

Sewer Capacity Assurance and Rehabilitation Program (SCARP)

LCA BOARD UPDATE BRIEFING

SCARP Briefing Objectives



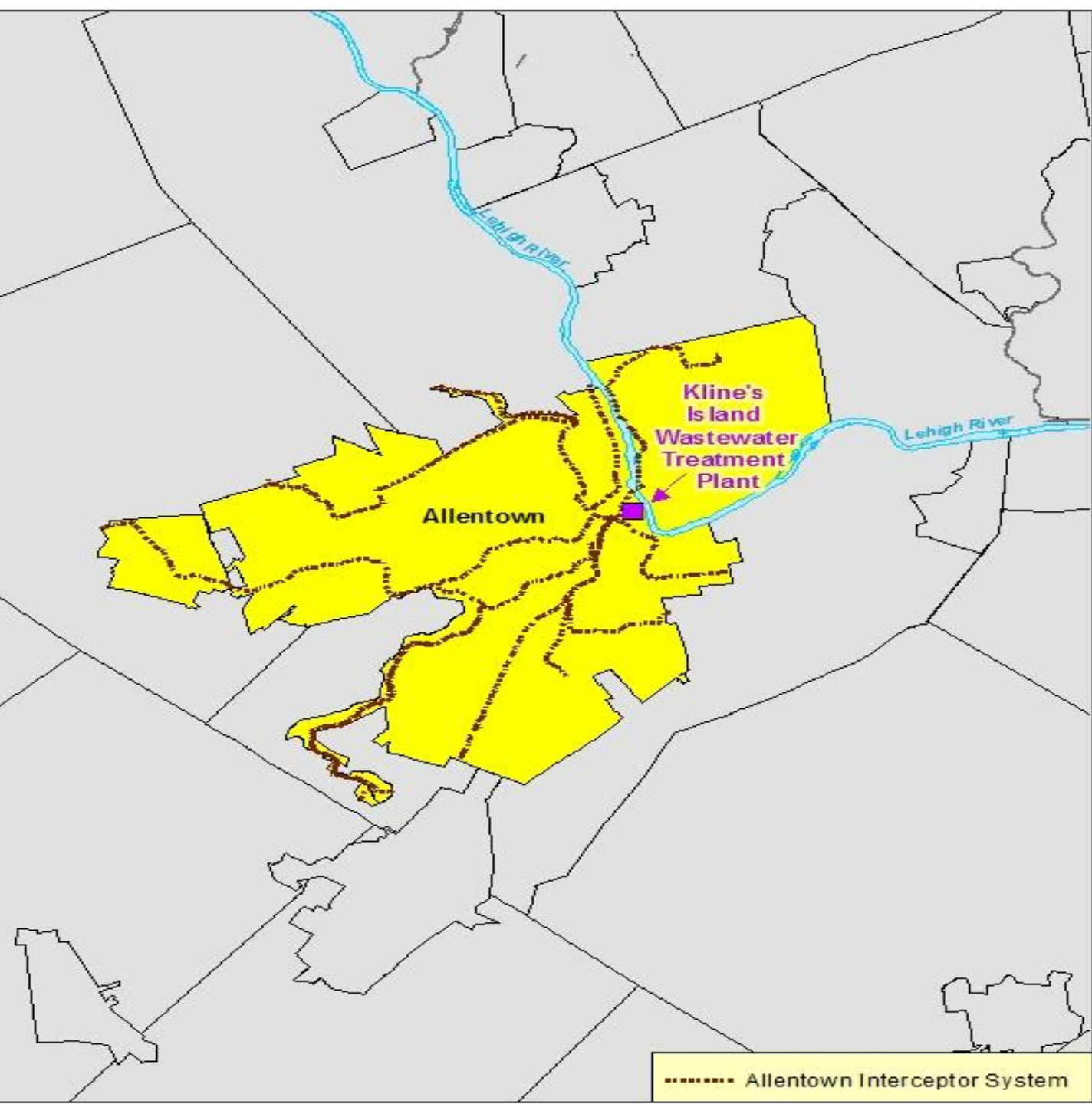
1. Share LCA & WLSP progress to date
2. Review June 14 EPA/PADEP meeting
3. Explain status of negotiations with Partners re: *How to Pay for the LCA/WLSP SCARP Work*
4. Explain status of negotiations with City and with other Signatories re: *How to Pay for the City's AO Work*
5. Explain sequence of activities from now to the End-of-Year regulatory submission deadline and into 2018
6. Review Board opportunities for opinions and authorizations

