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

Municipal Annex
for

BEACON FALLS, CT

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Beacon Falls, CT 06403
MMI #3211-29

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1.0 INTRODUCTION

1.1 Purpose of Annex

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

A meeting was held with Beacon Falls representatives on September 22, 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, Kerry McAndrew.

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

Beacon Falls is located in New Haven County. It is bordered by Seymour to the south, Oxford to the west, Naugatuck to the north, and Bethany to the east and southeast.

The topography of the Town is generally moderate to steeply sloping near the Naugatuck River. Elevations range from 90 feet above sea level along the Naugatuck River in the southeastern part of Town to over 750 feet above sea level near Toby's Rock Mountain in the northwestern part of Town, based on the National Geodetic Vertical Datum of 1929. The hilly, elevated terrain of Beacon Falls makes it particularly vulnerable to an array of natural hazards.

1.4 Land Cover

Beacon Falls encompasses 9.9 square miles. Beacon Falls is characterized by its hills and steep slopes which limit development in much of the Town. A small commercial area is located in the center of the town at the intersection of Depot Street and Main Street. Outside of the commercial area, low density residential neighborhoods are interspersed with undeveloped and agricultural areas. Industrial sites are located on either side of Route 8. A significant portion of the land area in the northern part of town is dedicated open space.

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 65% of Beacon Falls is forested and approximately 18% is developed.

Table 1-1: 2015 Land Cover by Area

Land Cover	Area (acres)	Percent of Community
Developed	1,146.9	18.17%
Turf & Grass	314.6	4.98%
Other Grass	263.5	4.17%
Agricultural Field	219.4	3.48%
Deciduous Forest	3,698.8	58.60%
Coniferous Forest	372.5	5.90%
Water	135.1	2.14%
Non-Forested Wetland	2.1	0.03%
Forested Wetland	53.2	0.84%
Tidal Wetland	0.0	0.00%
Barren	98.7	1.56%
Utility Row	7.4	0.12%
Total	**6,312**	**100%**

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

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 Beacon Falls.

The bedrock in Beacon Falls consists primarily of metasedimentary and metaigneous schists and secondarily of metamorphic amphibolite and granofels, metasedimentary marble and quartzite, and metasedimentary and metaigneous gneisses within the Iapetos Terrane. There is a small intrusion of bedrock belonging to the Mesozoic Basin running southwest to northeast through the eastern portion of Beacon Falls. This bedrock intrusion associated with the Newark Terrane consists of dolerite. The bedrock alignment trends generally southwest to northeast through the Town.

The six primary bedrock formations in the Town (from north to south) are Taine Mountain and Collinsville Formation (undivided), The Straits Schist, Collinsville Formation, Buttress Dolerite, Beardsley Member of Harrison Gneiss, and Golden Hill Schist. In addition, there are small areas of the Basal Member of The Straits

Schist in the central and southern parts of Town and a small area of Trap Falls formation in the eastern part of Town.

No known faults are mapped in the Beacon Falls. However, the intrusion of Buttress Dolerite in the southeastern part of Town divides a high angle, mostly Jurassic fault that runs from the town of Seymour towards the town of Bethany. This fault line is believed inactive and may exist in Beacon Falls below the intrusion of Buttress Dolerite. Bedrock outcrops are prevalent in Beacon Falls, and are often be found at higher elevations and on hilltops.

At least twice in the late Pleistocene, continental ice sheets moved across Connecticut. As a result, surficial geology of the Town is characteristic of the depositional environments that occurred during glacial and postglacial periods.

1.6 Drainage Basins and Hydrology

Almost 88% of the Town's land area drains directly into the Naugatuck River, while the remaining 12% drains to one of three tributaries that eventually lead to the Naugatuck River, which are Beacon Hill Brook, Little River, and Bladens River. All of the watersheds in Beacon Falls are part of the regional Naugatuck River basin that ultimately discharges into the Housatonic River. The drainage basins are described below, and summarized in Table 1-2.

Table 1-2: Drainage Basins

Drainage Basin	Area (sq. mi)	Percent of Town
Naugatuck River	8.65	87.7%
Beacon Hill Brook	0.58	5.9%
Little River	0.39	3.9%
Bladens River	0.24	2.5%
Total	9.86	100.0%

Source: Drainage Basins, CT DEEP GIS Data for Connecticut

Naugatuck River

The Naugatuck River originates near the City of Torrington 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 Beacon Falls, covering 8.65 square miles (sq. mi.) or 87.7% of the Town's land area. It enters Beacon Falls from the north, dividing the Town as it flows southward into Seymour. The river is joined by a number of tributaries as it flows through Town, including Beacon Hill Brook from the northeastern part of Town, an unnamed stream leading from Toby's Rock Mountain in the northwest, two unnamed streams draining the west central and east central portions of Town, Hockanum Brook, and Hemp Swamp Brook. The named streams are discussed in the following paragraph.

Hockanum Brook has its headwaters near Beacon Road in Bethany and drains much of the southeastern part of Beacon Falls. It passes through several swamps and ponds and is joined by several unnamed tributaries as it flows westward towards the Naugatuck River. Hemp Swamp Brook has its headwaters in the eastern part of Oxford and drains east across the southwestern part of Beacon Falls to its confluence with the Naugatuck River near Pine Bridge. It is joined by several tributaries, including outflow form Carrington Pond and Reservoir No. 1 in Beacon Falls and Reservoirs No. 2 and 3 and Seymour Reservoir No. 4 in Oxford. Beacon Hill Brook is discussed below.

Beacon Hill Brook

Beacon Hill Brook forms the Town's northeastern boundary with the Borough of Naugatuck. The brook drains a total of 0.58 sq. mi. of land within Beacon Falls (5.9% of the Town's land area) to the north of Beacon Hill in the Naugatuck State Forest.

Beacon Hill Brook has its headwaters near the Bethany / Prospect boundary along State Route 69. It drains southwest into Bethany, entering the New Naugatuck / Long Hill Reservoir. Beacon Hill Brook flows west out of the reservoir through southeastern Naugatuck towards Straitsville. It is joined by Marks Brook west of Horton Hill Road and by Straitsville Brook near Beacon Valley Road. The brook then begins to form the boundary between Beacon Falls and Naugatuck, eventually passing under Route 8 and reaching its confluence with the Naugatuck River. In total, Beacon Hill Brook drains 10.22 square miles of land across Naugatuck, Beacon Falls, Bethany and Prospect.

Little River

A small portion in the southwestern corner of Town (0.39 sq. mi. or 3.9% of the Town's land area) drains to the southwest into the Little River watershed. The Little River originates in western Oxford and flows generally south-southeast towards Seymour. It is joined by several unnamed tributaries and larger tributaries including Jacks Brook and Towantic Brook before its confluence with the Naugatuck River near Route 67 in Seymour. In total, the Little River watershed drains 15.50 square miles of land in Seymour, Beacon Falls, Oxford, Middlebury and Naugatuck.

Bladens Brook

A small area in the southeastern corner of Beacon Falls drains to Bladens Brook. This watershed is the smallest of those in Beacon Falls, covering only 0.24 sq. mi. or 2.5% of the Town's total land area. Most of this area drains southeast into Hop Brook in Bethany, although a small part drains south into an unnamed tributary to Bladens Brook in Bethany. Hop Brook is a major tributary to the Bladens Brook.

The Bladens Brook originates in Woodbridge near the intersection of Sanford Road and Route 67. The river generally drains to the north into Bethany and then west into Seymour to its confluence with the Naugatuck River near Route 67. The Bladens Brook is joined by several unnamed tributaries and larger tributaries including Pine Brook, Black Brook, and Hop Brook. In total, the watershed corresponding to the Bladens Brook drains 10.74 square miles of land across Seymour, Woodbridge, and Bethany.

1.7 Climate and Climate Change

In Beacon Falls, 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 20°F to 81°F and is rarely below 6°F or above 88°F.

The warm season lasts for 3.5 months, from June 1 to September 16, with an average daily high temperature above 72°F. The hottest day of the year is July 21, with an average high of 81°F and low of 64°F. The cold season lasts for 3.3 months, from December 3 to March 13, with an average daily high temperature below 44°F. The coldest day of the year is January 29, with an average low of 20°F and high of 35°F.

The wetter season lasts 3.5 months, from May 3 to August 18, with a greater than 29% chance of a given day being a wet day. The chance of a wet day peaks at 36% on May 30. The drier season lasts 8.5 months, from August 18 to May 3. The smallest chance of a wet day is 23% on January 29.

The most rain falls during the 31 days centered around June 4, with an average total accumulation of 4.0 inches. The snowy period of the year lasts for 5.3 months, from November 5 to April 15, 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 26, with an average total liquid-equivalent accumulation of 1.1 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_2 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 New Haven County is 5 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 Beacon Falls as 4.96 inches.

The NOAA Atlas 14, released on September 30, 2015 puts the 24-hour rainfall amount for a 10% annual-chance storm in Beacon Falls at 5.61 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%
Technical Paper No. 40	5.0	5.6	7.1
NRCC	5.0	6.2	8.6
NOAA Atlas 14	5.6	6.9	8.8

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 Beacon Falls can expect the 24-hour rainfall amount for a 10% annual-chance storm to be around 5.4 to 6.1 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

Beacon Falls was incorporated in 1871 and included land area from the surrounding towns of Bethany, Naugatuck, Oxford and Seymour. Agrarian in its origins, Beacon Falls transitioned to a center of manufacturing in the late 1800s. Industry waned throughout the 20th century, and Beacon Falls now exports most of its residents to jobs outside of Town.

The 2010 U.S. Census reported a population in Beacon Falls of 6,168 individuals. U.S. Census Bureau estimates for 2019 show a population around 6,532 individuals, an increase from 2010 of 5.9%. The Connecticut State Data Center predicts that population will decrease by 1.7% through 2025 to an estimated population of 1,335 individuals.

According to the Connecticut Data Collaborative, the number of annual housing permits in Beacon Falls increased over the last decade. The number of permits issued in 2010 and 2011 was 9 and 3, respectively, while 23 permits were issued in 2016, and 22 permits were issued in 2017. On average, 15 housing permits were issued each year in Beacon Falls between 2010 and 2017.

According to the U.S. Census Bureau, the overall number of housing units in Beacon Falls rose by approximately 4.8-percent between 2010 and 2019, from 2,509 units in 2010 to 2,636 units in 2019. In 2019,

the housing stock was made up of approximately 71% single-unit structures, 9% two-unit structures, 12% multi-unit structures, and 8% mobile-homes or other types of structures.

According to the Connecticut Office of Policy and Management, Beacon Falls's 2019 Total Equalized Net Grand List was valued at $489,000,000. 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.

