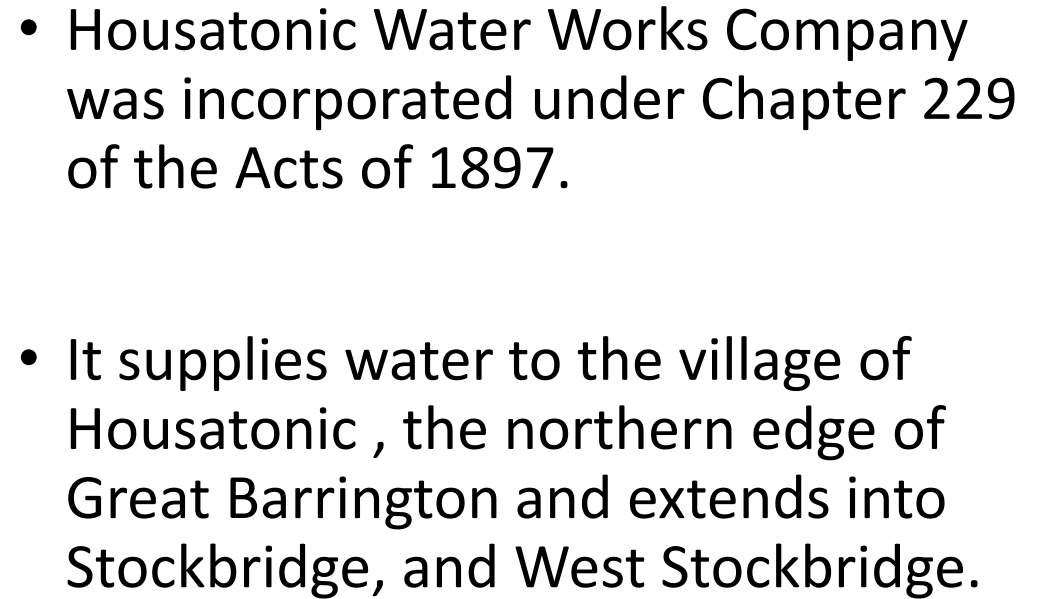




HOUSATONIC WATER WORKS COMPANY
Since 1897

INFORMATIONAL MEETING
AUGUST 13, 2020



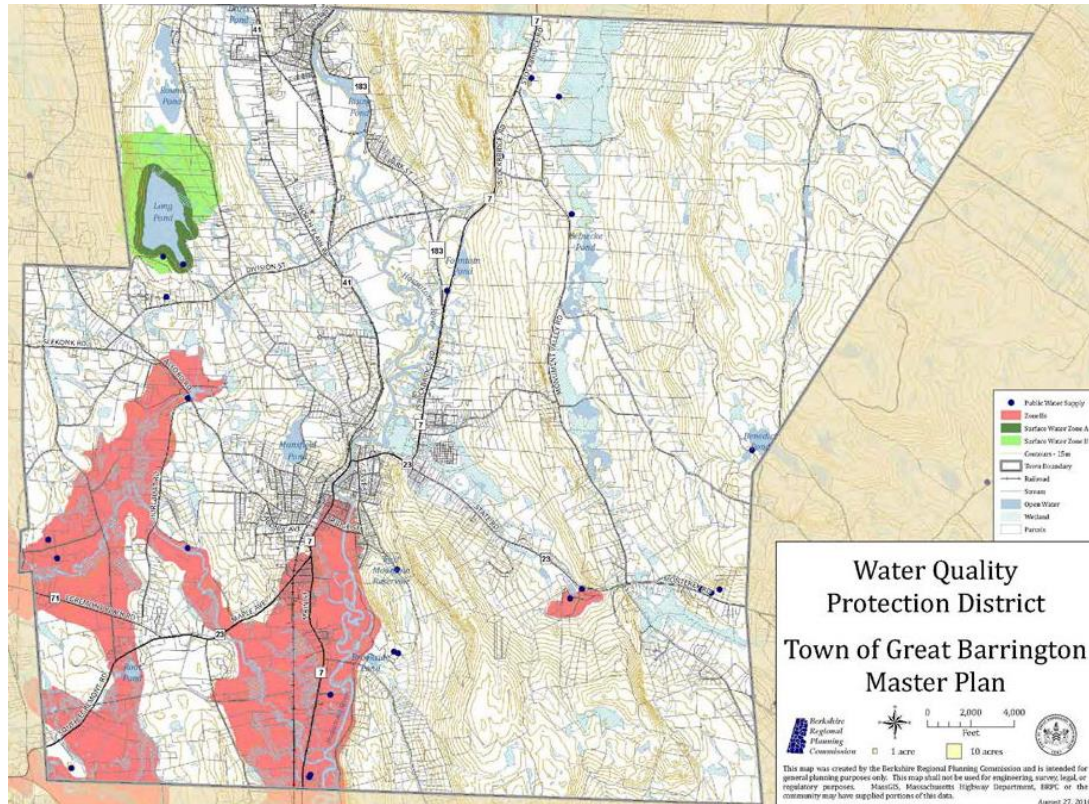
- Housatonic Water Works Company was incorporated under Chapter 229 of the Acts of 1897.
- It supplies water to the village of Housatonic , the northern edge of Great Barrington and extends into Stockbridge, and West Stockbridge.

