

Town of Stoughton

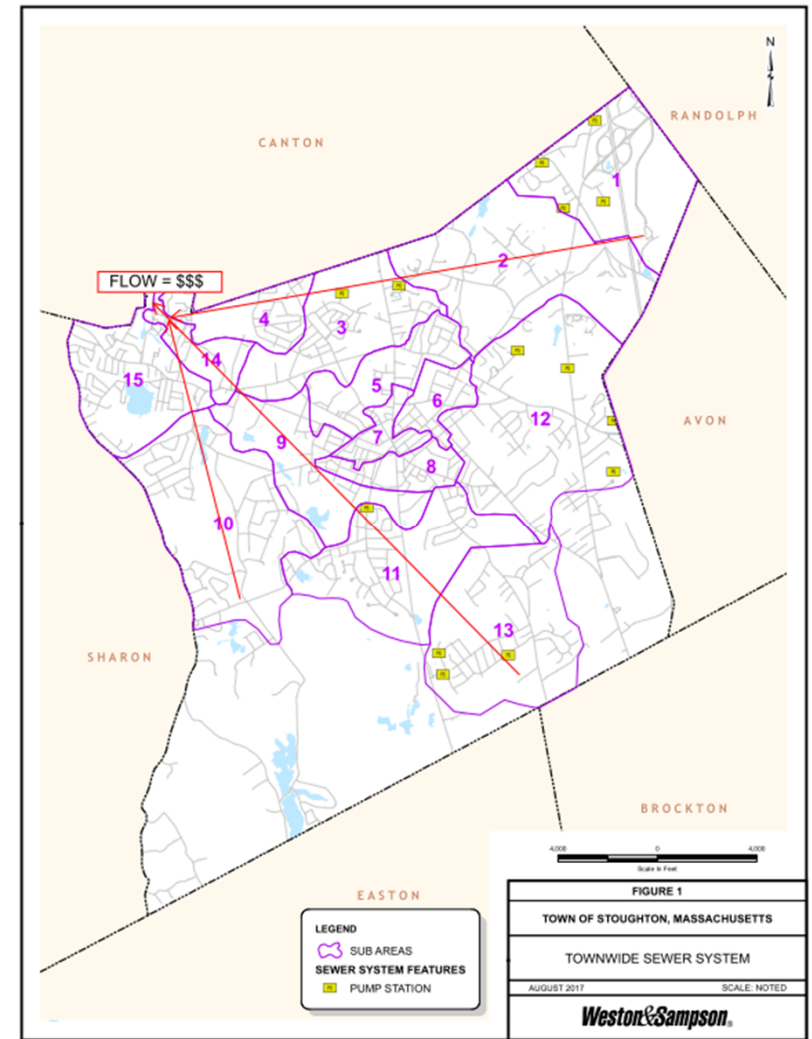


Annual Inflow & Infiltration (I/I) Program

February 9, 2025

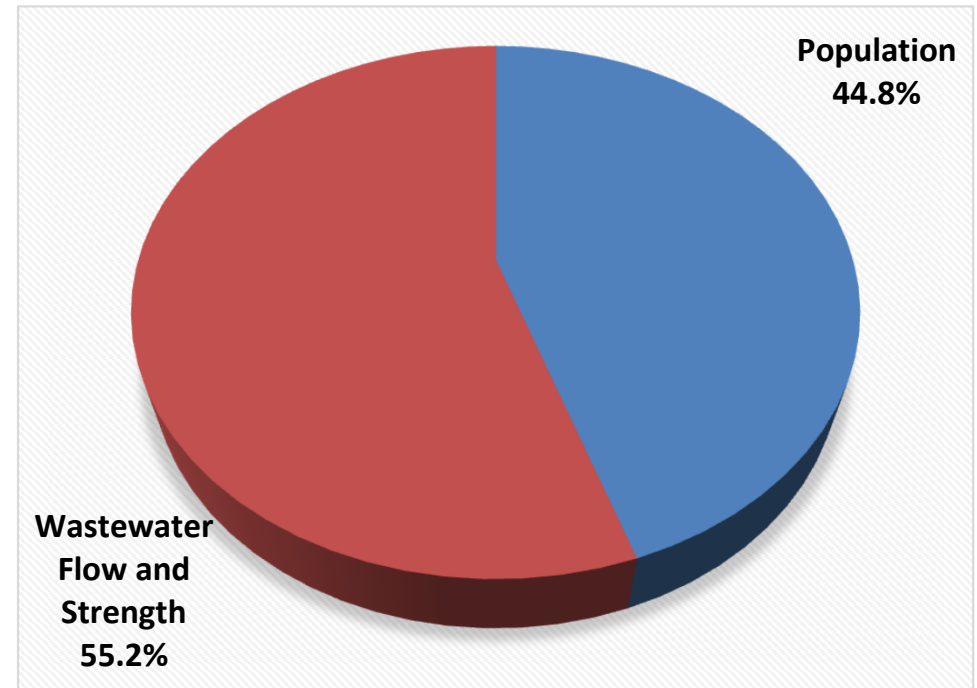
Stoughton's Sewer System

- 472,000 linear feet of gravity sewer and 2,700 manholes
- 3.22 MGD of Average Daily Flow (ADF)
- 1.85 MGD of Daily Water Demand
- 1.37 MGD of Average I/I (3.22 MGD – 1.85 MGD)
- Wastewater discharges to Massachusetts Water Resource Authority (MWRA)
- Annual I/I Program aims to inspect the entire system every ten years