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

The 2013 POCD focuses on growth within the Industrial Park Districts and in the Main Street Area. The following are encouraged for future economic growth and development: the traditional heart of the community consisting of the downtown area along Main Street, some adjacent areas, the industrial area west of the Naugatuck River, the Industrial Park, and areas in proximity to Exit 23 of Route 8. The POCD suggests mixed use development near Exit 23 and on South Main Street. The area between the train station and Route 8 is recommended for a Transit Oriented Development (TOD) zone. A site on Railroad Avenue was considered for new affordable housing. Most of the established residential areas in the town are planned for the continuation of the existing pattern of low to moderate density residential development, although some areas may support slightly higher concentrations.

According to the 2019 NVCOG Transit Oriented Development Scenario Report there are approximately 69 acres of vacant or underutilized land in Beacon Falls that have redevelopment potential. If redeveloped and fully infilled, this land could yield a total development mix of some 925 housing units and over a million square feet of commercial building area. However, much of this land (in Breault Road area) is located on the south side of town, near the border with Seymour and not located near the Beacon Falls Metro North station on Railroad Avenue. Nonetheless, this land is located closer to a location in Seymour (just over a mile) where the Seymour MetroNorth station may be relocated as part of a potential new TOD District at some point in the future.

Recent development has focused on active adult housing. Some recent developments include:

- Chatfield Farms and Chatfield Farms II, off Skokorat Road were expanded. These large developments will have 234 and 295 units, respectively, when finished.
- Pond Springs Village located off Route 8 (a 55 and over community) has expanded.
- The eight-home Oakwood Estates subdivision off of Blackberry Hill Road was constructed.
- A 5- to 10-year Capital Improvement Plan will soon be published with approximately $20 million in potential projects. The Town intends to use it as a "wish list" for improvements.

In addition, the following development is expected:

- A 31-home subdivision known as Haley Ridge has been approved for development along Timberland Way and Fairfield Place. Currently, fifteen lots are being developed.
- A proposal for 109 three-bedroom homes along Hop Brook off Timber Ridge Lane (called Hopp Brook Estates) is presently before the Town's commissions. The development would include a 250,000-gallon water tank for fire protection, private water, and a private homeowners association responsible for maintaining the roads. The development would be accessible from both Oakwood Drive to the north and Miller Road to the south, creating two modes of access and egress. 40 acres of the land would be designated for open space. The

timeline for completion of the project, if it moves forward at all, is unclear. Hopp Brook does not have a mapped floodplain. Information on this proposal was sourced from a Nov 19, 2020 article in Citizen's News.

- A 5- to 10-year Capital Improvement Plan will soon be published with approximately $20 million in potential projects. The Town intends to use it as a "wish list" for improvements.

The Town is also considering installing natural gas service in limited areas. There are no drainage concerns regarding these developments.

Open Space

Open space preservation is a high priority in Beacon Falls. The Town has passed ordinances and formed a land use committee to pursue acquisition and management of open space properties. The 2013 Plan of Conservation and Development includes a map of parcels suited for acquisition and preservation as open space.

In the early 2010s, the Town acquired and paid the back-taxes on two properties that had been abandoned, and demolished the existing structures to create open space. Since the properties are located in a floodplain they will remain as open space areas. The 97-acre Lantern Ridge parcel was given to The Town in 1990 to protect it from development, and has been converted into a public park for passive recreation. The Town has acquired additional open space properties since adoption of the previous HMP, including new parcels to add on to Lantern Ridge Park.

The Town is also considering buying a property adjacent to the Police Station to preserve as open space.

No land trusts are located in Beacon Falls at present.

Summary

Recent development in Beacon Falls has focused on infill within key growth areas, as well as expansion of existing residential developments. The Oakwood Estates subdivision off Blackberry Hill Road is in a relatively rural wooded area and has a single access route; this development may be vulnerable to wildfires and loss of access during severe winter storms or other events. For the most part, however, recent development has not increased natural hazard risks to the community, and the minor increase in vulnerabilities presented by the Oakwood Estates development is balanced by the community's hazard mitigation and response capabilities.

Development trends in Beacon falls are not expected to increase natural hazard risks over the next five years; in fact, the focus on redevelopment, densification, and TOD is expected to reduce risk exposure and increase mitigation capabilities (such as through improved access to transportation services in case of evacuation).

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 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*

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 Beacon Falls 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

Beacon Falls is considered to have a Moderate level of social vulnerability, with a higher vulnerability score for the SVI category of Household Composition and Disability. In other words, a particular challenge in Beacon Falls may include the presence of residents who need additional assistance during a disaster event.

2.0 MUNICIPAL CAPABILITIES

2.1 Governmental Structure and Capabilities

The Town of Beacon Falls 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. 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 Land Use Commission (which is separate from the Planning and Zoning Commission), the Conservation Commission, the Inland Wetland Commission, the Building Official, the Fire Department, the Resident State Trooper and the Department of Public Works.

The Department of Public Works and the Fire Department are the principal municipal departments that respond to problems caused by natural hazards. Complaints related to town maintenance are typically routed to the Department of Public Works. These complaints are usually received via phone, fax, 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

Transportation

The Town of Beacon Falls does not have any hospitals or medical centers. Instead, residents use the nearby facilities in the cities of Derby or Waterbury. As a means of accessing these facilities, Beacon Falls has convenient access on Route 8 that functions as the major transportation artery. Emergency Medical Technicians (EMTs) with Beacon Hose Company No. 1's volunteer ambulance corps staff the ambulance service to these hospitals. If paramedics are needed, they are called in from Waterbury.

Evacuation routes are regionally defined by the Regional Evacuation Plan. Route 8, which runs north-south through central Beacon Falls, provides access to Waterbury and Interstate 84 to the north and Bridgeport and Route 15 and Interstate 95 to the south. State Route 42 also runs from Oxford in the west through the center of Town and into Bethany to the east. South Main Street is also a primary evacuation route into Seymour.

Utilities

The Aquarion Water Company provides potable and fire-fighting water to the majority of the center of Town and the Pine Bridge area, while the Connecticut Water Company provides water service in the extreme northern portion of Beacon Falls (off exit 25 on route 8). The community is also served by a handful of small Community Water Systems and Non-Community Public Water Systems. Some residents and businesses rely on private well water. The Fire Department uses alternative water supplies to fight fires in the less

developed areas of Beacon Falls, including fire ponds and underground water tanks, and brings as much water in its tankers as possible to these fires.

The Town Sewage Treatment Plant is located at the south end of Lopus Road and serves most of the developed area of Beacon Falls. In the coming years (2021 to 2025) The Wastewater Treatment Plant will undergo an electrical upgrade and complete with a new generator, as well as a retaining wall to protect the secondary clarifier.

Eversource is the primary electricity provider in Beacon Falls. Natural gas service is provided by Eversource. Other utilities important to the Town include the electric substation on Cold Spring Road as well as electric and telephone lines in Town. Electricity is important for both day-to-day living and emergency usage, and the telephone is used to complement emergency communications in Town.

According to geoISP (geoISP.com), access to Broadband Internet and Mobile Broadband (cellular) service is very limited in Beacon Falls.

2.3 Critical Facilities and Emergency Response

Beacon Falls 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 Beacon Falls continues. 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.

Table 2-1: Critical Facilities

Facility	Address or Location	Type	Emergency Power	Shelter	SFHA
Beacon Hose Company No. 1	35 North Main Street	EOC	✓		
Woodland Regional High	135 Back Rimmon Road	Primary Shelter	✓	✓	
Beacon Falls Town Hall	10 Maple Avenue	Backup Shelter	✓	✓	
Beacon Falls Senior Center	57 North Main Street	Backup Shelter	✓	✓	♦
Laurel Ledge Elementary	30 Highland Avenue	Backup Shelter	✓	✓	
Police Department	119 North Main Street	Emergency			
Public Works Garage	411 Lopus Road	Fueling Station	*		
Wastewater Treatment Plant	411 Lopus Road	Utility	✓		
Sewage Pump Station	West Road	Utility	✓		
Sewage Pump Station	111 Lopus Road	Utility	✓		
Sewage Pump Station	123 Railroad Avenue	Utility	✓		
Eversource	Cold Spring Road	Utility			
Old Auxiliary Building**	52 Railroad Avenue	Municipal			***

Facility	Address or Location	Type	Emergency Power	Shelter	SFHA
Radio Tower	61 Rice Lane	Emergency			
Radio Tower	Rimmon Hill Road	Emergency			
Debris Management Site	Breault Road	Municipal			

- ♦ The Senior Center is located within a 0.2% annual-chance floodplain and may not be usable as a shelter during a flood event.
- * The Town was pursuing installation of Emergency Power at the Public Works Garage in 2021
- ** Old Auxiliary Building is used by the Fire Department
- *** Old Auxiliary Building is located adjacent to a 1% Annual-Chance Floodplain

Emergency Response Capabilities

The Fire Department is the designated emergency operations center.

While the Town has no elderly housing facilities, The Beacon Falls Emergency Operations Plan includes a list of addresses of special needs persons that would require special assistance during an emergency. In addition, the Town realizes that the influx of active adult housing in Town is increasing the amount of population that requires more assistance during emergencies, and plans to account for these populations in its emergency plan updates.

In order to ensure that critical facilities are able to operate in emergency situations, the town would like to obtain generators for the Police Department, the Old Auxiliary Building (Fire Station No. 2), and Laurel Ledge Elementary. Budget has been allocated for the installation of a generator at the Public Works in 2021. In addition, the Town is replacing water heaters at several critical facilities.

Sheltering Capabilities

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.

The Town has designated Woodland Regional High School as the primary shelter for the community. The High School has a generator which powers limited parts of the building. The Senior Center is able to serve as a shelter; however, this facility is located in the 500-year floodplain and could not be used in the event of extreme flood. The High School can accommodate more residents than the Senior Center. The Town Hall can also serve as a backup shelter, and has standby power. Finally, Laurel Ledge Elementary could also be used as a shelter if needed. The police and fire departments staff the shelters. The shelters are not certified by the American Red Cross.

Other municipal buildings, such as the Public Works garage, can serve as important emergency supply distribution centers.

Communications

The Town of Beacon Falls has established the CodeRED Emergency Notification System in an effort to streamline emergency notifications to residents of the Town. This system allows Town of Beacon Falls personnel to telephone all or targeted areas of the Town in case of an emergency situation that requires immediate action. The system is capable of dialing 50,000 phone numbers per hour. It then delivers a recorded message to a person or an answering machine, making three attempts to connect to any number.

Beacon Falls is in the southeast portion of Region 5 of the Connecticut Emergency Medical Service regions. Thus, it is important that Beacon Falls continue to maintain emergency notification systems compatible with those of Region 5, which contains most of the COGCNV municipalities. The Town's enhanced 9-1-1 service is already compatible with much of Region 5, and Seymour (Region 2) to the south. As development continues in the eastern portion of Town, the importance of emergency systems in Beacon Falls being compatible with Bethany's (also Region 2) is increasing. The Town has mutual aid agreements with all its neighbors.

Vulnerability to Natural Hazards

Several critical facilities in Beacon Falls are located in the 500-year floodplain. Town officials have noted that the Wastewater Treatment facility and the pump station on Railroad Avenue have been impacted by flooding due to heavy rain events in recent years. The most regularly impacted transportation artery is Route 42, which was closed due to flooding twice in 2007. Such flooding slows emergency response times due to detours around this area.

