

RANDOLPH'S WATER SYSTEM HISTORY, WORK COMPLETED AND UNIDIRECTIONAL FLUSHING PROGRAM



Water System History and Overview

- Public water system began in 1885.
- System has approximately 115 miles of water mains, ranging in size from 6" to 24".
- System has over 1,000 gate valves and 1,050 hydrants.
- System services approximately 9,300 customers.

Municipal Responsibility - Supply

- Tri-Town - Braintree, Randolph & Holbrook



Municipal Responsibility - Treatment

- Joint Board - Randolph & Holbrook



Municipal Responsibility - Storage

- Joint Board - Randolph & Holbrook



Oak Grove Road - 1960

Height = 120 ft

Diameter = 38 ft

Capacity = 1 MG



South Main Street - 1887

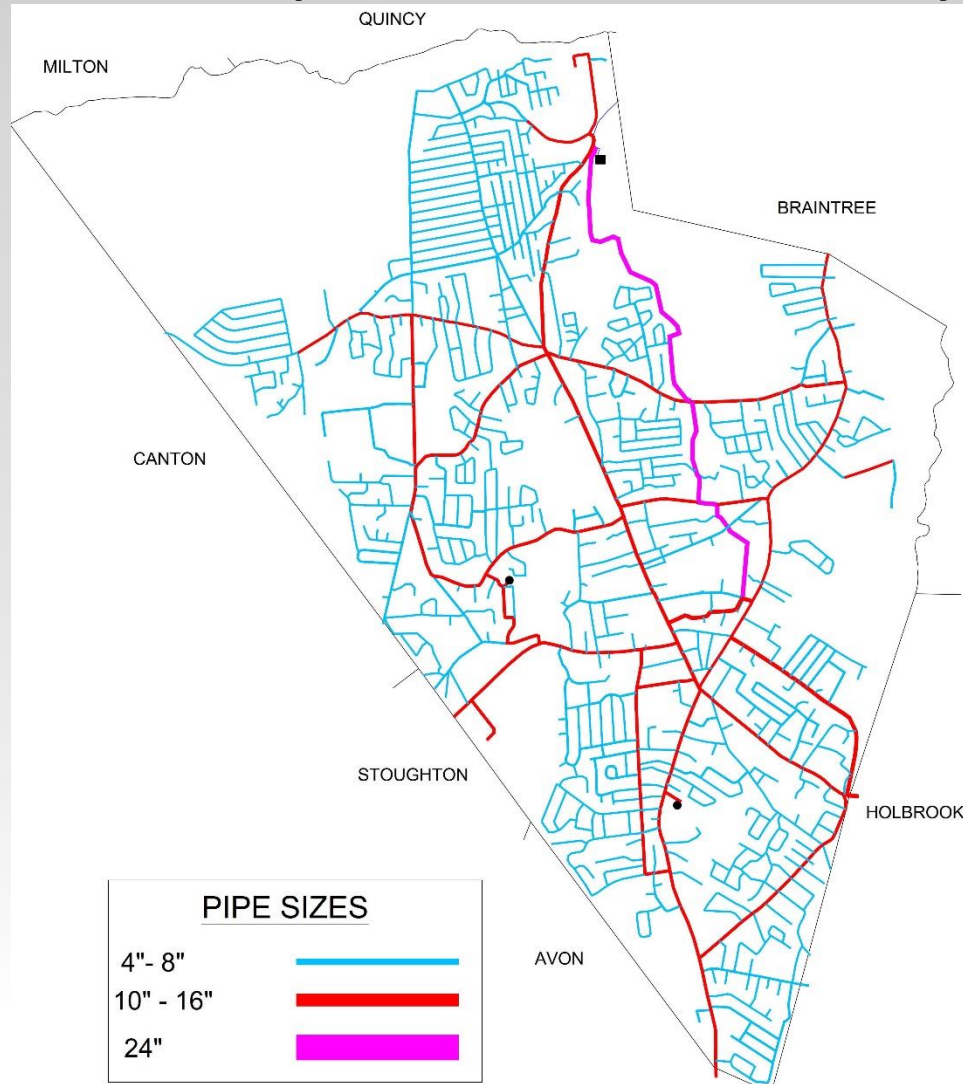
Height = 125 ft

Diameter = 30 ft

Capacity = 700,000 gallons

Municipal Responsibility

- Town of Randolph – Distribution System



Unlined Pipe



Unlined vs. Lined



Before



After

*Plainville, MA highlighted inside
Norfolk County*

OVERVIEW OF WORK COMPLETED



5-Year Capital Improvement Plan

- **5-Year CIP funded by the Town for \$5.5 Million**
- **Between 2001 and 2005:**
 - Cleaned and Lined 24,500 linear feet of 8” – 12” Water Mains
 - Replaced 23,250 linear feet of 8” – 12” Water Main
 - Created a System-Wide Water Model

