted and designed to treat up to 40 million gallons per day. During isolated period of peak flows caused by severe weather, the plant can treat up to 86 million gallons per day before bypasses occur.

What type of monitoring is done on the Little Lehigh Creek to ensure water quality is not impacted?

The wastewater that is treated at the Kline's Island Wastewater Plant is being monitored routinely to ensure it is safe to discharge into the environment. During period of severe weather, if the plant is bypassed and untreated wastewater is discharged into the creek, this discharge is also tested.

While we would prefer to eliminate all sewer system overflows, and will work toward achieving that goal, the results of this testing shows that the untreated wastewater that is discharged during these storm events is highly diluted and continues to meet all requirements of the discharge permits.

Why does the water back up from the drain in the basement especially when there is a lot of rain?

Basement backups during storm events can be a common occurrence in certain areas, depending on where the property is located within our system. In low-lying areas, homes are located at a "low spot" on the system in which wastewater flows by gravity to the lowest points in the system. If your property is in a low spot or flood-prone area, that means your sewer pipes may also be below grade and will be prone to backing up with the sewer system becomes overloaded during a storm event.

We recommend discussing your situation with a plumber to determine if any "backflow prevention" devices are available to prevent sewage from backing up through your home plumbing, especially your floor drains. You may also wish to consider disconnecting floor drains from the sewer system to prevent them from backing up. Finally, you should also talk to your homeowners insurance provider about sewer backup insurance protection to ensure any property damages you experience as a result of these incidents are covered!

Do you have any data thus far about actual flow reductions achieved rather than model estimates?

In the months ahead, the communities that are collaborating on this project will be installing sewer flow meters throughout the system to try to capture actual sewer flow patterns during wet and dry conditions. This will help to measure the positive impact of the work that has been completed so far. However, the computer model that has been developed is expected to be highly accurate and has been calibrated based on many years of past flow monitoring data already collected. Therefore, we will continue to plan projects based on outcomes predicted by the computer model, but will measure actual results with the flow meters that are being put in place.