The Police Department, Fire Department, Senior Center, and Sewage Treatment Plant are all located within a mapped dam failure inundation area, and both Laurel Ledge Elementary School and Woodland Regional High School are located on the edge of wildfire risk areas.

3.0 FLOODING

3.1 Existing Capabilities

Beacon Falls has participated in the NFIP since 03/01/1979. The Flood Insurance Rate Map (FIRM) for the community was most recently updated in 10/16/2013. Beacon Falls does not participate in the FEMA Community Rating System (CRS) program.

According to FEMA, there are 19 flood insurance policies in force in Beacon Falls as of 6/30/2019 with an insurance value of $5,727,100. The previous edition of this HMP noted.

Regulations, Plans, and Local Floodplain Management

The Town of Beacon Falls 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:

Flood Plain District

Section 53 of the 2013 Beacon Falls Zoning Regulations is essentially the local version of the NFIP regulations. It defines the boundaries of the flood plain district and establishes the FIRMs and the FIS as the official maps for delineating this district. The Section restricts uses in the floodplain, requires flood protection for structures, controls the alterations of flood plains, relieves the Town of responsibility for flooding damages regardless of regulations, and authorizes the Planning and Zoning Commission to administer and enforce the provisions of this regulation. The regulation requires an "Application for approval of a development in a flood plain" be submitted for any development located in a floodplain. This provision includes standards for new construction, utilities, and subdivisions; authorizes the Town to request further information on site plans, and defines flooding related terminology in the regulations.

- **Section 53.11.1(a)** states that new construction or substantial improvement of any residential structure shall have the lowest floor, including basement, elevated at least to two feet above base flood elevation.
- **Section 53.11(b)** states that new construction or substantial improvement of any commercial, industrial, or nonresidential structure located in Zone A1-30, AE & AH shall have the lowest floor, including the basement, elevated at least to two feet above the level of base flood elevation.
- **Section 53.11.3** defines floodways and prohibits encroachments, fill, and substantial improvements unless certification is provided showing that such improvements will result in no increase in flood levels during the base flood discharge.

Soil Erosion and Sediment Control Plan

Section 54.2 of the Beacon Falls Zoning Regulations requires the submittal of a Soil Erosion and Sediment Control Plan with any application in which the disturbed area of such development is cumulatively more than one-half acre or any slope greater than 25% is disturbed.

General Design Standards

Article IV of Beacon Falls Subdivision Regulations states:

- **Section 4.1** notes no subdivision plan shall be approved without proper provision made for water supply, drainage, sewerage, and flood control.
- **Section 4.13** states that SFHAs, including base flood elevations, must be shown on site plans.
- **Section 4.14** states that "Land subject to flooding…shall not be subdivided for residential occupancy, nor…for any other uses as may continue such conditions, or increase danger to health, safety, life, or property, unless steps are taken to diminish the above-mentioned hazards."

Inland Wetlands and Watercourses Regulations

Effective in January 2012, this document defines in detail the Town of Beacon Falls regulations regarding development near wetlands, watercourses, and water bodies that are sometimes coincident with the Flood Plain District.

- **Section 2** defines "Significant Impact Activity" covered by the Regulations. Section 6 states that no person may conduct or maintain a regulated activity without obtaining a permit.
- **Section 7** outlines the application requirements.
- **Section 10.2** 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.

Plan of Conservation & Development.

The 2013 Plan of Conservation and Development Update continues to consider the preservation of open space as a high priority. The POCD discusses flooding and floodplains in section 3.1.2 and stormwater management (including nuisance flooding) in section 8.1.2. This document's top policy is "Recognize that the Naugatuck River has been and will continue to be the major focus of the community" and one of its recommendations is "the Naugatuck River Greenway should be designed and utilized as the major focus of the community, including acting as a non-motorized transportation artery."

Overall, the intent of 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 Beacon Falls 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 Beacon Falls for participation in the National Flood Insurance Program.

David Keating, Wetland Enforcement Officer, serves as the NFIP administrator and oversees the enforcement NFIP regulations under the authority of the Planning and Zoning Commission. Floodplain District regulations are incorporated into the Town zoning regulations, which were updated in August 2013 and became effective in September 2013. The Town currently has no plans to enroll in the Community Rating System program, but may consider it.

Ordinances require that all structures in flood hazard areas have their lowest floor (including basement) be two feet above established base flood elevations. 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. Wet floodproofing is required for buildings that include a fully enclosed space below the base flood elevation formed by foundation or other exterior walls. No encroachment on floodways is allowed that will raise the level of base flood elevation. The Beacon Falls Inland Wetlands and Watercourses Commission also reviews new developments and existing land uses on and near wetlands and watercourses.

Flood Control and Drainage 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 ACOE. Three of these dams are located in the Town of Thomaston, and two others are located upstream in Torrington. These dams are further described in Section 8.3. According to the FEMA FIS for Thomaston, these five dams can store all runoff up to a 100-year storm and provide a controlled release to the channel downstream.

The Beacon Falls Department of Public Works 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 routed to the department and recorded. Complaints can also be placed with the First Selectman's office. The Town uses these documents to identify potential problems and plan for maintenance and upgrades. The Emergency Management Director is working on implementing a new system to track and analyze drainage complaints and other hazard issues reported to the Town.

Beacon Falls, along with Naugatuck and Watertown, are participating in the Housatonic Valley Association's Planning for Flood Resilient and Fish-Friendly Road-Stream Crossings project https://hvatoday.org/wp-content/uploads/2020/08/2020_03-RSCMP-Project-Fact-Sheet.pdf.

Emergency Services

Many of Beacon Falls' capabilities to mitigate for flooding and prevent loss of life and property have improved since the initial hazard mitigation plan was adopted. Specifically, the regulations continue to require two feet of freeboard which far exceeds the minimum criteria set by NFIP. Furthermore, the town continues to mandate that 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.

New Capabilities and Completed Actions

Beacon Falls continues to maintain its strong flood mitigation capabilities.

The Town would like to determine the feasibility of armoring the bridge on Beacon Valley Road to limit structural damage during storm events. The town would also like to armor the bridge on Pinesbridge Road. However, this bridge is owned by the State of Connecticut and the town would need to work with the State to determine if improvements could be made.

Summary

Beacon Falls mitigates flood damages primarily through regulating development in floodprone areas, performing maintenance and upgrades of drainage infrastructure, and performing structural projects when appropriate.

3.2 Vulnerabilities and Risk Assessment

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

Beacon Falls has zero Repetitive Loss Properties (RLP). Of those, zero are classified as Severe RLP. Zero of the RLPs in Beacon Falls have been mitigated in the past.

3.2.1 Vulnerability Analysis of Areas Along Watercourses

The primary waterway in the Town is the Naugatuck River, which flows north to south through the Town. The remaining waterways in Beacon Falls are mostly smaller streams and brooks. Recall from Figure 3-1 that SFHAs with AE zones are in place for the Naugatuck River, Hockanum Brook and its major tributary, Hemp Swamp Brook, Beacon Hill Brook, and Spruce Brook. A tributary to Hemp Swamp Brook is delineated by approximate methods, and many other watercourses, including the major water bodies, have 500-year floodplains 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 ACOE flood control dams upstream, there is little wide-scale flooding in Beacon Falls.

Primary Areas of Concern

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.

- Beacon Valley Road – Beacon Hill Brook runs along Beacon Valley Road. The road and numerous homes are located in the floodplain, but homes are reportedly impacted by flooding more often than the road itself. One or two homes routinely experience water in their basements, but not at the first floor level. The problems here are primarily yard flooding. Recall from page 1-11 that one of the public survey respondents stated that "We are lucky that we sit a little higher and only had a minimal amount of water in the basement.

However, our neighbors on both sides have flooding issues with any major rain accumulation."

- There are several bridges on Beacon Valley Road in varying states of repair. If a large flood knocked out several bridges, these residents would be trapped and isolated from Town emergency services, as residents must travel through Naugatuck and Bethany to reach the center of Beacon Falls. The Town plans to refurbish the Beacon Valley Road Bridge.

- Borgnis Road and Cotton Hollow Road – These bridges over Beacon Hill Brook are reportedly undersized. If the Borgnis Road bridge fails, there is no other way out of Andrasko Road. If the Cotton Hollow Road bridge fails, then residents will have a long detour to the east along Beacon Valley Road to reach Route 8 in Naugatuck.

- Hockanum Brook Corridor – Many of the flooding problems in Town occur along this stream corridor. Route 42 at Blackberry Hill Road flooded twice in 2007. This intersection is low relative to the stream, and Town personnel note that the problem is exacerbated by a dam upstream in Bethany (likely Simpson Lake Dam) that is not properly controlled. Nearby homes are generally less affected, but the road is often closed due to the flooding. Route 42 is a primary evacuation route, and the road closure creates a long detour down several side streets. The flooding of Route has been mitigated with an upgraded culvert beneath the roadway, however more work needs to be done in this area to fully mitigate the issue.

- Skokorat Road - Small sinkholes have recently formed on Skokorat Road due to drainage pipe failures.

- Lancaster Drive –The Lancaster Drive Industrial Park formerly flooded due to beaver dams which have since been removed. The Town works with trappers to remove the beavers as necessary to prevent flooding.

- North Main Street and South Main Street – Utilities along Main Street are affected by a variety of hazards, particularly flooding, wind damage, and damage from falling tree limbs. There is an old canal under Main Street that fills when the Naugatuck River is high, reportedly contributing to flooding in the area by impeding proper operation of drainage systems. Much of this area is also within the 500-year floodplain. The Town wishes to upgrade electrical and communication utilities and drainage from the Police Station to Exit 23 off Route 8, with the electrical and communication utilities optimally relocated below ground.

- Noe Place at Route 42 – This intersection is the low point of Main Street in the floodplain. While not impacted by overbank flooding from the Naugatuck River, it is flooded due to poor drainage as drain pipes get backed up with the river is high.

- Old Turnpike Road, Shasta Terrace, Hubbell Avenue, and Nancy Avenue – Many of the homes are located in the Naugatuck River floodplain, but have not had flooding problems since the ACOE flood control dams were installed upstream on the Naugatuck River. While acquisitions of occupied buildings are not being considered at this time, the town has paid the back taxes on two properties located on Nancy Avenue that have been abandoned. The town has acquired the properties and plans to demolish the existing structures. Since the properties are located in a floodplain they will remain as open space areas, allowing for expansion of Riverbend Park. Funding for the Park Development was through a $100,000 US Fish & Wildlife Grant in 2014. The expanded park opened in 2017.

- Railroad Avenue – Homes here are just outside the floodplain, and most are high enough that flooding is not a serious issue.

- South Main Street near Seymour – Two mobile home parks, Valley Mobile Home Park and Beacon Falls Trailer Court, are located in the 100-year and 500-year floodplains of the Naugatuck River near the Seymour boundary. Evacuations have been necessary in recent years during floods. New trailers are required to be elevated. Despite the floodplain location and high population density, the Town of Beacon Falls is not considering buying out or relocating the mobile home parks at this time, and instead wishes to improve emergency communications and evacuation procedures for these residents.