Water Supply



- Long Pond is a natural pond located in the foothills of Tom Ball Mountain
- Its surface area is approximately 115 acres.
- It's fed from snow melt, surface runoff, precipitation, and bottom springs. Unlike many water supplies that are fed via river/streams.
- 563 acre watershed
- 300 million gallon reservoir
- maximum safe yield of 600,000 gallons per day

Watershed Protection

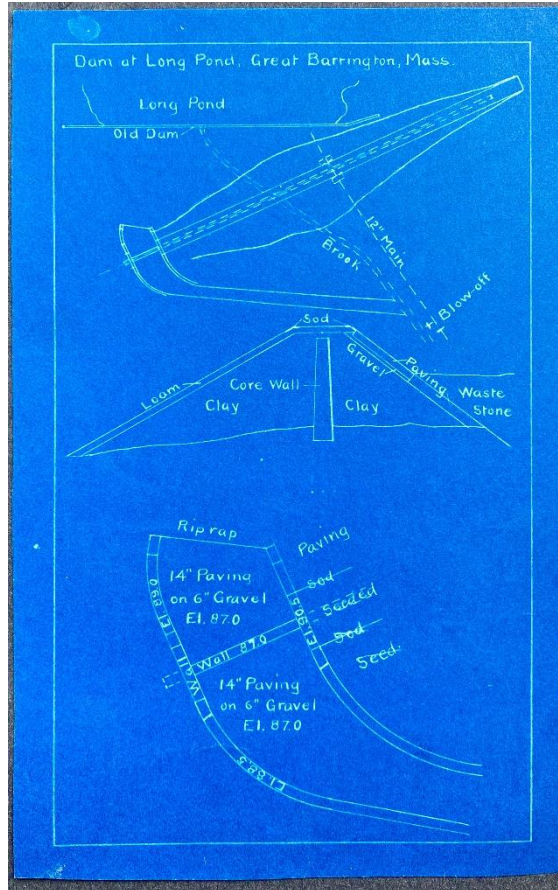


- Source protection is important for maintaining and managing the quality of drinking water.
- Housatonic Water Works has taken actions including developing a protection plan to minimize threats to our supply.
- Additionally Great Barrington has developed a water quality protection district to further protect all water supplies within the Town.

