Western Connecticut Council of Governments Multi-Jurisdiction Hazard Mitigation Plan Update 2021 – 2026

Municipal Annex
for
Wilton, CT

238 Danbury Rd.
Wilton, CT 06897
August 2021

Prepared for:
WESTERN CONNECTICUT
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1.0 INTRODUCTION

1.1 Purpose of Annex

The purpose of this Hazard Mitigation Plan (HMP) annex is to provide 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 Western Connecticut Council of Governments (WestCOG) Multi-Jurisdictional Hazard Mitigation Plan. This annex is designed to supplement the information presented in the Multi-Jurisdictional HMP with more specific detail for the Town of Wilton 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.

2.0 COMMUNITY PROFILE

2.1 Geography

2.1.1 Physical Setting

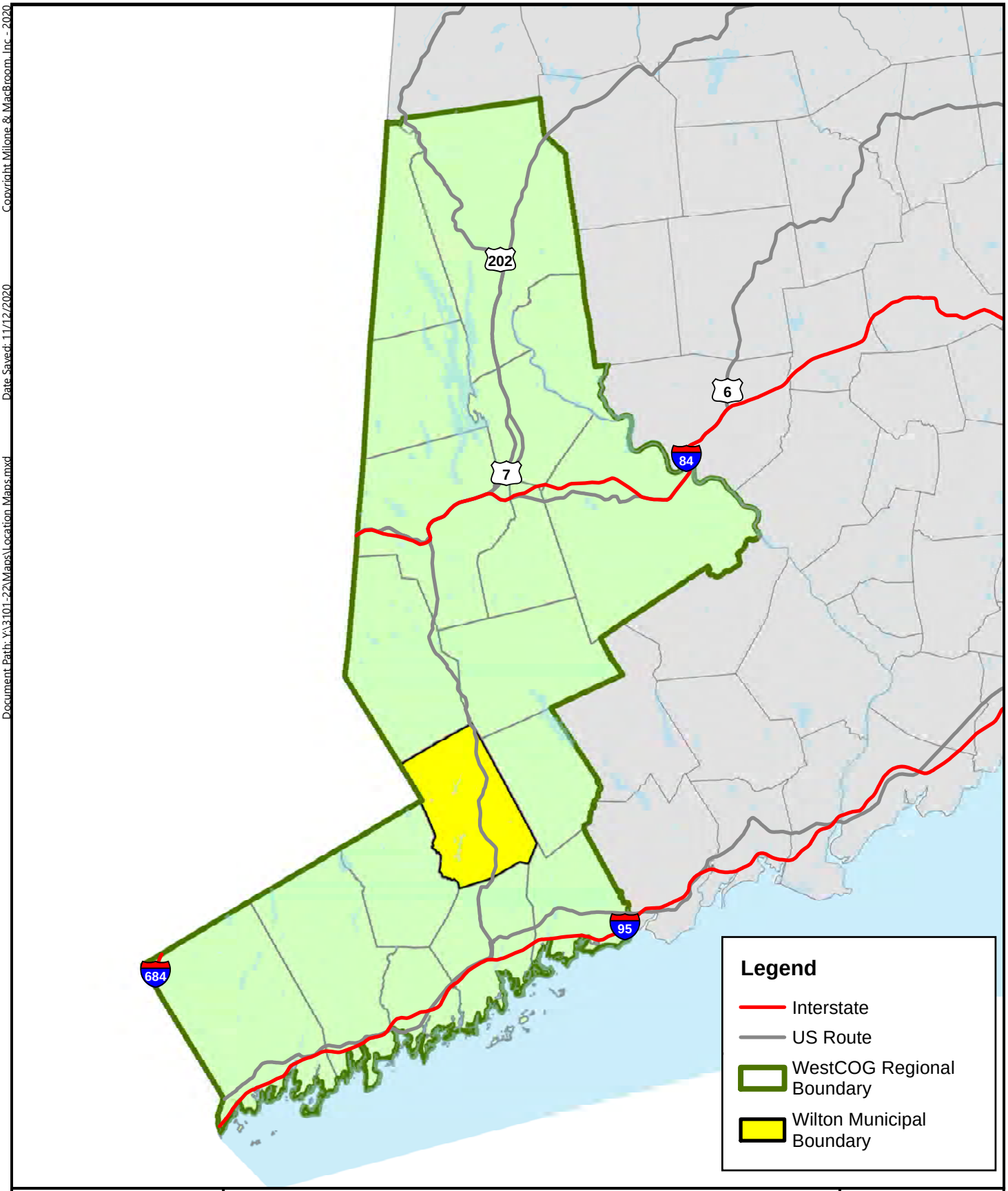
The Town of Wilton was granted a charter in 1802 and is located in southern Fairfield County and home to a population of 18,542 (2010 U.S. Census). Wilton is bordered by the municipalities of Norwalk and Westport to the south, New Canaan and New York state to the east, Weston to the west, and Ridgefield and Redding the north. Refer to Figure 2-1 for a map showing the location of Wilton within the WestCOG region.

Wilton is a suburban community, with several rivers and streams flowing throughout. The Norwalk River flows from the northeast corner of town to the southern central boarder. The highest elevation in Wilton is about 604 feet in the western most areas bordering New York. With the south western area of Wilton being at, or close to 250 feet. The varying terrain of Wilton makes the town vulnerable to an array of natural hazards.

The Center for Land Use Education and Research (CLEAR) has developed a land cover dataset derived from 2016 satellite imagery to depict statewide land cover. The land cover by percent of total land for Wilton can be found in Table 2-1.

