

# Naugatuck Valley Council of Governments Hazard Mitigation Plan Update 2021 – 2026

Municipal Annex  
for  
**THOMASTON, CT**



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MMI #3211-29

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## 1.0 INTRODUCTION

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### 1.1 Purpose of Annex

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This Hazard Mitigation Plan (HMP) annex provides a community-specific hazard risk assessment, capability analysis, and evaluation and prioritization of hazard mitigation measures and projects.

Background information and the regional effects of pertinent natural hazards are discussed in the main body of the Naugatuck Valley Council of Governments (NVCOG) Multi-Jurisdictional Hazard Mitigation Plan. This annex is designed to supplement the information presented in the Multi-Jurisdictional HMP with more specific local detail, and is not to be considered a standalone document.

The primary goal of this HMP, including this Municipal Annex, is to identify natural hazard risks and mitigation opportunities in order to reduce the loss of or damage to life, property, infrastructure, and natural, cultural, and economic resources. This includes the reduction of public and private damage costs. Limiting losses of and damage to life and property will also reduce the social, emotional, and economic disruption associated with a natural disaster.

### 1.2 Planning Process

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A meeting was held with Thomaston representatives on November 16, 2020 for the purposes of initial data collection and review of necessary updates for this document. The meeting was convened by the HMP local coordinator, Glenn Clark.

Additional input was provided at the two regional municipal staff workshops, held on November 18, 2020, and February 3, 2021.

Public input collected at public workshops and through an online survey have also informed development of this HMP update.

### 1.3 Physical Setting

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The Town of Thomaston is located in southeastern Litchfield County. It is bordered by Waterbury to the south, Watertown to the south and southwest, Morris to the west, Litchfield to the northwest, Harwinton to the North, and Plymouth to the east.

Thomaston is located within the western part of the crystalline uplands, or Western Highlands, of western Connecticut. This geologic feature consists of three belts of metamorphic rocks bounded to the west by the sediments and metamorphic rocks of the Hudson River valley and on the east by the Triassic sediments of the Connecticut River valley. The topography of the Town ranges from gently rolling terrain in the river valleys to steep hilly terrain throughout most of the upland areas. Elevations range from 290 feet above sea level along the Naugatuck River in the southeastern part of Town to over 1,010 feet above sea level near Lattin Hill in the northern part of Town, based on the National Geodetic Vertical Datum of 1929. The hilly, elevated terrain of Thomaston makes it particularly vulnerable to an array of natural hazards.

## 1.4 Land Cover

Table 1-1 summarizes 2015 land cover data which was derived from satellite imagery. Areas shown as turf and grass are maintained grasses such as residential and commercial lawns or golf courses. According to this data, about 60% of Thomaston is forested and approximately 22% is developed.

**Table 1-1: 2015 Land Cover by Area**

Land Cover	Area (acres)	Percent of Community
<b>Developed</b>	1,715.2	22.06%
<b>Turf &amp; Grass</b>	637.5	8.20%
<b>Other Grass</b>	185.7	2.39%
<b>Agricultural Field</b>	221.5	2.85%
<b>Deciduous Forest</b>	3,743.5	48.15%
<b>Coniferous Forest</b>	864.0	11.11%
<b>Water</b>	208.4	2.68%
<b>Non-Forested Wetland</b>	8.9	0.11%
<b>Forested Wetland</b>	42.1	0.54%
<b>Tidal Wetland</b>	0.0	0.00%
<b>Barren</b>	76.1	0.98%
<b>Utility Row</b>	72.0	0.93%
<b>Total</b>	<b>7,775</b>	<b>100%</b>

*Source: UCONN Center for Land Use Education and Research (CLEAR)*

A compact commercial district is located in the center of the town at the intersection of East Main Street and Main Street alongside the Naugatuck River. The commercial center is surrounded by medium density residential areas. Industrial sites are dispersed alongside the Naugatuck River. Additional commercial sites are located in the southwest part of Thomaston near Route 6 and Route 109. Low density residential areas are located in the northwestern areas of Thomaston, interspersed with agricultural and recreational areas.

## 1.5 Geology

Geology is important to the occurrence and relative effects of natural hazards such as floods and earthquakes. Thus, it is important to understand the geologic setting and variation of bedrock and surficial formations in Thomaston.

The Town of Thomaston's bedrock consists primarily of metasedimentary and metaigneous schists and secondarily of metamorphic granofels. The bedrock alignment trends generally southwest to northeast through the Town.

The five primary bedrock formations in the Town (from north to south) are Ratlum Mountain Schist, The Straits Schist, Collinsville Formation, Basal Member of the Straits Schist, and the Taine Mountain Formation:

- The Ratlum Mountain Schist consists of gray, medium-grained schist and granofels.
- The Straits Schist is a silvery to gray, coarse-grained schist.
- The Collinsville Formation is a gray and silvery, medium- to coarse-grained schist and dark, fine- to medium-grained amphibolite and hornblende gneiss.

- The Basal Member of The Straits Schist is a gray schist with amphibolite, marble, and quartzite.
- The Taine Mountain Formation consists of gray, medium-grained, well-laminated granofels.

No known faults are mapped in the Town of Thomaston. Bedrock outcrops can be difficult to find in Thomaston due to the forested nature of the Town, although outcrops can be found at higher elevations and on hilltops.

A vast area of the Town is covered by glacial till. Tills contain an unsorted mixture of clay, silt, sand, gravel, and boulders deposited by glaciers as a ground moraine. This area includes nearly all of Thomaston with the exception of the river valleys associated with the Naugatuck River and its tributary streams. Stratified sand and gravel ("stratified drift") areas are associated with the Naugatuck River and the lower parts of Branch Brook and Northfield Brook. These deposits accumulated by glacial meltwater streams during the outwash period following the latest glacial recession.

The amount of stratified drift present in the Town is important for several reasons. First, the stratified drift is currently used by the Connecticut Water Company to provide drinking water via pumping wells. Secondly, in regard to inland flooding, areas of stratified materials are generally coincident with inland floodplains. This is because these materials were deposited at lower elevations by glacial streams, and these valleys later were inherited by the larger of our present-day streams and rivers. However, smaller glacial till watercourses can also cause flooding, such as those in northern, western, and southern Thomaston. The amount of stratified drift also has bearing on the relative intensity of earthquakes and the likelihood of soil subsidence in areas of fill. These topics will be discussed in later sections.

## 1.6 Drainage Basins and Hydrology

The Town of Thomaston is drained by four watersheds corresponding with the Naugatuck River, Branch Brook, Northfield Brook, and Leadmine Brook. These subregional drainage basins are all part of the regional Naugatuck River basin that ultimately discharges into the Housatonic River. The drainage basins are described below.

**Table 1-2: Drainage Basins**

Drainage Basin	Area (sq. mi)	Percent of Town
Naugatuck River	6.61	54.5%
Branch Brook	3.08	25.3%
Northfield Brook	2.24	18.5%
Leadmine Brook	0.21	1.7%
<b>Total</b>	<b>12.14</b>	<b>100.0%</b>

*Source: Drainage Basins, 2008 CT DEP GIS Data for Connecticut*

### Naugatuck River

The Naugatuck River originates near the City of Torrington, CT, and winds south almost 40 miles to meet the Housatonic River in the City of Derby, giving it a total basin area of 311.16 square miles. It is the only major river in Connecticut whose headwaters are within the boundaries of the state. The Naugatuck River is well-known for its many defunct dams associated with its industrial history.

The Naugatuck River basin is by far the largest watershed in Thomaston, covering 54.5% of the Town's land area. It enters Thomaston in the Town's northeastern corner, flowing southward within the eastern border before serving as the Town's southwestern border in the Frost Bridge section of Town. The River is impounded once within Thomaston by a United States Army Corps of Engineers (USACE) flood control dam known as Thomaston Dam.

The Naugatuck River is joined by a number of tributaries as it flows through Town. Leadmine Brook enters the river in the northeast end of Town upstream of the Thomaston Dam. An unnamed tributary that enters the Naugatuck River near Railroad Street drains from Plymouth Reservoir, an impoundment of about 40 acres. The Naugatuck River receives flow from several additional unnamed tributaries and from Northfield Brook near the center of Town. The river also has several tributaries in the south end of Town near the Mattatuck State Forest, the largest of these being Branch Brook. Further south, Nibbling Brook converges with the Naugatuck River before it enters Waterbury.

### Branch Brook

The Branch Brook watershed is the second largest in Thomaston, covering 25.3% of the Town's total land area. The upper reaches of this drainage basin are located in northeastern Morris and Litchfield, where Pitch Brook, Wigwam Brook, and their tributaries flow southward into Pitch Reservoir. In addition to the abovementioned tributaries, the Pitch Reservoir also receives water from a seven mile long aqueduct built in the 1920s from the Shepaug Reservoir on the border between the Towns of Litchfield and Warren. In total, the Branch Brook watershed drains 22.65 square miles of land in Thomaston, Watertown, Bethlehem, Morris, and Litchfield.

The Branch Brook drainage basin is heavily utilized for water supply. Pitch Reservoir is the first of three major impoundments in the watershed. Downstream are the Morris Reservoir on the Morris-Litchfield boundary and the Wigwam Reservoir on the Watertown-Thomaston boundary. All of these reservoirs as well as the aqueduct were constructed by the City of Waterbury in the first half of the twentieth century for water supply purposes.

Morris Brook and Moosehorn Brook from the north and Fen Brook from the south all feed Wigwam Reservoir. Branch Brook begins as the outlet stream from Wigwam Reservoir and creates the boundary between Watertown and Thomaston as it flows east into the Naugatuck River. Several unnamed tributaries flow south from Thomaston into Branch Brook along its reach. The brook is also impounded by the Black Rock Dam, an USACE dam, in Black Rock State Park.

### Northfield Brook

The Northfield Brook basin covers 18.5% of the Town. The drainage basin has its uppermost reaches in Litchfield in a small pond near Richards Road Extension. The outflow from this pond is Humaston Brook, which drains southward to Northfield Pond. The outlet stream from Northfield Pond is Northfield Brook. Just downstream of Northfield Pond, the brook converges with Turner Brook before entering Thomaston.

Once inside Thomaston, Northfield Brook is impounded in Northfield Brook Lake, an USACE flood control impoundment. After leaving the impoundment, Northfield Brook flows to the southeast and enters into the Naugatuck River near the junction of Northfield Road and South Main Street in Thomaston. In all, the Northfield Brook basin drains 6.62 square miles of land in Thomaston and Litchfield.

### Leadmine Brook

The Leadmine Brook drainage basin is by far the smallest in Thomaston, covering 0.21 square miles or 1.75% of the Town's total land area. This area is located in the northeastern corner of Thomaston, where Leadmine Brook enters Thomaston from Harwinton and flows into the Naugatuck River behind the Thomaston Dam. This short stretch of river receives three unnamed tributaries flowing westward from Plymouth and Harwinton.

Leadmine Brook's East Branch has its headwaters in New Hartford and its West Branch has its headwaters in Torrington. These two branches flow southward and converge in Harwinton, where Leadmine Brook is formed. As it flows to the south, Leadmine Brook is joined by several tributaries, including Caitlin Brook, which drains the 40 acre Harwinton Lake, Rock Brook, and Kelly Pond Brook. In total, the Leadmine Brook drainage basin covers 16.11 square miles across Thomaston, Harwinton, Torrington, Plymouth and New Hartford.

## **1.7 Climate and Climate Change**

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In Thomaston, the summers are warm and wet, the winters are freezing, and it is partly cloudy year round. Over the course of the year, the temperature typically varies from 18°F to 81°F and is rarely below 4°F or above 88°F.

The warm season lasts for 3.6 months, from May 30 to September 16, with an average daily high temperature above 71°F. The hottest day of the year is July 21, with an average high of 81°F and low of 63°F. The cold season lasts for 3.3 months, from December 2 to March 12, with an average daily high temperature below 43°F. The coldest day of the year is January 30, with an average low of 18°F and high of 33°F.

The wetter season lasts 3.5 months, from May 4 to August 18, with a greater than 30% chance of a given day being a wet day. The chance of a wet day peaks at 38% on May 30. The drier season lasts 8.5 months, from August 18 to May 4. The smallest chance of a wet day is 22% on January 29.

The most rain falls during the 31 days centered around June 5, with an average total accumulation of 4.0 inches. The snowy period of the year lasts for 5.7 months, from October 27 to April 19, with a sliding 31-day liquid-equivalent snowfall of at least 0.1 inches. The most snow falls during the 31 days centered around January 24, with an average total liquid-equivalent accumulation of 1.3 inches.

Climate data was sourced from Weather Spark based on analysis of the years 1980 to 2016.

### **Climate Change**

Climate change projections for Connecticut were sourced from the 2019 Connecticut Physical Climate Science Assessment Report, which was developed by the University of Connecticut (UConn) Atmospheric Sciences Group, commissioned by the Connecticut Institute for Resilience and Climate Adaptation (CIRCA) with funding from the Department of Energy and Environmental Protection (DEEP). All projections are based on the IPCC high CO<sub>2</sub> emission scenario (RCP8.5).

### Temperature

Annual temperatures have been increasing throughout Connecticut and is projected to continue to do so in the future. By mid-century, average annual temperature is projected to increase by 5°F. Seasonal average temperatures are also expected to rise, with the greatest increase (6°F) experienced in summer (June to August). The number of nights over which temperature remains above 68°F will quadruple from 10 days per year to more than 40 days, and the number of extremely hot days will increase from above 4 a year to 48 per year.

### Precipitation

Rainfall data in "Technical Paper No. 40" by the U.S. Weather Bureau (now the National Weather Service) (Hershfield, 1961) dates from the years 1938 through 1958. According to these data, the 24-hour rainfall amount for a 10% annual-chance storm in Litchfield County is 4.7 inches.

The continued increase in precipitation only heightens the need for hazard mitigation planning as the occurrence of floods may change in accordance with the greater precipitation.

The Northeast Regional Climate Center (NRCC) has partnered with the Natural Resources Conservation Service (NRCS) to provide a consistent, current regional analysis of rainfall extremes (<http://precip.eas.cornell.edu/>). In 2020 this dataset listed the 24-hour rainfall amount for a 10% annual-chance storm in Thomaston as 4.95 inches.

The NOAA Atlas 14, released on September 30, 2015 puts the 24-hour rainfall amount for a 10% annual-chance storm in Thomaston at 5.73 inches.

These precipitation amounts, and more details, are summarized in Table 1-3, below.

**Table 1-3: 24-Hour Rainfall Amounts by Annual-Chance Occurrence**

Source	24-Hour Rainfall Amount (inches) by Annual-Chance Occurrence		
	10%	4%	1%
<b>Technical Paper No. 40</b>	4.7	5.5	7.0
<b>NRCC</b>	5.0	6.2	8.8
<b>NOAA Atlas 14</b>	5.7	7.1	9.1

Annual precipitation has been increasing statewide and is projected to continue to increase. By mid-century, annual precipitation is projected to increase by 8.5%, with the greatest increase (13.4%) occurring in the winter months. Extreme precipitation events are projected to increase in both frequency and magnitude. Based on this increase and the precipitation figures above, by 2050 Thomaston can expect the 24-hour rainfall amount for a 10% annual-chance storm to be around 5.1 to 6.2 inches or greater.

Despite overall increases in precipitation, drought risk is projected to increase, especially during summer, due to changing precipitation patterns and projected increases in potential evapotranspiration (plants taking up more water in hotter temperatures and longer growing seasons).



## 1.8 Development Trends

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Thomaston was first settled in the early 1700s and was originally part of the parish of Northbury in Mattatuck along with the adjacent Town of Plymouth. Thomaston became its own incorporated municipality in 1875. Thomaston, originally known as Plymouth Hollow, is named for Seth Thomas who began manufacturing clocks there in the early 1800's. The waterpower provided by the Naugatuck River played an important role in the development of the clock industry. In addition, Seth Thomas was instrumental in the routing of the rail line through Plymouth Hollow, creating an important connection with the brass industry in Waterbury.