Schematic Diagram



The Dam at Long Pond



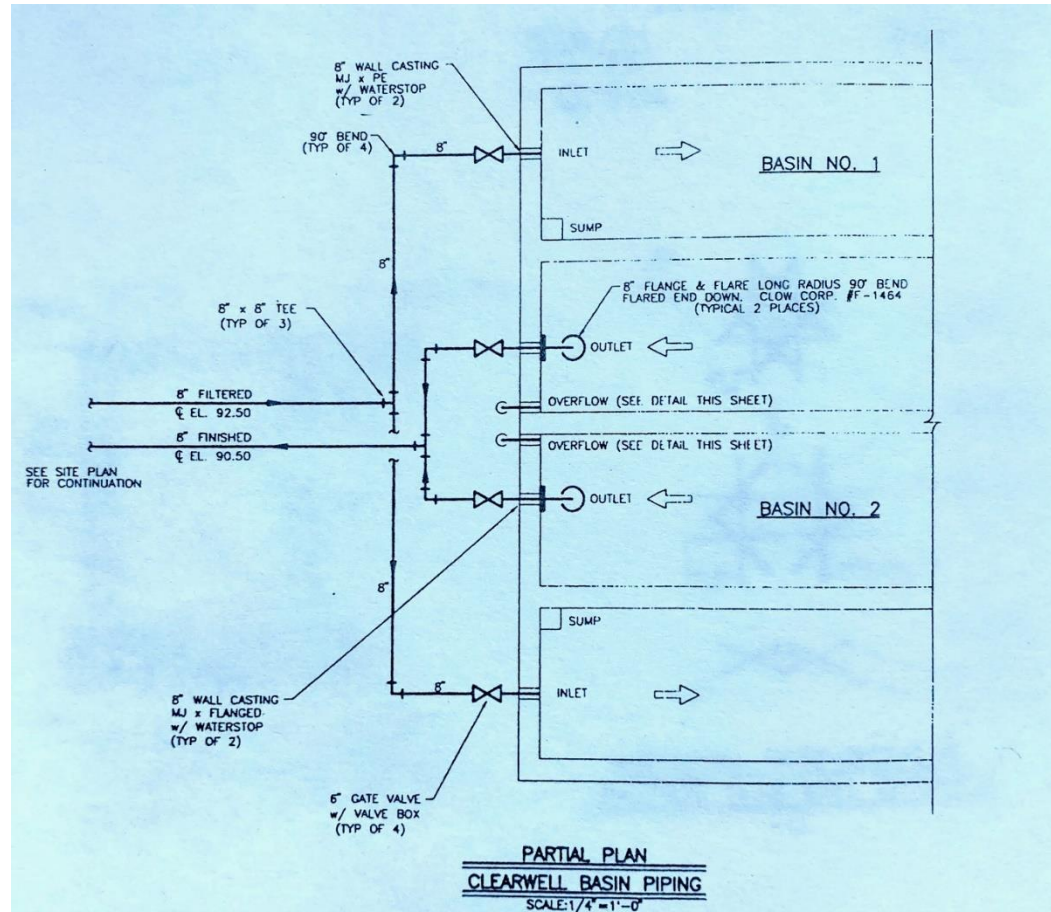
- Constructed in 1902 to enlarge the reservoir.
- It consists of a concrete core and earthen embankment approximately 201 feet long and 16 feet high.
- An 8-inch dam and gate valve are located approximately in the center of the dam. Intakes for the filtration system are located along the left abutment contact.
- The downstream face is benched and extends about 60 feet from the crest of the dam.
- The crest of the dam is about 2.5 feet above the concrete sill of the spillway and varies in width from 13 feet to 15 feet.

Slow Sand Filtration



- Slow sand filtration is used due to it being simple, reliable, and a proven method for small communities.
- Water from the reservoir is transferred using gravity to a large chamber.
- The base of the chamber consists of multiple layers in the following order (top to bottom) fine sand, small gravel, large gravel.
- Natural, biological processes are relied upon to remove impurities and disease-causing bacteria. This reduces dependency on chemicals and additional energy.

Treatment Facility and Clearwell



- Water is gravity fed through the treatment facility where testing is performed and chlorine, a disinfectant, is added to the water.
- After adding chlorine, the water flows to a two-cell, baffled concrete tank known as a 'Clearwell'
- Once disinfected, the treated water is pumped to the storage tank.