Stoughton's Flow Charges

- MWRA charges for conveyance and treatment of wastewater
- FY24 charge = \$5,714,438
- Annual I/I Program aims to reduce town-wide wastewater flow



Inflow

- Rainwater and surface runoff enters the sewer system



Depressed manhole cover with holes

Inflow Sources

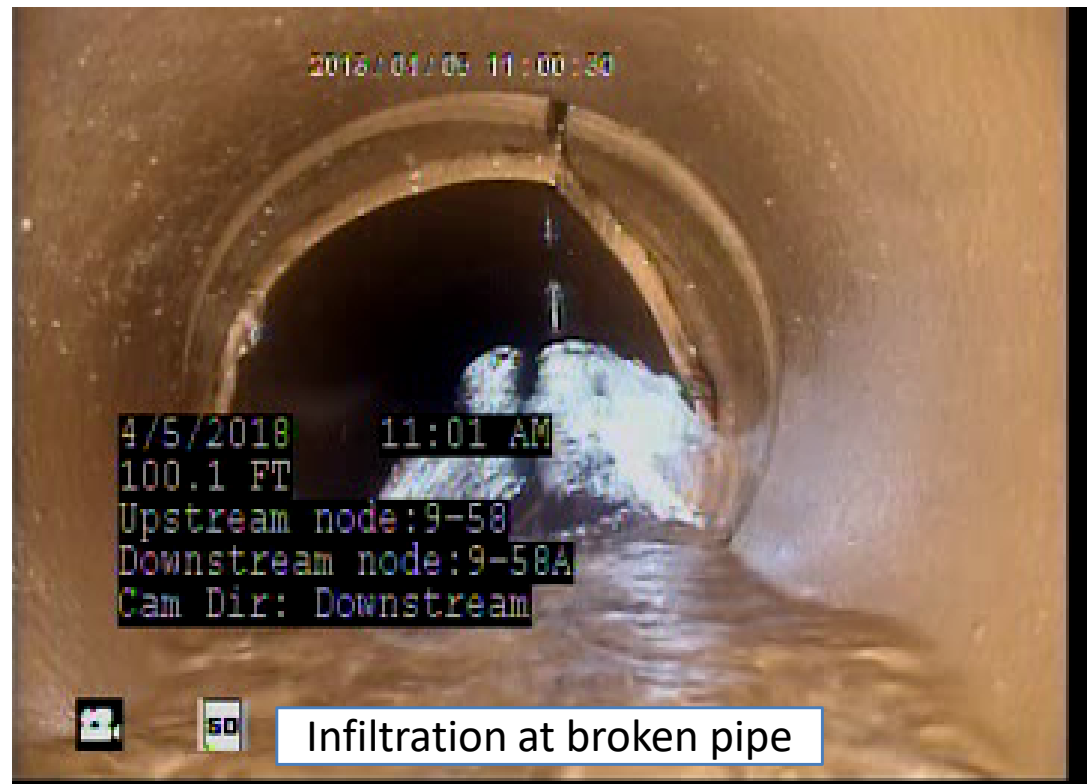
- Catch basins
- Cross connections between sewer and drain
- Manhole covers
- Sump pumps and clean-outs
- Driveway drains and roof leaders
- French drains tied into sewers



