

LCA Board of Directors

Kline's Island Sewer System – Regional Sewer Capacity & Wet Weather Planning

February 10, 2020

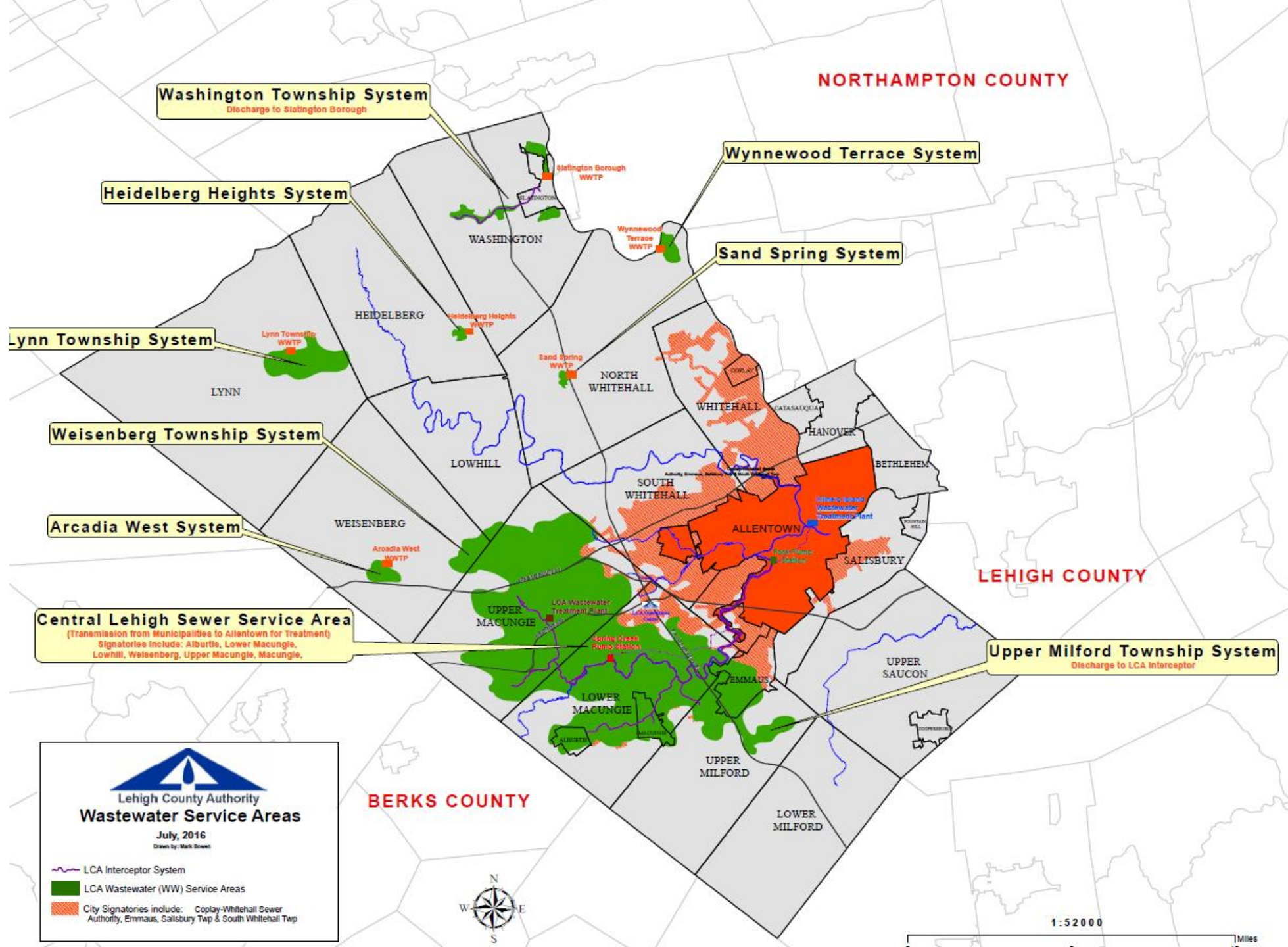
Kline's Island Sewer System

LCA / Western Lehigh Service Area

- Upper Macungie
- Lower Macungie
- Upper Milford
- Macungie
- Alburtis
- Weisenberg
- Lowhill