Manufacturing continued into to the 1900's with the Seth Thomas Clock Company merging under the name General Time Instruments Corporation in 1930. However, the firm's success waned through the middle of the 20<sup>th</sup> century and in 1979 the General Time Instruments Corporation was bought and the company headquarters were moved out of Thomaston.

The 2010 U.S. Census reported a population in Thomaston of 7,599 individuals. U.S. Census Bureau estimates for 2019 show a population around 7,781 individuals, an increase from 2010 of 2.4%. The Connecticut State Data Center predicts that population will increase by 5.2% through 2025 to an estimated population of 1,460 individuals.

### Residential Development

When the initial HMP was developed residential development had really slowed. Cul-de-sacs in new developments are discouraged and connectivity of roads is encouraged; however, Thomaston is very hilly which sometimes limits the creation of through streets. Cul-de-sacs are limited to roads of 1,000 feet or less in total length. Subdivisions featuring cul-de-sacs offer a single access point for emergency services, potentially lengthening emergency response times and rendering those residential areas vulnerable if access is cut off by flooding or downed tree limbs.

The minimum road width in new developments is 24 feet. Utilities are located underground in new developments whenever not inhibited by shallow depth to bedrock. Hydrants, underground tanks, and fire ponds are recommended for new developments but these are not required by any municipal regulations.

According to the Connecticut Data Collaborative, the number of annual housing permits in Thomaston remained steady over the last decade. The number of permits issued in 2010 and 2011 was 7 and 5, respectively, while 14 permits were issued in 2016, and 6 permits were issued in 2017. On average, 7 housing permits were issued each year in Thomaston between 2010 and 2017.

According to the U.S. Census Bureau, the overall number of housing units in Thomaston rose by approximately 2.3-percent between 2010 and 2019, from 3,276 units in 2010 to 3,353 units in 2019. In 2019, the housing stock was made up of approximately 70% single-unit structures, 7% two-unit structures, 22% multi-unit structures, and 1% mobile-homes or other types of structures.

According to the Connecticut Office of Policy and Management, Thomaston's 2019 Total Equalized Net Grand List was valued at \$572,000,000. The equalized net grand list is an estimate of the market value of all taxable property in the municipality, and gives some indication of the value of property at risk in the event of a major natural disaster.

Development continues to be relatively slow in Thomaston.

- Several single-family homes have been built over the last five years.
- One large active adult residential development (Whispering Pines) is being developed on South Main Street at Steven's Boulevard. 47 units have been completed, with more under construction.

### Commercial and Industrial Development

A 12-lot Industrial Park off Reynolds Bridge Road was previously approved. However, it has yet to be built, and the approval has expired. Town officials have indicated that it is anticipated that the developer will re-apply for land use approvals. Certain business buildings in Town previously had redevelopment contracts but do not have current plans to move forward with redevelopment. One of these buildings is located on Watertown Road across from the end of the Exit 38 ramp from Route 8 southbound. Also, a major Brownfield site is likely to be redeveloped someday, but no plans for this site are currently in development. This property is north of Route 6 at Route 8 (near Exit 39).

- Some commercial redevelopment is occurring. The Seth Thomas Industrial Park has been redeveloped and is seeking new tenants. The Clocktown Brewery was placed into a building near the Naugatuck River, and more tenants are sought for that building.
- There have been a couple of industrial building expansions on River Street.
- Two other industrial buildings with four businesses each have been built. One is the Fletcher Building.
- No brownfield redevelopment projects are presently underway.

Additional information can be found in the 2019 Connecticut Economic Resource Center profile for Thomaston, included as Appendix C.

### Open Space

Thomaston has 23% protected open space, primarily due to the three USACE dams in Town and the Wigwam reservoir lands owned by the City of Waterbury. The town is working toward the establishment of the multi-use greenway trail along the Naugatuck River.

Town personnel indicated that six town owned parcels (approximately 16 acres) in the vicinity of Nystrom Park were combined and designated as open space in 2016.

### Summary

Minimal new residential development has occurred in Thomaston over the past five years, and commercial and industrial development has primarily consisted of reuse or redevelopment of existing structures or sites; thus, recent development has not increased natural hazard risks in Thomaston. Similarly, development trends in Thomaston are not expected to increase natural hazard risks over the next five years.

## 1.9 Historic and Cultural Resources

Historic and cultural resources include sites, structures, and objects that are significant in history, architecture, archaeology, engineering, and culture. These resources grow economies and enhance community character, and following a natural disaster they can help to reinforce neighborhood connections and reestablish a sense of community and normalcy. Consideration of these resources in this HMP is critical.

Historic buildings and structures may be particularly susceptible to natural hazards because they were built prior to the establishment of more recent construction standards. Additionally, some of the structural integrity of these resources may have been degraded over the decades or centuries since their original construction. Structural retrofits and hazard mitigation methods may be challenging or restricted in cases where alteration of a resource will also diminish its cultural or historical aesthetic and value. Finally, miscommunications or lack of knowledge may lead to historic resources being damaged during the disaster recovery process.

Historic resources in Thomaston near flood sources may be damaged during flooding or other hazard events.

Steps to incorporate historical and cultural preservation into hazard mitigation planning include:

- Inventory and survey historic and cultural resources
- Implement appropriate mitigation measures for those resources
- Take steps to move portable resources, such as artwork or documents, to safe locations prior to the occurrence of a hazard, if possible
- Consider these resources in emergency operations plans to prevent accidental damages during recovery efforts

Specific actions to mitigate natural hazard risks to historic resources are listed at the end of this Annex.

## 1.10 Social Vulnerability Index

By evaluating local social vulnerabilities, a community can identify populations that may be more vulnerable to natural hazards, and implement actions to better respond to the needs of those populations. The Center for Disease Control and Prevention (CDC) uses 15 factors extracted from census data to calculate a Social Vulnerability Index (SVI) for communities. The SVI factors fall into four categories:

- socioeconomic status
- household composition and disability
- minority status and language
- housing type and transportation

Thomaston is considered to have a Moderate level of social vulnerability, with a relatively higher vulnerability score for the SVI category of Socioeconomic Status. In other words, a particular challenge in Thomaston may include a lack of access to financial resources.

**Historic preservation planning** helps protect historic properties and cultural resources from demolition or alteration.

**Hazard mitigation planning** helps protect life and property from damage caused by natural and manmade hazards.

**Integrating** these two planning processes helps create safe and sustainable historic communities.

- Paraphrased from FEMA Report 386-6

## 2.0 MUNICIPAL CAPABILITIES

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### 2.1 Governmental Structure and Capabilities

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The Town of Thomaston is governed by a Selectman-Town Meeting form of government in which legislative responsibilities are shared by the Board of Selectmen and the Town Meeting. The First Selectman serves as the chief executive.

In addition to Board of Selectmen and the Town Meeting, there are boards, commissions and committees providing input and direction to Town administrators. Also, Town departments provide municipal services and day-to-day administration. Many of these commissions and departments play a role in hazard mitigation, including the Planning and Zoning Commission, the Zoning Board of Appeals, the Fire Department, the Police Department, the Conservation Commission, the Fire Commission, the Inlands Wetlands and Watercourses Commission, the Building Inspector and the Public Works and Highway Department.

The Public Works Department is the principal municipal department that responds to problems caused by natural hazards. Complaints related to Town maintenance issues are routed to the First Selectman and/or the Public Works Department. These complaints are usually received via phone, mail, or email and are recorded in a book. The complaints are investigated as necessary until remediation surrounding the individual complaint is concluded.

### 2.2 Infrastructure

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#### Transportation

The primary transportation routes into and out of the town are Route 6 (running east-west) and Route 8 (running north-south), which have an interchange in Thomaston. Other key roads include Route 254 (S Main Street and Main Street), Route 109, Route 222, and Route 254 (Northfield Road). Thomaston is served by the CT transit public bus system.

The Town of Thomaston does not have any hospitals or medical centers. Instead, residents use the nearby facilities in Torrington, Bristol, or Waterbury. As a means of accessing these facilities, Thomaston has convenient access on Route 6 through Plymouth to Bristol or along Route 8 into Waterbury and Torrington that function as major transportation arteries.

Evacuation routes are regionally defined by the Regional Evacuation Plan. No local evacuation plan exists. Route 8, which runs north-south through the eastern part of Thomaston, provides access to Torrington to the north and Waterbury towards the south. Route 6 runs from Watertown to the southwest of Thomaston through the Reynolds Bridge area and then east into Plymouth and Bristol. The center of Town is also the spur for three other routes out of the area: Route 222 runs generally north-northeast into Harwinton; Route 254 runs northwest into Litchfield; and Route 109 runs west into Morris. Although there are no interstate highways within the town, I-84 can be accessed to the south of Thomaston, via Route 8.

## Utilities

### Water

Water service is a critical component of hazard mitigation, especially in regards to fighting wildfires. It is also necessary for everyday residential, commercial, and industrial use. The Connecticut Water Company provides potable and firefighting water to the majority of the center of Town and the Reynolds Bridge area. The Fire Department uses alternative water supplies to fight fires in the less developed areas of Thomaston.

Town officials have expressed concerns that the water pressure associated with the hydrants in town are not sufficient and would like to work with Connecticut Water Company to increase the pressure.

### Wastewater

The Town Sewage Treatment Plant is located at the south end of Old Waterbury Road and serves most of the developed area of Thomaston. According to Town personnel, the plant is operating at near capacity and will likely be at capacity when the proposed developments are built in a few years.

Other utilities important to the Town include the electric and telephone lines in Town. These lines have substations on Electric Avenue and High Street, respectively. Electricity is important for both day-to-day living and emergency usage, and the telephone is used to complement emergency communications in Town. Thus, these two substations are included in the list of critical facilities.

Each of the sewer pumping stations has a generator. The pump station on Hickory Hill Road was replaced recently. The Woodbridge pump station continues to be undersized. Pump station upgrades at Woodbridge have been completed, and include installation of a new generator.

### Other

Eversource is the primary electricity provider in Thomaston. Natural gas service is provided by Eversource.

According to geoISP (geoISP.com), there are 2 DSL Providers, 2 Cable Internet providers, 2 Fiber Internet (FTTH) providers, and 0 Fixed Wireless (WISP) providers in Thomaston, CT. There are also 4 Mobile Broadband (cellular) providers with service available in Thomaston.

## 2.3 Critical Facilities and Emergency Response

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Thomaston has identified several critical facilities throughout the town, as summarized on Table 2-1 below. The Town considers its police, fire, governmental, and major transportation facilities to be its most important critical facilities, for these are needed to ensure that emergencies are addressed while day-to-day management of Thomaston continues. Elderly housing facilities are included with critical facilities, as these house populations of individuals that would require special assistance during an emergency. Examples of these facilities are the elderly living facility located on Reynolds Bridge Road, and two elderly rental facilities (Green Manor and Grove Manor) located near the Town Center.

Educational institutions are included in critical facilities as well, as these can be used as shelters. In addition, Town personnel consider public and private water, sewer, electric, and communication utilities to be critical facilities.

Most municipal critical facilities have backup generators; however, the town would like to upgrade the capacity of the generator at Town Hall as this building houses the Police Department which is utilized as the Emergency Operations Center during storm events. The town would also like to upgrade the backup generator at the Woodbridge pump station.

**Table 2-1: Critical Facilities**

Facility	Address or Location	Comment	Em Power	Shelter	SFHA
<b>Thomaston Valley Village</b>	200 Reynolds Bridge Rd	Elderly			
<b>Green Manor</b>	63 Green Manor	Elderly			
<b>Grove Manor</b>	11 Grove St	Elderly			
<b>Municipal Building &amp; Police Dept</b>	158 Main St	EOC	✓		
<b>Fire Department</b>	245 South Main St.	Backup Shelter	✓	✓	
<b>Ambulance</b>	237 South Main St.	Primary Shelter	✓	✓	
<b>Highway Dept.</b>	32 Reynolds Bridge Rd	Municipal	✓		
<b>Communication Tower</b>	297 North St, Plymouth	Communication	✓		
<b>Communication Tower</b>	170 Mount Tobe Rd, Plymouth	Communication	✓		
<b>Communication Tower</b>	Turner Rd	Communication	✓		
<b>Communication Tower</b>	Chapel St	Communication	✓		
<b>Sewage Treatment Plant</b>	Old Waterbury Rd	Sewer	✓		✓
<b>Electric Avenue Pump Station</b>	North Main St	Sewer	✓		
<b>Woodbridge Pump Station</b>	Woodbridge Ln	Sewer	✓		
<b>Highwood Farms Pump Station</b>	Julie Ln	Sewer	✓		
<b>Kennedy Pump Station</b>	Kennedy Drive	Sewer	✓		
<b>Hickory Hill Pump Station</b>	Hickory Hill Rd	Sewer	✓		
<b>Center School</b>	1 Thomas Ave	School			
<b>Thomaston High School</b>	185 Branch Rd (Rte 109)	Secondary Shelter	✓	✓	
<b>Black Rock Elementary</b>	57 Branch Rd (Rte 109)	School			
<b>Connecticut Water Company Wellfield</b>	Maple Ave	Water			
<b>Telephone Switching Station</b>	High St	Communication			
<b>Eversource Substation</b>	Electric Ave	Electric			✓

## Emergency Response Capabilities

The Municipal Building and Police Department complex houses the Town's Emergency Operations Center (EOC). The facility has an aging, 1970s-era generator that has sufficient capacity to run the Police Station, EOC, and accounting department. Very limited power is available for the remainder of the building. An upgraded generator is necessary. Note that this project will require electrical upgrades as the current generator circuit is restricted to the parts of the building noted above.

The Police Chief is the primary day-to-day emergency manager in Thomaston. For long-term planning, the Town has a Local Emergency Preparedness Commissioner who forms temporary committees when the Town needs to accomplish a specific task related to emergency planning.

Town staff note that the Highway Department Building at 32 Reynolds Bridge Road is in need of a replacement for its emergency generator. The building has an aging 1970s-era generator; the automatic transfer switch no longer works, and Public Works staff need to manually operate the generator.

The Town does not have set evacuation routes. Evacuations are planned on a case-by-case basis.

## **Sheltering Capabilities**

Emergency shelters are considered to be an important subset of critical facilities, as they are needed in most emergency situations. The Town of Thomaston has designated two emergency shelters, and additional facilities can be used if necessary.

The Ambulance facility at 237 South Main Street has been designated as the Primary Shelter. There is sufficient space to bed, feed, and shower 25 people. This space is opened first when needed and is operated as a short-term shelter. The building has an aging generator that needs replacement.

The Thomaston High School is now the secondary shelter. This facility is only opened after 24 hours has passed following an event and there is a need for additional, longer-term shelter space.

The Fire Department is the backup shelter. The Fire Department has an auxiliary generator and can house 50 people temporarily, but has limited bed space for overnight evacuees. The Fire Department has recently installed a new generator.

These buildings have been designated as public shelter facilities by meeting specific American Red Cross guidelines. Amenities and operating costs of the designated shelters including expenses for food, cooking equipment, emergency power services, bedding, etc., are the responsibilities of the community and generally are not paid for by the American Red Cross.

The Town's other school buildings – Center School and Black Rock Elementary School – are not considered as shelters but could be converted to additional shelter space in case of an emergency. Other municipal buildings, such as the Highway Department garage, are not considered to be shelters but can serve as important emergency supply distribution centers.

Shelter and disaster response equipment are stored at many locations throughout Thomaston, including the Ambulance Facility, the Municipal Building, and the Fire House. A centralized storage facility or trailer is needed for these materials and equipment.

