

ADDRESS UTILITY INFRASTRUCTURE

Overview

This “briefing booklet” has been prepared as part of the process of preparing an update to the 2008 Plan of Conservation and Development (POCD) for Branford. This booklet is intended to familiarize the members of the POCD Update Committee and others existing and potential future strategies related to utility infrastructure.

What Is “Utility Infrastructure”?

In the Plan of Conservation and Development, utility infrastructure refers to utility services such as:

- piped utilities (public water, public sewer, storm drainage, and natural gas),
- wired utilities (electric, telephone, and cable), and
- wireless services (communications).

The availability and/or capacity of utility infrastructure should serve the needs of the community and the desired community structure. However, utility infrastructure should not, by itself, dictate community structure or density patterns. Utility services should help us create the community we want Branford to be.

Public Water



Public Sewer



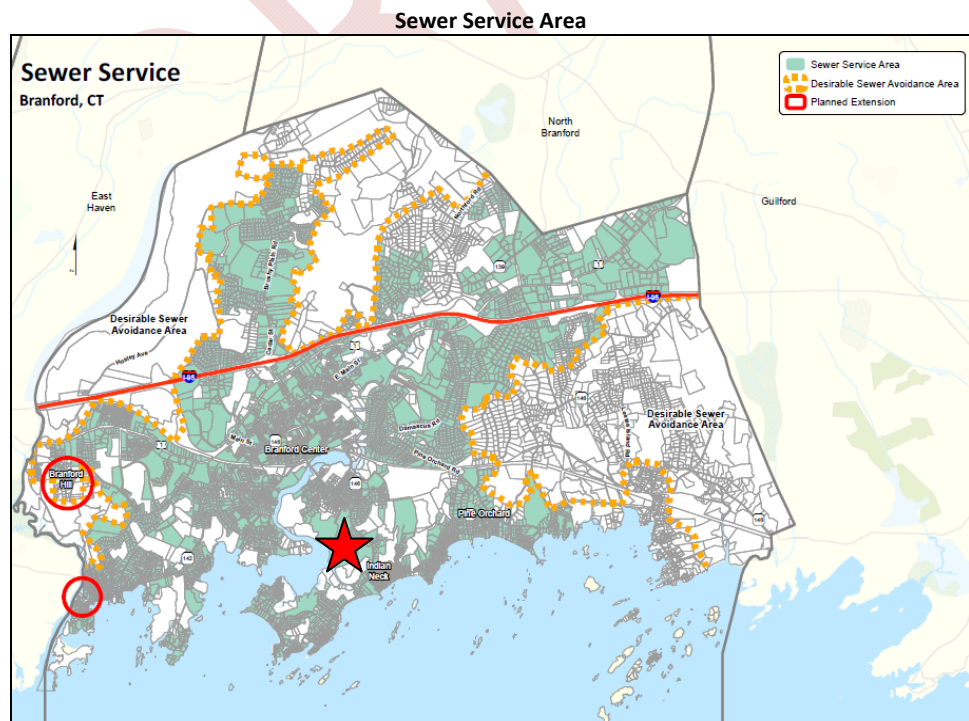
Background

Inventory / Assessment

PIPED - Public Sewer - The Town of Branford operates a sewage collection and treatment system that serves approximately 85 percent of the households and approximately 90 percent of existing commercial and industrial areas in Branford. Through an inter-local agreement, sewage treatment is also provided to North Branford.

The system consists of over 125 miles of sewers and about 50 pump stations that collect sewage and convey it to the Water Pollution Control Facility on Block Island Road. The treatment facility has been expanded and improved over the years and treats about 3.5 million gallons per day (plant capacity is about 4.9 MGD). After treatment, effluent from the plant is discharged to the Branford River and ultimately Long Island Sound. Effluent from the treatment plant has consistently met state and federal standards.