THE BACK STORY

The Players



City of Allentown Wastewater Service Area



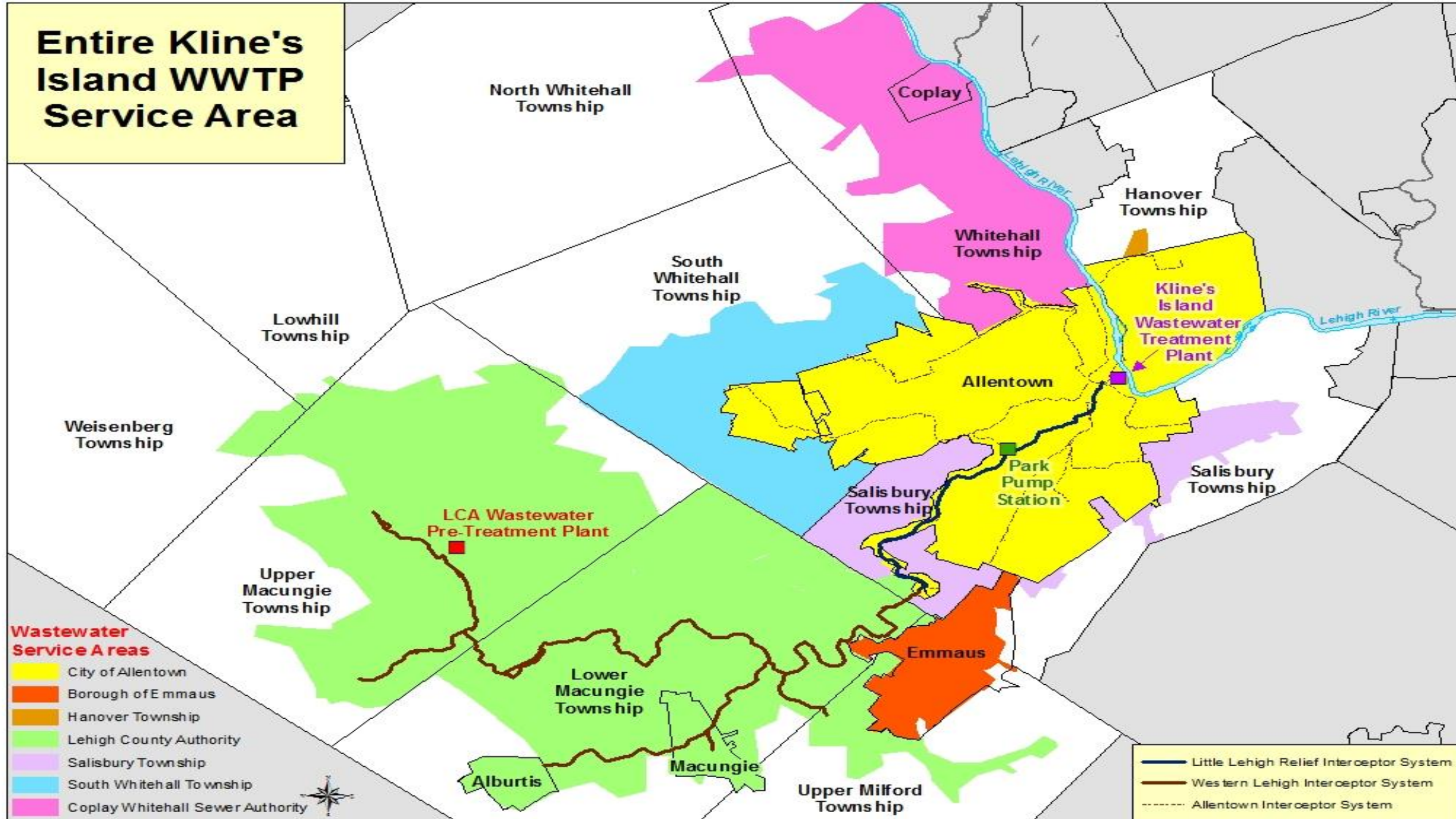
Wastewater
Service Areas

City of Allentown



----- Allentown Interceptor System

Entire Kline's Island WWTP Service Area



Progress to Date

The background is dark gray with several curved, overlapping lines in light gray and white. A prominent dashed yellow line curves from the top left towards the bottom right, passing behind the text box.