In case of a power outage, it is anticipated that 10-20% of the population would relocate, although not all of those relocating would necessarily utilize the shelter facilities. Many communities only intend to use such facilities on a temporary basis for providing shelter until hazards such as hurricanes diminish. Regionally-located mass care facilities operated and paid for by the American Red Cross may be available during recovery operations when additional sheltering services are necessary.



## **Communications**

The Town has enhanced 9-1-1 for emergency notification and response. Thomaston now has a Simulcast Communication system that utilizes 4 towers. Each tower has an emergency generator as part of its facility as does the base located at the Town Hall Complex. The Town has also upgraded all emergency personnel to high-band radios.

The Town of Thomaston participates in the CT Alert Emergency Notification System (powered by Everbridge) in an effort to streamline emergency notifications to residents of the Town.

The Town of Thomaston is in the southeast portion of Region 5 of the Connecticut Emergency Medical Service regions. The Town dispatch center has a high band radio compatible with Region 5.

Communications are provided by four radio towers, including two in Plymouth. Each tower has a battery backup as well as a generator for backup power. The Town owns the Tower Road property and leases the property at the other three sites. However, the towers and each associated building are owned by the Town.

## **Potential Impacts from Natural Hazards**

Most critical facilities are not impacted by flooding in the Town of Thomaston. The electric substation on Electric Avenue and the Sewage Treatment Plant on Old Waterbury Road are both located in the mapped 1% annual chance floodplain, but neither has any regular problems with flooding. Route 6 (Watertown Road), a major northeast-southwest thoroughfare has occasional flooding issues north of Route 109. Such flooding could potentially slow emergency response times due to detours around this area.

None of the critical facilities are more susceptible to wind, summer storms, winter storms, or earthquakes than the rest of the Town. However, nearly all of the critical facilities in Town could be impacted by dam failure, and the Communications Building on Chapel Street is located in a wildfire risk area.

## **Vulnerable Populations**

Green Manor and Grove Manor are both Housing Authority properties. Neither facility has a generator. This is a concern for the Town because many residents are on medical equipment and oxygen machines with limited (24-hours) backup power. The Town wants to install generators at these facilities.

Thomaston Valley Village is privately owned and lacks a generator. Many residents are on medical equipment similar to the Housing Authority facilities. The Town would like for this facility to install a generator and is interested in supporting a grant effort if the property owner is willing to provide the local match.



## 3.0 FLOODING

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### 3.1 Existing Capabilities

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#### Participation in the NFIP

Thomaston has participated in the NFIP since 07/05/1982. The Flood Insurance Rate Map (FIRM) for the community was most recently updated in 07/05/1982. Thomaston does not participate in the FEMA Community Rating System (CRS) program.

According to FEMA, there are 8 flood insurance policies in force in Thomaston as of 6/30/2019 with an insurance value of \$3,269,900.

The Building Official is the NFIP coordinator per ordinance, but the position is part-time. The Land Use Administrator shares many of the responsibilities. The ordinance needs to be updated to reflect the current roles and responsibilities.

#### Regulatory Capabilities

The Town of Thomaston has in place a number of measures to prevent flood damage. These include regulations, codes, and ordinances preventing encroachment and development near floodways. Regulations, codes, and ordinances that apply to flood hazard mitigation in conjunction with and in addition to NFIP regulations include:

#### Plan of Conservation and Development (2014)

The Town of Thomaston 2014 Plan of Conservation and Development (POCD) includes a chapter (Section 5.3, pictured below) directly related to “pre-disaster mitigation” and incorporates recommendations from the initial Hazard Mitigation Plan. The POCD provides several recommendations with respect to natural resources conservation. In particular, Section 5 outlines the following recommendations related to open space, wetlands and floodplain protection:

- Support the acquisitions of land for open space, recreational, and other public purposes in those locations recommended by the Plan of Conservation and Development, Planning and Zoning Commission and Conservation Commission
- Consider large lot zoning, residential cluster development and Low Impact Development techniques to utilize and preserve properties for agricultural use and open space

- Recommend against development in, and encourage the protection of, substantial areas of inland wetlands, cognizant to their economic and ecological value for such diverse functions as water supply and purification, flood control and wildlife habitat
- Review Zoning Regulations and Floodplain Ordinances to verify that current related provisions are adequate and if necessary incorporate new methods and technology.

### 5.3 Pre-Disaster Mitigation

Natural hazard emergencies often arise from increased impervious surface, improper building locations, or poor site design, coupled with major storms. FEMA's Pre-Disaster Mitigation program provides planning funds to communities to identify likely natural hazards and projects to reduce the potential damage from natural hazard emergencies.

The Town of Thomaston's mitigation plan was published in October of 2008 and revised in February of 2009. It identifies and addresses concerns such as:

1. Terrain challenges regarding street access for emergency vehicles
2. Impacts to town facilities from a potential dam failure from Army Corps or Waterbury Water Company dams
3. Localized flooding of tributaries of the Naugatuck River, such as Branch Brook, during storm events
4. Additional stormwater control methods within the existing infrastructure and new development proposals
5. Driving conditions in the hillier sections of Town during winter
6. Preparedness for extreme events such as hurricanes, tornadoes, flash flooding, earthquakes and wildfires



Thomaston Dam  
Photo by: Jeremy Leifert

Future planning decisions should refer to the "Town of Thomaston Natural Hazard Pre-Disaster Mitigation Plan" for guidance as well as the general recommendations in Section 5.5.6 below.

- Consider the potential of utilizing floodplain areas for passive recreational uses, open space activities and other compatible uses.

### Zoning Regulations (2012)

- **Lot, Area, Shape and Frontage** (Section 5.2 of the Thomaston Zoning Regulations). This section notes that "wetlands, watercourses, or their setback area containing any significant predevelopment slopes in excess of 25% shall not be present within the buildable square."
- **Flood Plain District** (Section 7 of the Thomaston Zoning Regulations). This section defines the boundaries of the flood plain district and states that no building or structure within the boundaries of this district may be constructed, moved, or substantially improved without a Flood Hazard Area Permit in accordance with the "*Floodplain Management Ordinance, Town of Thomaston, Connecticut*."

### Subdivision Regulations (2012)

- **Unsuitable Building Lots** (Section 9.4 of the Thomaston Subdivision Regulations). This section notes that a building lot may not be suitable for construction purposes due to adverse or sensitive environmental conditions, such as flooding, seasonal runoff, excessive slope, exposed ledge or bedrock, soil conditions, or wetlands.
- **Terrain** (Section 9.5 of the Thomaston Subdivision Regulations). This section notes that "unless the lot has been specifically approved by the Inland Wetlands and Watercourses

Commission, each lot shall be able to accommodate primary buildings, driveway access and parking spaces without disturbing wetlands and watercourses.”

- **Channel Encroachment and Building Lines** (Section 11.31 of the Thomaston Subdivision Regulations). This section states that channel encroachment/building lines based on sound engineering judgment shall be provided on the site plans for all subdivisions to prevent encroachment upon the natural water channel. The Commission may also require the placement of such lines around natural features, wetlands, and other watercourse areas.
- **Design Standards for Minimizing Flood Damage** (Section 12 of Thomaston Subdivision Regulations). This section notes that “subdivisions shall be designed to control and mitigate potential flood damage...and have drainage facilities and other systems in place to reduce exposure to flood hazards.” Proposals exceeding 50 lots of five acres in size are required to provide base flood elevations.

### Floodplain Management Ordinance (2007)

This ordinance was most recently updated in 2007 and establishes the floodplain management regulations in the Town of Thomaston. The Ordinance is essentially the town’s local version of the NFIP regulations. The Ordinance includes definitions, general development requirements including anchoring, construction materials and methods that minimize flood damage, placement of utilities and buildings, and floodproofing. The ordinance also regulates floodways, placement of manufactured homes, alterations to watercourses, changes to existing structures, elevation of buildings, and regulations for streams without established base flood elevations or floodways.

- Section 280-13 states that no new construction or substantial improvement of buildings or other structures for human occupancy shall be located in any special flood hazard area. Any new construction or substantial improvement of buildings and other structures for other than human occupancy shall have either the lowest floor, including the basement, elevated to or above the base flood elevation.
- Section 280-14 states that there shall be no encroachments, including fill, new construction, substantial improvements, and other development, unless certification by a registered professional engineer or architect is provided demonstrating that encroachments will not result in any increase in flood levels during the occurrence of the base flood discharge.
- Section 280-15 states that no manufactured homes shall be located in a special flood hazard area.
- Section 280-18 states that new construction or substantial improvements of elevated buildings that include fully enclosed areas formed by foundation and other exterior walls below the base flood elevation shall be designed to preclude finished living space and designed to allow for the entry and exit of floodwaters to automatically equalize hydrostatic flood forces on exterior walls.

### Inland Wetlands and Watercourses Regulations

The Inland Wetlands and Watercourse Regulations (last updated in 2012) define in detail the Town of Thomaston's regulations regarding development near wetlands, watercourses, and water bodies that are sometimes coincident with the Flood Plain District.

- Section 2 defines "Significant Activities" covered by the Regulations.
- Section 6 states that no person may conduct or maintain a regulated activity without obtaining a permit. Section 6.1 states that the Commission must consider the environmental impact of the proposed action, including the effects on the watercourse's natural capacity to prevent flooding, to supply water, to control sediment, and to facilitate drainage; any alternatives; and any measures that would mitigate the impact of the proposed activity, such as technical improvements or safeguards to reduce the environmental impact as described above.
- Section 7 outlines the application requirements.

### Summary of Regulations

Overall, the intent of these regulations is to promote the public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas of the Town of Thomaston by the establishment of standards designed to:

- Protect human life and public health;
- Minimize expenditure of money for costly flood control projects;
- Minimize the need for rescue and relief efforts associated with flooding;
- Ensure that purchasers of property are notified of special flood hazards;
- Ensure that all land approved for subdivision shall have proper provisions for water, drainage, and sewerage and in areas contiguous to brooks, rivers, or other bodies of water subject to flooding, and that proper provisions be made for protective flood control measures;
- Ensure that property owners are responsible for their actions;
- Ensure the continued eligibility of owners of property in Thomaston for participation in the National Flood Insurance Program.

The Town of Thomaston Land Use Officer serves as the NFIP administrator and oversees the enforcement of NFIP regulations. The Town has not completed an update of its flood hazard regulations, and currently has no plans to enroll in the Community Rating System program. The Town of Thomaston uses the 1% annual chance flood lines from the FIRM and FIS delineated by FEMA as the official maps and report for determining special flood hazard areas. Ordinances require that all structures in flood hazard areas have their lowest floor be above established base flood elevations. Site plan standards require that all proposals be consistent with the need to minimize flood damage, that public facilities and utilities be located and constructed to minimize flood damage, and that adequate drainage is provided. The Thomaston Inland Wetlands and Watercourses Commission also reviews new developments and existing land uses on and near wetlands and watercourses. The various departments provide a building development checklist to developers that includes the pertinent flood regulations.

## Structural and Maintenance Projects

Since 1955, extensive flood control modifications have been made to the Naugatuck River basin, including the construction of five flood control dams by the USACE. Three of these dams are located in the Town of Thomaston: Thomaston Dam, Northfield Dam, and Black Rock Dam. These dams are further described in Section 8.3. Two others are located upstream in Torrington. Together, these five dams can store all runoff up to a 100-year storm and provide a controlled release to the channel downstream. According to the FEMA FIS, these flood control reservoirs will decrease the stage of a flood with the same magnitude as that of August 1955 from an elevation of 342.0 feet to 323.4 feet at the confluence of Branch Brook and the Naugatuck River. In addition, Wigwam Reservoir, located upstream from Black Rock Dam, provides some storage to delay the timing of peak discharge to the Naugatuck River.

The Thomaston Highway Department is in charge of the maintenance of the Town's drainage systems, and performs clearing of bridges and culverts and other maintenance as needed. Drainage complaints are primarily routed to the Highway Department and recorded. The Town uses these documents to identify potential problems and plan for maintenance and upgrades.

The Town of Thomaston has a Stormwater Management Plan from 2006. There are 919 catch basins in the Town, and they are inspected on an annual basis. Cleaning of all catch basins occurs at least biannually, with Litchfield Street, Twin Pond Road, Reynolds Bridge Road, and Hotchkiss Avenue cleaned multiple times per year due to their vicinity to watercourses. The Town also has a street-sweeping program, with all roadways and parking lots swept at least once per year. Old Waterbury Road, Jackson Street, West Hill Road, Treadwell Avenue, and River Street are swept multiple times per year to reduce loading to the Naugatuck River.

In addition an engineering study to address stormwater issues along Hotchkiss Avenue in the vicinity of Crystal Lake was completed prior to adoption of the previous version of this HMP. The Town has since implemented the recommended actions from that study.

The town recently worked with the State of Connecticut Local Bridge Program on the replacement of a bridge along Walnut Hill Road. The town contributed 20% of the cost.

## New Capabilities and Completed Actions

Thomaston continues to maintain its strong flood mitigation capabilities. Many of Thomaston's capabilities to mitigate for flood damage have improved since the initial hazard mitigation plan was adopted, particularly with regard to drainage studies, structural improvements and knowledge of hazard areas. The increased knowledge of vulnerable areas, combined with other local planning efforts, has assisted community officials and commissions in providing a variety of flood mitigation recommendations.

Hickory Hill Road (FHWA connector road) is being upgraded in 2021 using a LOTCIP grant. Once completed it should no longer present a significant flooding concern. New storm drainage has been installed on Hillside Avenue and Gilbert Street. This is expected to alleviate the flooding issue. A drainage system was installed on Leigh Avenue that appropriately directs drainage into the pond at the end of the road. This area is considered to be mitigated.

The Town has installed new catch basins in several areas around town.

## Summary

The Town of Thomaston primarily attempts to mitigate flood damage and flood hazards by restricting building activities inside flood-prone areas. This process is carried out through both the Planning and Zoning Commission and the Inland Wetlands and Watercourses Commission. All watercourses are to be encroached minimally or not at all to maintain the existing flood carrying capacity. These regulations rely primarily on the FEMA-defined 100-year flood elevations to determine flood areas. Drainage complaints are ultimately routed to Public Works for resolution.

## 3.2 Vulnerabilities and Risk Assessment

### Vulnerability Analysis of Repetitive Loss Properties

Thomaston has one Repetitive Loss Properties (RLP). It is not located in a SFHA. The RL property is a single-family home located adjacent to Nibbling Brook.

There are no properties in Town classified as Severe RLP. Zero of the RLPs in Thomaston have been mitigated in the past.

**Table 3-1: Repetitive Loss Properties in Thomaston**

Total	Residential	Non-Residential	Mitigated	SRL
1	1	0	0	0

Town staff are concerned that one of the buildings at the Country View Estates condominiums on Branch Road adjacent to the Sunoco gas station and Chapman Lumber could become an RLP. This area receives drainage from Leigh Avenue and Edgewood Avenue, but the stream was reportedly diverted to support the construction of the condominiums many years ago. During heavy rain events, water will run through the condominiums (returning to its natural watercourse) and turn one of the buildings (the building closest to the wetland) into an island. There is reportedly a low grass berm that provides minimal flood protection that is overtopped during heavy rainfall. The Land Use Administrator has received several calls about this area in recent years. Ultimately, any solution will need to be worked out between the property owners that share the stream. It is possible that culvert upgrades at Route 6 could help, but the diverted water is the real issue.

### Vulnerability Analysis of Areas along Watercourses

The primary waterway in the Town is the Naugatuck River which flows north to south through the Town. A secondary waterway in Thomaston is Branch Brook, which forms much of Thomaston's southwestern boundary. The remaining waterways in Thomaston are mostly small streams and brooks. SFHAs with elevations are delineated for the Naugatuck River and Branch Brook, while several smaller brooks and streams, including the major water bodies, have SFHAs delineated by approximate methods. All of these delineated floodplains are generally limited to the areas adjacent to the streams.

