

# Lehigh County Authority

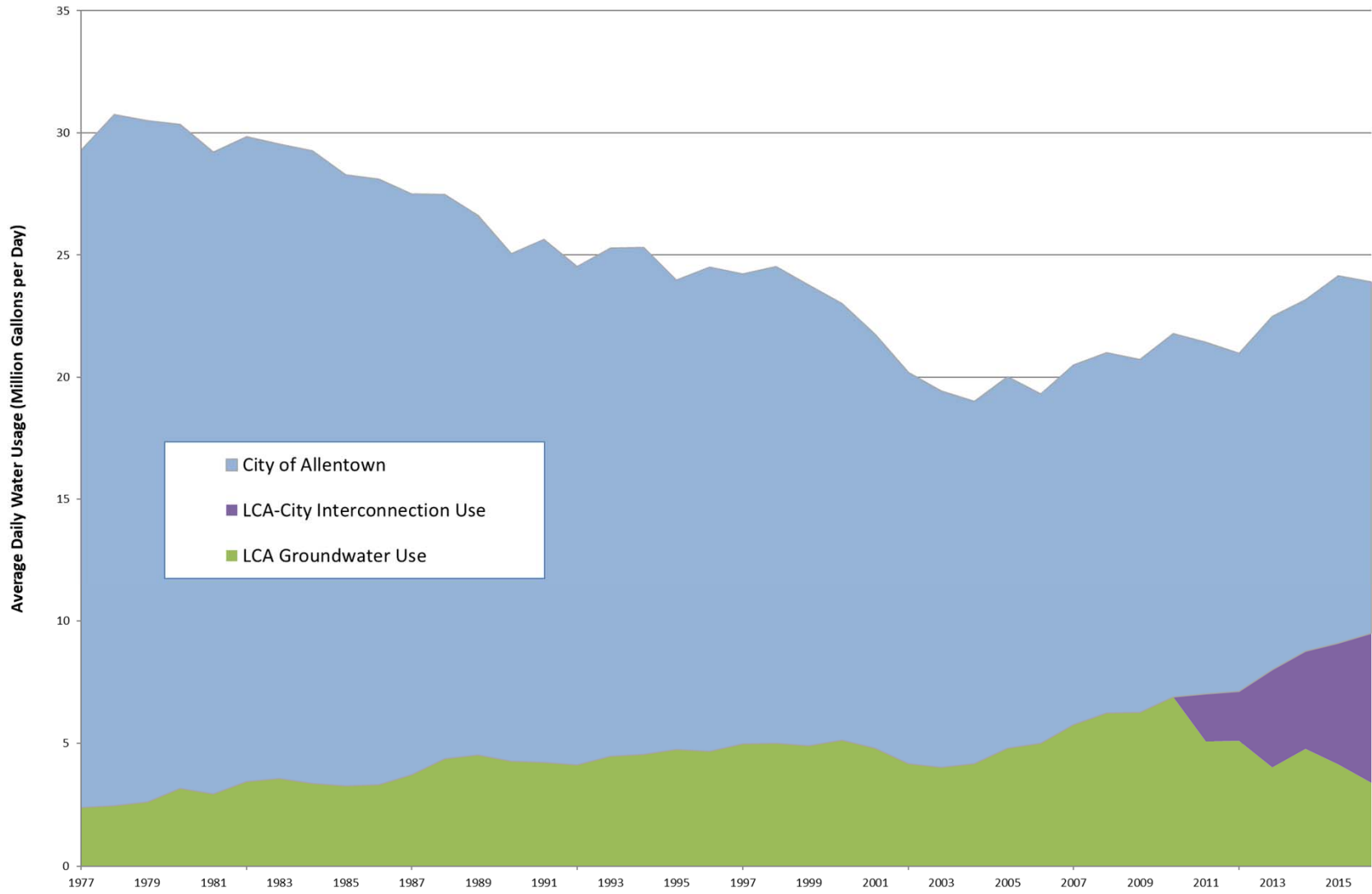
Update on Western Lehigh sewer service area and EPA Administrative Order to eliminate sanitary sewer overflows.

