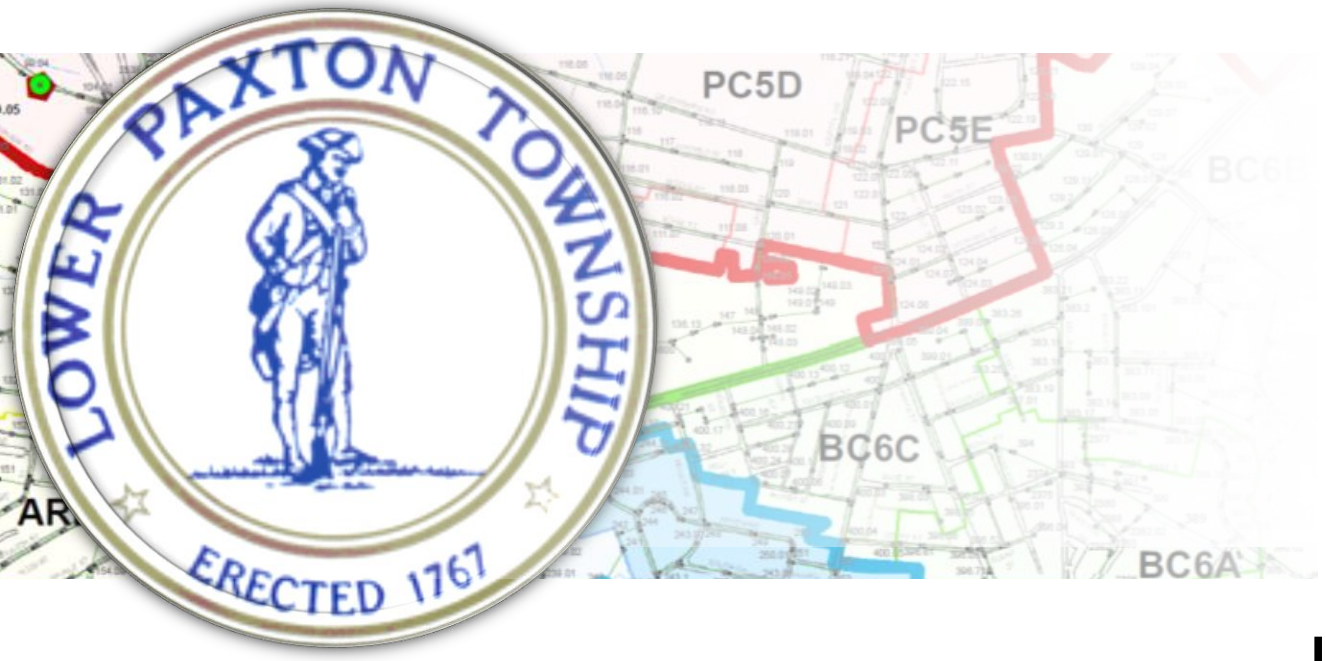
LPTA Second Consent Decree

Annual DEP Progress Meeting 2024-2025



July 29, 2025

PROGRAM SUCCESS

Program Success – I/I Removal to Date

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 in each basin
- Removed over 41 mgd of peak hourly I/I from the sanitary sewer system
- Spent over $119 million; averaged a very cost-effective $2.92/gpd of I/I removed per mini-basin project

Program Success – Overflow Reduction & Elimination

Beaver Creek – Consent Decree Target of Eliminating Overflows: September 2028

- **Last overflow was experienced in 2024**
- Under the majority of wet weather conditions, it is highly likely that the overflow locations have been successfully addressed. This is a reduction in 19 overflow locations experienced at program initiation.