Due to the large amount of buffer capacity provided by the USACE flood control dams, there is little wide-scale flooding in Thomaston. Several brownfield sites are located in the floodplain of the Naugatuck River.



Town officials have expressed an interest in remediating and redeveloping these sites. Any development within the Naugatuck River floodplain would need to be consistent with local floodplain management regulations.

The unnamed tributary to Branch Brook at the base of Babbitt Road is eroding the bank supporting Old Northfield Road. A stabilization project is needed here before the roadway is undermined.

Flood prone areas in the community today, as mapped by FEMA, are presented in Figure 3-1.

### **Vulnerability Analysis of Problem Areas Related to Localized Flooding**

Specific areas susceptible to flooding were identified by Town personnel. Most flooding occurs due to large amounts of rainfall falling in conjunction with snowmelt and occurs due to undersized road culverts, as noted below.

A significant rain event on September 25, 2018 did not cause significant flooding in Thomaston.

- ❑ Hickory Hill Road – This road is a Federal Highway Administration (FHWA) road based on its status as a connector road between Route 254 and Route 109. As such, FEMA could not provide disaster funding when the road washed out in April 2007 because the funding would duplicate another federal program, and the FHWA denied funding because the road has too little traffic. The problem is that two streams cross the road at a low point known as “Peck Hollow”. Wetland areas are near the road level and the two culverts running underneath the road are undersized. The major culvert at the west end of Peck Hollow was washed out during the April 2007 nor’easter partially because of a poorly located side drain that eroded the endwall. Poor drainage along the roadside also contributes to flooding in this area.

**Hickory Hill Road is being upgraded in 2021 using a LOTCIP grant. Once completed it should no longer present a significant flooding concern.**

- ❑ High Street Extension – A stream exits a culvert near High Street and runs parallel to road. The discharge is causing bank erosion on both sides of the stream, with the east bank only a few feet from the side of the road. The embankment is fairly steep to the streambed. The flooding issue here is largely on private property.
- ❑ Hillside Avenue and Gilbert Street – This area has historically had no storm drainage systems, and all nearby basements run their sump pumps to the street. New storm drainage has been installed on Hillside Avenue and Gilbert Street. This is expected to alleviate the flooding issue.
- ❑ Leigh Avenue – The end of the road is private and the residents experience drainage problems due to the nearby pond and wetlands. A drainage system was installed on Leigh Avenue that appropriately directs drainage into the pond at the end of the road. This area is considered to be mitigated.
- ❑ Park Street at Main Street – This intersection flooded during the April 2006 nor’easter due to the clogging of a culvert at a bend beneath a manhole access that had been previously paved over by the State Department of Transportation. The Town found the manhole and

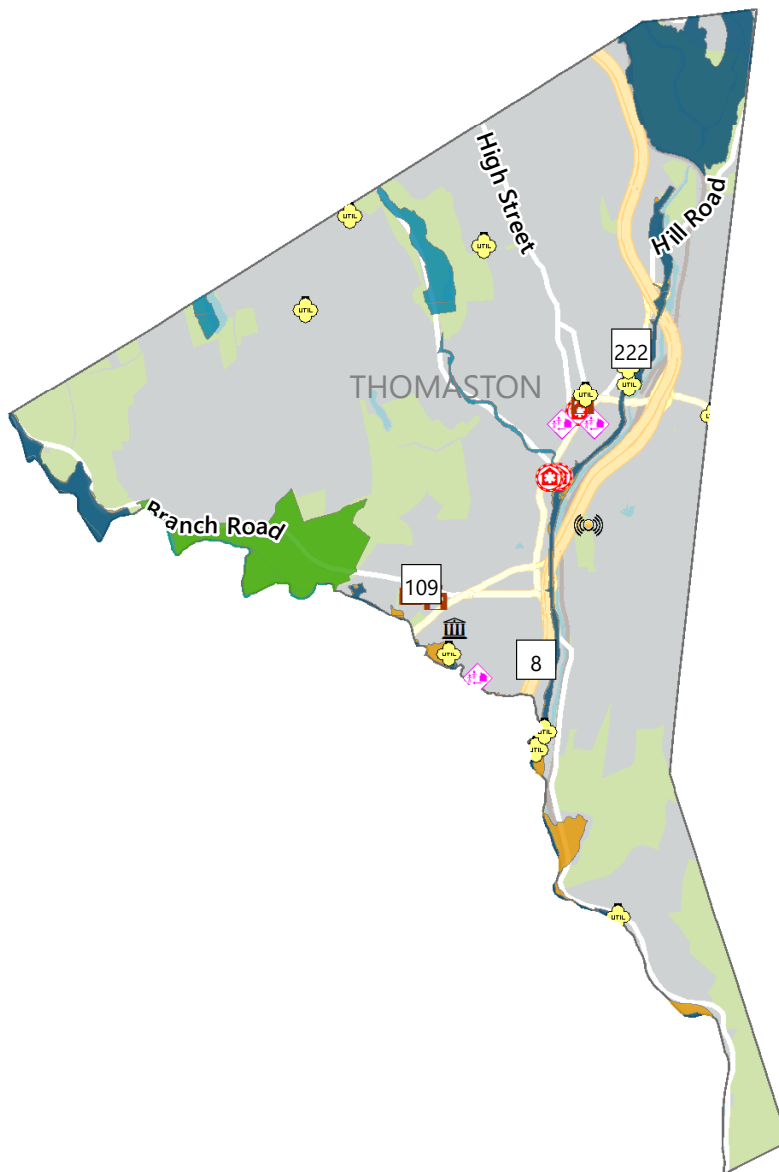
unclogged the pipe. This area is not typically a flooding concern and should be removed from future versions of the HMP.

- ❑ Watertown Road (Route 6) – Water backs up at an undersized culvert on the upstream side of Route 6. The drainage swale leading to the culvert is heavily vegetated. When this intersection floods, the water almost reaches nearby businesses. The water flows over Route 6, but doesn't generally impact the residences downstream along Stumpf Avenue. This area has not flooded recently. DOT has not upgraded the culvert, but Town staff report seeing DOT performing maintenance at the culvert recently.
- ❑ Drainage from the ponds near Hillside Cemetery are causing nuisance flooding along Cables Lane. A mitigation project may be needed here.

### **Critical Facilities and Emergency Services**

Critical facilities are not regularly impacted by flooding in the Town of Thomaston. The electric substation on Electric Avenue and the Sewage Treatment Plant on Old Waterbury Road are both located in the mapped 100-year floodplain, but neither has any regular issues with flooding. Route 6 (Watertown Road), a major northeast-southwest thoroughfare has occasional flooding issues north of Route 109. Such flooding could potentially slow emergency response times due to detours around this area.





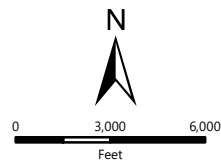
Critical Facilities		Historic Sites	
	Communications		Historic Sites
	Emergency Response	<b>Flood Zone</b>	
	Government Services		A
	School		AE
	Utility		ANI
	Vulnerable Population		D
			X500



99 REALTY DRIVE  
CHESHIRE, CT 06410  
203.271.1773

## Flood Hazards in Thomaston

NVCOG Hazard Mitigation Plan Update  
Naugatuck Valley Council of Governments  
47 Leavenworth Street, 3rd Floor  
Waterbury, CT 06702



DATE 6/15/2021  
141.3211.00029  
PROJ. NO.

**FIG. 3-1**

## 4.0 HURRICANES AND TROPICAL STORMS

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### 4.1 Existing Capabilities

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#### **Flooding**

Existing capabilities appropriate for flooding were discussed in Section 3.0. These include the ordinances, codes, and regulations that have been enacted to minimize flood damage. In addition, various structures exist to protect certain areas, including dam and local flood protection projects.

#### **Wind**

Wind loading requirements are addressed through the state building code. The State Building Code has been amended several times in the past two decades. The 2005 Code was amended in 2009, 2011, and 2013. The code was then updated and amended in 2016, with the current code having been updated and effective as of October 1, 2018. The code specifies the design wind speed for construction in all the Connecticut municipalities. Effective October 1, 2018 the design wind speed for Thomaston is 110 mph for a Category 1 event, 120 mph for a Category 2, and 130 mph for a Category 3, 4 or 5 hurricane event.

Connecticut is located in FEMA Zone II regarding maximum expected wind speed. The maximum expected wind speed for a three-second gust is 160 mph. This wind speed could occur as a result of either a hurricane or a tornado in western Connecticut and southeastern New York. The American Society of Civil Engineers recommends that new buildings be designed to withstand this peak three-second gust.

Trees and branches may fall during heavy wind events, potentially damaging structures, utility lines, and vehicles. The Town performs annual tree maintenance, both near roadways and for property owners who request it. The Town does not cable trees to keep them standing; they cut any that are dead or are in danger of falling. According to Town personnel, many dangerous trees have been removed. The Superintendent of Highways is the Tree Warden. Tree debris is chipped and delivered to a local landscaping company. A debris maintenance area is not believed necessary.

Eversource Energy, also performs tree maintenance, but landowners are primarily responsible for conducting tree maintenance on private property. The Town attempts to close roads at convenient intersections rather than at the location of the downed tree or branch. In addition, all utilities in new subdivisions must be located underground whenever possible in order to mitigate storm-related damages. Trees maintenance is fundamental, and they work well with Eversource. A lot of trees were damaged and removed as a result of past storms, which has reduced risks.

Eversource was under intense scrutiny after storms Irene and Alfred in 2011. The utility has reportedly done an adequate job trimming trees since 2011. Loss of power is a concern for the town. Trimming has reportedly helped avoid significant outages in a few recent high wind events.

The Town relies on radio and television to spread information on the location and availability of shelters. During a disaster, the Town will notify residents of emergency information on a neighborhood basis using its CT Alert emergency notification service. Prior to severe storm events, the Town ensures that

warning/notification systems and communication equipment is working properly, and prepares for the possible evacuation of impacted areas.

### **New Capabilities and Completed Actions**

Thomaston continues to maintain its strong tropical cyclone mitigation capabilities. The tree maintenance budget has increased slightly in recent years. A large increase is requested for next year in order to increase tree removal activities.

### **Summary**

Thomaston mitigates hurricane and tropical storm damages through tree and limb maintenance, public alert and communications procedures, and enforcement of building code requirements related to high winds.

## **4.2 Vulnerabilities and Risk Assessment**

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The Town of Thomaston is vulnerable to hurricane damage from wind and flooding, and from any tornadoes accompanying the storm. Wind damage is most prevalent along hilltops.

Thomaston's housing stock consists of a handful of historic buildings greater than 50 and sometimes 100 years old, relatively younger buildings built before 1990 when the building code changed to mitigate for wind damage, and relatively recent buildings that utilize the new code changes. Since much of the existing housing stock in the town predates the recent code changes, many structures are highly susceptible to roof and window damage from high winds.

Town-owned critical facilities do not have wind-mitigation measures installed to specifically reduce the effects of wind. Thus, it is believed that nearly all of the critical facilities in the town are as likely to be damaged by hurricane-force winds as any other. However, newer critical facilities are more likely to meet current building code requirements and are therefore considered to be the most resistant to wind damage even if they are not specifically wind resistant. Older facilities are considered to be more susceptible to wind damage.

The emerald ash borer has damaged trees throughout Thomaston. Public Works removes approximately 10 trees per month, but hundreds more need to be removed.

### Tropical Storm Isaias

Tropical Storm Isaias in early August 2020 caused significant damage and disruption in Thomaston. Some areas were out of power for a week. Damage was widespread, but there was slightly more tree damage in the higher elevations. Approximately four or five streets were cut off due to the falling trees. At the time of plan development Town staff reported that they were still cleaning up trees from the event.

The biggest initial hurdle was the lack of informed coordination with Eversource. The database Eversource was relying upon was faulty and reporting that work was completed when it was not. The EMD provided an example where he was standing on a street on the phone with Eversource and they told him it was

repaired, but the wires were down in front of him. Thomaston also had similar Make Safe issues as other communities where they could not get confirmation that power was cut so they could begin debris removal. The Town has addressed these issues with Eversource in its follow-up meetings. Once the Eversource trucks were in Town, the response was very proactive.

## 5.0 SUMMER STORMS AND TORNADOES

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### 5.1 Existing Capabilities

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Warning is the primary method of existing mitigation for tornadoes and thunderstorm-related hazards. The NOAA National Weather Service issues watches and warnings when severe weather is likely to develop or has developed, respectively.

Aside from warnings, several other methods of mitigation for wind damage are employed in Thomaston as explained in Section 4. In addition, the Connecticut State Building Code includes guidelines for the proper grounding of buildings and electrical boxes.

In the Town of Thomaston, the local utilities are responsible for tree branch removal and maintenance above and near their lines. In addition, all new developments in Thomaston must place utilities underground wherever possible. The Highway Department also performs annual tree maintenance on municipal right of ways, and also approaches residents on a case-by-case basis when trees and branches on their property look hazardous. The Highway Department will also perform tree maintenance for private homeowners who request it.

Municipal responsibilities relative to tornado mitigation and preparedness include:

- Developing and disseminating emergency public information and instructions concerning tornado safety, especially guidance regarding in-home protection and evacuation procedures, and locations of public shelters.
- Designate appropriate shelter space in the community that could potentially withstand tornado impact.
- Periodically test and exercise tornado response plans.
- Put emergency personnel on standby at tornado 'watch' stage.
- Utilizing the "CT Alert" Emergency Notification System to send warnings into potentially affected areas.

These protocols are considered effective for mitigating wind and summer storm-related damage in the Town of Thomaston. While additional funding could be utilized to strengthen the current level of mitigation, such funding is not currently considered cost-effective for the current level of risk.

### New Capabilities and Completed Actions

Thomaston continues to maintain its summer storm mitigation capabilities. Its tree and limb removal procedures continue to be adequate, and it coordinates closely with Eversource on protecting power lines.

### Summary

Thomaston mitigates summer storm risks primarily through tree, limb, and debris management, emergency communications, and coordination with Eversource.

## 5.2 Vulnerabilities and Risk Assessment

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The entire community is at relatively equal risk for experiencing damage from summer storms and tornadoes. Based on the historic record, a few severe thunderstorms have resulted in costly damages in Thomaston. Most damages are relatively site-specific and occur to private property (and therefore are paid for by private insurance). For municipal property, the budget for tree removal and minor repairs may need to be adjusted from time to time to address storms. Given the limited historic record for damaging tornado events, an estimate of several million dollars in damage may be reasonable for an EF2 tornado striking Thomaston, and with a greater damage amount to be expected should an EF3 or stronger tornado strike. The town notes that tornadoes have struck Thomaston as well as the adjacent communities of Waterbury and Watertown.

A tornado in May 2018 bypassed Thomaston to the north and south and did not affect the town.

Heavy winds can take down trees near power lines, leading to the start and spread of fires. Such fires can be extremely dangerous during the summer months during dry and drought conditions. Most downed power lines in Thomaston are detected quickly and any associated fires are quickly extinguished. However, it is important to have adequate water supply for fire protection to ensure this level of safety is maintained.

According to Town personnel, the most susceptible area of Town to wind damage is the one mobile home park in Thomaston at 1402 Waterbury Road. It includes 7 manufactured homes and one garage. The Zoning Regulations do not allow for new mobile home parks to be developed. Other areas of Town are more susceptible to damage from falling branches and trees than from actual wind damage.

## 6.0 WINTER STORMS

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### 6.1 Existing Capabilities

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Programs that are specific to winter storms are generally those related to preparing plows, sand and salt trucks; tree-trimming to protect power lines; and other associated snow removal and response preparations.

