

## ***Definitions & Abbreviations***

### **SSO – Sanitary Sewer Overflow**

A condition in which untreated sewage is discharged into the environment prior to reaching sewage treatment facilities. In the Lehigh County Regional Wastewater System, most overflows are caused by excessive inflow of rain water during storm events.

### **Bypass & Outfall**

A bypass condition is one where untreated or partially treated wastewater is discharged into the environment in a planned manner to protect the collection system and treatment plant from damage when experiencing peak flows caused by a major storm event. At the regional wastewater plant located in Allentown, such bypasses were anticipated in the plant's design, and an "outfall" facility constructed decades ago as a permitted method to conduct such bypasses.

### **AO – Administrative Order**

An enforceable order by the USEPA requiring all municipalities and sewer authorities connected to the regional sewer system to take corrective action to eliminate sanitary sewer overflows (SSOs).

### **I&I – Infiltration & Inflow**

Terms used to describe the ways that groundwater and stormwater enter into the sewer systems.

- Infiltration is typically groundwater flow that seeps ("infiltrates") into sewers through sewer pipes and/or manholes.
- Inflow is typically stormwater that enters the sewer system through unauthorized connections such as roof drains and sump pumps, as well as through manholes and sewer lines.

### **RDII – Rainfall-Derived Infiltration & inflow**

The measurable increase in water flow in a sanitary sewer system that occurs during and after a storm event. By measuring the RDII through flow-metering programs, we can find the "leakiest" portions of the sewer system that need to be addressed.

### **WLSP – Western Lehigh Sewerage Partnership**

A partnership of nine municipalities and sewer authorities that have been working collaboratively on AO work since 2009. The WLSP is made up of the boroughs of Macungie and Alburtis, Upper Milford, Upper Macungie, Lower Macungie, Lowhill and Weisenberg townships, the Upper Macungie Township Authority, and Lehigh County Authority.

### **SCARP – Sewer Capacity Assurance & Rehabilitation Program**

The corrective action plan developed by the Western Lehigh Sewerage Partnership (WLSP) as a method of responding to the Administrative Order and tracking progress on eliminating Infiltration and Inflow.

### **SSES – Sanitary Sewer Evaluation Study**

Common terminology used in the wastewater field to describe methods of evaluating a sanitary sewer system for leaks. Elements of SSES work might include CCTV work, smoke testing, dye testing and visual inspections of facilities.

### **Smoke Testing & Dye Testing**

Ways of finding leaks in underground sewer lines. For smoke testing, non-toxic smoke is pumped into the sewer lines and the area is visually inspected to see where the smoke rises. Where smoke rises indicates a leak or an unauthorized connection. Dye testing is similar, with a non-toxic dye added to the sewer flow, and local streams and storm drains inspected to see if sewage is leaking out of the system somewhere it shouldn't be.

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**CCTV – Closed Circuit Television**  
**FEB – Flow Equalization Basin**  
**MG – Million Gallons**  
**LF – Linear Feet**  
**WLI – Western Lehigh Interceptor**

**USEPA - United States Environmental Protection Agency**  
**PA-DEP – Pennsylvania Department of Environmental Protection**  
**KIWWTP/KITP – Kline's Island Wastewater Treatment Plant**  
**NPDES – National Pollutant Discharge Elimination System**  
**KISS – Kline's Island Sewer System**