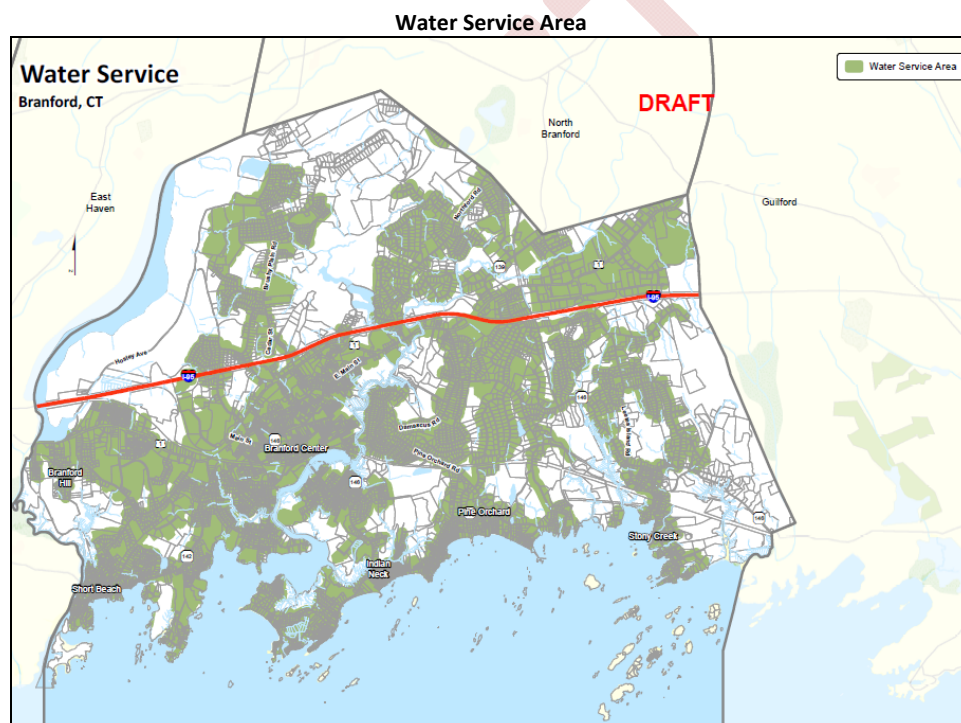
The sewer system is expected to have adequate capacity to meet community needs during the planning period. Sewer service is available to the areas of the community where higher intensity development is anticipated. Some areas of Branford are identified as “sewer avoidance” areas where properties will be expected to rely on on-site septic systems.



PIPED - Public Water - The South Central Connecticut Regional Water Authority (SCCRWA) operates a water system that serves much of the New Haven metropolitan region. SCCRWA owns more than 27,000-acres of land and supplies 46 million gallons of water a day to a population of some 430,000 persons.

Within Branford, SCCRWA has a water supply reservoir (Lake Saltonstall) and owns about 1,100 acres of watershed land. In terms of distribution, SCCRWA uses over 140 miles of water mains to provide water to over 8,000 Branford customers and 726 fire hydrants.

The water system is expected to be adequate during the planning period in terms of water quantity and water quality. Water service is available to the areas of the community where higher intensity development is anticipated and water service can be extended to areas where it is needed or wanted.



PIPED - Natural Gas - Southern Connecticut Gas Company provides gas service within Branford. Although a service area map is not available for publication, natural gas service is available to accommodate future growth.

The natural gas distribution system is expected to be adequate during the planning period. Since some residents and businesses may desire natural gas, opportunities to expand the service area should be explored and supported.

Possible Drainage Issues

In recent years, Connecticut has been experiencing more intense rain storm events and these intense rainstorms are occurring more frequently. There are more times now where the amount of rainfall exceeds the capacity of storm drainage systems and flooding can occur where it never happened before. Addressing this on a Town-wide basis will be a challenge since up-sizing one culvert will exacerbate any flooding downstream.