# Primary Issues – What to focus on?

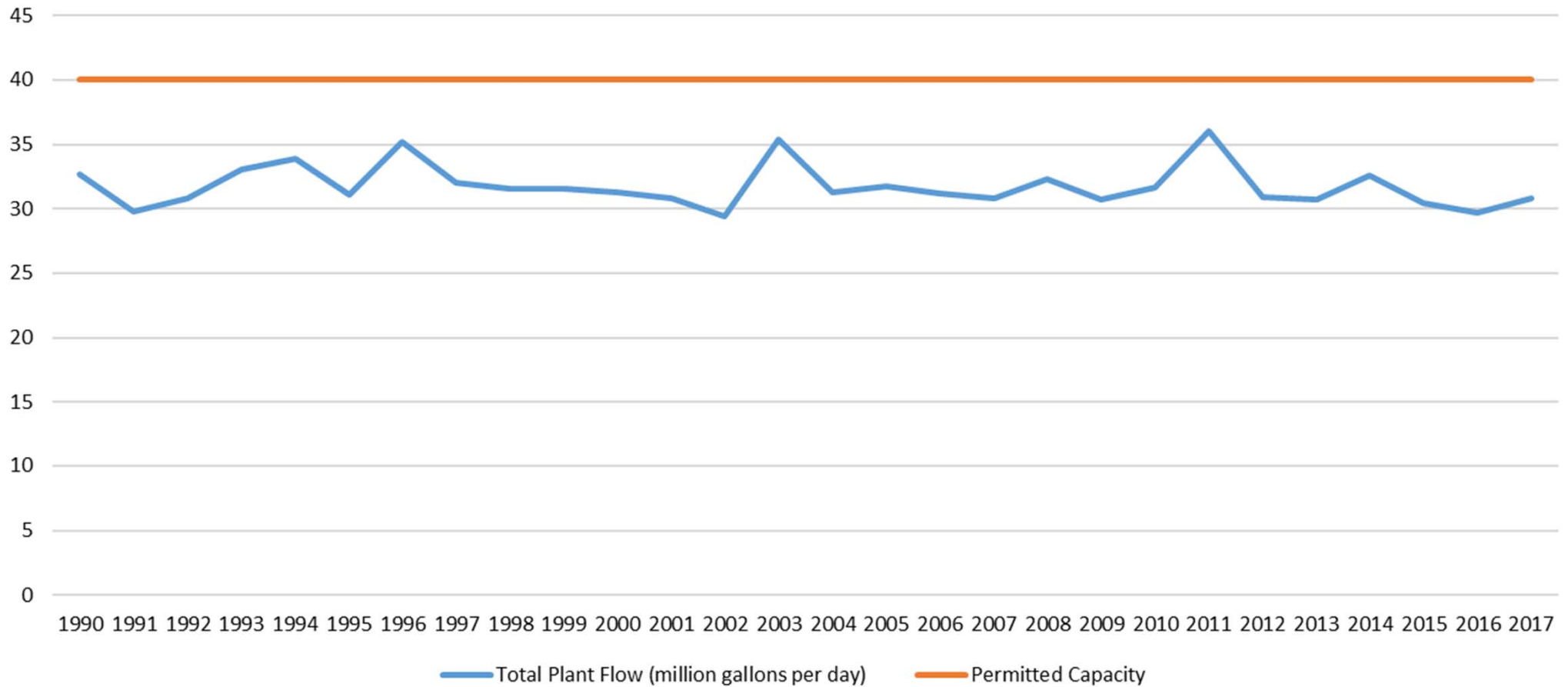
- Baseline Inflow & Infiltration (I&I)
- Rain-Derived I&I / Peak Flows
- Conveyance Capacity
- Treatment Capacity
- Restrictions Based on Agreement



### Little Lehigh Basin – Primary Public Water Suppliers – Usage Trend



## Kline's Island Wastewater Plant Flows (1990-2017)



### These data show:

- Overall treatment capacity is available for growth
- Supports DEP's 2014 directive to LCA that expanding the plant is not needed

# Water & Sewer Usage Comparisons

	2009 Precip = 44.56 Inches		2017 Precip = 50.18 Inches		
	2009 Water Sales*	2009 Sewer Flows	2017 Water Sales*	2017 Sewer Flows	Wastewater Treatment Allocation
LCA	6.28	6.76	9.29	8.78	10.78

\* Water sales are from LCA's Central Lehigh Division meter data, excludes water sales in Alburtis & Macungie.  
Figures shown in Million Gallons per Day

## These data show:

- LCA's sewer flows trend with metered water sales, showing growth in LCA service area is driving higher flows
- For now, LCA has adequate treatment capacity available for growth

# Managing / Removing Wet-Weather I&I

- LCA already managing system flows for the entire region via Park Pump Station (dry-day and wet-weather flows)
- LCA construction of flow equalization basin in 2010
- Flow metering and modeling to identify where to focus I&I rehab efforts
- Rehab work on LCA's regional interceptors (31 miles)

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- Municipal programs to address collector systems in Western Lehigh service area (250 miles)
  - Other non-Western Lehigh municipalities (another 300+ miles in Allentown, South Whitehall, Coplay-Whitehall, Salisbury, Hanover & Emmaus)

# Western Lehigh Sewerage Partnership

Work completed to date:

- Flow equalization basin
- Flow metering / modeling
- LCA test & seal – trunk lines
- LCA manhole evaluation
- Lower Macungie & Upper Macungie – lined nearly 100% of clay pipes
- Basement inspection & sump pump removal programs



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**Sewer Capacity Assurance  
and Rehabilitation Program (SCARP)  
Implementation Outline**

# Western Lehigh Sewerage Partnership

## Work still to do:

- \$22 million committed for I&I removal in municipal systems
- Rehab of all LCA-owned pump stations & interceptors
- Expect 27% reduction in wet-weather I&I
- Capital improvements to address hydraulic restrictions in the conveyance system
- Projects sized for current and future flows

