

ENGINEER'S REPORT

20 February 2025

Title	Engineer's Report for the Lower Paxton Township Authority		
Copy to	Lower Paxton Township Authority		
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Subject	Engineer's Report for Active Projects	Project no.	1257258

The following is a summary of GHD's activities since the November 21st meeting.

1. Chapter 94 Report

GHD is preparing the 2024 Chapter 94 Reports to CRW and Swatara and will submit them to the contributing municipalities by early March.

2. DEP Consent Order

As outlined in the last engineering's report, DEP agrees with the overall success of the program and is open to evaluating a new path to the CAP completion using an agreed upon design storm.

2.1 Modeling

GHD is updating the Beaver Creek model to reflect a storm event based hydraulic model to seek DEP approval for identifying a storm for design criteria. The remaining projects required to meet the CAP requirements, may be based on this return storm event. GHD is also updating the Spring Creek model and evaluating any areas at risk of overflows and the effects of the increased storm events on the system in this basin.

As previously reported to DEP, LPT has completed projects in 37 mini-basins using the "total replacement" approach and replaced/upgraded several trunk lines and interceptors in the three drainage basins to increase conveyance capacity and assist in reducing the hydraulic overload. LPT has seen great success with the modified approach which includes the following:

- Averaged over 90% excess I/I removal
- Reached 100% removal rates on some projects
- Removed over 40 mgd of peak hourly I/I from the sanitary sewer system

Due to the success of the overall program GHD is evaluating the list of manholes that Township Staff check during rain events for overflows throughout the Township as many can be removed from the list as there is no longer threats of overflows due to the substantial amount of peak flow I/I that has been removed from the system.

3. Wet Weather Summary

The wet weather events (WWEs) in October, November, and December of 2024 are presented in the following table. There was one (1) extreme, three (3) significant, and three (3) minor WWEs. There were no overflows reported during this metering period and no IMA limits were exceeded.

Wet Weather Event Summary Table							
Date	Rainfall (in.) ⁽¹⁾	MH 2790 Control Basin Peak (mgd) ⁽²⁾	Pre-Groundwater (ft)	Post-Groundwater (ft)	Storm Category	Weather Summary & Notes	Overflows
10/01/24	0.5	0.36	444.5	444.5	Significant	Combined rainfall 09/29/24-10/03/24	No
11/10/24	0.3	0.32	444.3	444.4	Significant	-	No
11/22/24	0.4	0.25	444.3	444.4	Minor	-	No
11/26/24	0.3	0.13	443.4	444.2	Minor	-	No
11/28/24	0.6	0.37	444.4	444.5	Significant	-	No
12/11/24	1.6	0.86	444.4	444.7	Extreme	Combined rainfall 12/10/24-12/11/24	No
12/29/24	0.5	0.26	443.7	444.5	Minor	Combined rainfall 12/27/24-12/29/24	No

(1) Rainfall data from Koons Park Rain Gauge (RG 753).

(2) Control basin flow reduced by a correction factor of 0.13 mgd to account for growth in the basin @ 850 gpd/EDU.

4. CRW Intermunicipal Agreement

GHD, LPT Staff, CDM Smith, and CRW CEO, CFO will meet on February 20th to discuss the approach and next steps forward. These include:

1. Target for completion by June 2025.
2. Consultants work together to develop multiple approaches to cost allocation and then present them to the group. A few of the cost allocation items discussed and to be included are:
 - a. Use of sewer metered flow (Maximum month and average month) to allocate volume and demand capital costs, respectively.
 - b. Use of metered water use to verify flows by each municipality.
 - c. Top-down and bottom-up approach to allocation: allocate total flows at the wastewater plant to each municipality and build up to total flows.
3. Completion of a limited cost of service study and wholesale rates development.
4. Allocate a limited cost of service / rate study will result in separate rates for each of the municipals as if they were separate rate classes and the balance of CRW customers, the retail sector, will be treated as one customer class.
5. Development on memorandum of understanding.

The next meeting with the Special Counsel and Team Meeting with CRW is scheduled for February 27th.

5. Construction Projects

5.1 BC-7A/7B/7C/7D/8C/8D

The sanitary sewer work was substantially complete as of July 9th. During this period, the contractor was completing temporary and final paving, ADA ramp installations, curb and sidewalk replacement. The remaining storm sewer work was still delayed due to utility conflicts not yet being addressed by PPL. PPL did respond on February 17th and said they could have their work completed within 5-7 weeks.