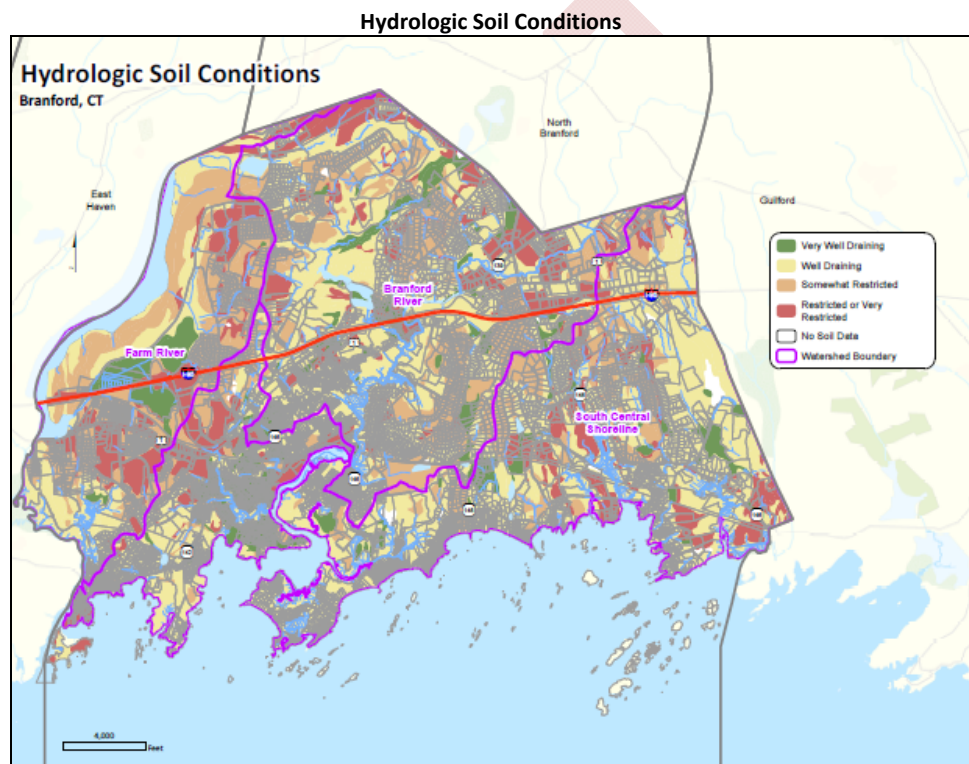
Another issue is that there is a desire to use more natural approaches (called “low impact development” or “LID”) to remove pollutants from runoff and promote infiltration of rainwater. It has been learned that the historic “industrial approach” to stormwater management (pipes) where rainfall was discharged as soon as possible actually diverted rainfall away from recharging groundwater and led to degraded water flow in streams. Implementing LID approaches on a town-wide basis has the potential to prevent degradation of water quality from runoff and ameliorate flows from smaller storms.

If Branford can implement LID approaches on a large number of properties (both residential and commercial), it is possible that this might help reduce the amount of flooding that can occur from more frequent and intense storms. This can include rain gardens, infiltration basins, and similar approaches.

PIPED - Storm Drainage - Storm drainage is another type of piped infrastructure. Most areas of Branford rely on underground piping and culverts to collect stormwater and convey it to an outlet. This historic approach to storm drainage may not work as well in the future (see sidebar) and new thinking is desirable.

For a number of reasons, a more natural approach (called “low impact development” or “LID”) is desired. This approach seeks to infiltrate rainwater into the ground as near as possible to where the raindrop falls. The following map shows areas in Branford where natural soil conditions may facilitate (or frustrate) attempts to infiltrate rainwater.

The stormwater system is expected to face a number of challenges during the planning period due to the frequency and intensity of large storm events.



Residential Rain Garden



Parking Lot Infiltration Basin



WIRED - Electricity – Electrical distribution in Branford is provided by Eversource (formerly Connecticut Light & Power). Most of the distribution system involves overhead wires although there are some areas (such as parts of Branford Center) and newer developments where the electrical wires are contained in underground conduits.