Allentown / City Signatories

- South Whitehall
- Salisbury
- Coplay-Whitehall Sewer Authority
 - North Whitehall
 - Whitehall
 - Coplay
- Emmaus
- Hanover



Snapshot: Today's Update

- The Western Lehigh service area's Sewer Capacity Assurance Rehabilitation Program (SCARP) has been discontinued
- New regional connection management plan for the entire Kline's Island Sewer System (KISS)
- DEP is working with all KISS municipalities to ensure long-term sewage facilities planning (Act 537 Plan) is completed:
 - Today's discussion will provide details on some of the key steps and milestones along the way
- ***Goal: Regional Act 537 Plan (a first for the KISS!)***

Goals for a Regional Act 537 Plan

- Support environmental and economic goals of the region
- Solutions must be regional and comprehensive
- Long term sewer capacity needs quantified through 2050
 - Includes current and future dry day, wet weather, and peak flows
- Ensure existing infrastructure is maintained / rehabilitated
- Develop plan for new infrastructure to meet region's future needs

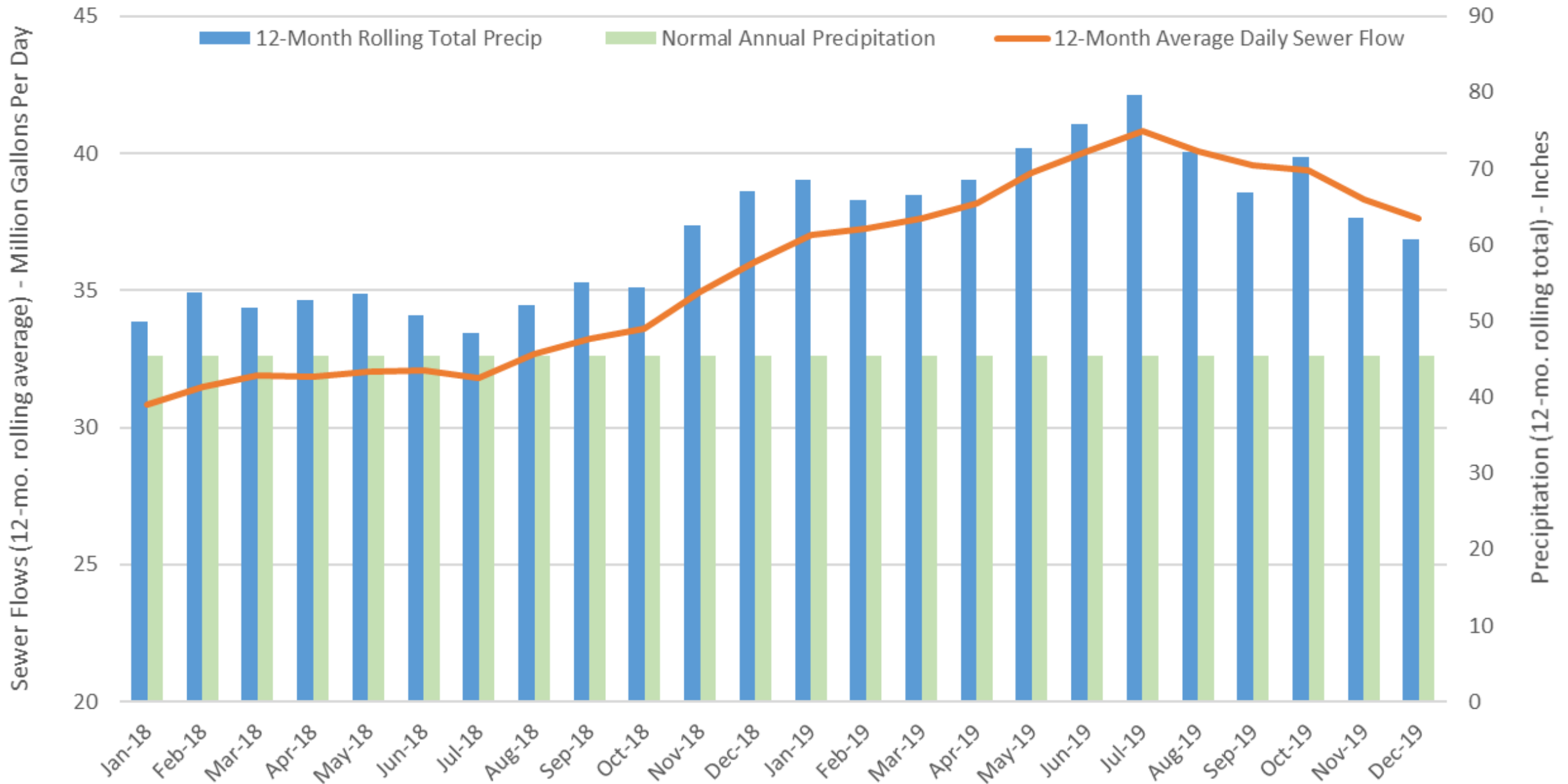
Brief History (2009-2019)