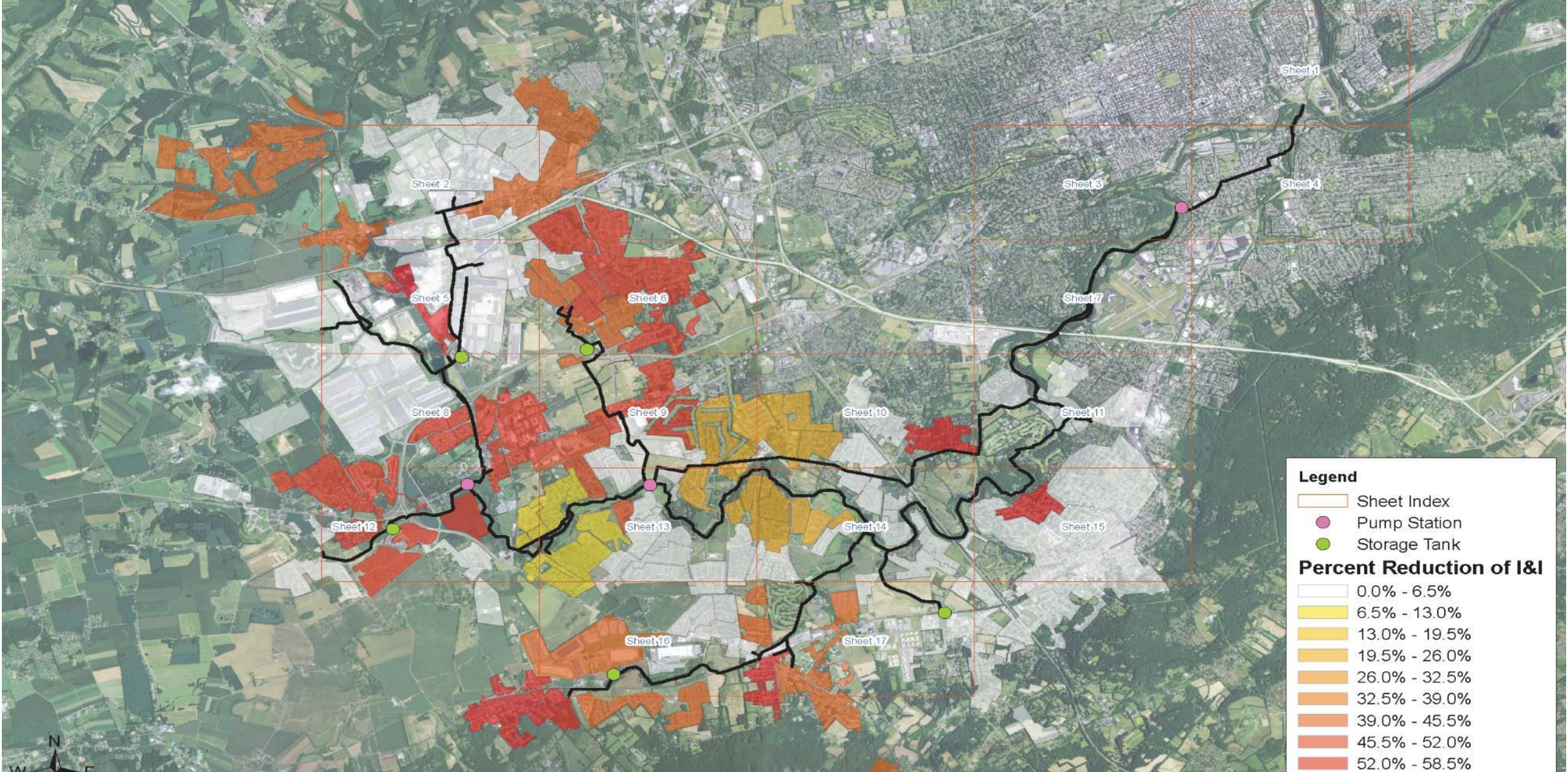
LCA & WLSP Progress

WLSP Progress Summary – since 2011



- 144 Basement disconnections
- 355 manhole inflow dishes installed
- 258 manhole frame/covers reset
- 82 cleanouts caps repaired
- 1 Roof drain disconnected