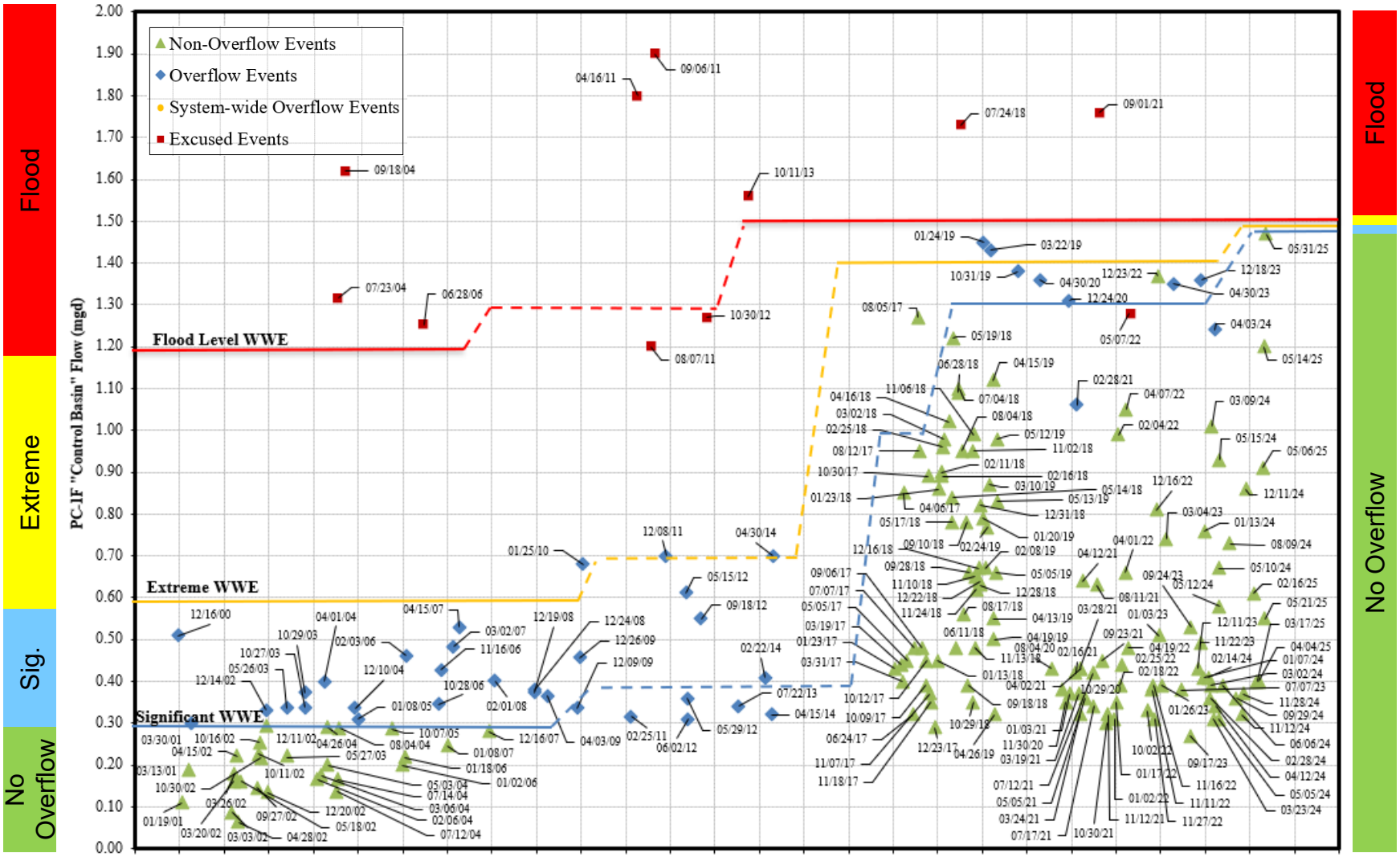
Paxton Creek – Consent Decree Target of Eliminating Overflows: June 2022

- **Last essential overflow was experienced in 2014**
- 100% reduction in overflow locations from 22 sites at program initiation

Spring Creek – Consent Decree Target of Eliminating Overflows: December 2013

- **Last overflow was experienced in 2014**
- 100% reduction in overflow locations from 8 sites at program initiation

Wet Weather Comparison – Increased Capture



Program Success – Reduction in Peak Flows and Storage Needs

Paxton Creek:

- **~ 60% estimated reduction in peak hourly flow**
- 31.50 mgd down to 12.34 mgd (~19.16 mgd removed)
  - Peak hourly flow will be further reduced with the completion of the PC-3E Mini-Basin Project

Beaver Creek:

- **~ 53% estimated reduction in peak hourly flow**
- 19.75 mgd down to 10.5 mgd (~9.25 mgd removed)

LPT has eliminated the need for wet weather storage with the completion of recent Beaver Creek Projects.

WET WEATHER SUMMARY 2024 – 2025

2024 – 2025 Wet Weather Overflows

LPT experienced approximately 34 inches of rain during this report period.
Thirteen (13) reportable wet weather events (WWEs):

- 8 significant events
- 3 extreme events
- 2 non-excused flood events

No overflows occurred during WWEs in the 2024-2025 metering season.