The Town of Thomaston primarily uses Town staff for plowing operations. The Highway Department utilizes nine plow trucks to clear and treat all Town-owned roadways, properties, and sidewalks. Town-owned roadways are primarily treated with "Ice B Gone". Private contractors perform snow removal at the schools. The Connecticut Department of Transportation plows Routes 6, 8, 109, 222, and 254. The Town follows set plowing routes for snow removal. These are not posted publicly. Snow removal practices are posted on the Thomaston Police Department website at <http://www.thomastonpolice.com>. During emergencies, a plow vehicle can be dispatched ahead of an emergency vehicle. Town roads are sanded and/or plowed in the following order of importance:

- 1) Emergency locations, including Fire, Ambulance, and accident locations;
- 2) School bus routes;
- 3) Through roads; and
- 4) Cul-de-sacs and other areas.

As there is over 500 feet in elevation difference between the high point and low point in Town, Thomaston can experience snow in the hills while it rains in the downtown area. The Town uses Meteorlogix Weather Service's MxVision WeatherSentry Online® Transportation Edition with Roadcast® software, which provides radar, weather and pavement temperature forecasts, to prioritize plowing and sanding operations. As additional mitigation, the Town website has a page dedicated to winter driving tips at [http://www.thomastonct.org/Content/Winter\\_Driving\\_Tips.asp](http://www.thomastonct.org/Content/Winter_Driving_Tips.asp).

The town found it necessary to remove snow from municipal facilities in January-February 2011. As a result of this experience, the town has been careful to watch for conditions that may lead to damage from snow loads.

### New Capabilities and Completed Actions

Thomaston continues to maintain its strong winter storm mitigation capabilities.

### Summary

Thomaston mitigates snow damages through implementation of road and building clearing protocols, enforcement of the State Building Code, and through the mitigation measures previously discussed for high wind events.

## 6.2 Vulnerabilities and Risk Assessment

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The entire community is at relatively equal risk for experiencing damage from winter storms, although some areas may be more susceptible. Many damages are relatively site-specific and occur to private property (and therefore are paid for by private insurance), while repairs for power outages is often widespread and difficult to quantify to any one municipality. For municipal property, the budget for plowing and minor repairs is generally adequate to handle winter storm damage, although the plowing budget is often depleted in severe winters. In particular, the heavy snowfalls associated with the winter of 2010-2011 drained the local plowing budget and raised a high level of awareness of the danger that heavy snow poses to roofs, as did the snow associated with Winter Storm Alfred in October 2011 and storm Nemo in February 2013.

The January 2015 winter storm required additional plowing efforts but did not cause any damage.

As mentioned for summer storms, the heavily treed landscape in close proximity to densely populated residential areas in the Town of Thomaston poses problems in relation to blizzard condition damage. Tree limbs and some building structures may not be suited to withstand high wind and snow loads. Ice can damage or collapse power lines, render steep gradients impassable for motorists, undermine foundations, and cause "flood" damage from freezing water pipes in basements.

A few areas in the Town of Thomaston have been identified by Town personnel as having problems with ice during the winter months. Icing causes difficult driving conditions throughout the hillier sections of Thomaston, including Blakeman Road, the condominium access road at 143 Pine Hill Road, and along Hickory Hill Road near Nystrom Pond. In some places, such as road cuts on Route 254 north of the center of Town, and on the southern part of Jackson Street, blocks of ice fall on the side of the roadway from the rocks above. Drifting snow is not as large a problem in Thomaston as other areas, but it still occurs. Snow drifts occasionally occur in higher elevations with cleared areas such as Hickory Hill Road and the Cedar Mountain area. This problem is mitigated through municipal plowing efforts. Ice jams are not a problem along the Naugatuck River in Thomaston.



## 7.0 GEOLOGICAL HAZARDS

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### 7.1 Existing Capabilities

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The Connecticut Building Codes include design criteria for buildings specific to a municipality, as adopted by the Building Officials and Code Administrators (BOCA). These include the seismic coefficients for building design in the Town of Thomaston. The Town has adopted these codes for new construction and they are enforced by the Town Building Inspector. Due to the infrequent nature of damaging earthquakes, land use policies in the Town of Thomaston do not address earthquake hazards.

The Subdivision Regulations of the Town of Thomaston (Section 11.16) restricts the angle of slopes beyond the sidewalk area to no more than one foot of rise or fall for each three feet of horizontal distance. The Town reserves the right to impose more stringent regulations on a site to maintain the stability of the bank under the proposed conditions.

Thomaston's capabilities to mitigate for earthquake damage and prevent loss of life and property have not necessarily changed since the initial hazard mitigation plan was adopted, although the State's building code has been updated and the town has incorporated those changes. In the event that a damaging earthquake occurs, Thomaston will activate its Emergency Operations Plan and initiate emergency response procedures as necessary.

#### **New Capabilities and Completed Actions**

Thomaston continues to maintain its earthquake and landslide mitigation capabilities.

#### **Summary**

Thomaston mitigates geological hazards through enforcement of zoning and subdivision regulations preventing development in higher risk areas. Other mitigation measures consist of general emergency response capabilities.

### 7.2 Vulnerabilities and Risk Assessment

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#### **Earthquake Vulnerabilities**

Several areas in the Town of Thomaston are underlain by sand and gravel. Structures in these areas are at increased risk from earthquakes due to amplification of seismic energy and/or collapse. The areas that are not at increased risk during an earthquake due to unstable soils are the areas underlain by glacial till.

Areas of steep slopes can collapse during an earthquake, creating landslides. Seismic activity can also break utility lines, such as water mains, electric and telephone lines, and stormwater management systems. Damage to utility lines can lead to fires, especially in electric and gas mains. Dam failure can also pose a significant threat to developed areas during an earthquake.

Because a damaging earthquake would likely affect a large area beyond Thomaston, it is likely that the community may not be able to receive regional aid for a few days. It is important for municipal facilities and departments to have adequate backup plans and backup supplies to ensure that restoration activities may begin and continue until outside assistance can be provided.

### **Other Geological Hazards**

The Jackson Street area experiences rockfalls year-round, in addition to experiencing ice-falls during winter months.

## 8.0 DAM FAILURE

### 8.1 Existing Capabilities

The Dam Safety Section of the Connecticut DEEP Inland Water Resources Division is responsible for administration and enforcement of Connecticut's dam safety laws. Dam safety laws are codified in Sections 22a-401 through 22a-411 of the Connecticut General Statutes. The statutes require that permits be obtained to construct, repair, or alter dams and that existing dams be inventoried and periodically inspected to assure that their continued operation does not constitute a hazard.

Dams regulated by the Connecticut DEEP must be designed to pass the 1% annual chance rainfall event with one foot of freeboard, a factor of safety against overtopping.

Significant and high hazard dams are required to meet a design standard greater than the 1% annual chance rainfall event.

Effective October 1, 2013, the owner of any high or significant hazard dam (Class B and C) must develop and implement an Emergency Action Plan (EAP). The EAP shall be updated every two years, and copies shall be filed with DEEP and the chief executive officer of any municipality that would potentially be affected in the event of an emergency. The EAP must include inundation zone mapping, procedures for monitoring the structure during periods of heavy rainfall and runoff, and a system to alert local officials in the event of an emergency.

The CT DEEP also administers the Flood and Erosion Control Board (FECB) program, which can provide noncompetitive state funding for repair of municipality-owned dams. State statute Section 25-84 allows a municipality to form an FECB.

The USACE is responsible for maintaining the plan for the Thomaston Dam, Northfield Dam, and Black Rock Dam. The City of Waterbury also has an emergency operation plan for Wigwam Reservoir Dam. The Town of Thomaston maintains the Class BB dam on Nystrom Pond in Litchfield as part of its maintenance of its Town Park.

#### Actions Completed and New Capabilities

Thomaston continues to maintain its capabilities for mitigating and responding to dam failure risks.

#### Summary

Thomaston mitigates dam failure hazards primarily by supporting State Dam Safety Program efforts locally.

### 8.2 Vulnerabilities and Risk Assessment

While flooding from a dam failure generally has a moderate geographic extent, the effects are potentially catastrophic. The Connecticut DEEP administers the statewide Dam Safety Program and designates a classification to each state-inventoried dam based on its potential hazard.

- *Class AA*: negligible hazard potential
- *Class A*: low hazard potential

- *Class BB*: moderate hazard potential
- *Class B*: significant hazard potential
- *Class C*: high potential hazard

As of 2020, there were 25 DEEP-inventoried dams within Thomaston. Four of these dams had a Significant or High Hazard Potential rating.

These dams are listed in Table 8-1 and shown in Figure 8-1.

**Table 8-1: DEEP-Inventoried Dams in Thomaston**

Number	Name	Class	Owner
14001	THOMASTON FLOOD CONTROL DAM	C	Federal USACE
14002	WIGWAM RESERVOIR DAM	B	Municipal
14003	HYCHKO POND 8 DAM		Private
14004	STEVENS DAM	A	Private
14005	WESTSIDE DAM	A	Private
14006	MORTON POND DAM	A	Private
14007	BLACK ROCK FLOOD CONTROL DAM	C	Federal USACE
14008	NORTHFIELD BROOK FLOOD CONTROL DAM	C	Federal USACE
14009	NORTHERLY POND DAM	A	Private
14010	SOUTHERLY POND DAM	BB	Private
14011	KUIBEDA POND DAM		Private
14012	GESMONDI POND DAM		Private
14013	GUSCEON CEMETERY DAM	A	Municipal
14014	Unknown Dam Name		Private
14015	BAKUTIS DAM	AA	Private
14016	THOMAS POND DAM		Private
14017	BYSTRY POND DAM	AA	Private
14018	JOHNSON POND DAM		Private
14019	PIERPONT'S POND DAM	AA	Private
14020	THOMASTON FISH & GAME DAM	AA	Private Club
14021	MILLER POND BERM	AA	Private
14022	FARM POND DAM		Private
14023	PIERPONT LOWER POND DAM		Private
14024	CHAMBERLIN POND DAM		Private
14025	PLUME AND ATWOOD DAM	BB	Private

The following table summarizes the status of EAPs for the higher-hazard potential dams in Thomaston:

**Table 8-2: EAP Status of Higher-Hazard Dams**

#	Name	Class	EAP Status	EAP Status Date
14001	THOMASTON FLOOD CONTROL DAM	C	USACE dam on Federal Land EAP exists	
14002	WIGWAM RESERVOIR DAM	B	Review letter sent revisions needed	6/5/2017
14007	BLACK ROCK FLOOD CONTROL DAM	C	USACE dam on Federal Land EAP exists	
14008	NORTHFIELD BROOK FLOOD CONTROL DAM	C	ACOE dam on Federal Land EAP exists	

Thomaston should work to ensure EAPs are up-to-date.

Thomaston Dam – Thomaston Dam is owned by the USACE and is designed to impound floodwaters from the Naugatuck River and Leadmine Brook. Based on dam failure inundation maps provided by the USACE, a dam failure at full pool height (worst-case scenario) would cause flooding along the Naugatuck River corridor all the way to the Housatonic River in Derby. Much of downtown Thomaston to the area of Thomaston High School would experience some degree of flooding, including most of the critical facilities in Town. Such a failure would cause backwater conditions along Branch Brook and Northfield Brook, and flooding along Waterbury Road. A breach at full height would cause flooding greater than the mapped 500-year flood event for Thomaston.

Northfield Brook Dam – Northfield Brook Dam is owned by the USACE and provides flood control along Northfield Brook. Based on dam failure inundation maps provided by the USACE, a dam failure at full pool height would cause flooding along Northfield Brook and the Naugatuck River corridors all the way to Naugatuck. The Town Fire Department and the State Department of Transportation District Four Headquarters are critical facilities located within the inundation area. Further downstream, the inundation area would primarily be confined to the Naugatuck River floodplain, although some additional low-lying areas would also be affected. The Thomaston Waste Water Treatment Plant (WWTP) may also be affected by flooding from the failure of Northfield Brook Dam.

Black Rock Dam – Black Rock Dam is owned by the USACE and provides flood control along Branch Brook in Black Rock State Park. Based on dam failure inundation maps provided by the USACE, a dam failure at full pool height would cause flooding along the Branch Brook and Naugatuck River corridors all the way to Beacon Falls. Thomaston High School, the Thomaston WWTP and the Connecticut Water Company wellfield are the critical facilities that would be affected. Further downstream, the inundation area would primarily be inside the Naugatuck River floodplain, although some inland areas would also be affected.

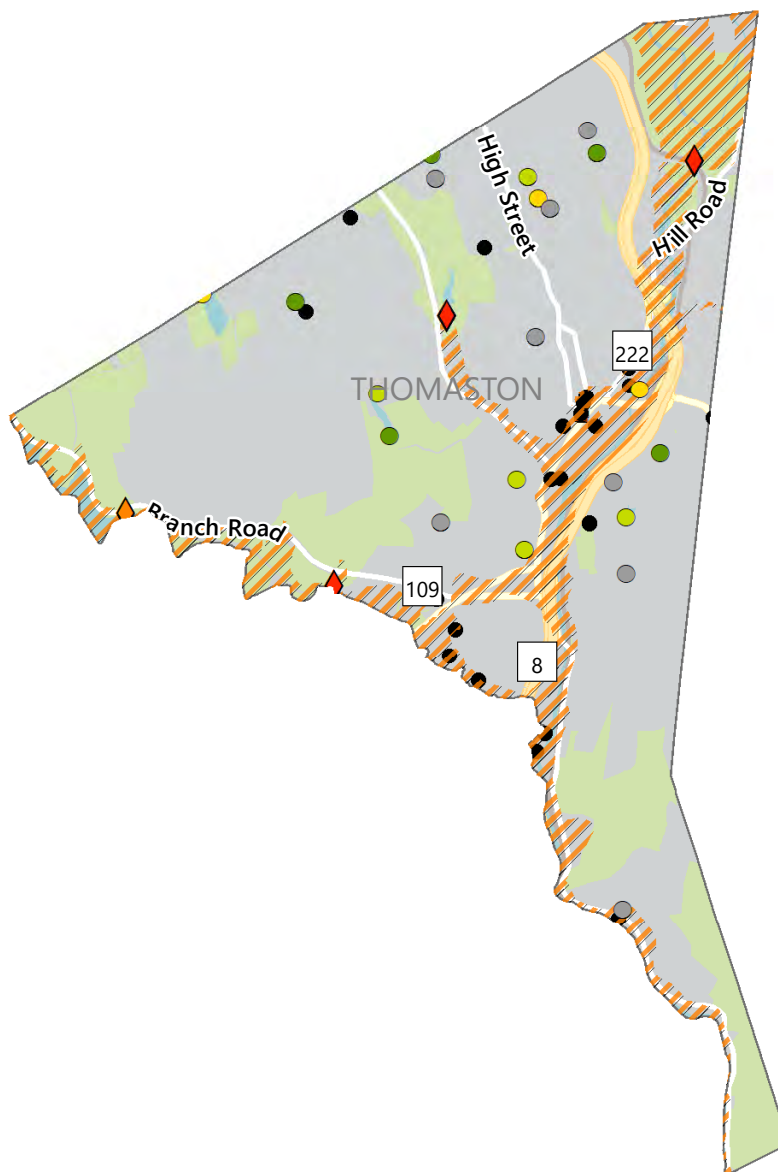
Wigwam Reservoir Dam – Wigwam Reservoir is owned by the City of Waterbury. It covers a surface area of approximately 96.3 acres, with much of this area outside the Town of Thomaston. The reservoir receives its inflow from Morris Reservoir, Moosehorn Brook, Fenn Brook, and several unnamed tributaries. The outflow from this reservoir is the headwaters of Branch Brook. The downstream corridor is predominately undeveloped, with an aqueduct running parallel to the brook through Black Rock State Park before it enters Watertown. The dam failure inundation area extends along Route 109 to Black Rock Dam. Few houses are in the dam failure inundation area, with no critical facilities with the exception of Route 109. The largest danger from a dam failure of this Class B dam is the damage it could cause to Black Rock Dam. If the pool behind Black Rock Dam was near capacity, the failure of Wigwam Reservoir dam could cause Black Rock Dam to fail.