*Plainville, MA highlighted inside
Norfolk County*

SRF Loans and ARRA Grants

– 2007: \$8 Million Appropriated

- Cleaned and Lined 12,500 linear feet of 8" – 12" Water Mains
- Replaced 33,000 linear feet of 8" – 12" Water Main

– 2009: \$4 Million Appropriated

- Cleaned and Lined 18,000 linear feet of 6" & 8" Water Mains
- Replaced 10,000 linear feet of 8" Water Main

*Plainville, MA highlighted inside
Norfolk County*

SRF Loans and ARRA Grants

– 2011: \$6 Million Appropriated

- Cleaned and Lined 11,000 linear feet of 14" Water Mains and 5,000 Linear feet of 6" Water Mains
- Replaced 16,000 linear feet of 8" Water Mains

– 2014: \$5.5 Million Appropriated

- Cleaned and Lined 18,000 linear feet of 6" & 8" Water Mains
- Replaced 10,000 linear feet of 8" Water Main

*Plainville, MA highlighted inside
Norfolk County*

3-Year Capital Improvement Plan

- 3-Year CIP funded by the Town for \$6 Million
- Between 2015 and 2017:
 - Cleaned and Lined 35,000 linear feet of 6" Water Main

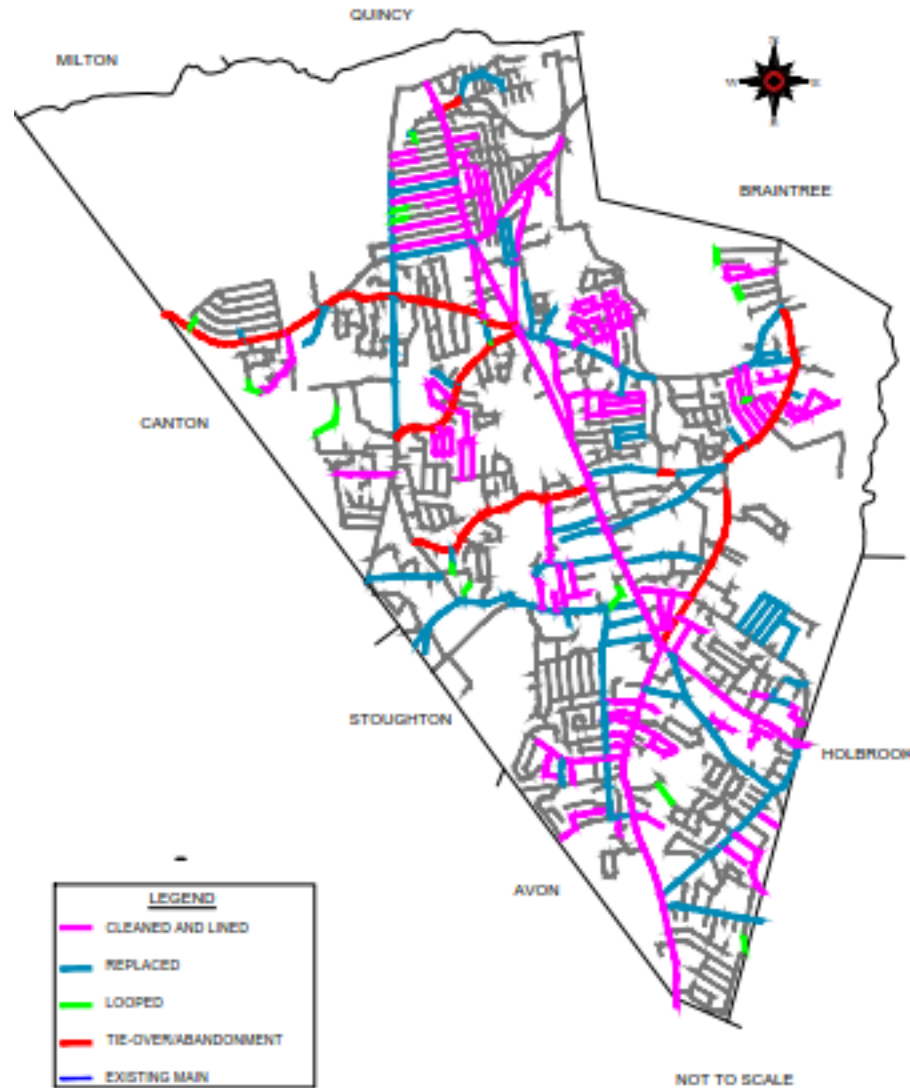


Completed Improvements

- **\$35 Million in Improvements**
- **Between 2001 and 2021:**
 - 120,000 Linear Feet of Cleaning and Lining
 - 92,250 Linear Feet of Water Main Replacement
 - 30,000 Linear Feet of Water Main Transfer
 - 10,000 Linear Feet of Water Main Looping