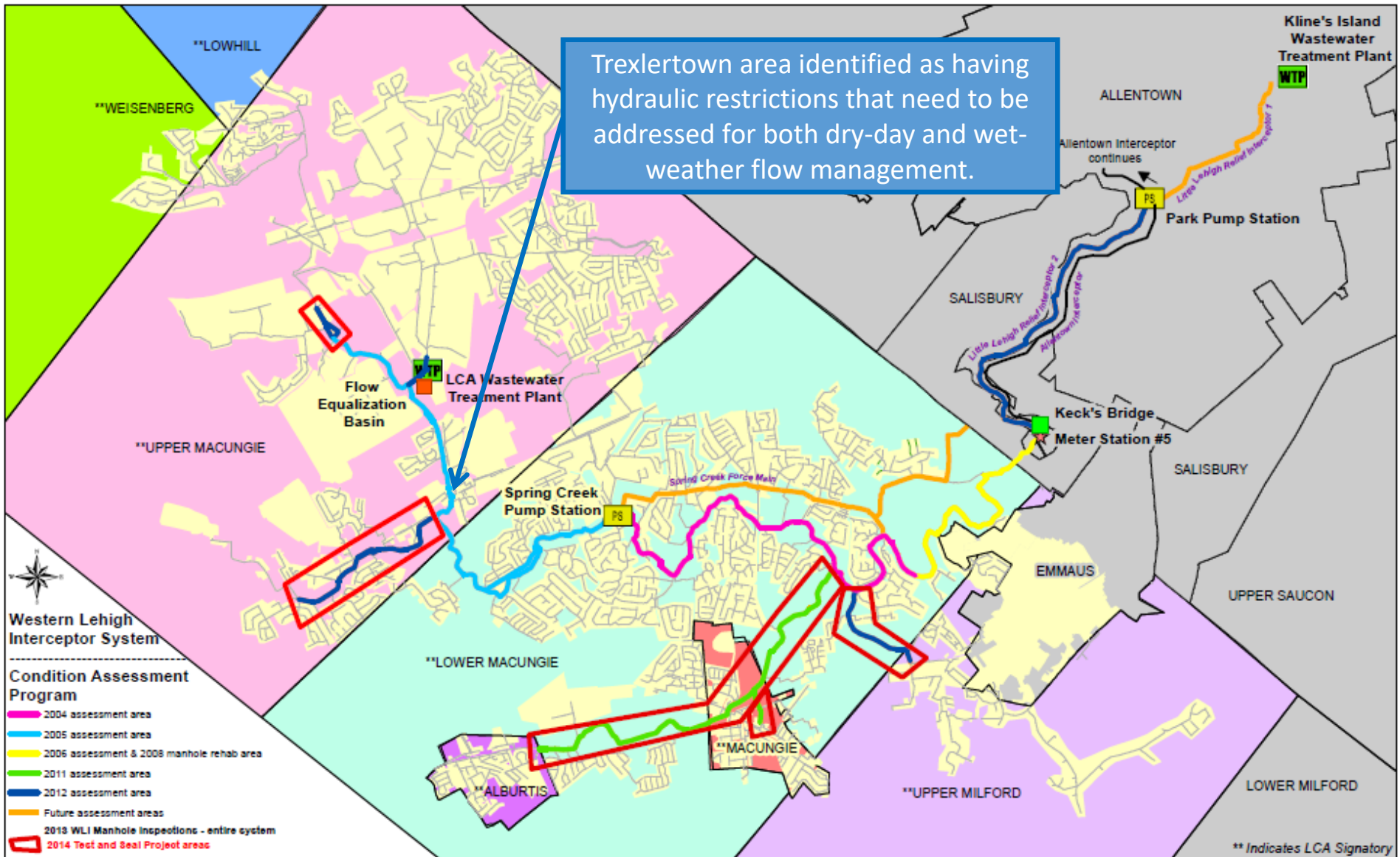


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## Sewer Capacity Assurance and Rehabilitation Program (SCARP) Implementation Outline





# Regional Flow Management Strategy

EPA asked the 16 municipalities in the Kline's Island Sewer System to work together on a Regional Flow Management Strategy that addresses the following critical elements:

- System Characterization
- Flow Monitoring
- Collection System Operation and Maintenance
- Inflow and Infiltration Removal

Joint submission: August 1, 2018

# Current Status (January 2019)

- Record-setting rainfall August – December 2018
- LCA aggressively pursuing investigation / rehab of interceptors
- LCA has met with DEP twice to discuss Trexlertown area concerns and project planning – will continue to work with DEP on this project
- Board presentation of Trexlertown options – January / February 2019
- WLSP flow metering kicked off in December
- No response from EPA on status of Administrative Order
- DEP has asked region to respond by 3/29/19 to questions relating to:
  - Timing and approach for flow monitoring / system characterization
  - Individual municipal I&I reduction programs
  - Individual municipal maintenance programs
  - Hydraulic & treatment capacity constraints
  - How growth will be addressed

# Discussion