Water Quality Monitoring



December 16, 2019 **MADEP Drinking Water Program: Water Quality Sampling Schedule** Page 1 of 3

PWS ID: **1113003** PWS Name: **HOUSATONIC WATER WORKS** City/Town: **GREAT BARRINGTON**
 Schedule of Required Water Quality Sampling For the Years: **2020** To **2022** Popl.: **1391** Class: **COM**

BACTERIA SAMPLING

Refer to your Coliform Monitoring Plan for approved Coliform Sample locations.

Raw Water: Additional Bacteria Sampling is Required from Each Treated and/or Disinfected Source.

Location ID #	SAMPLE LOCATION	MULT/SIN	R/F	D/S	WAIVER Y/N	2020				2021				2022					
						QTR1	QTR2	QTR3	QTR4	QTR1	QTR2	QTR3	QTR4	QTR1	QTR2	QTR3	QTR4		
ASBESTOS																			
10001	15 COMSTOCK LANE	S	F	D												X			
BACTERIOLOGICAL ANALYSIS																			
POE	POINT OF ENTRY BACTERIA TESTING	S	F	D	One or more distribution system coliform samples will be representative of the entry point of the distribution system.														
BACTERIOLOGICAL ANALYSIS * Raw Water Bacteria Sample in addition to Distribution Samples																			
RW1	LONG POND RAW WATER 1113003-01S LONG POND (01S)	S	R	S		M	M	M	M		M	M	M	M		M	M	M	
GROSS ALPHA PARTICLE ACTIVITY																			
10531	POINT OF ENTRY POST TREATMENT 1113003-01S LONG POND (01S)	S	F	S		[Next Sampling due in 2024]													
HALOACETIC ACIDS --Beginning in 2013, all Stage 2 Samples shall be taken during the second week of the month indicated.--																			
10003	10 DEPOT ROAD	S	F	D		FEB	MAY	AUG	NOV		FEB	MAY	AUG	NOV		FEB	MAY	AUG	
INORGANICS * includes Sodium																			
10531	POINT OF ENTRY POST TREATMENT 1113003-01S LONG POND (01S)	S	F	S	N			X					X				X		
IRON																			
10531	POINT OF ENTRY POST TREATMENT 1113003-01S LONG POND (01S)	S	F	S			X					X					X		
RW1	LONG POND RAW WATER 1113003-01S LONG POND (01S)	S	R	S			X					X					X		
LEAD & COPPER SCHOOL SAMPLING																			

R/F = RAW OR FINISHED WATER; D/S = DISTRIBUTION OR SOURCE SAMPLE Waiver: (A)pplied, (Y)es, or (N)o M = Monthly Testing Required
 **Three letter abbreviations indicate required sampling months.
 This monitoring schedule is based on the system's current inventory and is subject to change. Water systems are responsible for promptly reporting schedule errors or omissions.
 Errors or omissions on monitoring schedules do not prohibit the MassDEP from enforcing monitoring requirements set forth by the Regulations.

- Daily –
 - Chlorine
 - Turbidity
 - pH
 - Temperature
- Every other week –
 - Water Quality - three locations
Treatment Plant, North Plain Road,
Park Street
- Monthly –
 - Independent lab tests for bacteria
- Annually –
 - Consumer Confidence Report

1 Million Gallon Storage Tank



- Constructed in 1997
- Pre-stressed concrete.
- 40 feet in height and 65.5 feet in diameter.
- Located 650 feet northeast of the filter plant, stores finished water