BEAVER CREEK

STATUS UPDATE

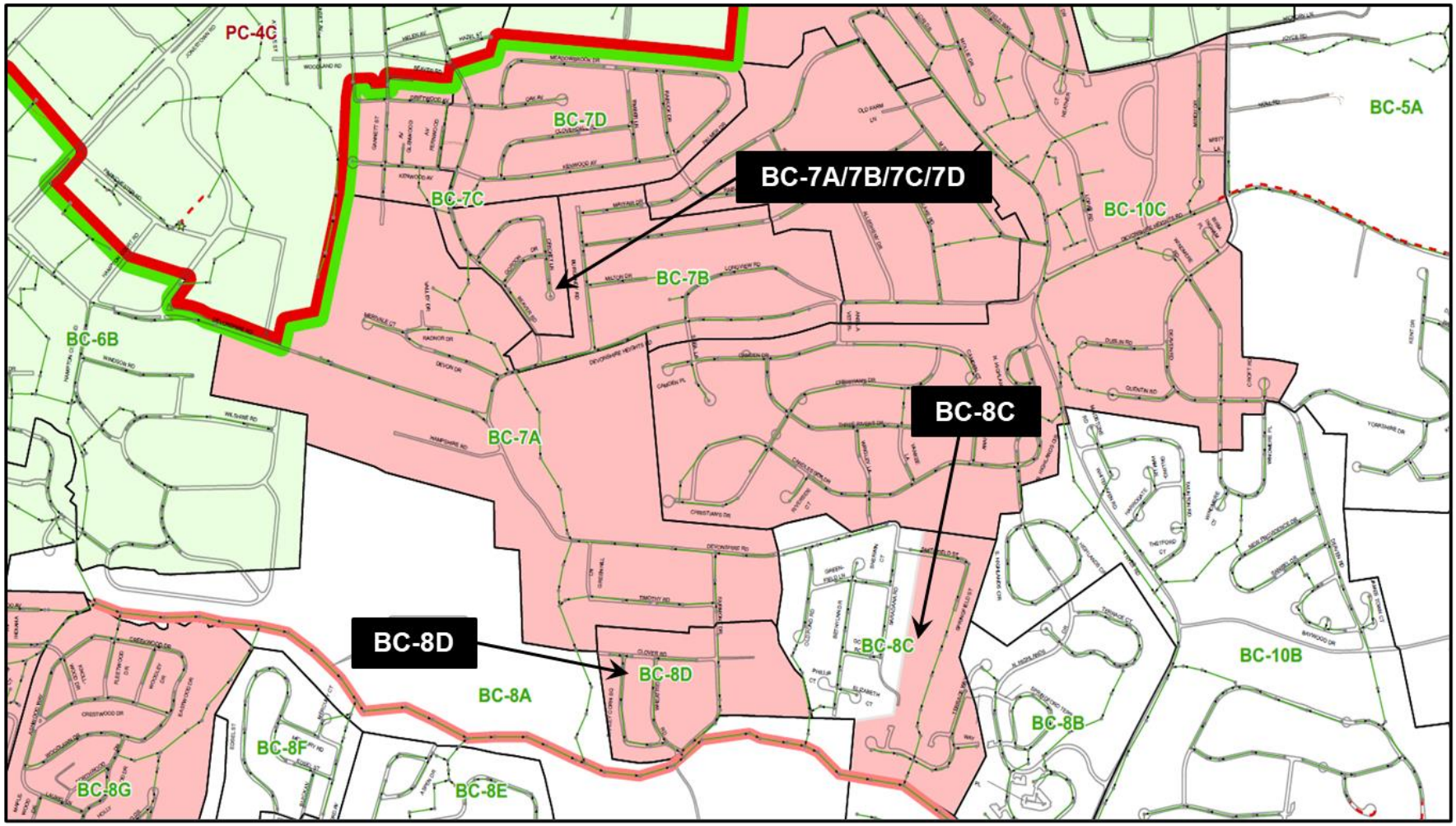
Beaver Creek – Program Status

BC

- No overflows occurred during WWEs in 2024-2025 metering season.
- Improved 30 miles of pipeline
- Current peak flows are 10.50 mgd, almost half of what was experienced at the beginning of the program

BC-7A/7B/7C/7D/8C/8D Sanitary Sewer Replacement/Rehabilitation Project

BC



BC-7A/7B/7C/7D/8C/8D Sanitary Sewer Replacement/Rehabilitation Project

BC

Sanitary sewer work reached substantial completion in Spring 2024

- **3.25 mgd** of total peak flow removed
- **100%** of excess I/I was eliminated from BC-7 Sub Basin.

Program Evaluation and Storage Sizing

BC

Beaver Creek Basin model was updated to reflect current conditions.