- Lopus Road – Flooding often occurs in this area and the basements of homes typically flood as a result.

- Burton Road at Wolfe Avenue is susceptible to culvert washouts, according to one of the respondents of the public survey described on page 1-11. As a result, a retaining wall on Burton Road has been damaged by slumping.

3.2.2 Critical Facilities and Emergency Services

Critical facilities are not regularly impacted by flooding in Beacon Falls, despite several critical facilities (Table 2-1) being located in the 500-year floodplain of the Naugatuck River. However, town officials have indicated that the pump station on Railroad Avenue has flooded in the past and that sand bags have been brought in to reduce damages. In addition, flooding also occurred at the Wastewater Treatment Plant on Lopus Road during Hurricane Irene. In order to address flooding at these critical facilities, the town may consider constructing a flood wall or berm around the side of the facilities that are near the Naugatuck River. The Town has bonded $5 million for road repairs, and $1 million for upgrades at the Wastewater Treatment Plant. The road work will include improvements on Beacon Valley Road including some drainage upgrades.

The most regularly impacted transportation artery is Route 42, which is periodically closed due to flooding. Such flooding slows emergency response times due to detours around this area.

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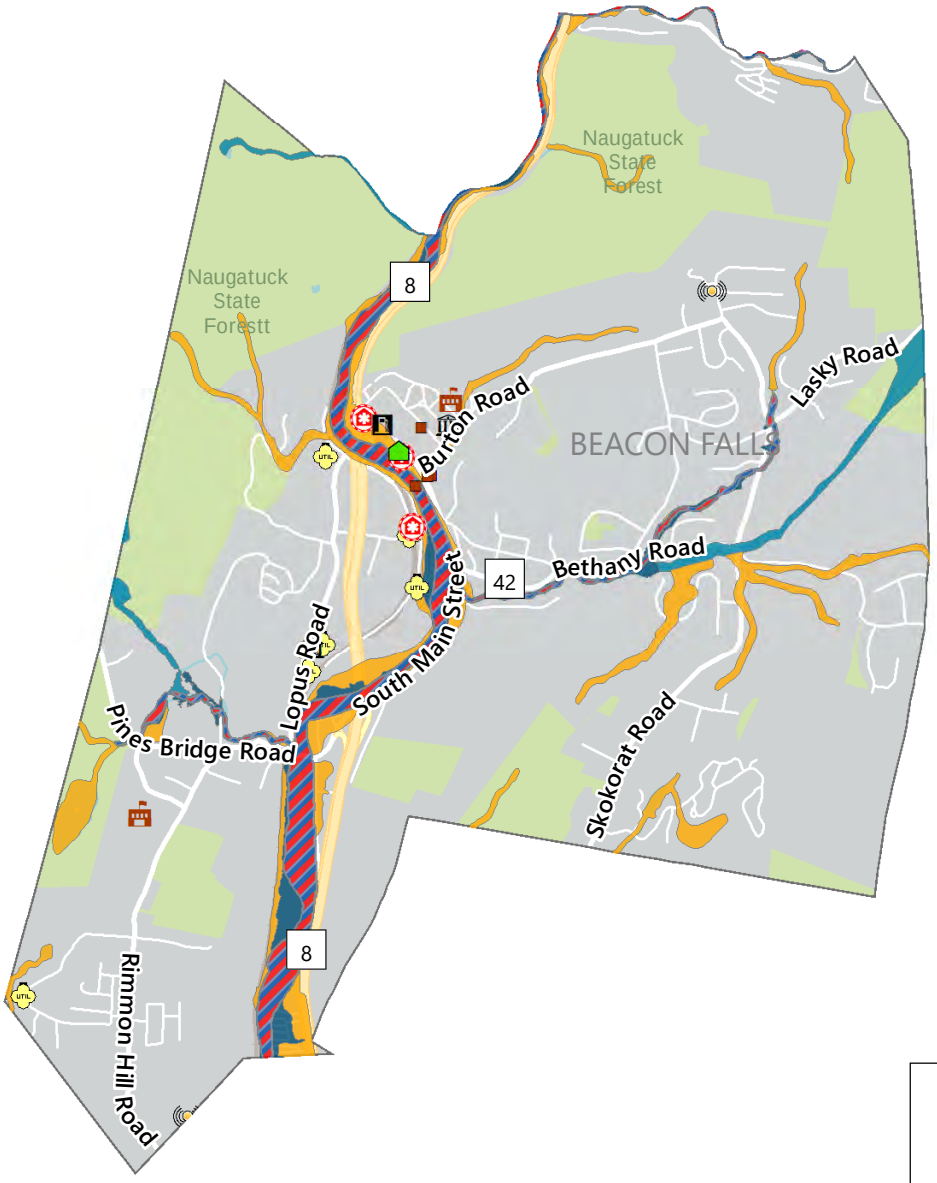

Critical Facilities

- Communications
- Community Center
- Emergency Response
- Fuel
- Government Services
- School
- Utility
- Vulnerable Population

Flood Zone

- A
- AE
- Floodway
- X: 0.2% Annual Chance

SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773

Flood Hazards in Beacon Falls

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

N

0 1,500 3,000
Feet

DATE 6/15/2021

141.3211.00029
PROJ. NO.

FIG. 3-1

4.0 HURRICANES AND TROPICAL STORMS

4.1 Existing Capabilities

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 Beacon Falls is 115 mph for a Category 1 event, 125 mph for a Category 2, and 135 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.

Eversource, the local electric utility, provides tree maintenance near its power lines.

New developments in Beacon Falls are required to place utilities underground.

Existing mitigation measures appropriate for flooding have been discussed in Section 3. These include ordinances, codes, and regulations that have been enacted to minimize flood damage. In addition, various structures exist to protect certain areas, including dams and riprap.

Beacon Falls has adopted the Connecticut Building Code as its building code, and literature is available regarding design standards in the Building Department office.

Parts of tall and older trees may fall during heavy wind events, potentially damaging structures, utility lines, and vehicles. Eversource Energy (formerly Connecticut Light & Power), the local electric utility, provides tree maintenance near its power lines. Eversource was under intense scrutiny after storms Irene and Alfred in 2011. Town officials have indicated that Eversource is very active in Beacon Falls.

The Road Foreman is also the Tree Warden. He/she assists in managing all trees on Town-owned property, including within the street rights-of-way. Currently the Town does not perform maintenance on private trees, but ownership of trees and maintenance procedures is poorly defined. A tree on private property that falls on Town property can be called by the property owner to be a Town tree, and the Town deals with it. A tree on private property that hangs over Town property can be claimed by the Town to be a Town tree

as well, and they will perform maintenance on it. Eversource also performs tree maintenance, but landowners are primarily responsible for conducting tree maintenance on private property away from Town 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. Currently, the tree removal budget is generally appropriate to perform cleanup and outreach.

During emergencies, the Town of Beacon Falls has space designated to use as shelter for evacuees (Section 2.9). Woodland Regional High School is currently the primary shelter with a generator, while the secondary shelters are the Beacon Hose Company No. 1 (Fire Department) and the Town Hall. As hurricanes generally pass an area within a day's time, additional shelters can be set up after the storm as needed for long-term evacuees.

The Town of Beacon Falls has instituted the CodeRED Emergency Notification System. The Town also relies on radio and television to spread information on the location and availability of shelters. Prior to a hurricane, the Town ensures that warning/notification systems and communication equipment is working properly and prepares for the possible evacuation of susceptible areas.

In summary, many of Beacon Falls capabilities to mitigate for wind damage and prevent loss of life and property have improved since the initial hazard mitigation plan was adopted. Furthermore, Eversource has increased its capabilities relative to tree and tree limb maintenance near utility lines.

New Capabilities and Completed Actions

Beacon Falls continues to maintain its strong tropical cyclone mitigation capabilities.

Currently, Beacon Falls contracts tree maintenance and debris cleanup jobs that are beyond municipal capabilities, such as those that require elevated work, through an RFP process. Due to cleanup challenges following the May 2018 Tornado and Tropical Storm Isaias in 2020, the Town is considering placing a tree company on call to cut down on response times.

Summary

Beacon Falls 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

The town of Beacon Falls is vulnerable to hurricane damage from wind and flooding, and from any tornadoes accompanying the storm. Wind damage in Beacon Falls is relatively uniform. Town officials have indicated that the areas along Route 42 heading into Bethany and Oxford are prone to wind damage due to a significant number of pine trees. The Blackberry Hill Road area is also prone to wind damage.

As Beacon Falls is not affected by storm surge, hurricane sheltering needs have not been calculated by the Army Corps of Engineers for the Town. The Town of Beacon Falls determines sheltering need based upon

areas damaged within the Town. Under limited emergency conditions, a high percentage of evacuees will seek shelter with friends or relatives rather than go to established shelters. During extended power outages, it is believed that only 10% to 20% of the affected population of Beacon Falls will relocate, though many of this number will again stay with friends or relatives rather than go to established shelters.

Tropical Storm Isaias in August 2020 caused minor damage in Beacon Falls. Power was out in some areas for up to five days, including at the sewer pumping stations which operated on generators during that time. Tree damage required extensive cleanup, and one town-owned fence was damaged by a falling tree.

5.0 SUMMER STORMS AND TORNADOES

5.1 Existing Capabilities

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 Beacon Falls as explained in Section 4. In addition, the Connecticut State Building Code includes guidelines for the proper grounding of buildings and electrical boxes.

In Beacon Falls, the local utilities are responsible for tree branch removal and maintenance. In addition, all new developments in the Town must place utilities underground wherever possible. The Public Works Department also performs annual tree maintenance on municipal right of ways.

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 "CodeRED" 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 Beacon Falls. 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 vulnerability.

New Capabilities and Completed Actions

Beacon Falls 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

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

5.2 Vulnerabilities and Risk Assessment

Beacon Falls has a moderate to high potential to experience tornado damage. In addition, NOAA states that climate change has the potential to increase the frequency and intensity of tornadoes, so it is possible that the pattern of occurrence in Connecticut could change in the future.

The risk of downbursts occurring during such storms and damaging the town of Beacon Falls is believed to be low for any given year. The town is particularly susceptible to damage from high winds due to its high elevation and heavily treed landscape.

The town indicated that the areas along Route 42 heading into Bethany and Oxford are prone to wind damage due to a significant number of pine trees. The Blackberry Hill Road is also prone to wind damage.

Secondary damage from falling branches and trees is more common than direct wind damage to structures. 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 Beacon Falls 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.

There are no critical facilities believed to be more susceptible to summer storm damage than any other. Some critical facilities are more susceptible than others to flooding damage due to summer storms

The entire community is at relatively equal risk for experiencing damage from summer storms and tornadoes. Based on the historic record, only a few summer storms and tornadoes have resulted in costly damages in Beacon Falls. 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 Beacon Falls, and with a greater damage amount to be expected should an EF3 or stronger tornado strike.