Majority of Private Side Work is Complete



WLSP Source Reduction Programs

WLSP Progress Summary

	Mainline Rehab			Manhole Rehab			Lateral Rehab		
	To date	To do	Total	To date	To do	Total	To date	To do	Total
Macungie	21,724	7,500	29,224		200	200		600	600
Alburtis	14,172		14,172		277	277		397	397
LCA	72,494	82,800	155,294	-	184	184	-	-	-
UMT	63,720	-	63,720		461	461		920	920
LMT	26,000	21,000	47,000		248	248		1,200	1,200
Total	198,110	111,300	309,410	-	1,298	1,298	-	3,117	3,117

Halfway through the Source Reduction Program already
Rehab Effectiveness Monitoring is currently being conducted

Ongoing LCA Work

- Park Pump Station Rehabilitation
- Spring Creek Pump Station Screen and Valve Refurbishment
- Trunk Line Rehabilitation



LCA Future Projects

Source Reduction Projects

- Reduce amount of interceptors that need to be upsized (\$72M savings)

Interceptor Projects

- Reduce overflows from WLI

Pump Station Projects

- Remove flow from City interceptors

	Spend Year	Spend Year Capital
WLI Trunkline Rehab	2016	\$ 812,000
Park Pump Station Refurbishment	2017	\$ 2,719,794
WLI Main Rehab 2	2018	\$ 3,346,171
Park Force Main Refurbishment	2018	\$ 3,032,467
Park Force Main Extension	2020	\$ 2,429,534
Trexlerstown Interceptor	2021	\$ 14,622,411
Little Sister Force Main	2028	\$ 21,253,937
Little Sister Pump Station	2029	\$ 16,813,466
Kecks Bridge Park Interceptor	2030	\$ 6,137,575
Upper Milford Relief Trunk Line	2032	\$ -
AMTL Relief Trunk Line	2034	\$ 17,745,063
Ancient Oaks Interceptor Phase 2	2036	\$ 12,509,104

Upcoming LCA Work (2017-2018)

- Rehab Effectiveness Monitoring (metering April – October 2017)
- Park Force Main Inspection (2017 dates TBD)
- Trexlertown Interceptor Alignment Evaluation (Fall 2017)
- Iron Run Pump Station Flow Impact Evaluation (*December 2017*)
- Pretreatment Plant Domestic-Industrial Flow Segregation Evaluation (*Spring 2018*)
- Western Lehigh Interceptor Pipe and Manhole Rehabilitation (2018)
- Little Sister Pump Station Alignment Evaluation (2018)

The background features three large, overlapping circles in shades of orange and brown, set against a dark gray background. A horizontal white band runs across the middle of the image, containing the text.

EPA and PADEP meeting: June 14, 2017

EPA / PADEP Meeting Objectives

Review progress to date (info from slides above)

Review plans for future projects, phased approach

Review overflow history at Kline's Island Wastewater Treatment Plant (KIWWTP), Outfall 003

Asked for feedback to help us prepare an acceptable submission to EPA / PADEP by the 12/31/2017 deadline

Future Projects / Phased Approach for WLSP and City

	Spend Year	Spend Year Capital
WLI Trunkline Rehab	2016	\$ 812,000
Park Pump Station Refurbishment	2017	\$ 2,719,794
WLI Main Rehab 2	2018	\$ 3,346,171
Park Force Main Refurbishment	2018	\$ 3,032,467
Park Force Main Extension	2020	\$ 2,429,534
Phase 1 COA Blending	2020	\$ 5,386,420
Trexlerstown Interceptor	2021	\$ 14,622,411
End of Phase 1 Performance Evaluation	2026	\$ 1,177,949
Little Sister Force Main	2028	\$ 21,253,937
Little Sister Pump Station	2029	\$ 16,813,466
Phase 2 COA Blending	2029	\$ 12,317,557
Kecks Bridge Park Interceptor	2030	\$ 6,137,575
Upper Milford Relief Trunk Line	2032	\$ -
AMTL Relief Trunk Line	2034	\$ 17,745,063
Ancient Oaks Interceptor Phase 2	2036	\$ 12,509,104
End of Phase 2 Performance Evaluation	2037	\$ 1,387,564
Phase 3 COA Blending	2041	\$ 10,308,967