Types of Pipe



Cast Iron Water Pipe



Ductile Iron Pipe



Galvanized Pipe



Copper Pipe



Plastic Pipe



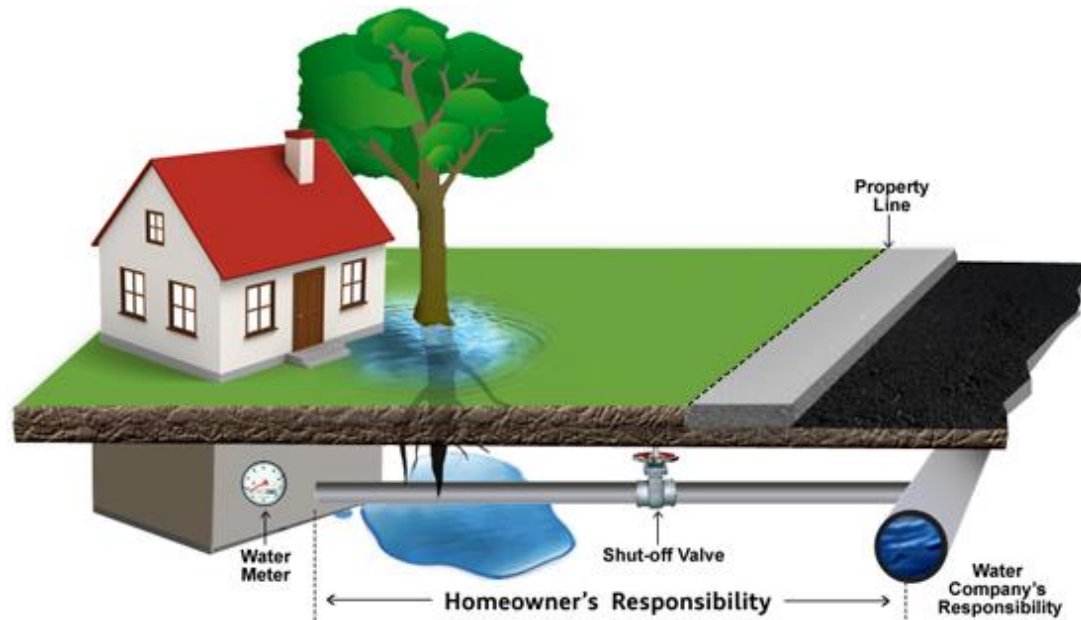
Distribution System



Cast Iron Main Installation on Pleasant Street *circa 1900*

- The distribution system is comprised of 16.65 miles of pipe and:
 - Housatonic (759 services)
 - Stockbridge (23 services)
 - West Stockbridge (66 services).
 - 79 Hydrants and Blow-offs
- The majority of the mains are over 100 years old, and made of unlined cast iron pipe.
- Approximately 14,140 feet of the distribution system mains have been upgraded over the past 30 years.

Distribution Mains & Service Lines



- Distribution mains are typically larger than service lines and generally follow the town streets.
- Service lines carry water from the distribution main to the building, house or property being served.
- Most homes built before 1960 have some service lines or galvanized plumbing.