- Pipes & Manholes updated to reflect rehabilitation efforts
- Dry weather flows updated to reflect revised diurnal patterns
- May 31, 2025, WWE was modeled as peak WWE without overflows (flood level event)

Based on this evaluation, LPT/LPTA has decided to revise its approach to meeting the Intermunicipal Agreement (IMA) and addressing hydraulic overload within the Beaver Creek Basin. With the success of the I/I Removal Projects, the previously recommended storage upgrades and Nyes Road Interceptor improvements are no longer deemed necessary. Consequently, LPT/LPTA is proposing a new Corrective Action Plan (CAP) that focuses on continued I/I removal as the selected alternative for effectively reducing hydraulic overload by 2033 and meeting the Swatara IMA limits.

Beaver Creek CAP – Proposed 2025

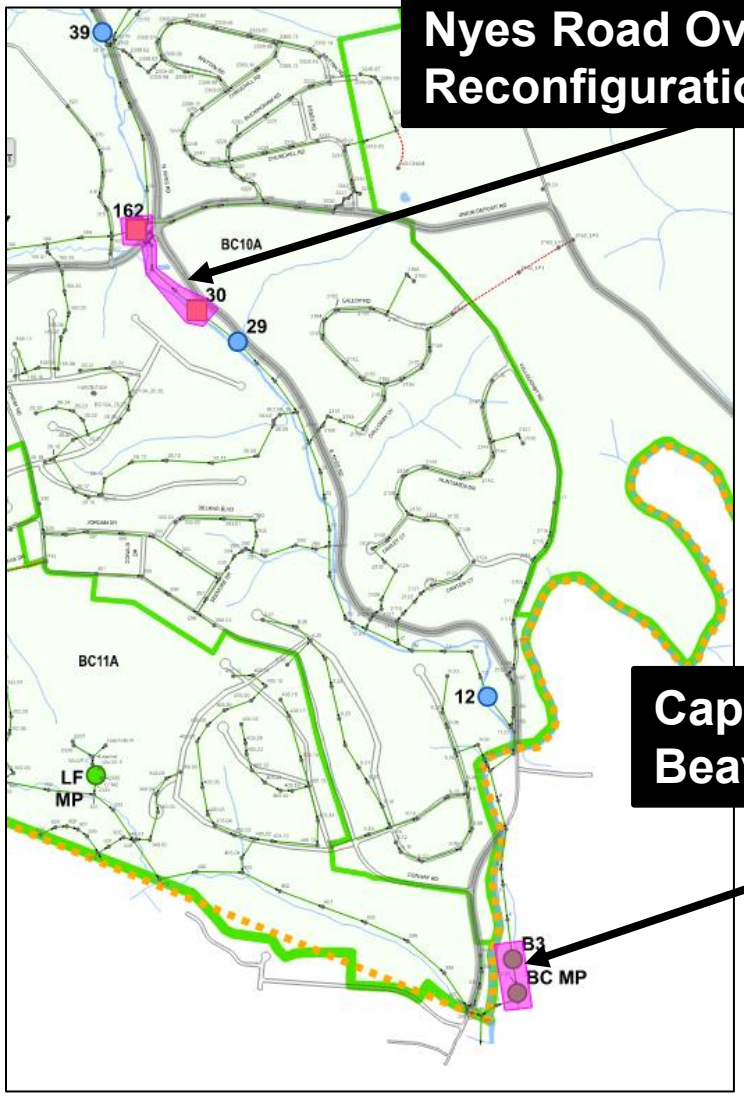
BC

2025 Proposed BC CAP Implementation Schedule

Tentative Priority For 2025 – 2028: Eliminate Overflows	
Key Maintenance Repairs	2025
Nyes Road Overflow Box Reconfiguration and Capacity Evaluation at the Beaver Creek Meter Chamber	2026
Trunk H Replacement/Rehabilitation	2027
Tentative Priority For 2028 – 2033: Reduce the Hydraulic Overload	
Priority Mini-Basin Rehabilitation (as needed)	2033

