

Follow-up Questions Posed by the Falls Church Pulse to the City of Falls Church and Fairfax County on March 4, 2024, and Answered on March 14, 2024

1. What was the cost of the large-scale pumping option explored in 2020? With reference to the 2020 study and the concern that this option would cause disruption due to construction, will the current proposal for a pumping station on the Quinn lot result in similar disruption to make the connection to Arlington's system?

The 2020 study estimated a present worth cost for a 25-year period of \$19.01 million for the purchase / treatment cost for 0.6 million gallons per day (MGD) of additional capacity in Fairfax County versus \$22.29 million in Arlington County.

The current “Quinn’s” project proposes a different route than what was proposed in the 2020 study. The Quinn’s force main would connect to our existing gravity sewer system, rather than pump the entire distance to Arlington County.

Please note that there is a difference in the Quinn’s project versus the 2020 City owned pumping station. The Quinn’s pumping station would be privately owned / operated, as would any other pumping station for future projects in that area. The force main would be owned by the City.

2. Is the \$30 million cost for improving downstream pipe capacity a cost for Fairfax County only, or would City pipes be improved as well? Did the County propose that the City pay the entirety of these costs?

\$30 million is a rough estimate from Fairfax County for improving the undersized lines in the County. The tributary sewer lines in the City have recently been upgraded in capacity to serve the pending development work.

Fairfax County has stated that expanding the downstream capacity in their system would be driven by the City’s additional flows and would need to be paid for by the City.

3. Regarding peak-flow problems and their connection to legacy issues, your response suggests that even if these issues are resolved, neither Falls Church nor Fairfax will be able to reliably meet the peak-flow cap. Is this the case?

From the March 11, 2024 staff report to City Council: Reducing rain flow derived inflow and infiltration (RDI&I) in older sanitary sewer systems like the City’s is difficult and expensive. It can be done either at the source or through a peak flow equalization basin. The City has made a decades long effort to reduce RDI&I at the source. Based on that experience and prior studies on the issue, City staff believes that the most effective and reliable approach to meet a 5.38 MGD peak flow cap during major rain events would be to construct a peak flow equalization basin.

4. It is difficult to understand why the average daily flows from Falls Church to Fairfax are essentially static, given the development that has taken place in the City from 2014 to

2023. Please provide a map of where the three sub-shed areas are as well as additional numbers and locations for the "unmetered areas." Why aren't these areas metered? How can Fairfax reliably know what flows from the City into its system without metering?

Both Fairfax and Arlington Counties have experienced similar static sewage levels while also undergoing significant re-development. The growth in population has been at least partially offset by the increased prevalence of low-flow plumbing fixtures, the elimination of the illicit sump pump / downspout connections, and the installation of new sanitary laterals during redevelopment. In addition, the City has made a decade-long effort at relining its sewers which has reduced groundwater infiltration.

Maps of the three City sub-sheds are attached.

Small areas or individual houses are not metered since, unlike water, it is expensive to install sewage meters and they are not accurate for small flow rates. The estimated cost to upgrade a single existing "flume" type of flow meter to a modern area / velocity flow meter, in an existing vault, is an average of \$75,000 for each of our 3 meters. In addition, there would be the cost of monitoring the meters.

5. Regarding financing the sewer capacity purchase and the flow equalization basis, would the City draw on the \$17 million in its sewer accounts per the 2023 financial report?

Staff outlined a proposed financing strategy to City Council in the March 11, 2024 meeting.