Other Dams – There are additional dams that could affect the residents of Thomaston. A Class C dam in Plymouth has a dam failure inundation area passing through Thomaston into the Naugatuck River. In addition, two other smaller impoundments in Thomaston have been noted by Town personnel as having the potential for problems. These are discussed briefly below.

- Plymouth Reservoir Dam: This Class C dam is owned and operated by Connecticut Water Company and is located in the west part of Plymouth. The outflow from this 36.5 acre reservoir is an unnamed stream that enters Thomaston near Altair Avenue and passes under

Railroad Street and Sanderson Lane before passing into the Naugatuck River. As noted in Section 3, this stream has recently caused damage to the bridge on Altair Avenue that has since been repaired. The dam failure inundation area for this dam extends throughout the residential area in the vicinity of Railroad Street and downstream to the Naugatuck River. Repairs to Altair Avenue have been completed and there are no current flooding concerns downstream of this dam.

- Leigh Avenue Dam: This private dam is located in a remote rural area above Leigh Avenue. The dam is not registered with the DEEP. According to Town personnel, the dam is an earthen dam with a pipe through the dam to act as a spillway. The dam impounds approximately 1.8 acres. While a formal dam failure analysis has not been performed, Town personnel are concerned that a dam failure could impact five homes on Edgewood Avenue and Leigh Avenue and potentially Route 6 if it failed suddenly. Recent drainage improvements have reduced the Town's concerns in this area.
- Southerly Pond Dam: This dam is registered with the DEEP but was not assigned a hazard classification as of 1996. The dam impounds approximately 2.4 acres. The pond is primarily used for stormwater management and receives inflow from storm sewers on the surrounding roads. According to Town personnel, the pond has been slowly filling over the past 14 years since Twin Pond Road was installed, resulting in a loss of available storage for the mitigation of peak stormwater. If the dam should fail, it could affect as many as four houses downstream on Smith Road and cause considerable damage to an underground culvert under Smith Road that conveys the outflow from the pond. The Town removed sediment from the Southerly Pond Dam east of Twin Pond Road several years ago, as it was designed to be a sedimentation basin. The Town expects that it will need to remove sediment from this basin again in the future.
- The Nystrom Pond Dam and Dike are owned by the Town. Both are Class BB (moderate) hazard structures. Failure of this dam would flood approximately six properties in the Northfield area. DEEP recently changed the dam to a more hazardous classification and the Town needs to perform upgrades. These will be performed in fiscal year 2021-2022 at a cost of approximately \$1.2 million. The Town has secured the funding to complete this work, and is currently awaiting a permit from the US Army Corps of Engineers to perform the work.

**Dam Hazard Class**

- Unclassified
- AA - Negligible Hazard
- A - Low Hazard
- BB - Moderate Hazard
- B - Significant Hazard
- C - High Hazard

▨ Dam Breach Inundation Area

**Critical Facilities**

- Critical Facilities

**Historic Sites**

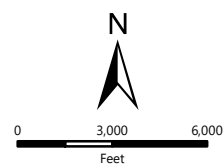
- Historic Sites



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## Dam Failure Hazards in Thomaston

NVCOG Hazard Mitigation Plan Update  
Naugatuck Valley Council of Governments  
47 Leavenworth Street, 3rd Floor  
Waterbury, CT 06702



DATE 6/15/2021

141.3211.00029

PROJ. NO.

**FIG. 8-1**

## 9.0 WILDFIRES

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### 9.1 Existing Capabilities

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Existing mitigation for wildland fire control is typically focused on Fire Department training and maintaining an adequate supply of equipment. The Town of Thomaston Zoning Regulations and Subdivision Regulations also have special use standards regarding fire protection for commercial and municipal facilities, and the creation of fire ponds for new subdivisions outside the range of public water service. In addition, new roads and subdivisions are required to allow for fire truck access.

Unlike wildfires on the west coast of the United States where the fires are allowed to burn toward development and then stopped, the Thomaston Fire Department goes to the fires. This proactive approach is believed to be effective for controlling wildfires. The fire department has some water storage capability, but primarily relies on the Connecticut Water Company's water service to fight fires in the central part of Town. In the remainder of Town, the fire department relies heavily on the use of local water bodies to supply fire fighting water.

The Thomaston Fire Department is often the first responder for fires that happen in the Mattatuck State Forest in Watertown, and coordinates with the Watertown Fire Department to control these forest fires. While the Thomaston Fire Department does not have a four-wheel drive brush truck, it does have a tanker truck capable of carrying water to remote locations. The Town also has mutual aid agreements with all of its neighbors.

Town officials indicated that approximately half of the town is covered by public water supply and hydrants. The other half is not covered by public water supply but is serviced by tanker trucks. In total, the town has approximately 6,000 gallons of water available through the use of tankers.

The Town has the support of the owners of the tracts of open space to provide access to their lands in case of a wildfire.

The Connecticut DEEP Open Burning Program requires designated "Open Burning Officials" in every community to oversee open burning within the town. The Town of Thomaston is compliant with this program and has a designated Burning Official.

### **Actions Completed and New Capabilities**

Thomaston continues to maintain its capabilities for mitigating and responding to wildfire risks.

### **Summary**

The Town mitigates wildfire hazards by implementing the state's Open Burning Program locally, installing dry hydrants and firefighting-water sources in remote areas, and training its fire department to fight wildfires.



## 9.2 Vulnerabilities and Risk Assessment

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The approximately 5,245 acres of forests and undeveloped land in Thomaston may be susceptible to drought conditions that make them more vulnerable to wildfires. The approximately 407 acres of agricultural fields and maintained grasses may be vulnerable to direct damage from drought conditions.

Wildfire risk areas are generally associated with wooded water company lands, federally owned forests associated with the flood control dams, land trust property, and Town-owned open space. As each area borders residential sections of the Town, residents on the outskirts of these risk areas are the most vulnerable to fire, heat, and smoke effects of wildfires. Cedar Mountain and Waterbury Road have been identified by the town as areas of concern due to potential wildfires.

Fragmented forest areas in the southern part of the town near new development are considered most at risk from wildfires. In addition, there is concern about fires in the wooded eastern, northern, and southern sections of Town. While fires are less frequent in these areas, they can often be difficult to access.

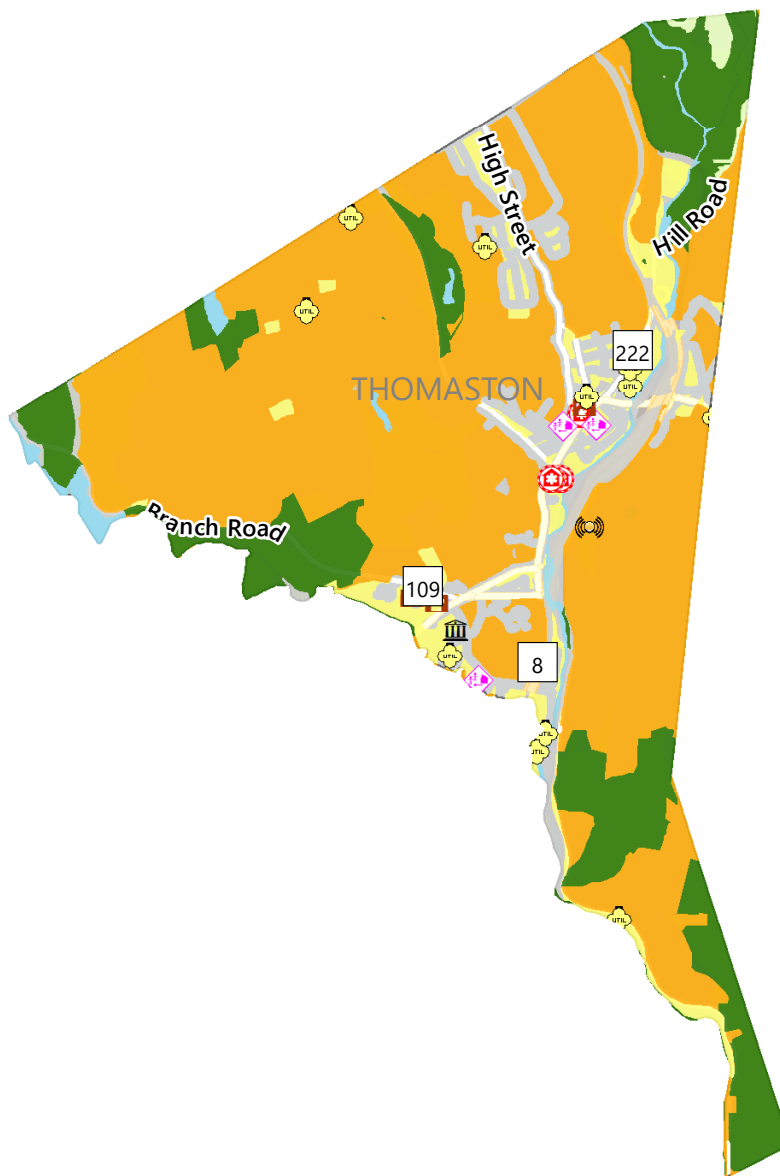
As mentioned above, Town officials indicated that approximately half of the town is covered by public water supply and hydrants. However, the town feels that the water pressure associated with the hydrants is not sufficient and would like to work with Connecticut Water Company to increase the pressure.

The other half is not covered by public water supply but is serviced by tanker trucks. In total, the town has approximately 6,000 gallons of water available through the use of tankers. The town would like to pursue funding for hydrants and/or fire ponds in the outskirts of town where public water supply is not available.

Despite having a large amount of forest/urban interface, the overall risk of wildfires occurring in the Town of Thomaston is also considered to be low. Such fires fail to spread far due speed of detection and strong fire response. As most of the Town has fire-fighting water available nearby, a large amount of water can be made readily available for fire fighting equipment. The Town also has the support of the local water companies to provide access to their extensive watershed lands in case of a wildfire.

The Town has not had to fight any wildfires or brush fires in recent years.

Wildfire risk zones are mapped in Figure 9-1.



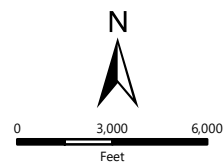
Critical Facilities		Wildland Urban Interface Type	
	Communications		Wildland-Urban Intermix
	Emergency Response		Wildland-Urban Interface
	Government Services		Vegetated: Low Housing Density
	School		Vegetated: No Housing
	Utility		Non-vegetated
	Vulnerable Population		Water
Historic Sites			
	Historic Sites		



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## Wildfire Hazard in Thomaston

NVCOG Hazard Mitigation Plan Update  
Naugatuck Valley Council of Governments  
47 Leavenworth Street, 3rd Floor  
Waterbury, CT 06702



DATE 6/15/2021  
141.3211.00029  
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**FIG. 9-1**

## 10.0 MITIGATION STRATEGIES AND ACTIONS

### 10.1 Goals and Objectives

Municipal goals and objectives have been made consistent regionally and are presented in the Multi-Jurisdictional Plan document.

### 10.2 Status of Mitigation Strategies and Actions from Previous HMP

The table below lists the mitigation actions developed in the previous HMP and the status of each. Actions to be carried forward are noted as such. Actions that have been institutionalized as capabilities are not carried forward.

Strategy	Description	Responsible Party	Status	Notes
<b>TMS-1</b>	Add pages to the town website dedicated to citizen education and preparation for natural hazard events	EMS	Carry Forward	These types of notifications have been done via press releases posted on the website. A permanent page regarding event preparedness is still needed.
<b>TMS-2</b>	Obtain a grant to purchase new generators for the Town Hall and the Woodbridge Pump Station	Public Works	Carry Forward with Revision	No progress. Revise into a new generator strategy for multiple critical facilities.
<b>TMS-3</b>	Encourage residents to purchase and use NOAA weather radio with an alarm feature	EMS	Capability	This is a capability; the Town can do this at any time.
<b>TMS-4</b>	Acquire open space properties within SFHAs and set aside as greenways, parks, or other non-residential, non-commercial, or non-industrial use	Selectman's Office	Capability	This can be done when property and funding are available. No properties have been purchased by the Town in floodplains over the last five years.
<b>TMS-5</b>	Install drainage systems on Hillside Avenue and Gilbert Street	Public Works	Complete	This is in progress and will be completed by the end of 2020.
<b>TMS-6</b>	Coordinate with the State DOT regarding maintenance of vegetated swale near culvert under Route 6 upstream of Stumpf Avenue	Public Works	Drop	This area has not been an issue recently. A specific action is no longer needed.
<b>TMS-7</b>	Pursue funding to implement stormwater improvements along Hotchkiss Avenue in the vicinity of Crystal Lake.	Public Works	Complete	This was completed in 2018 as part of the Tracy Street drainage project.

Strategy	Description	Responsible Party	Status	Notes
<b>TMS-8</b>	Continue to work with the State of Connecticut, Local Bridge Program on the replacement of a bridge along Walnut Hill Road. Pursue funding for the town's required 20% contribution.	Selectman's Office	Complete	The Walnut Hill Road bridge was replaced in 2019-2020. A second bridge is in progress right now for Carter Road and will be completed soon.
<b>TMS-9</b>	Ensure that any development within the Brownfields sites is consistent with local floodplain management regulations.	Public Works, P&Z	Capability	This is a capability as any development needs to be compliant with local flood regulations. Brownfields redevelopment is not presently ongoing.
<b>TMS-10</b>	Conduct an evaluation of Northfield Brook to determine if maintenance is required to prevent potential flooding impacts.	Public Works	Drop	This culvert was replaced (see Walnut Hill Road bridge above). This area is mitigated, and an evaluation is no longer needed.
<b>TMS-11</b>	Review potential evacuation plans to ensure timely migration of people seeking shelter in all areas of Thomaston, and post evacuation and shelter information on the Town website and in municipal buildings.	EMS	Capability	There are potential evacuation plans and procedures in the EOP. The Town does not wish to post shelter locations prior to them being opened.
<b>TMS-12</b>	Encourage the use of structural techniques related to mitigation of wind damage in new residential and commercial structures to protect new buildings to a standard greater than the minimum building code requirements. Require such improvements for new municipal critical facilities.	Public Works	Capability	This may have been a more appropriate strategy for the Building Department. Regardless, this is likely a capability as buildings must be built to the 2018 building code that includes many of these techniques that were not required under the 2012 code.
<b>TMS-13</b>	Provide educational materials to property owners regarding using shutters, storm windows, pipe insulators, and removing snow from flat roofs	EMS	Drop	This direct outreach originally envisioned is no longer considered to be needed as heavy wind and snowfall events have not been frequent in recent years. The current method of issuing press releases is believed sufficient for distributing this information.