Phased to pace the 4 MGD of new connections expected between now and 2040

Overflow History at KIWWTP

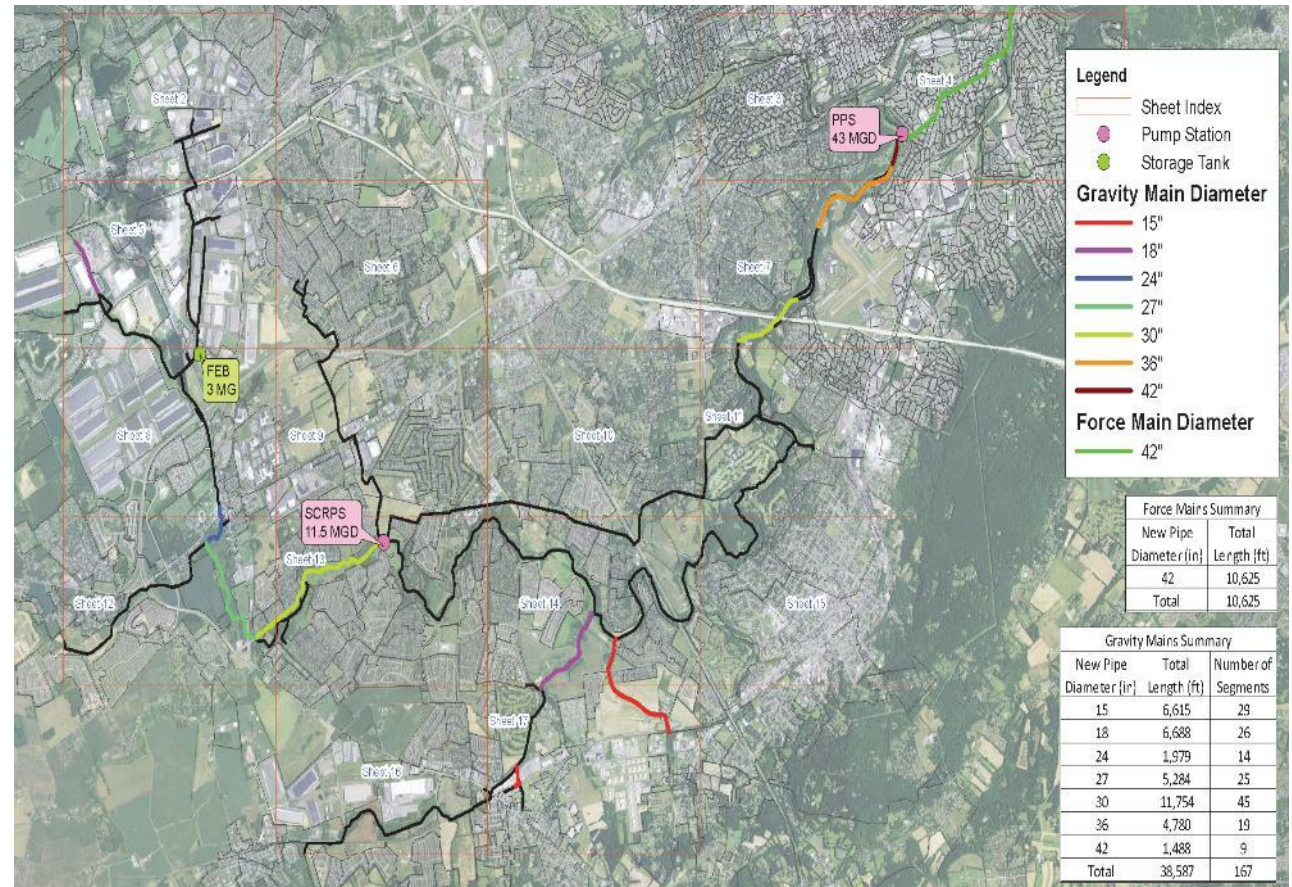
- Our performance is much better than it was 10 years ago
 - Due to dry weather and LCA FEB
 - Unknown impact of I&I efforts