Beaver Creek CAP – Proposed Projects

BC

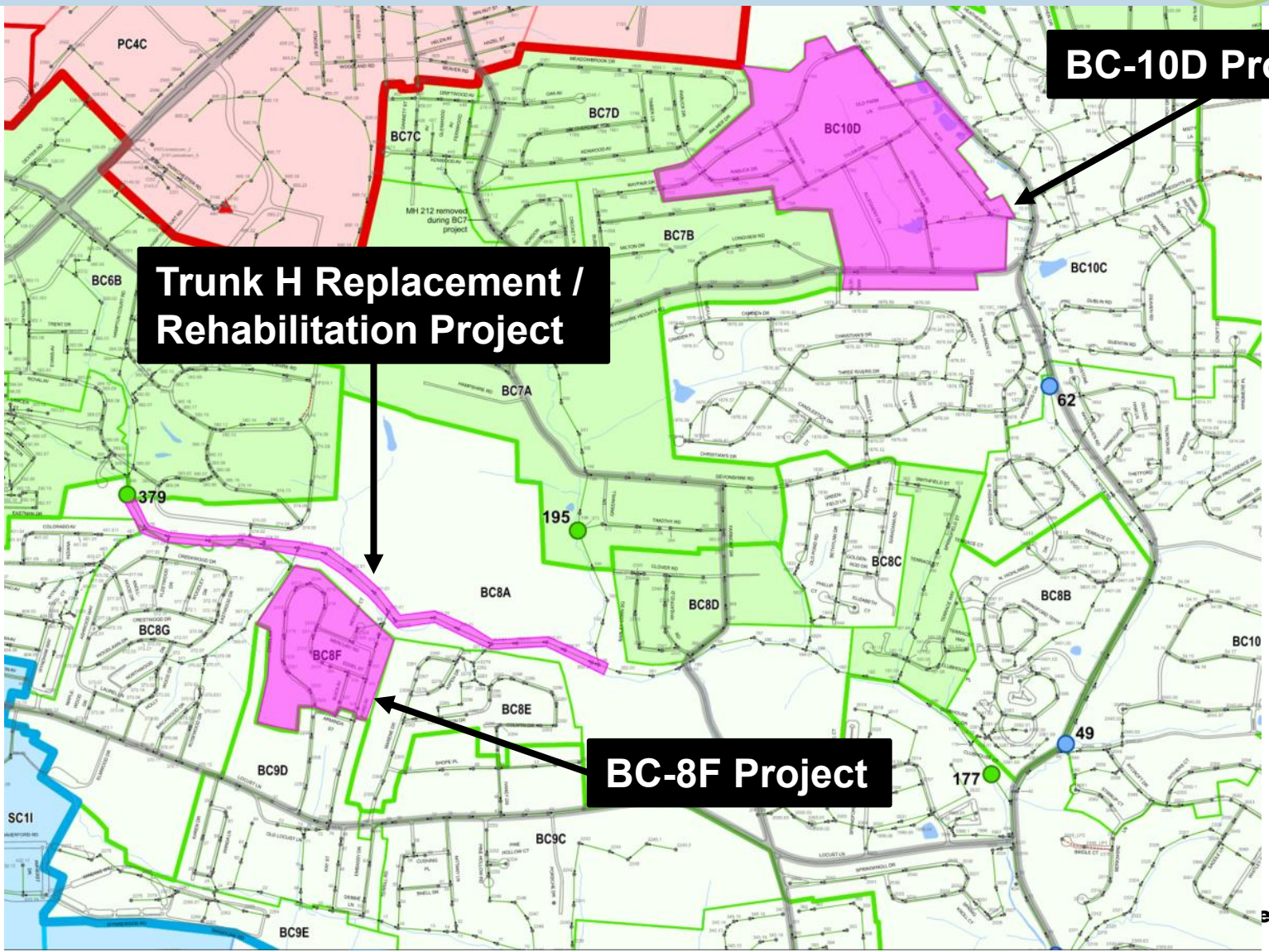


Nyes Road Overflow Box Reconfiguration

Capacity Evaluation at the Beaver Creek Meter Chamber

Beaver Creek CAP – Proposed Projects

BC



Settlement Agreement & Swatara IMA

BC

- LPTA Staff will discuss closing out the Settlement Agreement with Swatara at annual meetings

(b) In any event, if Lower Paxton does not exceed its reserved capacity in the Joint Use Interceptor or Swatara plant, as revised by any approved maximum monthly flow limitation, for any month for a period of three (3) consecutive years this Agreement shall automatically terminate.