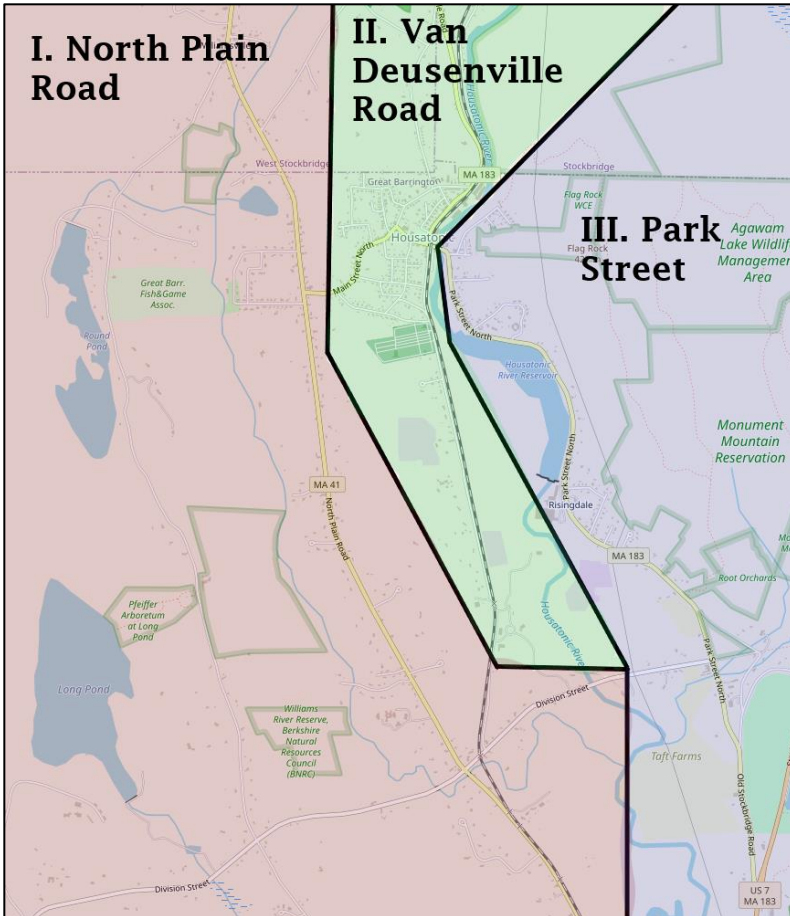
Private Mains



The water mains that service these areas are privately owned and not maintained by Housatonic Water Works:

- Brookside Court
- Crimson Lane
- Grant Lane
- Nolan Drive
- Rachael's Way
- Ramsdell Road
- Spruce Street
- Walnut Street
- Wright Lane

Unidirectional Flushing



Section I

- Consists of the transmission main running from the reservoir to the Division Street/North Plain Road, extending to the West Stockbridge Williamsville area.

Section II

- Consists of the Van Deusenville Road/downtown core, and extends to the Stockbridge Furnace area

Section III

- Consists primarily of Park Street from Ramsdell Road on the south to the Park Street bridge in the north.

When Section I is being flushed, the transmission line to Section II at the intersection of North Plain Road and Main Street is shut off to provide unidirectional flushing. Likewise, when Section II is flushed, the North Plain Road and Main Street valve is closed, and the valve line at the Park Street Bridge is closed. Similarly, Section III is isolated from Sections I and II. Blow offs on secondary streets in each section are conducted upon completion of the primary lines in each section.

Discolored Water and Other Questions



- **Why is my water colored?**

Water main breaks, water system maintenance, firefighting activities, extremely high system demand or other activities, including unauthorized use of fire hydrants, can increase the speed at which water travels through water mains. When this occurs, iron sediment in mains may get stirred up, temporarily resulting in discolored water.

- **Is it safe to drink?**

Discolored water caused by iron and is safe to drink. Understandably, you may prefer to wait until it clears before using it.

- **What should I do?**

Run a cold water faucet at the lowest level of the house for a few minutes or try running the cold water in the bath tub. If the water does not clear, wait an hour or two and repeat the process. After the water clears, flush the cold water faucets throughout the house.

- **Why does the pressure seem low?**

When we are flushing the system water pressure decrease substantially. This is particularly true for side streets and homes located on one of the many hills in town. Firefighting and industrial use may also affect pressure. Also check the faucet screens or aerators for trapped sediment. If you still have low water pressure, please contact us.

Discolored Water and Other Questions



- **Can I use my washing machine?**

Please wait until the water clears before using the washing machine. This will help avoid laundry stains.

- **Can plumbing affect my water quality?**

Many older homes were built with galvanized plumbing and service lines. As they deteriorate water quality issues can arise. As the galvanized lines deteriorate corrosion can also constrict the flow of water through the pipes. Iron sediment and discolored water can result.

- **What should I do if I see water in my yard/on my property?**

If you see bubbling water or have standing water contact us. We will help determine the cause and the appropriate course of action.

- **What if the water leak is not my service line?**

If the leak is on the company-owned water main and not your service line, we will make all necessary repairs and restore the site to the original conditions.