Wet Weather Activation of Outfall 003

DATE	CAUSE	DURATION (hrs)	VOLUME (mgd)	RAINFALL (in)	REOCCURANCE
					INTERVAL (yrs)
2/24/2016	Mechanical Problem - Pumps & Hydraulic Capacity Exceeded	7.75	1.18	3.01	>1
2015	No Bypasses	-	-	-	-
4/30/2014	Mechanical Problem - Bar Screens & Hydraulic Capacity Exceeded	11.33	1.17	3.68	>2
2013	No Bypasses	-	-	-	-
9/6/2011	Hydraulic Capacity Exceeded - Lee	23.50	2.09	2.71	>1
8/28/2011	Hydraulic Capacity Exceeded - Irene	19.25	4.66	3.62	>2
9/30/2010	Mechanical Problem - Bar Screens & Hydraulic Capacity Exceeded	13.17	5.32	8.01	>100

Feedback Requested from EPA / PADEP

- City will develop a submission to EPA based on blending option
- Lowest cost option w/ appropriate environmental & operational benefits
- Need regulatory direction / decision to move forward
- Acceptable level of protection?
 - 10-year design basis
 - 5-year compliance basis
- Future regulatory format?
 - PADEP / Act 537 process
 - EPA order (what kind?)



What EPA and PADEP told us

- Progress to date is encouraging
- Comprehensive planning approach is appreciated
- We'll get back to you on the rest



We appreciate the information, but we won't render an opinion today

**Getting from
Today to New
Year's Eve**



Critical Elements

- LCA Memorandum of Cooperation w/ WLSP (*How to Pay for the LCA/WLSP SCARP Work*)
- City Memorandum of Understanding w/ Signatories (*How to Pay for the City's AO Work*)
- WLSP partners' Capacity Management, Operations & Maintenance (CMOM) plans
- Document details of 25-year work plan for LCA / WLSP SCARP efforts (SCARP Guidance Manual)
- Develop SCARP summary for submission to EPA / PADEP (SCARP Implementation Plan)
- City / City Signatories will develop their own submissions to EPA

WLSP Memorandum of Cooperation (MOC)

Partners Agree

- Commitment to completing Source Reduction Programs
- Phase 1 SCARP conveyance costs distributed on allocation method
- Phase 2 SCARP conveyance costs distributed on peak flow need
- Want City to base Phase 2 City AO projects on peak flow as well – could save WLSP \$13M if source removal work is successful

Partners Uncertain

- How much Source Reduction Program is optimal
 - Need flow metering and modeling data
- When the MOC should terminate, based on regulatory oversight changing and/or yet undefined projects being completed / paid for
- How to get an MOC passed w/ these unknowns

MOC – Close to closure with Partners

WLSP Memorandum of Cooperation (MOC)

We're working on it!

- Municipal managers & solicitors working together on these uncertainties
- Expect to adopt municipal ordinance and LCA resolution to agree on MOC and SCARP planning documents



City Memorandum of Understanding (MOU)

Signatories Agree

- Cost of Phase 1 City AO projects distributed based on existing agreements (treatment capacity allocation)

**MOU negotiations will
not move forward**

Signatories Uncertain

- How much each system leaks, and what needs to be done about it
- What a peak-flow basis for distributing cost of Phase 2 City AO projects means
- How to interpret peak flow rights included in old agreements
- Requirements for standardization / maintenance of sewer billing meters
- Who should share in costs of relief facilities (e.g. Sister Pump Station)

City-Signatory Interactions

- Phase 1 projects will kick off without MOU in place
- Must continue to work together on the outstanding issues
 - Metering & modeling
 - Sewer billing meters
 - Negotiating future agreements