- Peak Hourly flow limit 9.487 mgd, Current flows are 10.50 mgd
- Maximum Monthly Average Flow limit 5.361 mgd, Current flows are 3.42 mgd

EXHIBIT B

Swatara Township Authority
Water Pollution Control Plant Upgrade and Modifications – 2010
Total Plant Flow Capacity – 6.3 MGD (AAF)

	Hummelstown	Lower Paxton	South Hanover	Swatara
Reserve Flow Capacities				
Plant Flow Capacities:				
Annual Average Flow (AAF) – 6.3 MGD	0.615 MGD	3.795 MGD	0.032 MGD	1.858 MGD
Maximum Monthly Average Flow (MMAF) – 8.90 MGD*	0.869 MGD	5.361 MGD	0.045 MGD	2.625 MGD
Peak Daily Flow (PDF) – 14.18 MGD	1.384 MGD	8.542 MGD	0.072 MGD	4.182 MGD
Peak Hourly Flow (PHF) – 15.75 MGD	1.538 MGD	9.487 MGD	0.080 MGD	4.645 MGD
Upgrading Ratio – Percent of Plant Capacity Based on AAF	9.762%	60.238%	0.508%	29.492%

Settlement Agreement & Swatara IMA

BC

- Exhibit C needs to be revised to match existing peak hourly flow limit in Exhibit B. LPTA will request the peak hourly flows to match the Joint Used Interceptor Safe Carrying Capacity of 11.39 mgd.

ALLOCATED CAPACITIES						
SEGMENT	SIZE	CAP. FULL M.G.D.	SWATARA	LOWER PAXTON	HUMMELSTOWN	SOUTH HANOVER
A — B	10"	1.400	0.791	0.609	-----	-----
B — C	12"	2.100	1.218	0.882	-----	-----
C — D	30"	10.700	3.090	7.610	-----	-----
D — E	30"	11.800	3.806	7.930	-----	0.064
E — F	30"	12.000	3.806	8.130	-----	0.064
F — G	33"	12.500	3.806	7.400	1.230	0.064
G — H	33"	12.500	3.806	7.400	1.230	0.064

PAXTON CREEK

STATUS UPDATE

Paxton Creek - Consent Decree / IMA

PC

- **No overflows occurred during WWEs in the 2024-2025 metering season.**
- Did not exceed IMA peak daily flow limit of 12.34 mgd to Susquehanna

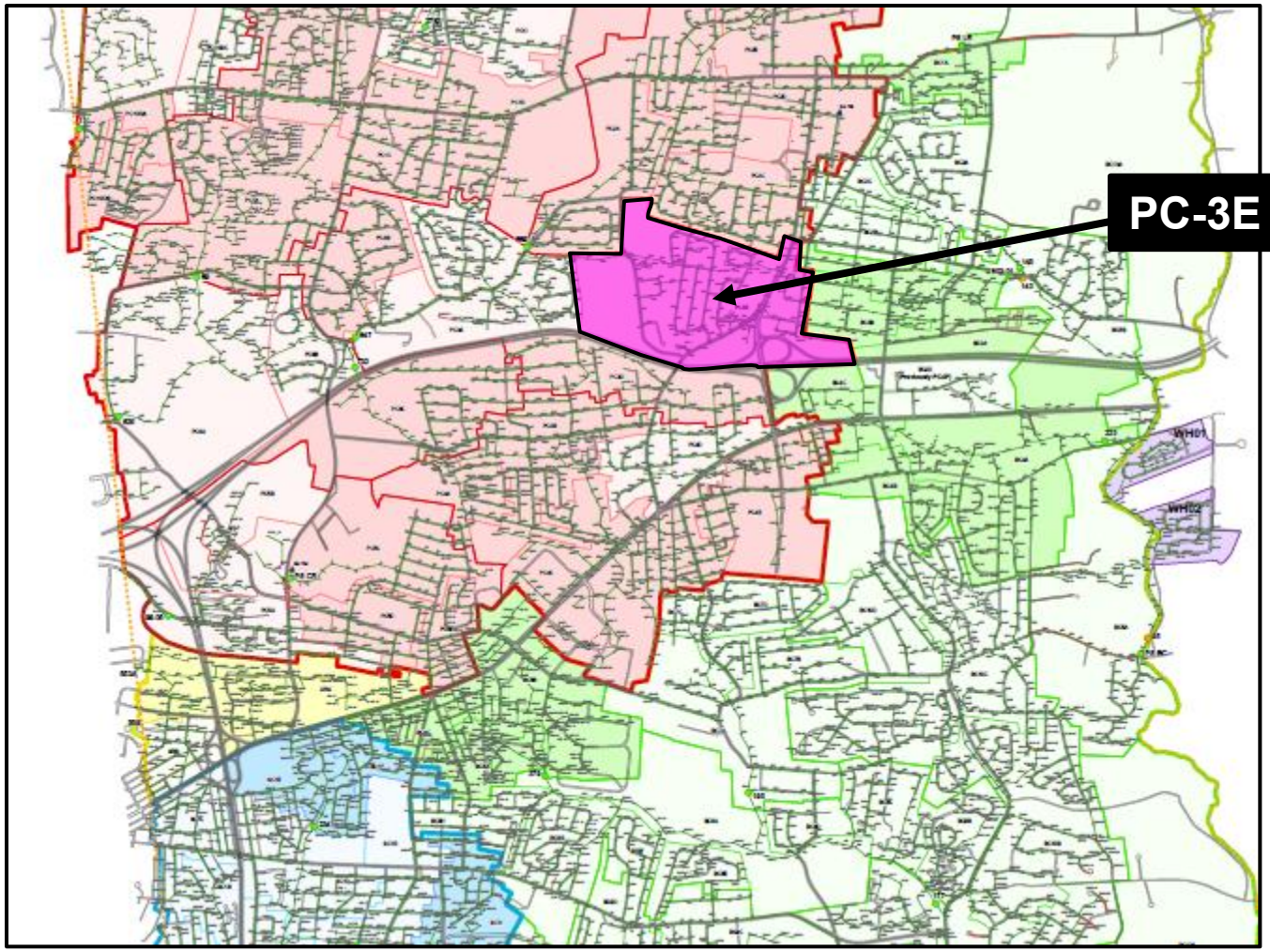
Mini-Basin	2019 EDUs	Estimated Pre-Rehab Comp. Peak (gpd/EDU)	Estimated Comp. Peak Excess I/I (mgd)	Est. Peak Hourly I/I Removed ($/gpd)	Estimated ACP/VCP Mainline (LF)	Estimated "Other" Mainline (LF)	Proposed Completion Date
TENTATIVE PRIORITY FOR 2023 - 2027							
PC-3E	428	4,000	1.28	$7.30	19,759	8,982	2025
Program Evaluation							2026 / 2027