The May 2018 tornado did significant damage to Beacon Falls. The total reimbursement from FEMA will be approximately $400,000. There was significant tree damage, and municipal staff were severely hindered by blocked roads during attempts to address the damage. Public Works spent multiple weeks removing trees and debris. The roof of the fire station experienced minor damage, as did one town vehicle. A town-owned retaining wall on Burton Road was also damaged. Power was out in the affected area for 7 to 10 days.

6.0 WINTER STORMS

6.1 Existing Capabilities

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 ensures that all warning/notification and communications systems are ready before a storm, and ensures that appropriate equipment and supplies, especially snow removal equipment, are in place and in good working order. The Town also prepares for the possible evacuation and sheltering of some populations which could be impacted by the upcoming storm (especially the elderly and special needs persons).

CTDOT plows all State roads and Interstates. The Town primarily uses Town staff for plowing operations on the remaining miles of roadway. Priority is given to plowing egresses to critical facilities and areas with steep hills. The Town has six routes and six trucks for plowing. The plow routes are not posted publicly. A treated salt is used for roadways rather than the sand/salt mixture. Town officials have noted that access to salt has been very difficult this year.

New Capabilities and Completed Actions

Beacon Falls continues to maintain its strong winter storm mitigation capabilities.

Summary

Beacon Falls 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

As mentioned for summer storms, the heavily treed landscape in close proximity to densely populated residential areas in the town of Beacon Falls 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. Icing is an issue on Blackberry Hill Road and Skokorat Road.

As there is over 660 feet in elevation difference between the high point and low point in Town, Beacon Falls can experience snow in the hills while it rains in the downtown area. The Town relies on its personnel to report areas receiving snow in the higher elevations, as there are many hills in Beacon Falls which can make driving difficult in icy weather. The most extreme example is Rice Lane Extension, which has a steep (30%) grade up into a subdivision. Emergency access to this area can be difficult during the winter.

As for other winter hazards, drifting snow is not as large a problem in Beacon Falls as in other areas, but it does occur. West Road, Hillside Drive, Skokrat Road and Blackberry Hill Road are prone to snow drift. In addition, snow drifts can reach 5 feet on Rimmon Hill Road. This is mitigated through municipal plowing efforts. Ice jams are not a problem along rivers and streams in Beacon Falls.

Elderly, linguistically isolated, and disabled populations reside in the town of Beacon Falls. It is possible that several hundred of the population impacted by a severe winter storm could consist of the elderly, several tens could consist of linguistically isolated households, and several hundred could be disabled. Thus, it is important for Beacon Falls emergency personnel to be prepared to assist these special populations during emergencies such as winter storms.

The roof of a manufacturing facility collapsed in Beacon Falls as a result of the storms in early 2011. Town officials also reported that the snow load caused roof cracks to buildings within the industrial park on Railroad Avenue and to the High School. The roofs of municipal buildings were shoveled and power outages lasted up to eight days. The overall storm impacts and damages of the winter 2010-2011 storms resulted in Presidential Disaster Declaration 1958-DR for Connecticut. Beacon Falls experienced heavy snow in January 2015 that strained the Town's plowing capabilities. No property damage was reported. A small reimbursement was received from FEMA for snow clearing costs.

Summary – 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.

7.0 GEOLOGICAL HAZARDS

7.1 Existing Capabilities

The Connecticut Building Codes include design criteria for buildings specific to municipality, as adopted by the Building Officials and Code Administrators (BOCA). These include the seismic coefficients for building design in Beacon Falls. 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 Beacon Falls do not directly address earthquake hazards. However, the Zoning Regulations of the Town of Beacon Falls (Section 9.20) state that areas of slopes greater than 25% do not count towards meeting the minimum lot area requirements. Section 54.2 of the Zoning Regulations requires a Sediment and Erosion Control Plan be submitted when the disturbed area of a site is greater than one-half acre or any part of the disturbed area has a slope greater than 25%.

New Capabilities and Completed Actions

Beacon Falls continues to maintain its earthquake and landslide mitigation capabilities. Town 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.

Summary

Beacon Falls 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

Earthquake Vulnerabilities

Several areas in the town of Beacon Falls 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. Areas that are not at increased risk during an earthquake due to unstable soils are those 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.

While the risk of an earthquake affecting Beacon Falls is relatively low over the short-term, long-term probabilities suggest that a damaging earthquake (magnitude greater than 5.0) could occur within the vicinity of Beacon Falls.

Because a damaging earthquake would likely affect a large area beyond Beacon Falls, 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.

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.

Actions Completed and New Capabilities

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

Summary

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

8.2 Vulnerabilities and Risk Assessment

Beacon Falls officials report that the majority of the dams in town are small and privately owned, while large upstream dams on the Naugatuck River are well-maintained by the federal government. For these reasons, the Town does not have immediate dam concerns.

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 hazard potential

As of 2020, there were 11 DEEP-inventoried dams within the Town of Beacon Falls. One 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 Beacon Falls

Number	Name	Class	Owner
601	BRONSON COMPANY DAM		Private
602	BETHANY ROAD POND DAM	A	Private
603	CARRINGTON POND DAM	BB	Municipal
604	CAMMERINO DAM #1	A	Private
605	CAMMERINO DAM #2		Private
606	SEYMOUR RESERVOIR #1 DAM	B	State Owned
607	HUNTER POND DAM	A	State Owned
608	STATE POND DAM	A	State Owned
609	SHAW DAM	A	Private Corporation
611	LAMB POND DAM		Private
612	MC GEEVER DAM	A	Private

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

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

Number	Name	Class	EAP Status	EAP Status Date
606	SEYMOUR RESERVOIR #1 DAM	B	Review letter sent revisions needed	3/9/2017

Beacon Falls should work to ensure EAPs are up-to-date.

While there are no Class C dams located within Beacon Falls, there are several Class C dams upstream of Beacon Falls whose failure would impact Town residents. These dam failure inundation areas are shown in Figure 8-1, and a list of these dams is provided in Table 8-3.

Table 8-3: Class C Dams Upstream of the Town of Beacon Falls

Number	Name	Watercourse in Beacon Falls	Town
803	Long Hill Reservoir Dam	Beacon Hill Brook	Bethany
8814	Hop Brook Dam	Naugatuck River	Naugatuck
14007	Black Rock Dam	Naugatuck River	Thomaston
14001	Thomaston Dam	Naugatuck River	Thomaston

Note that the Black Rock Dam, Hop Brook Dam, and Thomaston Dam have progressively larger inundation areas depicted on Figure 8-1. For example, the Thomaston Dam inundation area is only visible at the edges of the Hop Brook Dam inundation area, although it completely underlies (is wider than) the Hop Brook Dam inundation area.

Significant and High Hazard Dams

Thomaston Dam

Thomaston Dam is owned by the ACOE and is designed to impound floodwaters from the Naugatuck River and Leadmine Brook. Based on dam failure inundation maps provided by the ACOE, 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 Beacon Falls would experience some degree of flooding, including most of the critical facilities in Town. Such a failure would cause backwater conditions along Beacon Hill Brook and up the unnamed stream to the sports fields off Pent Road, and would completely inundate the mobile home parks at the south end of Town. A breach at full height would cause flooding greater than the mapped 500-year flood event for Beacon Falls.

Hop Brook Dam

Hop Brook Dam is owned by the ACOE and provides flood control along Hop Brook. Based on dam failure inundation maps provided by the ACOE, a dam failure at full pool height would cause flooding along Hop Brook and the Naugatuck River corridors all the way to Derby. Much of downtown Beacon Falls would receive flooding in areas beyond the mapped 500-year floodplain, although flood heights would be less than a breach of the Thomaston Dam. Still, many of the critical facilities in Town on Main Street would be flooded.

Black Rock Dam

Black Rock Dam is owned by the ACOE and provides flood control along Branch Brook in Black Rock State Park. Based on dam failure inundation maps provided by the ACOE, a dam failure at full pool height would cause flooding along the Branch Brook and Naugatuck River corridors all the way to downtown Beacon Falls. Flood heights would extend outside the 500-year floodplain in the center of Town, though flood heights would be lower than those from a failure of Hop Brook Dam. No inundation area is delineated south of Bethany Road (Route 42), so the flood peak may recede prior to reaching the mobile home parks at the south end of Town.

Long Hill Reservoir Dam

Long Hill Reservoir is owned by the Connecticut Water Company. The downstream corridor is developed with many residential and some commercial and industrial properties. The dam failure inundation area extends along Route 63 and Beacon Valley Road. None of the critical facilities in the town of Beacon Falls are in the inundation area, but many residential structures would be flooded if the dam failed, and a dam failure could trap residents in the Andrasko and Cotton Hollow Road areas if the bridges were undermined.

Seymour Reservoir Dam #1

Seymour Reservoir Dam #1 is owned by the Connecticut DEEP. It is the southernmost of four reservoir dams, all of which are listed as Class B dams. A dam failure inundation area map was not available from the DEEP. According to Town personnel, the failure of this dam would likely damage the industrial park on Lancaster Drive, and would potentially cause flooding of homes on Molleur View Drive and on Old Pines Bridge Road. If all four Class B dams were to fail due to the same event, the affected area in Beacon Falls would be much greater.

Other Dams

Town officials have reported that "Smith's dam," which is privately owned, suffered a partial loss and is in need of repair. The town has ongoing concerns about future risks associated with this dam.

The Town of Beacon Falls is also concerned with the potential failures of beaver dams.