Strategy	Description	Responsible Party	Status	Notes
<b>TMS-14</b>	Provide educational materials with safety tips and reminders regarding cold weather	EMS	Capability	Seasonal announcements and press releases are provided on the Town website. The Town encourages elderly residents to contact social services for assistance during very hot and very cold weather. They also check on elderly housing developments to make sure people are ok during power outages.
<b>TMS-15</b>	Develop a plan to prioritize snow removal from the roof of critical facilities and other municipal buildings each winter. Ensure adequate funding is available in the Town budget for this purpose.	Public Works	Drop	No progress. A strategy is not believed to be needed at this time. The snow loads have not been as challenging in recent years.
<b>TMS-16</b>	Ensure that municipal departments have adequate backup facilities (power generation, heat, water, etc.) in case earthquake damage occurs	Public Works	Capability	This is a capability. Generators are the biggest need for municipal departments at this time. Shelters have adequate backup power supplies.
<b>TMS-17</b>	Consider bracing systems for assets and equipment inside critical facilities	Public Works	Carry Forward with Revision	The Town will investigate if sensitive components such as IT server racks, above ground fuel tanks, etc. are braced to mitigate potential wind or earthquake damage.
<b>TMS-18</b>	Include dam failure inundation areas in the CT Alert database.	Public Works	Capability	This is a general broadcast to those who signed up, which means that specific areas are included. The Town also uses the Everbridge emergency notification system which can send to specific areas. However, the Town prefers to send messages to all residents as opposed to targeted areas.
<b>TMS-19</b>	Petition the DEEP to investigate the hazard potential of the dam above Leigh Avenue and require registration	Public Works	Drop	Chamberlain Pond Dam is still listed as "unclassified" by DEEP. However, the hazard potential appears to be low, and the completion of a recent drainage project on Leigh Avenue has reduced potential flooding concerns in the area.
<b>TMS-20</b>	Make copies of the Class C dam EOP's and Dam Failure Analysis on file at the Town Hall	EMS	Carry Forward with Revision	Town has not received any recent EAPs. A strategy is needed to receive updated EAPs from dam owners where the failure of the dam could impact Thomaston.

Strategy	Description	Responsible Party	Status	Notes
<b>TMS-21</b>	Continue to encourage the Connecticut Water Company to extend/upgrade the public water supply systems into areas requiring water for fire protection	Fire Department	Carry Forward	The water system has not been extended, although there are certain areas where this is desired.
<b>TMS-22</b>	The Connecticut Water Company should continue to identify and upgrade those portions of the public water supply systems that are substandard from the standpoint of adequate pressure and volume for fire-fighting purposes.	Fire Department	Carry Forward	No changes. Some fire hydrants have been replaced but certain areas have substandard pressure requiring upgrades, particularly in areas with older 2.5-inch connection hydrants. The water company wanted to install a tank on Smith Road many years ago to enhance fire pressure, but residents were opposed to the plan. The Town has to pump out of hydrants in this area to fight fires.
<b>TMS-23</b>	The Town of Thomaston should consider the construction of dry hydrants, cisterns, fire ponds, and sprinkler systems throughout the Town to provide a more reliable supply of firefighting water in areas without public water supply.	Fire Department	Capability	This is a capability performed during regular review of fire protection needs. None have been installed recently. They need to install one on Waterbury Road, but they have yet to find a suitable location. The Town plans to apply for a DEEP grant for this work.
<b>TMS-24</b>	Explore other fire protection solutions when water main extensions are not feasible, such as the use of cisterns, hydrants, or fire ponds.	Fire Department	Capability	This is a capability performed during regular review of fire protection needs.

### 10.3 Prioritization of Strategies and Actions

The STAPLEE method, described in the Multi-Jurisdictional document, was used to score mitigation activities. The STAPLEE matrix in Appendix A provides the total scores. Actions have been further prioritized based on implementation cost, project urgency, and municipal and public input. The strategies below are presented in priority order, with qualitative priority levels listed for each.

### 10.4 Mitigation Strategies and Actions Implementation Table

The Town proposed to initiate several new mitigation actions for the upcoming five years.

- The top mitigation project for the next five years is to install generators. A strategy is needed to install generators at several critical facilities, particularly the Housing Authority buildings. The strategy needs to include any necessary electrical upgrades to support expanded capacity for the municipal building.

- The top mitigation project for Emergency Management is to secure a centralized storage location or trailer for the Town's emergency management supplies.
- The top mitigation project for Public Works is to stabilize the bank erosion occurring along Old Northfield Road.
- The top mitigation strategy for the Land Use Office is to strengthen the stormwater management requirements in the Zoning Regulations.

Additionally, a number of actions from the previous planning period are being carried forward or replaced with revised actions. These are listed below.

<b>Action TMS-01</b>	
<b>Take one of the following actions that will mitigate natural hazard risks while also meeting Sustainable CT objectives:</b> <ol style="list-style-type: none"> <li><b>1. Disseminate a toolkit for pre-disaster business preparedness.</b></li> <li><b>2. Revise regulations to promote Low Impact Development.</b></li> <li><b>3. Include the goals of this Hazard Mitigation Plan, and at least three other sustainability concepts, in your next POCD update.</b></li> </ol>	
<b>Lead</b>	Plan
<b>Cost</b>	\$0 - \$25,000
<b>Funding</b>	OB, CT DEEP, Sustainable CT
<b>Timeframe</b>	2022
<b>Priority</b>	High

<b>Action TMS-02</b>	
<b>Refer to the Morris Low Impact Sustainable Development Design Manual, created to be a regional resource by the Northwest Conservation District and the Northwest Hills Council of Governments, to incorporate LID guidance and regulations into the local Zoning Regulations or Ordinances</b>	
<b>Lead</b>	Plan
<b>Cost</b>	\$0 - \$25,000
<b>Funding</b>	OB, CT DEEP
<b>Timeframe</b>	2022
<b>Priority</b>	High

<b>Action TMS-03</b>	
<b>Work with CT DEEP to complete a formal validation of the Repetitive Loss Property list and update the mitigation status of each listed property.</b>	
<b>Lead</b>	EM, Plan, FS
<b>Cost</b>	\$0 - \$25,000
<b>Funding</b>	OB, CT DEEP
<b>Timeframe</b>	2022
<b>Priority</b>	High

<b>Action TMS-04</b>	
<b>Strengthen the stormwater management requirements in the Zoning Regulations.</b>	
<b>Lead</b>	LU
<b>Cost</b>	\$0 - \$25,000
<b>Funding</b>	OB, FEMA Grant, CT DEEP
<b>Timeframe</b>	2022
<b>Priority</b>	Med

<b>Action TMS-05</b>	
<b>Fully incorporate the provisions of the DEEP model flood regulations into the local flood damage prevention regulations (or ordinance), including but not limited to the required design flood elevations for the first floor, building electrical systems, and building mechanical systems.</b>	
<b>Lead</b>	Plan, FS, NFIP Coordinator
<b>Cost</b>	\$0 - \$25,000
<b>Funding</b>	OB, FEMA Grant, CT DEEP
<b>Timeframe</b>	2022
<b>Priority</b>	Med

<b>Action TMS-06</b>	
<b>Increase Substantial Damage and Substantial Improvement lookback periods to two or more years.</b>	
<b>Lead</b>	Plan, FS, NFIP Coordinator
<b>Cost</b>	\$0 - \$25,000
<b>Funding</b>	OB, FEMA Grant, CT DEEP
<b>Timeframe</b>	2022
<b>Priority</b>	Med

<b>Action TMS-07</b>	
<b>Remain engaged with FEMA and the State during the Housatonic River Watershed flood map updates. Review draft maps and provide comments to FEMA.</b>	
<b>Lead</b>	Plan, FS, NFIP Coordinator
<b>Cost</b>	\$0 - \$25,000
<b>Funding</b>	OB, FEMA Grant, CT DEEP
<b>Timeframe</b>	2022
<b>Priority</b>	Med



<b>Action TMS-08</b>	
<b>Use the CT Toxics Users and Climate Resilience Map to identify toxic users located in hazard zones within your community. Contact those users to inform them about the CT DEEP small business chemical management initiative.</b>	
<b>Lead</b>	EM, FS
<b>Cost</b>	\$0 - \$25,000
<b>Funding</b>	CT DEEP
<b>Timeframe</b>	2022
<b>Priority</b>	Med

<b>Action TMS-09</b>	
<b>Add pages to the town website dedicated to citizen education and preparation for natural hazard events</b>	
<b>Lead</b>	EMS
<b>Cost</b>	\$0 - \$25,000
<b>Funding</b>	OB
<b>Timeframe</b>	2022 – 2023
<b>Priority</b>	Low

<b>Action TMS-10</b>	
<b>Coordinate with CT SHPO to conduct historic resource surveys, focusing on areas within natural hazard risk zones (flood zones, wildfire hazard zones, steep slopes) to support the preparation of resiliency plans across the state.</b>	
<b>Lead</b>	Plan, HC/HDC
<b>Cost</b>	\$0 - \$25,000
<b>Funding</b>	OB, CT SHPO
<b>Timeframe</b>	2022 – 2023
<b>Priority</b>	Low

<b>Action TMS-11</b>	
<b>Coordinate with CT SHPO to conduct outreach to owners of historic properties to educate them on methods of retrofitting historic properties to be more hazard-resilient while maintaining historic character.</b>	
<b>Lead</b>	Plan, HC/HDC
<b>Cost</b>	\$0 - \$25,000
<b>Funding</b>	OB, CT SHPO
<b>Timeframe</b>	2022 – 2023
<b>Priority</b>	Low

<b>Action TMS-12</b>	
<b>Work with CTDEEP to secure EAPs for dams where failure of the dam could impact Thomaston.</b>	
<b>Lead</b>	EMS
<b>Cost</b>	\$25,000 - \$50,000
<b>Funding</b>	OB, CT DEEP
<b>Timeframe</b>	2022 – 2024
<b>Priority</b>	Med

<b>Action TMS-13</b>	
<b>Develop a prioritized list of generator needs for critical facilities, and incorporate into Capital Improvement Plan.</b>	
<b>Lead</b>	EM, DPW
<b>Cost</b>	\$0 - \$25,000
<b>Funding</b>	OB, CIP
<b>Timeframe</b>	2022 – 2024
<b>Priority</b>	Low

<b>Action TMS-14</b>	
<b>Investigate if sensitive components such as IT server racks, above ground fuel tanks, etc. are braced to mitigate potential wind or earthquake damage.</b>	
<b>Lead</b>	Public Works
<b>Cost</b>	\$25,000 - \$50,000
<b>Funding</b>	OB, CIP
<b>Timeframe</b>	2022 – 2024
<b>Priority</b>	Low

<b>Action TMS-15</b>	
<b>Drainage from the ponds near Hillside Cemetery are causing nuisance flooding along Cables Lane. A mitigation project may be needed here.</b>	
<b>Lead</b>	DPW
<b>Cost</b>	More than \$500,000
<b>Funding</b>	OB, CIP, FEMA Grant, CT DEEP
<b>Timeframe</b>	2023 – 2025
<b>Priority</b>	High

<b>Action TMS-16</b>	
<b>Complete a stabilization project at Old Northfield Road at the unnamed tributary to Branch Brook (near the base of Babbitt Road), which is eroding the bank. A stabilization project is needed here before the roadway is undermined.</b>	
<b>Lead</b>	DPW
<b>Cost</b>	\$100,000 - \$500,000
<b>Funding</b>	CIP, FEMA Grant
<b>Timeframe</b>	2023 – 2025
<b>Priority</b>	Low

<b>Action TMS-17</b>	
<b>Continue to encourage the Connecticut Water Company to extend/upgrade the public water supply systems into areas requiring water for fire protection</b>	
<b>Lead</b>	Fire Department
<b>Cost</b>	\$100,000 - \$500,000
<b>Funding</b>	CIP, FEMA Grant, FEMA AFG, CT DEEP
<b>Timeframe</b>	2023 – 2025
<b>Priority</b>	Low

<b>Action TMS-18</b>	
<b>Work with the Connecticut Water Company to identify and upgrade portions of the public water supply systems that are substandard from the standpoint of adequate pressure and volume for fire-fighting purposes.</b>	
<b>Lead</b>	Fire Department
<b>Cost</b>	\$100,000 - \$500,000
<b>Funding</b>	CIP, FEMA Grant, FEMA AFG, CT DEEP
<b>Timeframe</b>	2023 – 2025
<b>Priority</b>	Low

<b>Action TMS-19</b>	
<b>Perform upgrades to the Nystrom Pond Dam and Dike (both owned by the Town). Both are Class BB (moderate) hazard structures. Failure would flood approximately six properties in the Northfield area. DEEP recently raised the hazard classification for the dam.</b>	
<b>Lead</b>	EM, DPW, FS
<b>Cost</b>	More than \$1 million
<b>Funding</b>	CIP, CT DEEP
<b>Timeframe</b>	2022-2024
<b>Priority</b>	High

<b>Action TMS-20</b>	
<b>Secure a centralized storage location or trailer for the Town's emergency management supplies.</b>	
<b>Lead</b>	EM
<b>Cost</b>	\$100,000 - \$500,000
<b>Funding</b>	OB, CT DEMHS
<b>Timeframe</b>	2025 – 2027
<b>Priority</b>	Low

<b>Action TMS-21</b>	
<b>Install backup generators, and perform any necessary electrical upgrades to support expanded generator capacity, at several critical facilities (particularly the Housing Authority buildings).</b>	
<b>Lead</b>	EM, DPW
<b>Cost</b>	More than \$500,000
<b>Funding</b>	CIP, FEMA Grant
<b>Timeframe</b>	2025 – 2027
<b>Priority</b>	Low

<b>Action TMS-22</b>	
<b>Mitigate flooding impacts on High Street Extension</b>	
<b>Lead</b>	EM, DPW
<b>Cost</b>	More than \$500,000
<b>Funding</b>	CIP, FEMA Grant
<b>Timeframe</b>	2021 – 2024
<b>Priority</b>	High