Electrical generation occurs elsewhere and is transmitted to Branford for distribution over the Eversource system. Some local properties have installed solar panels and wind generation systems to generate their own electricity and/or supply electricity back to the electrical grid.

Adequate electrical power is expected to be available to meet the needs of local users.

WIRED – Cable Communication – Wired communication services (land-line telephone and cable communication) in Branford is provided by:

- Comcast of Connecticut
- Frontier Communications (successor to AT&T Connecticut which was successor to Southern New England Telephone Co.)

Most people are now obtaining telephone, internet, and cable service through “bundled services from Comcast or Frontier.

Adequate wired communication service is expected to be available to meet the needs of local users.

WIRELESS – Telecommunication Services – Many people are using wireless phones and other devices (some people are relying exclusively on them) and the capacity of the wireless system is an important consideration. Branford benefits from the telecommunication towers in place to service traffic on Interstate 95 and enjoys reasonable wireless service in most parts of the community.

Adequate wireless communication service is expected to be available to meet the needs of local users.

Electrical Reliability

Over the years, Eversource has made significant progress in improving the reliability of its service through improvements to the electrical system. Major storms and other events can cause service disruptions. Periodic tree trimming is one approach to minimizing power outages due to storm events. Guidance is also available for the type of tree planting that is appropriate for locations near overhead power lines. The cost of relocating power lines underground limits its use (whether for reliability or aesthetic purposes).

2008 POCD

GOAL	Provide, and maintain, adequate utilities to meet community needs
STRATEGIES	Maintain Existing Infrastructure Address Stormwater Management Monitor Private Septic Systems Monitor Regional Utilities

Possible Strategies For 2018 POCD

NEW STRATEGY

Addressed Piped Infrastructure

Five-Year Update

The Water Pollution Control Department continued improvements to facilities, including installation of generators at all pump stations.

A. Public Sewer		Comments
1.	Continue to maintain the sewer system and address issues from sea level rise.	
2.	Maintain the Water Pollution Control Facility in compliance with State and federal standards.	
a.	Update the 1996 Wastewater Treatment Facility Plan in order to anticipate future needs.	<input type="checkbox"/>

B. Public Water Service		Comments
1.	Support maintenance and expansion of the public water system by SCCRWA to meet community needs.	
2.	Continue to use the Town's Water Commission to evaluate areas that might benefit from public water and/or address other issues.	

C. Natural Gas		Comments
1.	Support maintenance and expansion of the natural gas system by Southern CT Gas to meet community needs.	

Five-Year Update

The Planning and Zoning Commission adopted regulations to:

- Reduce impervious surfaces
- Address drainage issues;
- Encourage use of low impact design;

D. Stormwater		Comments
1.	Maintain and improve the stormwater drainage system.	
2.	Seek to address drainage issues that arise from more frequent and more severe storm events	
3.	Encourage the use of "low impact development" (LID) stormwater approaches.	

Addressed Wired Infrastructure

NEW
STRATEGY

A. Wired Utilities		Comments
1.	Continue to work with Eversource to improve utility reliability in Branford.	
2.	Continue to require underground utilities in all new development.	
3.	Work with utility companies to “balance” tree trimming with aesthetic and other concerns.	
4.	Explore opportunities to relocate wired utilities underground where opportunities arise.	

Five-Year Update

The Planning and Zoning Commission adopted regulations to:

- Require underground utilities for new development;

Addressed Wireless Infrastructure

NEW
STRATEGY

B. Wireless Utilities		Comments
1.	Continue to work with telecommunication providers and the Connecticut Siting Council to provide for wireless services to meet local needs in the least visually intrusive manner.	

Common Tower
With No Camouflage



Stealth Monopole
As Flagpole



Tree Tower
With Lower Branches



If so, please make notes below.

1. Branford Plan of Conservation and Development (2008)
2. Stormwater Management Plan (2017)
3. Wastewater Facility Plan (1996)
4. Telecommunication Application Information on Town website

DRAFT



Planimetrics

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