*Plainville, MA highlighted inside
Norfolk County*

Completed Improvements



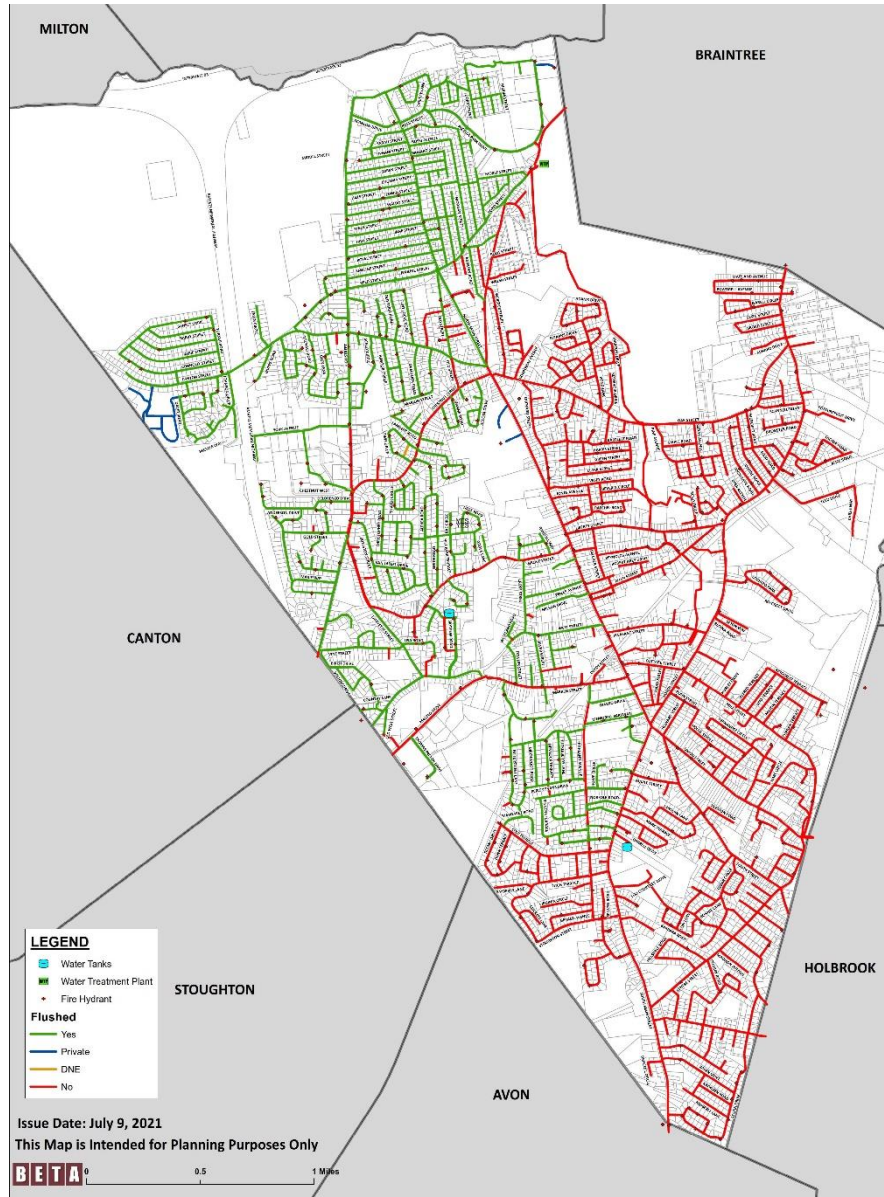
Flushing Program

- Unidirectional Flushing (UDF) is a method of cleaning water distribution pipes in order to improve water quality and operations, improve service standards, and restore capacity.
- Unidirectional flushing is a more effective way of cleaning than conventional flushing and uses an average of about 40% less water. UDF isolates each pipeline to create flow in a single direction to quickly and efficiently clean the pipe network.

Flushing Program

- Randolph developed a 5-Year UDF Program that began in the Fall of 2020 and continued in the Spring of 2021.
- The first two years of the program have been completed, with plans to continue with Year 3 in the Fall of 2021.
- While flushing, tuberculation and other sediment is forced out through open hydrants. During this process, it is normal to have occasional dirty water at services along the main being cleaned.
- [Unidirectional Flushing Town of Randolph, MA PSA 1](#)

Flushing Program



Questions?