Planned
Under Construction
Completed

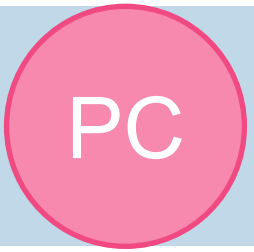
- Complete rehabilitation in the PC-3E Mini-Basin by 2025 (currently under construction)
- Evaluate success of the project and future growth projections in 2026

Paxton Creek CAP
PC-3E Sanitary Sewer Replacement/Rehabilitation

PC



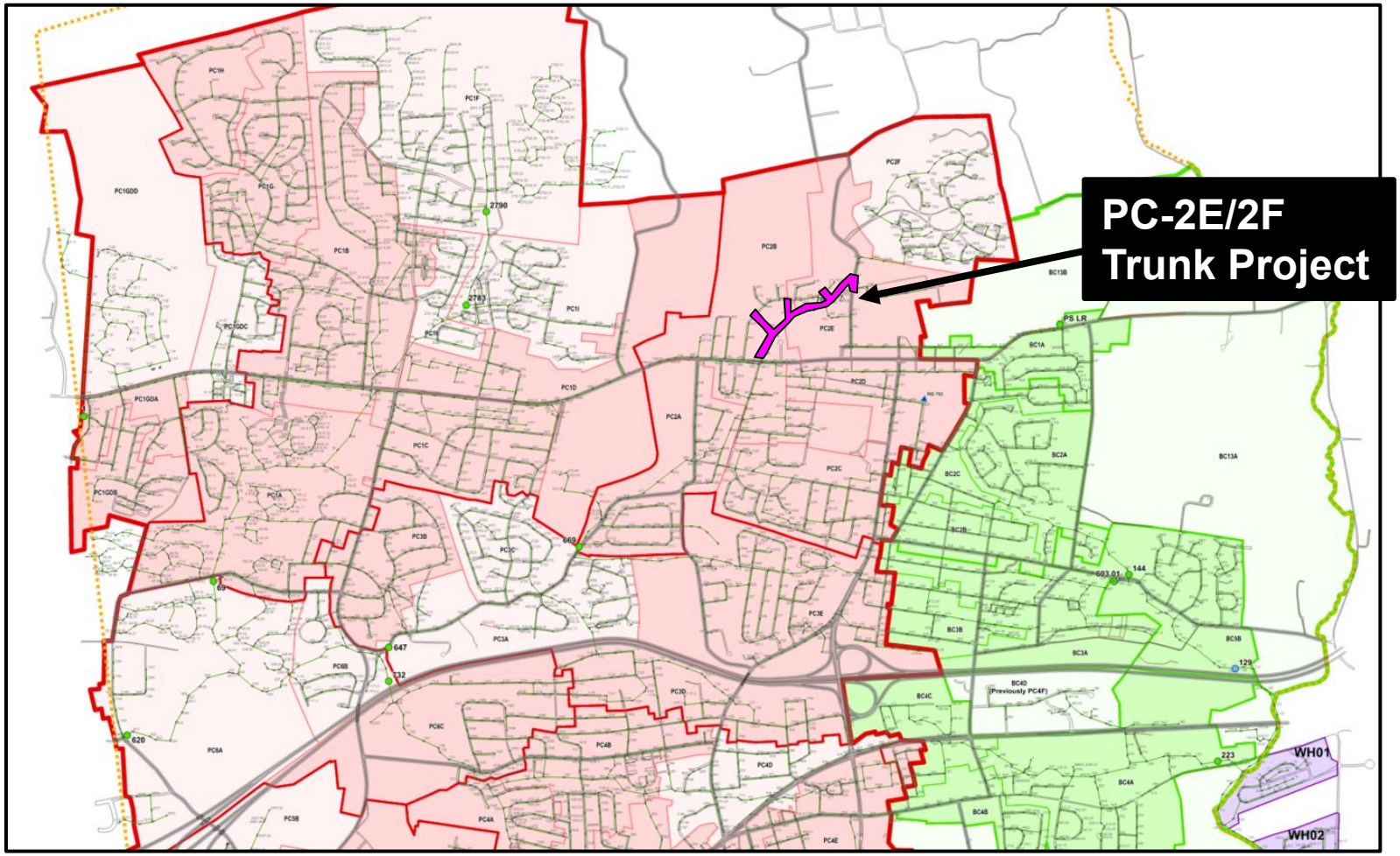
Paxton Creek CAP
PC-3E Sanitary Sewer Replacement/Rehabilitation