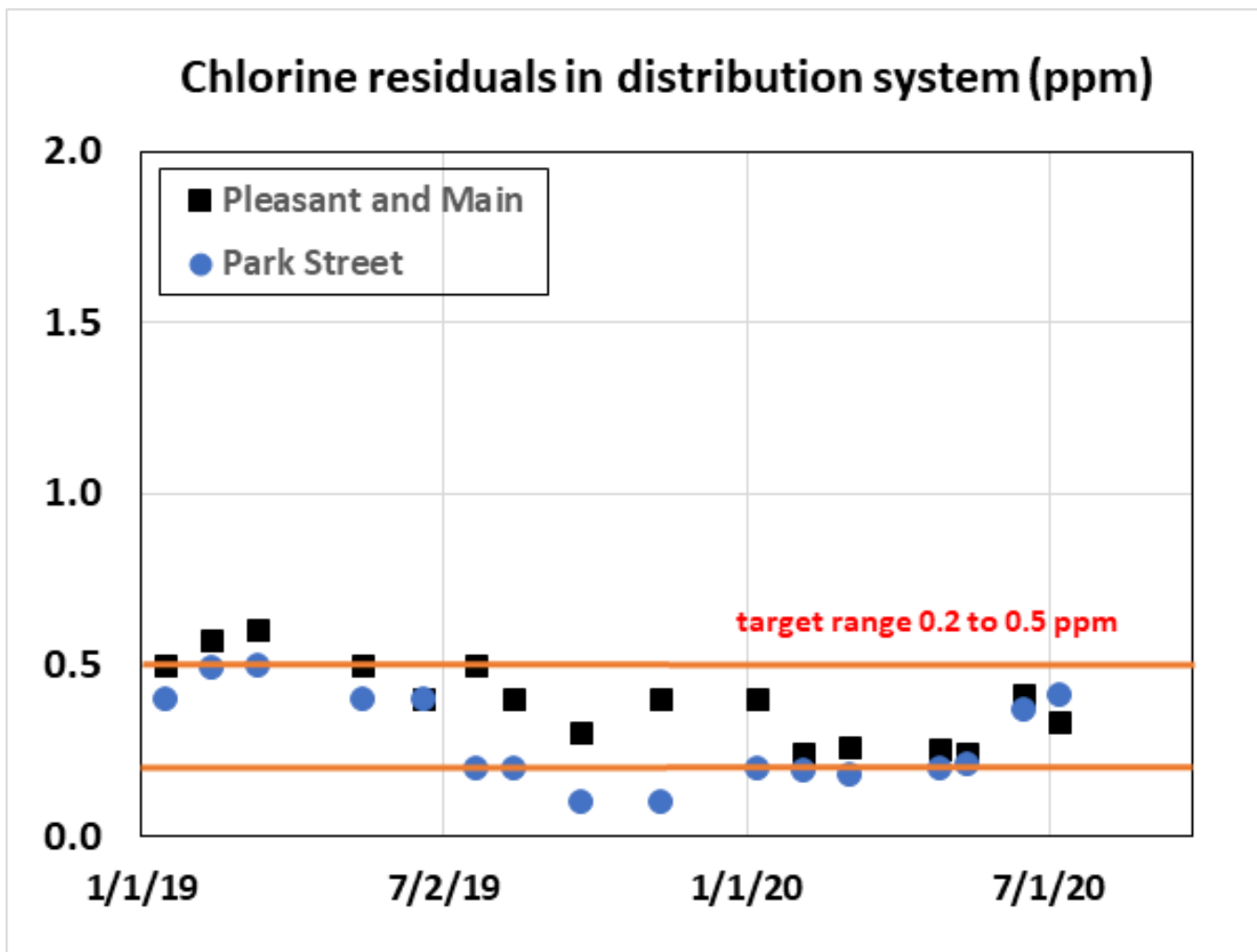
If the leak is from the water service line, the customer is responsible for those repairs.