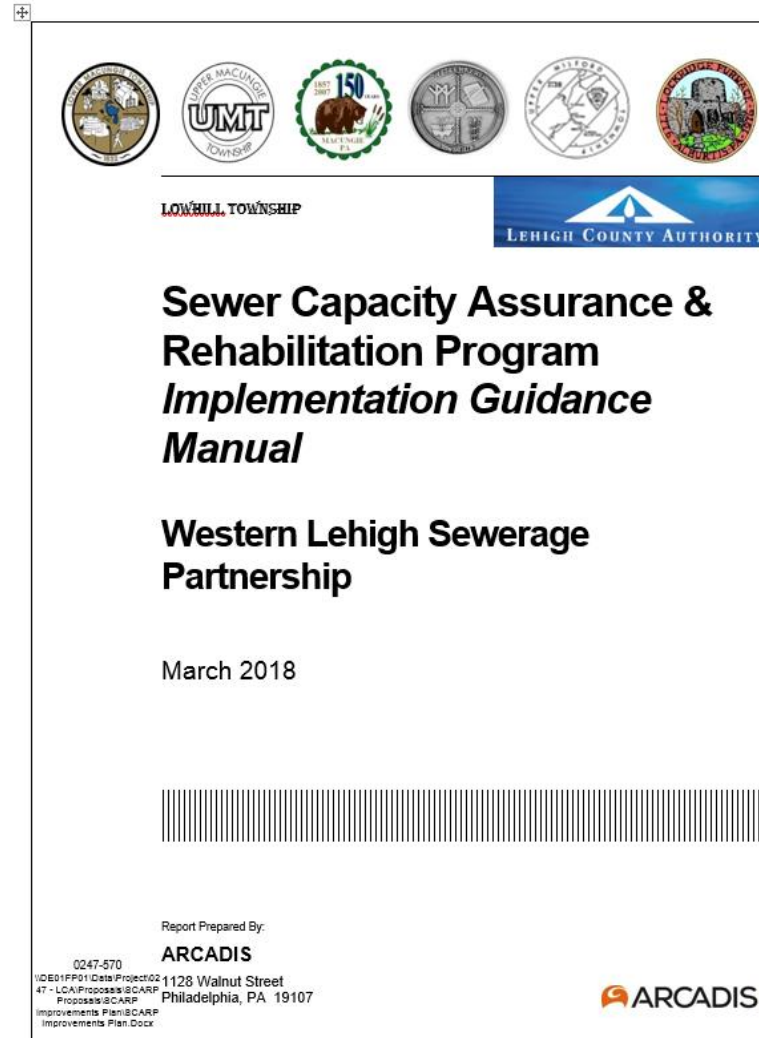
CMOM Plan Development

- Objective: Establish long term operating practices
- Significance: May change O&M practices/tools; lower costs
- Issues: Organizational resistance
- Development by: LCA-Arcadis
- Status: Not started
- Anticipated Cost: \$20K