- Replacing approximately 19,850 linear feet of existing 8-inch and 10-inch ACP pipe with PVC and replacing manholes and laterals
- Final completion is November 2025
- Post-rehabilitation monitoring of the PC-3E Mini-Basin is planned for the next report period

Paxton Creek CAP
PC-2E/2F Trunkline Replacement
(Additional Effort completed outside of the CAP)

PC



Paxton Creek CAP
PC-2E/2F Trunkline Replacement
(Additional Effort completed outside of the CAP)

PC

- 3,900 linear feet of existing 8-inch and 10-inch ACP pipe was replaced along with associated manholes and laterals
- Final completion is August 2025
- **0.68 mgd of peak flow removed**

Program Evaluation – Current Status

PC

- Evaluation of PC will occur in 2026 following completion PC-3E in November 2025
- Current Status, recent peak daily flows were below the IMA limit 12.34 mgd to Susquehanna Township
- No wet weather overflows
- Program evaluation shall include reduction in flows required to accommodate growth projections

SPRING CREEK

STATUS UPDATE

Intermunicipal Agreement Threshold & Surcharge Monitoring

SC

- LPT/LPTA did not exceed the IMA 24-hour peak flow threshold of 4.50 mgd and modeled capacity peak instantaneous flow threshold of 6.50 mgd for the SC-1 Sub-Basin during the report period.
- There was a total of 13 reported WWEs and the peak events are shown below – remaining events did not surcharge

Surcharging Monitoring Location	Pipe Diameter (in)	Manhole Depth (in)	WWE 05/06/2025	WWE 05/14/2025	WWE 05/31/2025
			Peak Level (in)		
MH 227	10	72	12.5	56.2	40.6
MH 430	8	78	4.1	17.3	24.0

Program Evaluation

SC

- No wet weather overflows
- Program evaluation shall include reduction in flows required to accommodate growth projections (minimum growth projected) and aging system
- Future mini-basin project placeholder identified to be completed to accommodate growth
- LPT/LPTA capacity needs are being evaluated for the CRW's Spring Creek Interceptor / Pump Station Replacement Projects

Presentation Summary:

KEY TAKEAWAY AND ACTION ITEMS

Key Takeaway and Action Items

- No overflows & significant reduction in peak flows since the beginning of the program
- Beaver Creek
  - DEP approval of proposed BC CAP

- Paxton Creek
  - Future discussions with DEP about completion of Consent Decree for reducing the hydraulic overload, definition in Second Amendment vs. Chapter 94
  - Elimination of DEP annual connection limitations (Elimination of PC CAP June 2027)

- Spring Creek
  - Surcharge monitoring
  - Evaluating future capacity requirements for redevelopment

QUESTIONS?