Chlorine

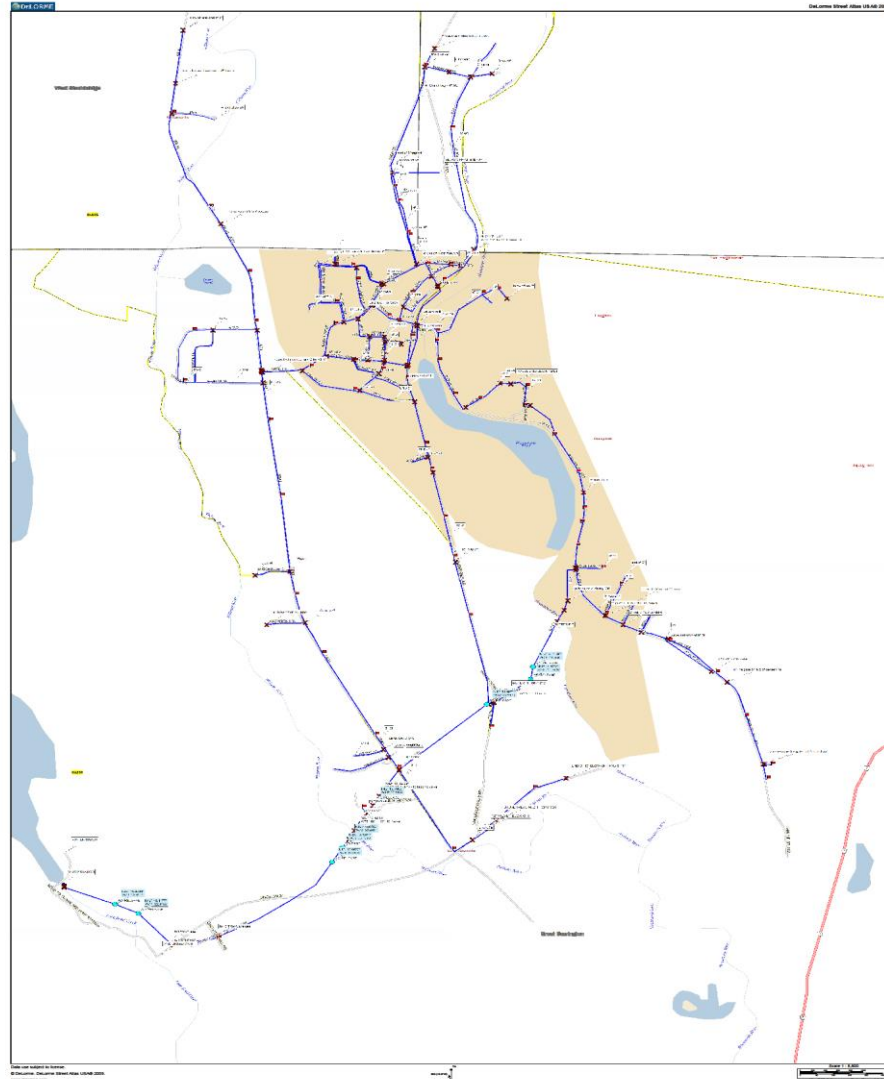


- Disinfection reduces pathogenic microorganisms in the water to levels designated safe by public health standards. This prevents the transmission of disease.
- Chlorine is so important for maintaining healthy drinking water supplies, the U.S. EPA requires treated drinking water to contain a detectable level of chlorine – a chlorine residual – to help protect against germs all the way to the consumer's tap. The loss of chlorine residual makes distribution systems vulnerable to microbial contamination.

Chlorine Residual Data



Distribution Map



Action Plan



- I. Short Term:
 - A. Proactive flushing (to periodically clean pipes prior to occurrence of any problems)
 - B. Reactive flushing (in response to colored water incidents)

- II. Mid Term:
 - A. Corrosion Control Study - Housatonic Water has hired the Cornwell Engineering Group, an environmental engineering consulting firm with expertise in corrosion control chemistry to evaluate and recommend a long-term solution
 - B. Eliminate duplicate cast-iron mains in the Prospect Street and High Street sections

- III. Long Term:
 - A. Replace cast-iron mains
 - B. Conduct a feasibility study to examine the potential for a new transmission line from Long Pond to the center of town, and an additional water tower in the center of town