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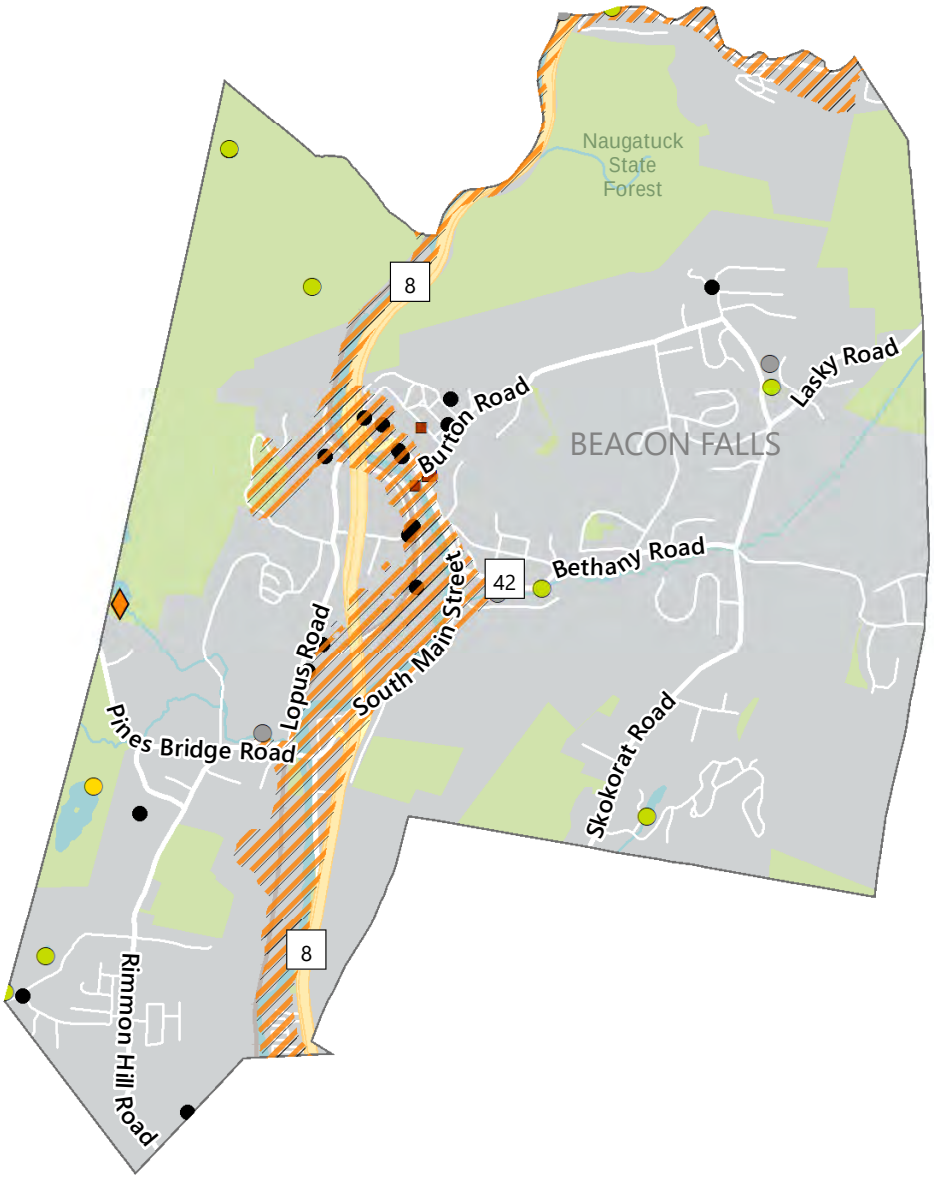

Dam Hazard Class

- Unclassified
- A - Low Hazard
- BB - Moderate Hazard
- B - Significant Hazard
- Dam Breach Inundation Area

Critical Facilities

- Critical Facilities

SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773

Dam Failure Hazards in Beacon Falls

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

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Feet

DATE 6/15/2021

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PROJ. NO.

FIG. 8-1

9.0 WILDFIRES

9.1 Existing Capabilities

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

Existing mitigation for wildland fire control is typically focused on Fire Department training and maintaining an adequate supply of equipment. The Town of Beacon Falls Zoning Regulations and Subdivision Regulations also require reports from the Fire Marshall regarding the adequacy of fire protection in all new developments. The Town requires developers to install underground 30,000-gallon water storage tanks for fire protection in recent developments in outlying areas of the Town. Approximately 90% of the town is covered by hydrants.

Unlike wildfires on the west coast of the United States where the fires are allowed to burn toward development and then stopped, the Beacon Hose Company No. 1 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 Aquarion 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 Connecticut Water Company system and the use of local water bodies and its tanker trucks to supply fire fighting water. The Town also makes use of one dry hydrant in Oxford for fires in the western part of Town. A few dry hydrants are located in outlying areas. The Town also recently purchased new equipment using grants that allow then to draft water from ponds. Beacon Falls personnel have also received brush fire training.

The Beacon Hose Company No. 1 is often a first responder for fires that happen in the Naugatuck State Forest, and coordinates with the Naugatuck, Oxford, and Bethany Fire Departments to control these forest fires. The Fire Department has a four-wheel drive brush truck and an all-terrain vehicle equipped with a water tank for carrying water to remote locations. The Town also has mutual aid agreements with all of its neighbors.

Actions Completed and New Capabilities

Beacon Falls 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

The approximately 4,386 acres of forests and undeveloped land in Beacon Falls may be susceptible to drought conditions that make them more vulnerable to wildfires. The approximately 483 acres of agricultural fields and maintained grasses may be vulnerable to direct damage from drought conditions.

Much of Beacon Falls (up to 35%) is protected open space, and fires have occurred throughout the Town. Specifically, Town personnel noted that fires have occurred in the High Rock Grove section of the Naugatuck State Forest in Beacon Falls and Naugatuck. Such fires are usually caused by arson or from campfires that spread out of control. Fires that start in Naugatuck in this area and near Toby's Rock Mountain are reportedly often left to burn due to the topography, and the fires spread south into Beacon Falls.

Despite having a large amount of forest/urban interface, the overall risk of wildfires occurring in the Town of Beacon Falls 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, and tankers from other Towns can provide additional fire support for outlying fires.

In summary, limited access forest areas in the outskirts of Town near new development are considered most at risk from wildfires. In addition, there is special concern about fires in the Naugatuck State Forest in the northern part of Town. Fires in these areas are difficult to access due to topography can spread from nearby municipalities. 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.

Should a wildfire occur, it seems reasonable to estimate that the average area to burn would be five acres, consistent with the state average during long period of drought. In the case of an extreme wildfire during a long drought on forested lands, it is estimated that up to 300 acres could burn before containment due to the limited access of those lands. Residential areas bordering such lands would also be vulnerable to wildfire, but would likely be more impacted by heat and smoke than by structure fires due to the strong fire response in the Town.

Wildfire risk zones are mapped in Figure 9-1.

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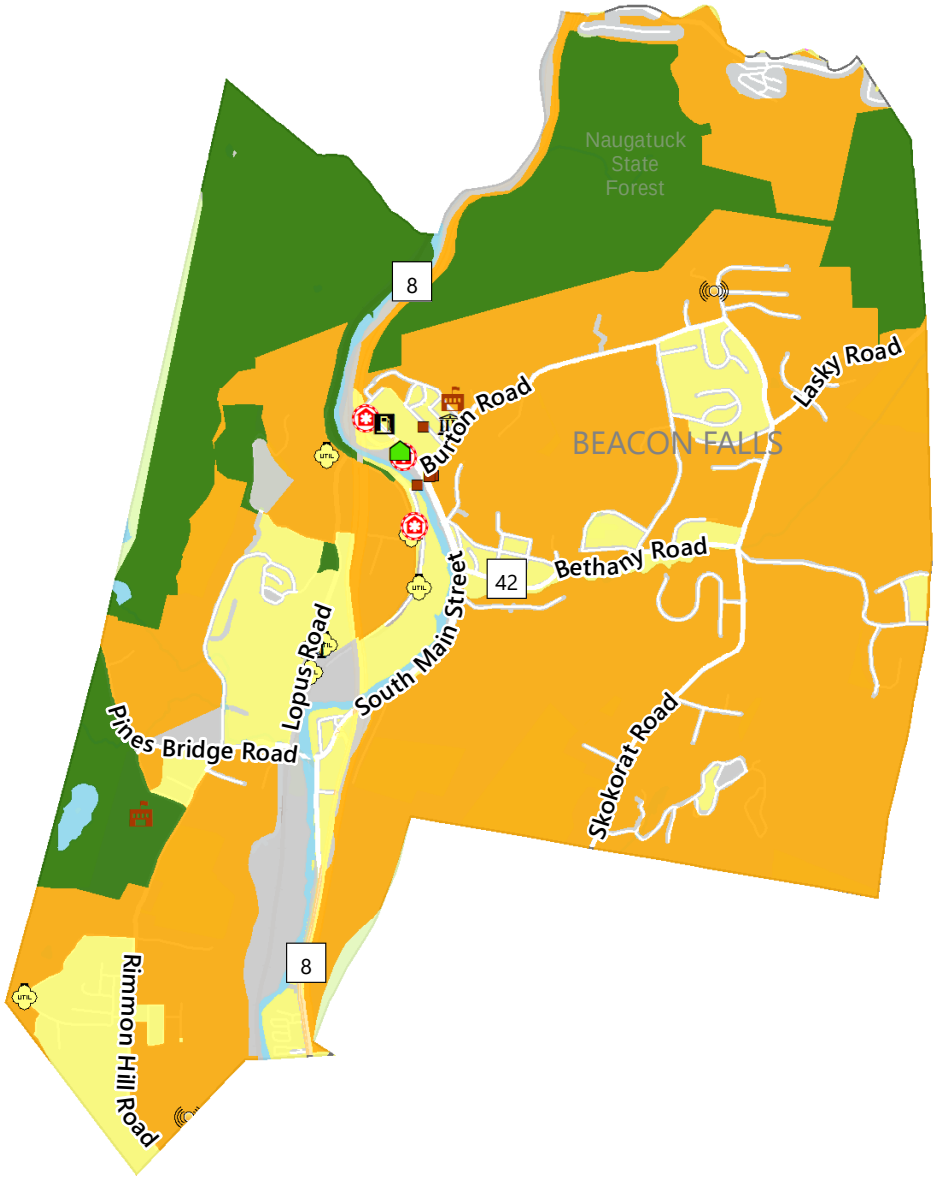

Critical Facilities

- Communications
- Community Center
- Emergency Response
- Fuel
- Government Services
- School
- Utility
- Vulnerable Population

Wildland Urban Interface Type

- Wildland-Urban Intermix
- Wildland-Urban Interface
- Vegetated: Low Housing Density
- Vegetated: No Housing
- Non-vegetated
- Water

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203.271.1773

Wildfire Hazard in Beacon Falls

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

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DATE 6/15/2021

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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
BFL-1	Incorporate goals, strategies, and actions of the hazard mitigation plan to the Plan of Conservation and Development Update.	First Selectman	Carry Forward	This can be performed during the 2023 POCD update
BFL-2	Acquire standby power for the Public Works facility	Public Works	Complete	Budgeted for 2021.
BFL-3	Acquire standby power for Laurel Ledge Elementary School	Public Works	Complete	This has been completed.
BFL-4	Acquire standby power for the Woodland Regional High School pump station	Public Works	Drop	This is for a water pumping station. The school is R16, not under Town control.
BFL-5	Evaluate the cost of joining FEMA's Community Rating System and calculate the benefits to residents.	First Selectman	Complete	Not a lot of structures in floodplain, unlikely to be cost-effective.
BFL-6	Perform a Town-wide inventory of drainage pipes during next stormwater management plan update	Public Works	Capability	MS4 filing done. Did street scan and have some GIS files. This is a work in progress. A formal study will not be performed.
BFL-7	Conduct a comprehensive drainage study along Main Street to determine appropriate mitigation measures.	Public Works	Complete	Drainage still a big issue on Main Street. This is being worked into various streetscape projects.
BFL-8	Improve emergency communications with the mobile home parks on South Main Street and provide outreach regarding evacuation procedures every two years to these residents.	EMS	Capability	Reverse 911 is used to contact this area. Outreach performed. Social media policy is in development for future outreach. This is a capability.