GHD is currently reviewing applications for payment and currently preparing a CO for the time extension to complete the project.

5.2 PC-2E Trunkline Project

PACT One started work on the replacement project on January 20th. Approximately 25% of the project is completed. The utility conflicts on Blue Mountain Road have been completed ahead of the storm sewer replacement work. The proposed road closure for Blue Mountain Parkway is scheduled for March 5th – 7th.

GHD is currently reviewing applications for payment and misc. construction engineering services.

5.3 Misc. External Mainline Repairs

The Misc. External Mainline Repairs were bid with the PC-2E Trunkline Project and awarded to PACT One. LLC. These repairs will be completed after the PC-2E Trunkline is installed.

6. Properties with On-Lot Systems

6.1 Wilshire Road Request for Sanitary Sewer Extension

The Authority had received requests from a few of these property owners who are interested in connecting to the public sanitary sewer system. Due to the layout of the sanitary sewers serving Wilshire Estates, and their utilization of low-pressure sewers for a portion of the development, there is no gravity sanitary sewer available to connect the dry sewer into. The Authority authorized GHD to prepare two options to connect these homes to the public sanitary sewer system, prepare cost estimates for each option, and to calculate an estimated front foot assessment and total cost to connect for each property. GHD prepared this information and presented the chosen option, a low-pressure sewer system with individual grinder pumps, to the property owners on January 29th. A memo summarizing the meeting and the suggested follow-up is attached.

7. Emergency Repairs to the Wastewater and Stormwater Collection System

No Work Orders were issued this period. Three work orders have been issued to Rogele to date under the current contract. Work Order number 1 was to repair 20 LF of broken pipe on Kalla Drive, Work Order number 2 was to repair a force main break at the Colonial Road pumping station and Work Order number 3 was to repair a collapsed pipe located on Stradford Drive that consisted of replacing approximately 10 LF of sewer main.

8. PennDOT Projects

8.1 Locust Lane (MPMS #108527)

The time extension to the Locust Lane HOP was approved by PennDOT. Township staff will raise the manhole frame and covers in the summer of 2025 before the PennDOT paving project is completed in the fall of 2025.

8.2 Nyes Road Bridge Replacement (MPMS #117189)

GHD attended a meeting with PennDOT on January 30th. PennDOT will be replacing the bridge on Nyes Road north of its intersection with Pin Hill Road. Township staff will provide risers for two manholes that will need to be adjusted and will televise the adjacent sanitary sewer main before and after construction to ensure that the construction did not compromise the structural integrity of the pipe.

8.3 Union Deposit Road ADA Ramp Project (MPMS #119307)

GHD responded to PennDOT's request for utility conflicts with the proposed ADA Ramp project along Union Deposit from its intersection with I-83 to Lakewood Drive. There are no conflicts with the sanitary sewer system.

9. Standard Specifications and Rules Rates and Regulations

GHD has prepared a draft update to the Standard Construction and Material Specifications for Wastewater Collection System Extension that were last updated in May 2017. Staff is currently reviewing the draft documents.

GHD is also preparing a Sewer System Rules, Rates and Regulations document for the Authority's review and adoption.

10. Developments

A memo regarding the four developments, or phases of developments, that have sanitary sewers ready for dedication is attached.

GHD's activities since the November 21st meeting:

- Elizabeth Village, Phase 1: Construction is complete, and the project is currently being closed out. Developer is requesting sewers to be dedicated.
- Whilshire Phase 2C: Construction is complete, and the project is currently being closed out. Developer is requesting sewers to be dedicated.
- Nissley Property: Construction is complete, and the project is currently being closed out. Developer is requesting sewers to be dedicated.
- Wingstop (4919 Jonestown Rd): DEP planning has been approved and a sewer permit has been approved. Submittals for grinder pump and grease interceptor are under review.
- Parkway Farms, Phase 2: Construction is complete, and the project is currently being closed out. Developer is requesting sewers to be dedicated.
- Cider Press: Construction is scheduled to start in early March.
- Harrisburg Temple (605 Rutherford Road): GHD returned the drawing review letter on January 1, 2025, and reviewed the planning application and returned a review letter on December 12, 2024.