- 2009: EPA issues Administrative Order (AO) to all KISS municipalities with 12/31/14 deadline to eliminate sanitary sewer overflows (SSOs)
- 2009: Western Lehigh Sewerage Partnership (WLSP) and SCARP are formed to address conveyance capacity challenges in LCA service area
- 2010: 3-million-gallon flow equalization basin (FEB) constructed
- 2011-2015: Hydraulic modeling, planning and engineering on WLSP options for both conveyance and treatment capacity – preliminary Act 537 Plan
- 2015: EPA extends AO deadline to 12/31/17

Brief History Part 2 (2009-2019)

- 2015: DEP advised WLSP NOT to submit Act 537 – focus on regional wet weather plans instead
- 2016-2017: LCA/City of Allentown collaborate extensively to develop integrated strategy to address the AO with capital intensive upgrades
- Late 2017: EPA advises region that capital intensive strategy is no longer preferred – focus instead on flow monitoring and system rehab
- August 2018: Region submits Regional Flow Management Strategy to DEP/EPA
- August 2018-July 2019: Region received 80” of rain (compared to 45” normal); KISS flows >40 million gallons per day over multiple months

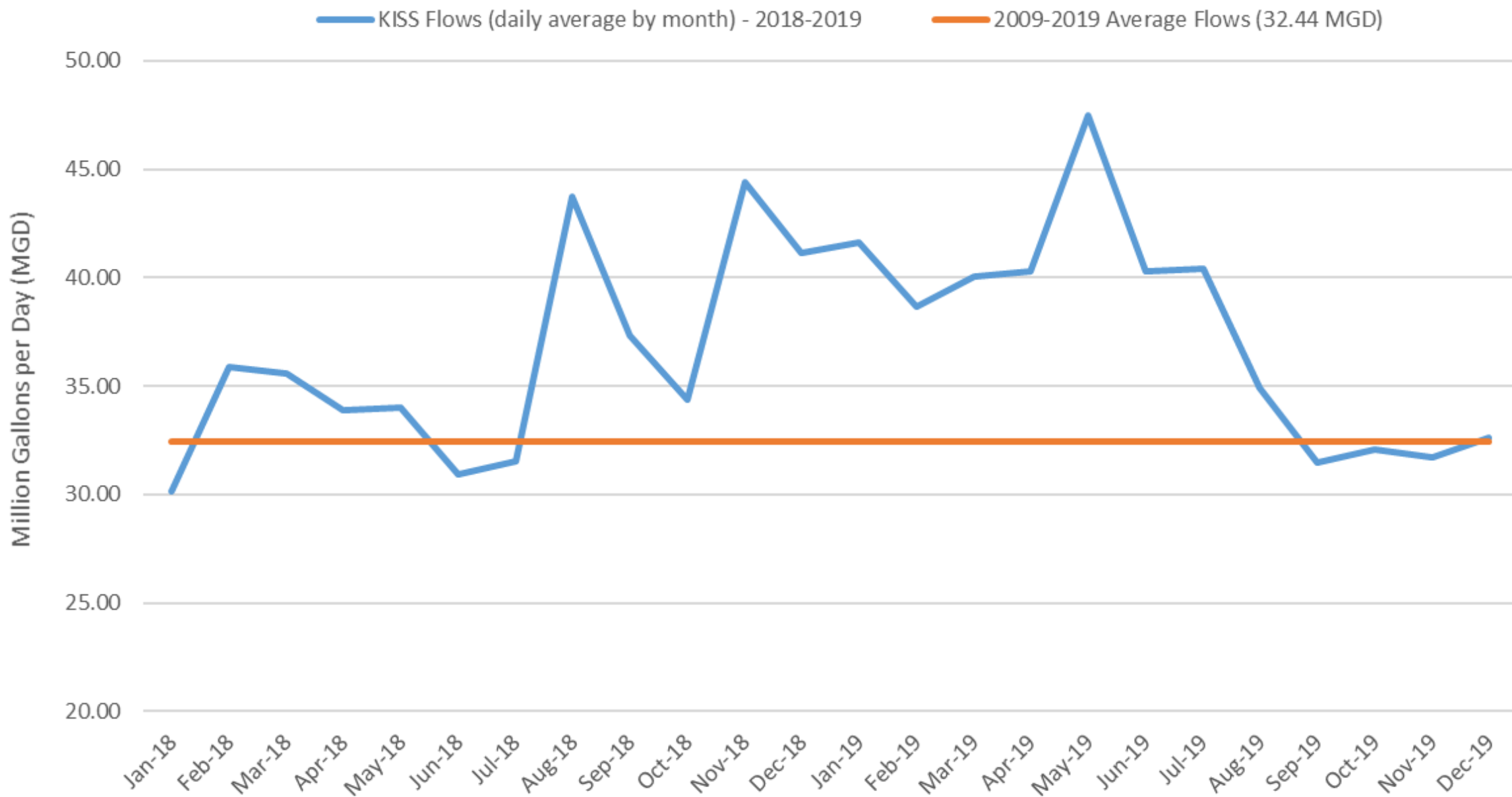
12-Month Rolling Totals - KISS Sewer Flows vs. Precipitation



