

U.S. ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT

Hatfield Borough Sewer Collection Improvement Project

- **Authority:** Section 566 of WRDA 1996
- **Non-Federal Sponsor:** Hatfield Borough, Montgomery County, Pennsylvania
- **Date of Agreement:** 24 September 2009
- **Construction Date:** Fall 2010-Summer 2011
- **Designed By:** Bursich Engineers, Inc.
- **Constructed By:** National Water Main Cleaning Co.
- **Total Project Cost:** \$400,070
- **Non-Federal Share:** 25%
- **Construction Cost:** \$344,308



Under authority of Section 566 of the Water Resources Development Act of 1996, as amended, the U.S. Army Corps of Engineers (Corps) provided design and construction assistance to Hatfield Borough, Montgomery County, Pennsylvania to minimize inflow and infiltration into the existing sanitary sewer system. The local community provided project designs, contracting and project management assistance. The Corps provided project review and environmental documentation.

Inflow and infiltration (I&I) affects the volume of wastewater requiring treatment, the capacity of the Borough's existing sewer infrastructure, the allowable capacity purchased from the Hatfield Township Sewer Treatment Plant (STP) and ultimately the rate businesses and residents pay to operate and maintain the system.

The Borough purchases from Hatfield Township an average monthly flow of 750,000 gallons per day (gpd) with a corresponding peak day purchase of 1,590,000 gallons. The Borough has exceeded both capacity purchase limits during significant daily rain events (Peak Day) and during extended wet weather periods (Monthly). Monthly average flows have been as high as 832,000 gpd and daily flows have reached as high as 1,693,000 gallons.

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- **Project Goals:** The goal of this project is to minimize or eliminate the inflow and infiltration of ground and storm water into the existing sewer infrastructure, reduce the average monthly and peak flows within the sewer system during wet weather events, and to improve the overall environmental quality within Hatfield Borough and the surrounding communities.

The project replaced or repaired existing sewer laterals that feed residential structures into the main sewage collection system for the Borough. When feasible, sewer lateral lines were repaired through pipe relining. Pipe relining involves using an epoxy relining substance to create a mold within a damaged pipe to seal cracks and leaks and prevent inflow and infiltration. However, when damage to the existing lateral was too severe to repair through this process, the existing laterals were excavated and replaced with new pipe.

In addition to the relining, the contractor installed a new trap and vent assembly for each property impacted by this project. This effort modernized the connection between the main stem and each lateral to allow for easier access and cleaning in the future.