Strategy	Description	Responsible Party	Status	Notes
BFL-9	Pursue an emergency access easement off the private drive on the east end of Andrasko Road leading down to private drive on Beacon Valley Road for use if the Borgnis Road bridge fails.	Public Works	Carry Forward with Revision	Area still at risk, but this project will not be completed in next 5 years A study phase may be appropriate.
BFL-10	Pursue the acquisition of additional municipal open space properties inside SFHAs and set those aside as greenways and parks.	First Selectman	Capability	Generally adding to existing parks. Town looks at properties as they come available, looking at open space next to PD
BFL-11	Promote local floodproofing options for homes impacted by flooding along Beacon Hill Brook	First Selectman	Capability	Town looking at drainage improvements
BFL-12	Evaluate the possibility of acquiring or elevating residences or businesses that are prone to flooding, particularly within the Valley Mobile Home Park and the Beacon Falls Trailer Court. Pursue funding for home elevations should any residents become interested.	First Selectman	Capability	No interest in acquisitions at this time. The Town would consider new acquisitions in the future if requested.
BFL-13	Increase the conveyance capacity of the culvert for Hockanum Brook near Route 42 & Blackberry Hill Road	Public Works	Complete	Culvert upgraded but more work needs to be done in the area.
BFL-14	Evaluate the feasibility and effectiveness of increasing the capacity of the culverts located under Burton Road where washouts have occurred	Public Works	Carry Forward	No progress due to funding and staff constraints.
BFL-15	Evaluate the feasibility and effectiveness of increasing the capacity of the culverts located under Beacon Valley Road	Public Works	Carry Forward	This is in progress.
BFL-16	Evaluate the feasibility and effectiveness of increasing the capacity of the culverts located under Lopus Road	Public Works	Drop	This will not be performed in the next five years. It is too low of a priority.
BFL-17	Upgrade the drainage system on Main Street to prevent drainage from backing up through the system when the Naugatuck River is high	Public Works	Carry Forward	Drainage concerns in this area are worked on in smaller projects as opposed to one large project that would not be affordable.
BFL-18	Evaluate the feasibility and effectiveness of a flood wall or berm around the side of the Railroad Avenue pump station.	Public Works	Carry Forward	Welded manhole covers to prevent water seepage. A floodwall or berm may still be needed. The water has come close to the fence in the past.

Strategy	Description	Responsible Party	Status	Notes
BFL-19	Evaluate the feasibility and effectiveness of a flood wall or berm around the side of the wastewater treatment plant.	Public Works	Complete	To be constructed in 2021.
BFL-20	Evaluate the feasibility of armoring the bridge on Beacon Valley Road to limit structural damage during storm events.	Public Works	Drop	Bridge will be rehabbed in place. Armoring may or may not be needed.
BFL-21	Evaluate the feasibility of armoring the bridge on Pinesbridge Road (this bridge is owned by the State of Connecticut and the town would need to work with the State to determine if improvements could be made).	Public Works	Drop	State road.
BFL-22	Conduct outreach regarding dangerous trees on private property.	Public Works	Capability	The Tree Warden performs outreach as needed.
BFL-23	Provide for the Building Department to make literature available during the permitting process regarding appropriate design standards	Building official	Capability	This is a capability.
BFL-24	Develop a plan to address potential wind damage due to excessive pine trees located along Route 42 and Blackberry Hill Road.	Public Works	Drop	Not a concern, current response is sufficient in this area.
BFL-25	Upgrade utilities and place underground on Main Street to prevent future damage	Public Works	Drop	Wish list item that will not happen in 5 years. They are addressing this piecemeal through smaller projects.
BFL-26	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	They evaluate on a case-by-case basis following storms, a formal plan is not required
BFL-27	Develop a plan to address snow drift in the vicinity of West Road, Hillside Drive, Skokrat Road and Blackberry Hill Road. Snow fencing and certain vegetation buffers may be helpful to reduce drifting.	Public Works	Complete	Snow fencing is erected on Rimmon Hill to mitigate drifts. A formal plan is not needed. The other areas are not concerning at present.
BFL-28	Ensure that municipal departments have adequate backup facilities (power generation, heat, water, etc.) in case earthquake damage occurs	Public Works, EMS	Complete	The Town has adequate backup facilities without needing complete redundancy.

Strategy	Description	Responsible Party	Status	Notes
BFL-29	Evaluate the effectiveness of bracing systems and assets inside critical facilities. This could help protect IT systems, important records and files, libraries, and department-specific assets such as mechanical equipment in the wastewater treatment plant.	Public Works, EMS	Drop	These systems may be considered for new critical facilities in the future, but renovations of existing facilities are not believed necessary at this time.
BFL-30	Maintain copies of dam EAPs at the town hall.	EMS	Capability	The EMD has copies and reaches out to DEEP every few years to ensure they are up to date.
BFL-31	Include dam failure areas in the CodeRED contact database	EMS	Complete	Currently evaluating if they want a new Reverse 911 system to replace CodeRed.
BFL-32	Form a Flood & Erosion Control Board to oversee problems with flooding and erosion	First Selectman	Carry forward	Not a lot of flooding issues that would require a separate board. The Town will look into this since funding is occasionally available to FECBs from the DEEP. They may designate inland wetlands as FECB.
BFL-33	Develop a long-term beaver dam management plan.	Public Works	Complete	Trappers are given permission to trap as needed, no longer an issue.
BFL-34	If found feasible in the beaver dam management plan, utilize beaver deterrent devices such as beaver stops or beaver bafflers.	Public Works	Drop	Not necessary per above.
BFL-35	Provide technical assistance referrals to owners of Smith Dam regarding effective maintenance strategies if needed.	Public Works	Drop	This is the dam on Bethany Road. Town staff are not aware of any current issues or concerns with the dam.
BFL-36	Explore other fire protection solutions when water main extensions are not feasible, such as the use of fire ponds.	Fire Department	Complete	This is a capability.

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

Action BFL-01	
Register as a Sustainable CT community and make progress with the hazard mitigation goals associated with registration.	
Lead	Plan
Cost	$0 - $25,000
Funding	OB, CT DEEP, Sustainable CT
Timeframe	2022
Priority	High

Action BFL-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	
Lead	Plan
Cost	$0 - $25,000
Funding	OB, CT DEEP
Timeframe	2022
Priority	High

Action BFL-03	
Incorporate goals, strategies, and actions of the hazard mitigation plan to the Plan of Conservation and Development Update.	
Lead	First Selectman
Cost	$0 - $25,000
Funding	OB, FEMA Grant, CT DEEP
Timeframe	2022
Priority	Med

Action BFL-04	
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.	
Lead	Plan, FS, NFIP Coordinator
Cost	$0 - $25,000
Funding	OB, FEMA Grant, CT DEEP
Timeframe	2022
Priority	Med

Action BFL-05	
Increase Substantial Damage and Substantial Improvement lookback periods to two or more years.	
Lead	Plan, FS, NFIP Coordinator
Cost	$0 - $25,000
Funding	OB, FEMA Grant, CT DEEP
Timeframe	2022
Priority	Med

Action BFL-06	
Remain engaged with CIRCA's Resilient Connecticut project and utilize vulnerability mapping tools to help with local planning and project development.	
Lead	Plan
Cost	$0 - $25,000
Funding	OB, CT DEEP, Resilient CT
Timeframe	2022
Priority	Med

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

Action BFL-08	
Work with CIRCA to develop potential risk reduction pilot projects in the identified "adaptation/resilience opportunity areas" near and in locations of transit-oriented development (TOD).	
Lead	Plan
Cost	$0 - $25,000
Funding	OB, CT DEEP, Resilient CT
Timeframe	2022
Priority	Med

Action BFL-09	
Form a Flood & Erosion Control Board to oversee problems with flooding and erosion	
Lead	First Selectman
Cost	$0 - $25,000
Funding	OB
Timeframe	2022
Priority	Low

Action BFL-10	
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.	
Lead	EM, FS
Cost	$0 - $25,000
Funding	CT DEEP
Timeframe	2022
Priority	Low

Action BFL-11	
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.	
Lead	Plan, HC/HDC
Cost	$0 - $25,000
Funding	OB, CT SHPO
Timeframe	2022 – 2023
Priority	Low

Action BFL-12	
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.	
Lead	Plan, HC/HDC
Cost	$0 - $25,000
Funding	OB, CT SHPO
Timeframe	2022 – 2023
Priority	Low

Action BFL-13	
Evaluate the feasibility and effectiveness of increasing the capacity of the culverts located under Burton Road where washouts have occurred	
Lead	Public Works
Cost	$25,000 - $50,000
Funding	OB, CIP, FEMA Grant, CT DEEP
Timeframe	2022 – 2024
Priority	Low

Action BFL-14	
Evaluate the feasibility and effectiveness of increasing the capacity of the culverts located under Beacon Valley Road	
Lead	Public Works
Cost	$25,000 - $50,000
Funding	OB, CIP, FEMA Grant, CT DEEP
Timeframe	2022 – 2024
Priority	Low

Action BFL-15	
Evaluate the feasibility and effectiveness of a flood wall or berm around the side of the Railroad Avenue pump station.	
Lead	DPW
Cost	$100,000 - $500,000
Funding	CIP, FEMA Grant, FEMA AFG, CT DEMHS
Timeframe	2022 – 2024
Priority	Med

Action BFL-16	
Conduct a feasibility study exploring creation of an emergency access easement off the private drive on the east end of Andrasko Road leading down to private drive on Beacon Valley Road for use if the Borgnis Road bridge fails.	
Lead	Public Works
Cost	$25,000 - $50,000
Funding	OB, CT DEMHS
Timeframe	2022 – 2024
Priority	Low

Action BFL-17	
Refurbish the Beacon Valley Road Bridge.	
Lead	DPW
Cost	More than $500,000
Funding	OB, CIP, FEMA Grant, CT DEEP
Timeframe	2023 – 2025
Priority	Low

Action BFL-18	
Make stormwater system upgrades to Skokorat Road and Burton Road.	
Lead	DPW
Cost	More than $500,000
Funding	OB, CIP, FEMA Grant, CT DEEP
Timeframe	2023 – 2025
Priority	Low

Action BFL-19	
Upgrade the drainage system on Main Street to prevent drainage from backing up through the system when the Naugatuck River is high	
Lead	Public Works
Cost	More than $500,000
Funding	OB, CIP, FEMA Grant, CT DEEP
Timeframe	2023 – 2025
Priority	Low