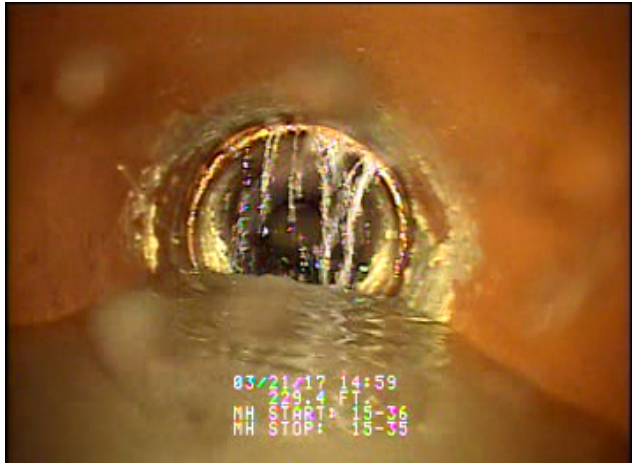
Infiltration Sources

Infiltration is ground water that enters the sewer system through sources including:

- Defective pipes
- Open joints
- Manholes
- Service connections



Infiltration: Before & After



Greenwood Avenue

← Before: Open Joint

After: CIPP →



Clapp Street

← Before: Service Defect

After: Lateral Sealing →



Infiltration: Before & After



Greenbrook Drive

← Before: Defective Pipe

After: CIPP →



Central Street

← Before: Leaking Manhole

After: Manhole Sealing and
Cement Lining →



PROACTIVE RATHER THAN REACTIVE

Stoughton's Role = Significant \$ Savings

Proactive sewer department

- Know their system well
- Performs cleaning and television inspection
 - Entire system cleaned every three years
- Perform dig repairs
- Yearly easement clearing



Annual I/I Program's Identify This...

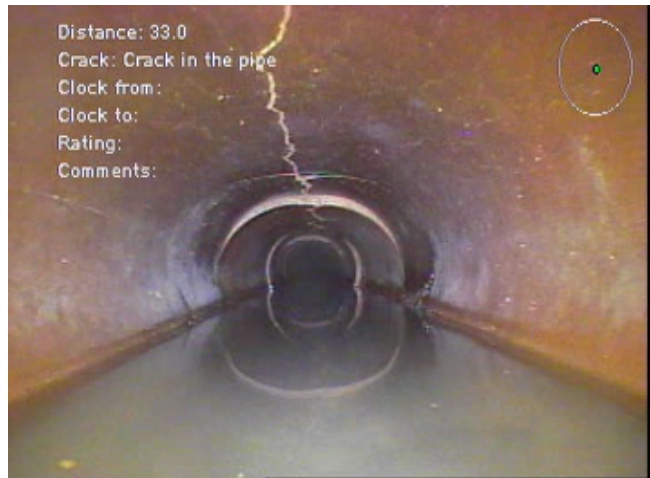


Before This!