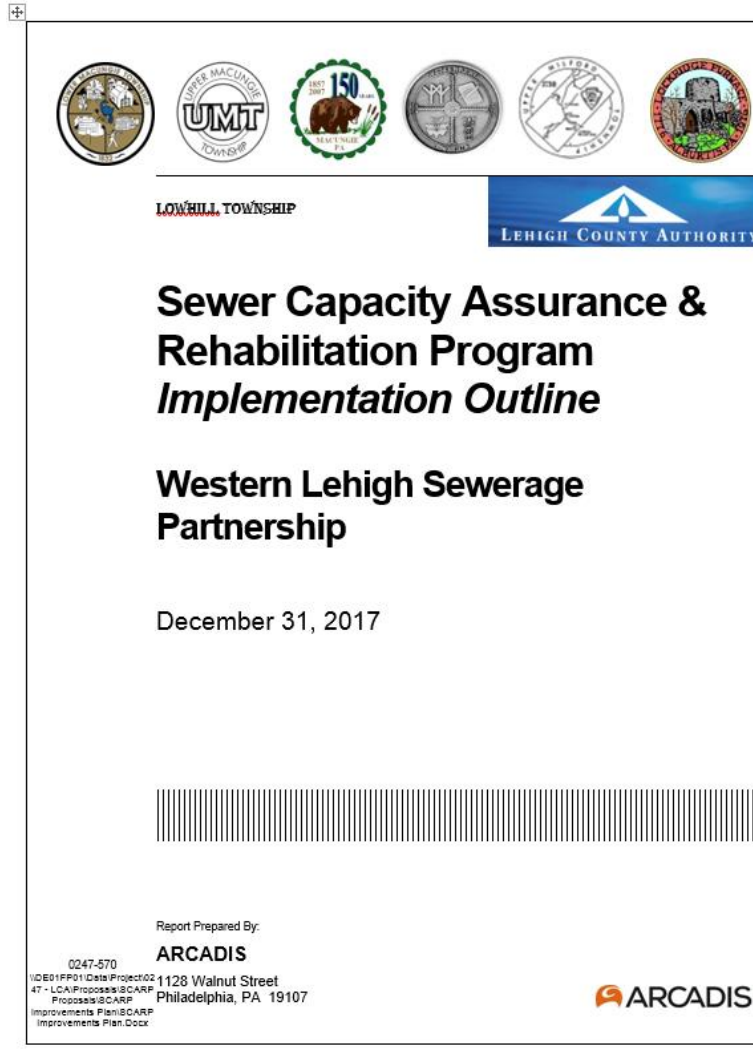
SCARP Implementation Guidance Manual

- Objective: Guide for next generation for 25 year plan
- Significance: Document important findings, assumptions, issues
- Issues: None
- Development by: Arcadis
- Status: Not started
- Anticipated Cost: \$60K



SCARP Implementation Outline

- Objective: Regulatory submission
- Significance: Will be reference by EPA and DEP for next two decades
- Issues: Balancing detail with flexibility
- Development by: Arcadis
- Status: Not started
- Due: Halloween to WLSP, NYE to regulators
- Anticipated Cost: \$15K

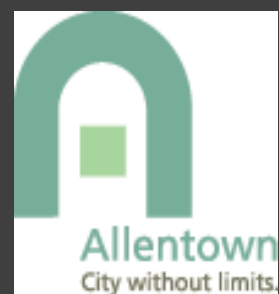


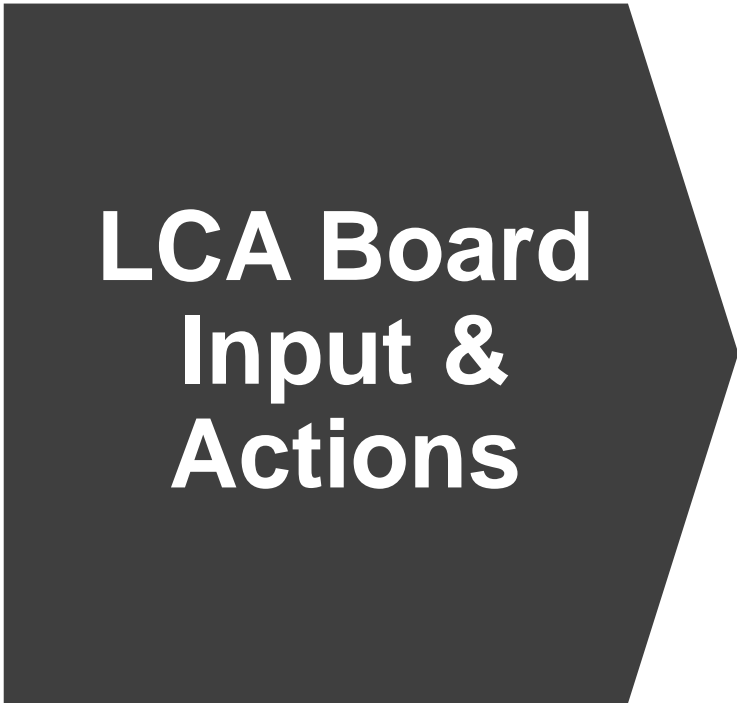
City & City Signatories

Regulatory Submission by
12/31/2017 Deadline

City will lead efforts for City submission

Signatories will handle their own
submissions





LCA Board Input & Actions

LCA / WLSP Related Work:

- SCARP Guidance Manual & Implementation Plan Development (8/14/2017)
- MOC review & input (*October 2017*)
- SCARP Guidance Manual & Implementation Plan review & input (*November 2017*)
- LCA Resolution authorizing inter-municipal agreement (MOC) (*November 2017*)
- Design & Construction project authorizations (ongoing as scope of projects are defined)

City AO Work:

LCA participating under City direction as Operator

- Engineering contract approval for Phase 1 AO improvements (8/14/2017)
- Design & Construction project authorizations (ongoing as scope of projects are defined)



Discussion