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	
BFL-01	Register as a Sustainable CT community and make progress with the hazard mitigation goals associated with registration.	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	9
BFL-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	8
BFL-03	Incorporate goals, strategies, and actions of the hazard mitigation plan to the Plan of Conservation and Development Update.	HMP in Planning Docs	First Selectman	$0 - $25,000	OB, FEMA Grant, CT DEEP	2022	1	1	1	0	1	0	1	0	0	0	-1	0	0	0	5
BFL-04	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	5
BFL-05	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	5
BFL-06	Remain engaged with CIRCA's Resilient Connecticut project and utilize vulnerability mapping tools to help with local planning and project development.	Resilient CT	Plan	$0 - $25,000	OB, CT DEEP, Resilient CT	2022	0	1	1	1	1	1	0	0	0	0	0	0	0	0	7
BFL-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	5
BFL-08	Work with CIRCA to develop potential risk reduction pilot projects in the identified "adaptation/resilience opportunity areas" near and in locations of transit-oriented development (TOD).	Resilient CT	Plan	$0 - $25,000	OB, CT DEEP, Resilient CT	2022	0	1	1	1	1	1	0	0	0	0	0	0	0	0	7
BFL-09	Evaluate the feasibility and effectiveness of a flood wall or berm around the side of the Railroad Avenue pump station.	Critical Facility Protection	DPW	$100,000 - $500,000	CIP, FEMA Grant, FEMA AFG, CT DEMHS	2022 – 2024	0	1	1	0	1	1	1	0	0	0	0	0	0	0	7
BFL-10	Evaluate the feasibility and effectiveness of increasing the capacity of the culverts located under Burton Road where washouts have occurred	Culvert & Bridge Upgrades	Public Works	$25,000 - $50,000	OB, CIP, FEMA Grant, CT DEEP	2022 – 2024	0	1	0	1	1	1	0.5	0	0	0	0	0	0	0	6.5
BFL-11	Evaluate the feasibility and effectiveness of increasing the capacity of the culverts located under Beacon Valley Road	Culvert & Bridge Upgrades	Public Works	$25,000 - $50,000	OB, CIP, FEMA Grant, CT DEEP	2022 – 2024	0	1	0	1	1	1	0.5	0	0	0	0	0	0	0	6.5
BFL-12	Refurbish the Beacon Valley Road Bridge.	Culvert & Bridge Upgrades	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	6.5
BFL-13	Make stormwater system upgrades to Skokorat Road and Burton Road.	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	6.5
BFL-14	Upgrade the drainage system on Main Street to prevent drainage from backing up through the system when the Naugatuck River is high	Drainage	Public Works	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	6.5
BFL-15	Form a Flood & Erosion Control Board to oversee problems with flooding and erosion	Administration, Enforcement, & Maintenance	First Selectman	$0 - $25,000	OB	2022	1	0.5	1	1	1	0.5	0	0	0	0	0	0	0	0	6
BFL-16	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	6
BFL-17	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	5
BFL-18	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	5
BFL-19	Conduct a feasibility study exploring creation of an emergency access easement off the private drive on the east end of Andrasko Road leading down to private drive on Beacon Valley Road for use if the Borgnis Road bridge fails.	Evacuation & Access	Public Works	$25,000 - $50,000	OB, CT DEMHS	2022 – 2024	1	0	1	1	1	0	0	0	0	-1	0	0	0	0	3.5

APPENDIX B

RECORD OF MUNICIPAL ADOPTION

CERTIFICATE OF ADOPTION
BEACON FALLS BOARD OF SELECTMEN

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

WHEREAS, the Town of Beacon Falls 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 Beacon Falls Board of Selectmen approved the previous version of the Plan in 2015; and

WHEREAS, the Town of Beacon Falls 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 Beacon Falls; and

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

WHEREAS, adoption of this Plan will make Beacon Falls 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 Beacon Falls;
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 10 **day of** Jan **, 2021 by the Board of Selectmen of Beacon Falls, Connecticut**

First Selectman

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the corporate seal of Beacon Falls this 12 day of Jan, 2021.

Denise E. Hendricks, Asst. Town Clerk

Town Clerk

APPENDIX C

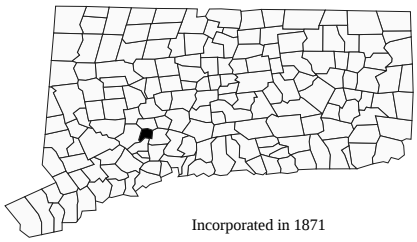
CERC Town Profile 2019

Beacon Falls, Connecticut

CERC Town Profile 2019 *Produced by Connecticut Data Collaborative*

Town Hall
10 Maple Avenue
Beacon Falls, CT 06403
(203) 729-4340

Belongs To
New Haven County
LMA Waterbury
Naugatuck Valley Planning Area



Incorporated in 1871

Demographics

Population

	Town	County	State
2000	5,246	824,008	3,405,565
2010	6,049	862,477	3,574,097
2013-2017	6,108	862,127	3,594,478
2020	6,420	898,514	3,604,591
'17 - '20 Growth / Yr	1.6%	1.3%	0.1%

	Town	County	State
Land Area (sq. miles)	10	605	4,842
Pop./Sq. Mile (2013-2017)	632	1,426	742
Median Age (2013-2017)	44	40	41
Households (2013-2017)	2,419	327,402	1,361,755
Med. HH Inc. (2013-2017)	$88,355	$64,872	$73,781

	Town	State
Veterans (2013-2017)	270	180,111

Race/Ethnicity (2013-2017)

	Town	County	State
White Non-Hisp	5,476	553,000	2,446,049
Black Non-Hisp	115	105,661	350,820
Asian Non-Hisp	38	33,678	154,910
Native American Non-Hisp	0	783	5,201
Other/Multi-Race Non-Hisp	46	20,448	84,917
Hispanic or Latino	433	148,446	551,916

	Town	County	State
Poverty Rate (2013-2017)	3.6%	12.1%	10.1%

Educational Attainment (2013-2017)

	Town		State	
High School Graduate	1,409	34%	673,582	27%
Associates Degree	462	11%	188,481	8%
Bachelors or Higher	1,243	30%	953,199	38%

Age Distribution (2013-2017)

	0-4		5-14		15-24		25-44		45-64		65+		Total	
Town	242	4%	879	14%	881	14%	1,141	19%	2,063	34%	902	15%	6,108	100%
County	45,072	5%	100,549	12%	120,727	14%	216,208	25%	240,037	28%	139,534	16%	862,127	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%

Economics

Business Profile (2018)

Sector	Units	Employment
Total - All Industries	134	935
23 - Construction	23	200
31-33 - Manufacturing	13	170
42 - Wholesale Trade	21	117
44-45 - Retail Trade	7	8
48-49 - Transportation and Warehousing	6	44
Total Government	18	255

Top Five Grand List (2017)

	Amount
Two North Main LLC	-$666,666
Connecticut Light & Power Co.	-$666,666
Murtha Enterprises Inc.	-$666,666
EG Homes LLC	-$666,666
United Rentals North America Inc	-$666,666
Net Grand List (SFY 2016-2017)	$489,510,636

Major Employers (2017)

NEJ
Goldenrod
Ansonia Steel
DiGiorgi
Cameo Metal Products

Education

2018-2019 School Year

	Grades	Enrollment
Regional School District 16	PK-12	2134

Smarter Balanced Test Percent Above Goal (2017-2018)

	Grade 3		Grade 4		Grade 8	
	Town	State	Town	State	Town	State
Math	80.4%	53.8%	61.6%	51.3%	47.1%	43.0%
ELA	79.0%	53.1%	73.3%	54.9%	71.1%	56.1%

Pre-K Enrollment (PSIS)

	2018-2019
Regional School District 16	44

Rate of Chronic Absenteeism (2017-2018)

	All
Connecticut	10.7%
Regional School District 16	6.7%

4-Year Cohort Graduation Rate (2017-2018)

	All	Female	Male
Connecticut	88.3%	91.8%	85.1%
Regional School District 16	97.1%	100.0%	93.8%

Public vs Private Enrollment (2013-2017)

	Town	County	State
Public	95.4%	88.2%	86.8%
Private	4.6%	11.8%	13.2%

Beacon Falls, Connecticut

CERC Town Profile 2019

Connecticut Economic Resource Center

Government

Government Form: Selectman - Town Meeting

Total Revenue (2017)	$22,476,497	Total Expenditures (2017)	$20,942,705	Annual Debt Service (2017)	$624,881
Tax Revenue	$16,512,580	Education	$14,820,178	As % of Expenditures	3.0%
Non-tax Revenue	$5,963,917	Other	$6,122,527	Eq. Net Grand List (2017)	$675,139,685
Intergovernmental	$4,584,028	Total Indebtedness (2017)	$20,954,190	Per Capita	$109,458
Per Capita Tax (2017)	$2,610	As % of Expenditures	100.1%	As % of State Average	72.5%
As % of State Average	89.0%	Per Capita	$3,397	Moody's Bond Rating (2017)	-
		As % of State Average	135.1%	Actual Mill Rate (2017)	32.90
				Equalized Mill Rate (2017)	23.84
				% of Net Grand List Com/Ind (2017)	9.1%

Housing/Real Estate

Housing Stock (2013-2017)

	Town	County	State
Total Units	2,688	365,546	1,507,711
% Single Unit (2013-2017)	60.5%	53.6%	59.2%
New Permits Auth (2017)	22	750	4,547
As % Existing Units	0.8%	0.2%	0.3%
Demolitions (2017)	0	202	1,403
Home Sales (2017)	54	4,763	21,880
Median Price	$235,100	$244,400	$270,100
Built Pre-1950 share	21.7%	33.2%	29.3%
Owner Occupied Dwellings	2,064	204,037	906,798
As % Total Dwellings	85.3%	62.3%	66.6%
Subsidized Housing (2018)	43	46,013	167,879

Distribution of House Sales (2017)

	Town	County	State
Less than $100,000	7	106	536
$100,000-$199,999	14	1,232	5,237
$200,000-$299,999	17	1,785	6,681
$300,000-$399,999	14	888	3,863
$400,000 or More	2	752	5,563

Rental (2013-2017)

	Town	County	State
Median Rent	$1,225	$1,100	$1,123
Cost-burdened Renters	38.2%	54.5%	52.3%

Labor Force

	Town	County	State
Residents Employed	3,403	438,576	1,827,070
Residents Unemployed	133	20,171	78,242
Unemployment Rate	3.8%	4.4%	4.1%
Self-Employed Rate	2.8%	8.5%	10.0%
Total Employers	134	24,958	122,067
Total Employed	935	366,848	1,673,867

Connecticut Commuters (2015)

Commuters Into Town From:		Town Residents Commuting To:	
Waterbury, CT	109	Waterbury, CT	254
Beacon Falls, CT	87	Shelton, CT	231
Naugatuck, CT	43	Stratford, CT	166
Ansonia, CT	27	New Haven, CT	157
Seymour, CT	26	Seymour, CT	150
Watertown, CT	25	Milford, CT	117
Shelton, CT	22	Naugatuck, CT	110

Quality of Life

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

	Town	State
Property	851	1,777
Violent	109	228

Disengaged Youth (2013-2017)

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

	Town
Library circulation per capita	3.36

Distance to Major Cities

	Miles
Hartford	30
New York City	71
Providence	89
Boston	122
Montreal	285

Residential Utilities

Electric Provider
Eversource Energy
(800) 286-2000

Gas Provider
Eversource Energy
(800) 989-0900

Water Provider
Aquarion Water Company
(800) 732-9678

Cable Provider
Comcast Seymour
(800) 266-2278