## APPENDIX A

### STAPLEE MATRIX



#	Action Description	Regional Theme	Lead Department	Cost Estimate	Potential Funding Sources	Timeframe for Completion	Weighted STAPLEE Criteria														Total STAPLEE Score	
							Benefits							Costs								
							Social	Technical (x2)	Administrative	Political	Legal	Economic (x2)	Environmental	Social	Technical (x2)	Administrative	Political	Legal	Economic (x2)	Environmental		
TMS-01	Take one of the following actions that will mitigate natural hazard risks while also meeting Sustainable CT objectives: 1. Disseminate a toolkit for pre-disaster business preparedness. 2. Revise regulations to promote Low Impact Development. 3. Include the goals of this Hazard Mitigation Plan, and at least three other sustainability concepts, in your next POCD update.	Sustainable CT	Plan	\$0 - \$25,000	OB, CT DEEP, Sustainable CT	2022	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	9
TMS-02	Refer to the Morris Low Impact Sustainable Development Design Manual, created to be a regional resource by the Northwest Conservation District and the Northwest Hills Council of Governments, to incorporate LID guidance and regulations into the local Zoning Regulations or Ordinances	Low Impact Development	Plan	\$0 - \$25,000	OB, CT DEEP	2022	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	8
TMS-03	Work with CT DEEP to complete a formal validation of the Repetitive Loss Property list and update the mitigation status of each listed property.	RLP	EM, Plan, FS	\$0 - \$25,000	OB, CT DEEP	2022	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	7
TMS-04	Strengthen the stormwater management requirements in the Zoning Regulations.	Flood Regulations	LU	\$0 - \$25,000	OB, FEMA Grant, CT DEEP	2022	1	1	1	0	1	0	1	0	0	0	-1	0	0	0	0	5
TMS-05	Fully incorporate the provisions of the DEEP model flood regulations into the local flood damage prevention regulations (or ordinance), including but not limited to the required design flood elevations for the first floor, building electrical systems, and building mechanical systems.	Flood Regulations	Plan, FS, NFIP Coordinator	\$0 - \$25,000	OB, FEMA Grant, CT DEEP	2022	1	1	1	0	1	0	1	0	0	0	-1	0	0	0	0	5
TMS-06	Increase Substantial Damage and Substantial Improvement lookback periods to two or more years.	Flood Regulations	Plan, FS, NFIP Coordinator	\$0 - \$25,000	OB, FEMA Grant, CT DEEP	2022	1	1	1	0	1	0	1	0	0	0	-1	0	0	0	0	5
TMS-07	Remain engaged with FEMA and the State during the Housatonic River Watershed flood map updates. Review draft maps and provide comments to FEMA.	Flood Map Updates	Plan, FS, NFIP Coordinator	\$0 - \$25,000	OB, FEMA Grant, CT DEEP	2022	1	1	1	0	1	0	1	0	0	0	-1	0	0	0	0	5
TMS-08	Use the CT Toxics Users and Climate Resilience Map to identify toxic users located in hazard zones within your community. Contact those users to inform them about the CT DEEP small business chemical management initiative.	Small Business Chemicals	EM, FS	\$0 - \$25,000	CT DEEP	2022	1	0	1	0	1	1	1	0	0	0	0	0	0	0	0	6
TMS-09	Add pages to the town website dedicated to citizen education and preparation for natural hazard events	Public Education & Engagement	EMS	\$0 - \$25,000	OB	2022 – 2023	1	0.5	0	1	1	1	0	0	0	-1	0	0	0	0	0	5.5
TMS-10	Coordinate with CT SHPO to conduct historic resource surveys, focusing on areas within natural hazard risk zones (flood zones, wildfire hazard zones, steep slopes) to support the preparation of resiliency plans across the state.	Historic & Cultural Resources	Plan, HC/HDC	\$0 - \$25,000	OB, CT SHPO	2022 – 2023	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	5
TMS-11	Coordinate with CT SHPO to conduct outreach to owners of historic properties to educate them on methods of retrofitting historic properties to be more hazard-resilient while maintaining historic character.	Historic & Cultural Resources	Plan, HC/HDC	\$0 - \$25,000	OB, CT SHPO	2022 – 2023	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	5
TMS-12	Work with CTDEEP to secure EAPs for dams where failure of the dam could impact Thomaston.	Dam Safety	EMS	\$25,000 - \$50,000	OB, CT DEEP	2022 – 2024	0	1	1	1	1	1	0	0	0	0	0	0	0	0	-1	6.5
TMS-13	Develop a prioritized list of generator needs for critical facilities, and incorporate into Capital Improvement Plan.	Backup Power	EM, DPW	\$0 - \$25,000	OB, CIP	2022 – 2024	0	0.5	1	1	0	1	0	0	0	0	0	0	0	-1	-1	3
TMS-14	Investigate if sensitive components such as IT server racks, above ground fuel tanks, etc. are braced to mitigate potential wind or earthquake damage.	Critical Facility Protection	Public Works	\$25,000 - \$50,000	OB, CIP	2022 – 2024	0	0.5	1	0	1	1	0	0	0	0	0	0	0	0	0	5
TMS-15	Drainage from the ponds near Hillside Cemetery are causing nuisance flooding along Cables Lane. A mitigation project may be needed here.	Drainage	DPW	More than \$500,000	OB, CIP, FEMA Grant, CT DEEP	2023 – 2025	0	1	0	1	1	1	0.5	0	0	0	0	0	0	0	0	6.5
TMS-16	Complete a stabilization project at Old Northfield Road at the unnamed tributary to Branch Brook (near the base of Babbitt Road), which is eroding the bank. A stabilization project is needed here before the roadway is undermined.	Flood Mitigation	DPW	\$100,000 - \$500,000	CIP, FEMA Grant	2023 – 2025	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	5
TMS-17	Continue to encourage the Connecticut Water Company to extend/upgrade the public water supply systems into areas requiring water for fire protection	Wildfire Risk Reduction	Fire Department	\$100,000 - \$500,000	CIP, FEMA Grant, FEMA AFG, CT DEEP	2023 – 2025	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	6
TMS-18	Work with the Connecticut Water Company to identify and upgrade portions of the public water supply systems that are substandard from the standpoint of adequate pressure and volume for fire-fighting purposes.	Wildfire Risk Reduction	Fire Department	\$100,000 - \$500,000	CIP, FEMA Grant, FEMA AFG, CT DEEP	2023 – 2025	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	6
TMS-19	Perform upgrades to the Nystrom Pond Dam and Dike (both owned by the Town). Both are Class BB (moderate) hazard structures. Failure would flood approximately six properties in the Northfield area. DEEP recently raised the hazard classification for the dam.	Dam Safety	EM, DPW, FS	More than \$1 million	CIP, CT DEEP	2022-2024	0	1	1	1	1	1	0	0	0	0	0	0	0	0	-1	6.5
TMS-20	Secure a centralized storage location or trailer for the Town’s emergency management supplies.	Emergency Response, Alerts, & Communication	EM	\$100,000 - \$500,000	OB, CT DEMHS	2025 – 2027	1	0	1	1	1	0	0	0	0	-1	0	0	0	0	0	3.5
TMS-21	Install backup generators, and perform any necessary electrical upgrades to support expanded generator capacity, at several critical facilities (particularly the Housing Authority buildings).	Backup Power	EM, DPW	More than \$500,000	CIP, FEMA Grant	2025 – 2027	0.5	0.5	1	1	0	1	0	0	0	0	0	0	0	-1	-1	3.5

#	Action Description	Regional Theme	Lead Department	Cost Estimate	Potential Funding Sources	Timeframe for Completion	Weighted STAPLEE Criteria														Total STAPLEE Score
							Benefits							Costs							
							Social	Technical (x2)	Administrative	Political	Legal	Economic (x2)	Environmental	Social	Technical (x2)	Administrative	Political	Legal	Economic (x2)	Environmental	
TMS-22	Mitigate flooding impacts on High Street Extension	Drainage	EM, DPW	More than \$500,000	CIP, FEMA Grant	2021 – 2024	0	1	0	1	1	1	0	0	0	0	0	0	0	0	6



## **APPENDIX B**

### **RECORD OF MUNICIPAL ADOPTION**



**CERTIFICATE OF ADOPTION  
TOWN OF THOMASTON BOARD OF SELECTMEN**

**A RESOLUTION ADOPTING THE NAUGATUCK VALLEY COUNCIL OF GOVERNMENTS  
HAZARD MITIGATION PLAN UPDATE 2021-2026**

**WHEREAS**, the Town of Thomaston has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of those natural hazards profiled in the plan (e.g. flooding, high wind, thunderstorms, winter storms, earthquakes, droughts, dam failure, and wildfires), resulting in loss of property and life, economic hardship, and threats to public health and safety; and

**WHEREAS**, the Thomaston Board of Selectmen approved the previous version of the Plan in 2015; and

**WHEREAS**, the Town of Thomaston and the Naugatuck Valley Council of Governments developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for the Hazard Mitigation Plan Update, 2021-2026 under the requirements of 44 CFR 201.6; and

**WHEREAS**, public and committee meetings were held and public input was sought in 2020 and 2021 regarding the development and review of the Hazard Mitigation Plan Update, 2021-2026; and

**WHEREAS**, the Plan specifically addresses hazard mitigation strategies and Plan maintenance procedure for Thomaston; and

**WHEREAS**, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural hazards that impact Thomaston, with the effect of protecting people and property from loss associated with those hazards; and

**WHEREAS**, adoption of this Plan will make Thomaston eligible for funding to alleviate the impacts of future hazards; now therefore be it


**RESOLVED** by the Board of Selectmen:

1. The Plan is hereby adopted as an official plan of the Town of Thomaston;
2. The respective officials identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the implementation elements of the Plan shall be presented to the Board of Selectmen.

**Adopted this 19th day of October, 2021 by the Board of Selectmen of Thomaston, Connecticut**

  
\_\_\_\_\_  
First Selectman

**IN WITNESS WHEREOF**, the undersigned has affixed his/her signature and the corporate seal of Thomaston this 19<sup>th</sup> day of October, 2021.

  
\_\_\_\_\_  
Town Clerk



## **APPENDIX C**

### **CERC Town Profile 2019**

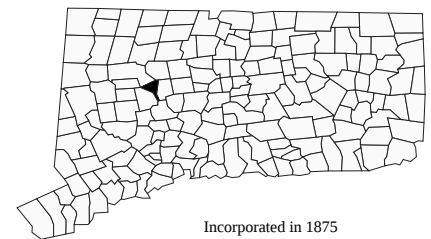


# Thomaston, Connecticut

CERC Town Profile 2019 *Produced by Connecticut Data Collaborative*

**Town Hall**  
158 Main Street  
Thomaston, CT 06787  
(860) 283-0305

*Belongs To*  
Litchfield County  
LMA Hartford  
Naugatuck Valley Planning Area



Incorporated in 1875

## Demographics

### Population

	<i>Town</i>	<i>County</i>	<i>State</i>
2000	7,503	182,193	3,405,565
2010	7,887	189,927	3,574,097
2013-2017	7,668	184,454	3,594,478
2020	7,836	193,116	3,604,591
'17 - '20 Growth / Yr	0.7%	1.5%	0.1%

	<i>Town</i>	<i>County</i>	<i>State</i>
Land Area (sq. miles)	12	921	4,842
Pop./Sq. Mile (2013-2017)	641	200	742
Median Age (2013-2017)	44	47	41
Households (2013-2017)	3,096	74,605	1,361,755
Med. HH Inc. (2013-2017)	\$67,639	\$76,438	\$73,781

	<i>Town</i>	<i>State</i>
Veterans (2013-2017)	435	180,111

### Age Distribution (2013-2017)

	<i>0-4</i>	<i>5-14</i>	<i>15-24</i>	<i>25-44</i>	<i>45-64</i>	<i>65+</i>	<i>Total</i>
Town	308 4%	962 13%	898 12%	1,774 23%	2,460 32%	1,266 17%	7,668 100%
County	7,668 4%	20,218 11%	21,158 11%	38,329 21%	61,693 33%	35,388 19%	184,454 100%
State	186,188 5%	432,367 12%	495,626 14%	872,640 24%	1,031,900 29%	575,757 16%	3,594,478 100%

### Race/Ethnicity (2013-2017)

	<i>Town</i>	<i>County</i>	<i>State</i>
White Non-Hisp	7,342	164,992	2,446,049
Black Non-Hisp	38	2,843	350,820
Asian Non-Hisp	56	3,516	154,910
Native American Non-Hisp	0	267	5,201
Other/Multi-Race Non-Hisp	46	2,320	84,917
Hispanic or Latino	186	10,510	551,916

	<i>Town</i>	<i>County</i>	<i>State</i>
Poverty Rate (2013-2017)	5.9%	6.8%	10.1%

### Educational Attainment (2013-2017)

	<i>Town</i>	<i>State</i>
High School Graduate	2,046 37%	673,582 27%
Associates Degree	550 10%	188,481 8%
Bachelors or Higher	1,425 26%	953,199 38%

## Economics

### Business Profile (2018)

<i>Sector</i>	<i>Units</i>	<i>Employment</i>
Total - All Industries	242	3,055
23 - Construction	32	298
31-33 - Manufacturing	28	1,191
44-45 - Retail Trade	28	250
62 - Health Care and Social Assistance	16	266
72 - Accommodation and Food Services	21	188
Total Government	20	389

### Top Five Grand List (2018)

	<i>Amount</i>
Connecticut Light & Power	\$18,983,130
Albea	\$9,435,280
Yankee Gas Services Co.	\$3,985,950
Thomaston Savings Bank	\$3,858,590
Connecticut Water Co.	\$3,446,300
Net Grand List (SFY 2016-2017)	\$546,074,183

### Major Employers (2017)

Albea	Ward Leonard Electric Co Inc
Stewart EFI LLC	Whyco Finishing Tech LLC
Quality Rolling & Deburring Co	

## Education

### 2018-2019 School Year

	<i>Grades</i>	<i>Enrollment</i>
Thomaston School District	PK-12	853

### Smarter Balanced Test Percent Above Goal (2017-2018)

	Grade 3		Grade 4		Grade 8	
	Town	State	Town	State	Town	State
Math	50.8%	53.8%	50.9%	51.3%	42.7%	43.0%
ELA	52.4%	53.1%	55.6%	54.9%	78.7%	56.1%

### Pre-K Enrollment (PSIS)

	<i>2018-2019</i>
Thomaston School District	40

### 4-Year Cohort Graduation Rate (2017-2018)

	<i>All</i>	<i>Female</i>	<i>Male</i>
Connecticut	88.3%	91.8%	85.1%
Thomaston School District	96.6%	95.7%	97.1%

### Rate of Chronic Absenteeism (2017-2018)

	<i>All</i>
Connecticut	10.7%
Thomaston School District	8.5%

### Public vs Private Enrollment (2013-2017)

	<i>Town</i>	<i>County</i>	<i>State</i>
Public	96.4%	84.0%	86.8%
Private	3.6%	16.0%	13.2%

# Thomaston, Connecticut

CERC Town Profile 2019



Connecticut  
Economic  
Resource Center

## Government

Government Form: Selectman - Town Meeting

Total Revenue (2017)	\$28,394,296	Total Expenditures (2017)	\$24,985,276	Annual Debt Service (2017)	\$3,336,029
Tax Revenue	\$18,880,582	Education	\$17,115,585	As % of Expenditures	13.4%
Non-tax Revenue	\$9,513,714	Other	\$7,869,691	Eq. Net Grand List (2017)	\$763,493,537
Intergovernmental	\$9,107,312	Total Indebtedness (2017)	\$21,883,988	Per Capita	\$100,433
Per Capita Tax (2017)	\$2,466	As % of Expenditures	87.6%	As % of State Average	66.5%
As % of State Average	84.1%	Per Capita	\$2,879	Moody's Bond Rating (2017)	Aa3
		As % of State Average	114.5%	Actual Mill Rate (2017)	34.07
				Equalized Mill Rate (2017)	24.55
				% of Net Grand List Com/Ind (2017)	11.9%

## Housing/Real Estate

Housing Stock (2013-2017)

	Town	County	State
Total Units	3,267	88,068	1,507,711
% Single Unit (2013-2017)	67.8%	73.6%	59.2%
New Permits Auth (2017)	6	142	4,547
As % Existing Units	0.2%	0.2%	0.3%
Demolitions (2017)	0	32	1,403
Home Sales (2017)	74	1,753	21,880
Median Price	\$199,400	\$250,100	\$270,100
Built Pre-1950 share	29.2%	31.2%	29.3%
Owner Occupied Dwellings	2,450	57,330	906,798
As % Total Dwellings	79.1%	76.8%	66.6%
Subsidized Housing (2018)	191	4,817	167,879

Distribution of House Sales (2017)

	Town	County	State
Less than \$100,000	0	57	536
\$100,000-\$199,999	40	563	5,237
\$200,000-\$299,999	26	538	6,681
\$300,000-\$399,999	8	315	3,863
\$400,000 or More	0	280	5,563

Rental (2013-2017)

	Town	County	State
Median Rent	\$936	\$995	\$1,123
Cost-burdened Renters	41.9%	47.3%	52.3%

## Labor Force

	Town	County	State
Residents Employed	4,589	101,000	1,827,070
Residents Unemployed	182	4,014	78,242
Unemployment Rate	3.8%	3.8%	4.1%
Self-Employed Rate	7.8%	13.0%	10.0%
Total Employers	242	6,177	122,067
Total Employed	3,055	61,496	1,673,867

Connecticut Commuters (2015)

Commuters Into Town From:		Town Residents Commuting To:	
Waterbury, CT	512	Waterbury, CT	642
Thomaston, CT	502	Thomaston, CT	502
Torrington, CT	214	Torrington, CT	238
Watertown, CT	198	Watertown, CT	237
Plymouth, CT	192	Hartford, CT	175
Bristol, CT	107	Bristol, CT	156
Litchfield, CT	71	Plymouth, CT	147

## Quality of Life

Crime Rates (per 100,000 residents) (2017)

	Town	State
Property	1,532	1,777
Violent	76	228

Distance to Major Cities

	Miles
Hartford	22
New York City	82
Providence	87
Boston	116
Montreal	269

Residential Utilities

Electric Provider	Eversource Energy (800) 286-2000
Gas Provider	Eversource Energy (800) 989-0900
Water Provider	Connecticut Water Company (800) 286-5700
Cable Provider	Cablevision of Litchfield, Inc. (860) 567-3103

Disengaged Youth (2013-2017)

	Town	State
Female	0.0%	4.2%
Male	16.1%	5.6%

	Town
Library circulation per capita	6.93