Brief History Part 3 (2009-2019)

- November 2018: LCA declares emergency to address high flows in the Western Lehigh Interceptor
- March 2019: EPA withdraws AO, transfers oversight back to DEP
- August 2019-today: DEP collaboration with Region
- September 2019-today: KISS flows return to normal at ~32 MGD
- January 2020: DEP approves 2020 connection management plan for all KISS municipalities

Kline's Island Sewer System - Sewer Flows 2018-2019



Current Plan Following DEP Guidance

- New development in 2020 approved through KISS connection management plan
- Interim 537 to be submitted to DEP by September 2020 → focused on steps to develop long term plan
- Regional 537 Plan to be submitted to DEP by 2025
- Municipal I&I source reduction programs continue throughout planning process
- KISS connection management plan to continue through 2025 (contingent on Regional compliance with 537 commitments)



Let's stop for questions...

Phase 1: 2020 Corrective Action & Connection Management Plan

- **Status** =
 - DEP approved connection management plan (*handouts*)
 - Interim Act 537 due September 2020
- **Action Items** =
 - Quarterly reports of new connections and progress on Interim 537 plan
 - Municipalities provide 2021-2025 flow projections
 - Submit Interim Act 537 Plan by September 2020
 - Scheduled Signatory I&I work to continue
- **Challenges** =
 - Requires 15 municipal adoptions by August 2020



Authorizations Needed to Get Started

- Interim Act 537 Plan Preparation
- Western Lehigh Service Area: Engineering & Program Support
- Flow Metering Contract (2020-2022)
- Western Lehigh 2020 Flow Data QA/QC and RDII Analysis

Discussion to follow for each...

Phase 2:
Interim Act 537,
Corrective Action &
Connection Management
Plan (2021-2025)

Status =

- Regional 537 Plan due to DEP in 2025

Action Items =

- New developments approved according to KISS connection management plan
- Municipalities provide flow projections from 2026-2050
- I&I source removal projects by each municipality
- Flow monitoring & KISS hydraulic model update (2022)
- Solutions identified (2023)
- Consensus reached (2024)
- Plan preparation and municipal adoptions (2025)

Challenges =

- Aggressive schedule
- Existing intermunicipal agreements / cost sharing



Phase 3: Regional Act 537 Plan Implementation (2026 and beyond)

- **Status =**
 - Assume Regional Act 537 Plan submitted to DEP in 2025 is approved
- **Action Items =**
 - To be determined
- **Challenges =**
 - Existing intermunicipal agreements
 - Unknown cost exposure / cost-sharing arrangements

Keys to Success

- Aggressive schedules require extensive intermunicipal cooperation
- Continued engagement with DEP
- Regional approaches will be most cost effective
- Significant planning and engineering required between now and 2025
- Public communication to drive understanding and support
 - Large capital investment required to meet the Region's long-term sewer capacity needs

Questions? Discussion