Complete structural failure = Collapsed pipe

Structural Rehabs: Before and After



Kinsley Street

← Before: Defective Pipe

After: CIPP →



Central Street

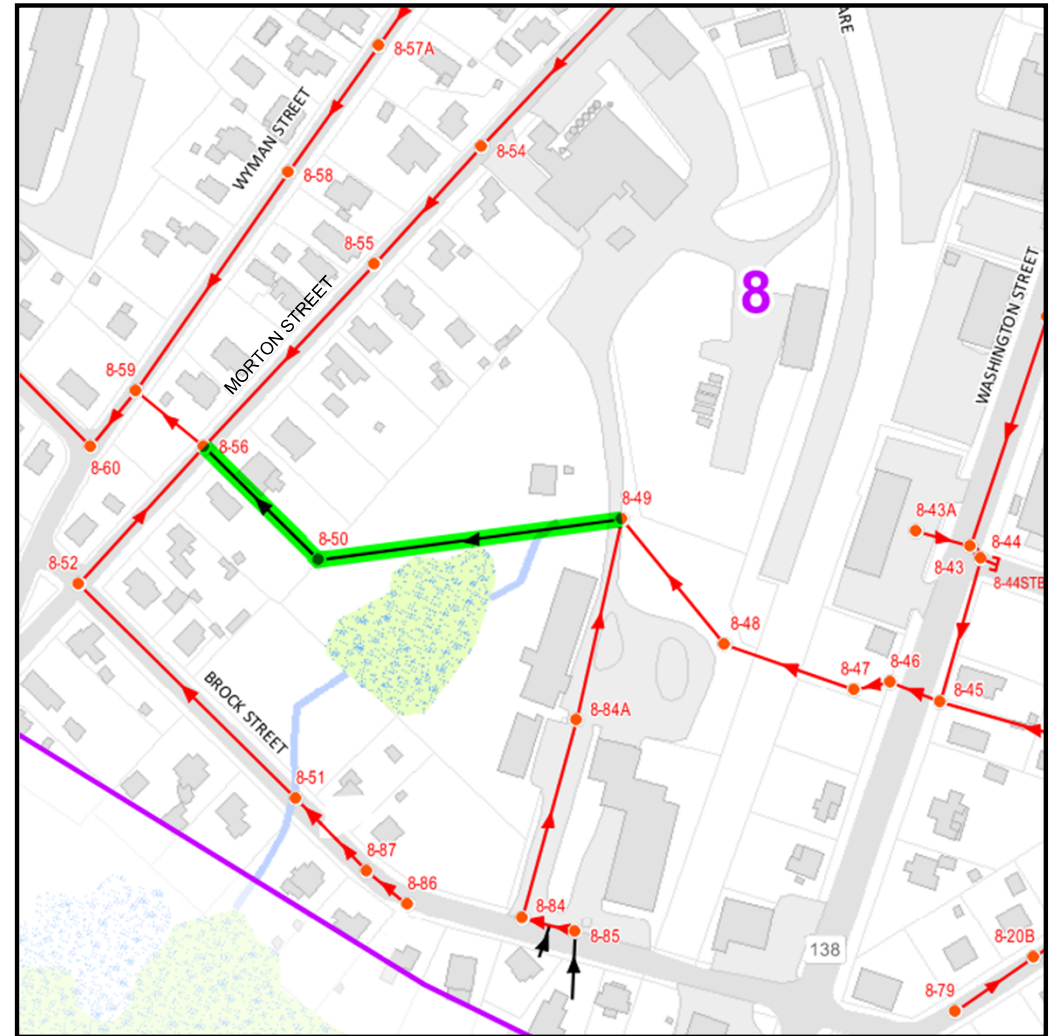
← Before: Cross Bore

After: Removed →



Morton Street Easement

- Town Savings (\$40K vs. \$400K)
- Minimal impact on environment
- Trenchless rehabilitation
- Critical 560-foot, 12-inch diameter interceptor pipe with surrounding wetland resources



Morton Street CIPP



↑ Severely damaged pipe = reduced cross-sectional area and potential structural failure ↑

↓ CIPP rehabilitation = restored structural integrity and improved cross sectional area ↓



Results

- Stoughton's aims to reduce their MWRA flow share each year
- Zero-sum game
- Stoughton vs. all MWRA Communities
- Need to keep up with everyone else or fall behind
- Comply with DEP 314 CMR 12.00 I/I Control Plan



Stoughton Water Works Building
1748 Central Street

Questions?