Table 2-1: Land Cover by Area

Land Cover Class	Percent of Total Area
Developed	24.8%
Turf & Grass	14.0%
Other Grasses	1.0%
Agricultural Field	0.9%
Deciduous Forest	51.4%
Coniferous Forest	2.2%
Water	2.3%
Non-Forested Wetland	0.09%
Forested Wetland	3.0%
Tidal Wetland	0.2%
Barren Land	0.3%
Utility Corridor	0.0%



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Regional Location of Wilton

WestCOG Hazard Mitigation Plan
Town of Wilton

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0 40,000 80,000
Feet

SCALE	1 " = 82,167 '
DATE	11/12/2020
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FIG. 2-1

2.1.2 Land Use & Cover

According to Wilton's 2019 Plan of Conservation and Development, approximately 60% of the town is zoned for residential use (mostly single-family), about 4% is zoned for business uses, and about 23% is zoned for open space. Most commercial activity lies along Route 7.

Table 2-2: 2018 Land Use by Area

Use	Percent of Total Land
Residential	
Single-Family	59%
Multi-Family	1%
Business	
Commercial	3%
Recreation	1%
Open Space	
Protected Open Space	11%
Unprotected Open Space (including Route 7 ROW)	12%
Community Facilities	
Municipal Facilities	2%
Institutional	1%
Utilities & Transportation	
Road ROW (excluding Route 7 ROW)	6%
Undeveloped Land	
Undeveloped Land	4%

Source: 2019 Wilton Plan of Conservation& Development

2.1.3 Climate and Climate Change

Current Conditions

Over the course of the year, the temperature in Wilton typically varies from 18 22°F to 82°F and is rarely below 7°F or above 89°F. The warm season lasts from June 1 to September 15, with an average daily high temperature above 73°F. The hottest day of the year is July 20, with an average high of 82°F and low of 66°F. The cold season lasts from December 3 to March 12, with an average daily high temperature below 45°F. The coldest day of the year is January 29, with an average low of 22°F and high of 36°F.

Precipitation falls throughout the year in Wilton. The wetter season lasts from March 31 to December 10, with a greater than 29% chance of a given day being a wet day. The chance of a wet day peaks at 35% on July 31. The smallest chance of a wet day is 22% on January 29.

The most rain falls during the 31 days centered around June 3, with an average total accumulation of 3.8 inches. The least rain falls around January 30, with an average total accumulation of 1.8 inches.

The snowy period of the year lasts from November 13 to April 8, 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 0.9 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 50% annual-chance storm in Fairfield County is 3.3 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 50% annual-chance storm in Wilton as 3.46 inches.

The NOAA Atlas 14, released on September 30, 2015 puts the 24-hour rainfall amount for a 50% annual-chance annual storm in Wilton at 3.55 inches.

These precipitation amounts, and more details, are summarized in Table 2-1, below.

Table 2-1: 24-Hour Rainfall Amounts by Annual-Chance Occurrence

Source	24-Hour Rainfall Amount (inches) by Annual-Chance Occurrence		
	50%	4%	1%
Technical Paper No. 40	3.3	5.7	7.2
NRCC	3.46	6.44	9.08
NOAA Atlas 14	3.55	6.58	8.39

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 Wilton can expect the 24-hour rainfall amount for a 50% annual-chance storm to be around 3.7 inches or greater.

Impervious surfaces and infrastructure in town have increased over time as well, leading to increasing runoff and peak discharge values.

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).

2.1.4 Drainage Basins and Hydrology

Wilton is divided among five sub-regional watersheds as shown in Table 2-2. All of the water that passes through Wilton eventually empties into Long Island Sound.

Table 2-2: Sub-Regional Drainage Basins

Drainage Basin	Overall Sub-regional Area (sq. mi)	Area within Town (sq. mi)	Area within Town (acres)	Percent of Town
Comstock Brook	7.34	6.32	4,047.60	23%
Norwalk River	32.55	10.33	6,612.16	38%
Saugatuck River	48.55	0.50	318.96	2%
Silvermine River	22.52	7.41	4,740.67	27%
West Branch Saugatuck	11.92	2.78	1,778.60	10%
Total	n/a	27.34	17,497.99	

Source: Connecticut Department of Energy & Environmental Protection GIS Data

Wilton is entirely encompassed within the Southwest Coast drainage basin, which drains directly into Long Island Sound. Of the five sub-regional drainage basins and their respective streams, the Norwalk River is the largest, followed by the Silvermine River.

Comstock Brook

The Comstock Brook, a tributary of the Norwalk River, begins just south of Millstone Road where it then meanders parallel to Ridgefield Road and finally through Merwin Meadows where it joins the Norwalk River. There are stretches of floodway and designated floodplain along this watercourse.

Norwalk River

The Norwalk River is approximately 21 miles, and originates at Great Pond in Ridgefield, Connecticut. The river flows from northeast Wilton southwest where it flows into Norwalk in southcentral Wilton. Much as this river has floodway and floodplain areas, along with some well-defined 0.2% annual chance delineations. The Norwalk River ultimately flows directly into Long Island sound.

Saugatuck River

The Saugatuck River is approximately 24 miles, and originates at Sugar Hollow Pond in Danbury, Connecticut. The Saugatuck Basin drains 48.55 square miles of land, and ultimately flows directly into Long Island Sound. A small area in southeast Wilton falls within this basin.

Silvermine River

The Silvermine River is a tributary of the Norwalk River and stretched roughly 8.4 miles. The basin drains approximately 22.5 square miles of land within Wilton, Ridgefield, New Canaan, Norwalk, and an area of New York.

West Branch Saugatuck River

This basin, which encompasses the eastern and southeastern border of Wilton drains about 11.9 square miles The River flows underneath route 53, and parallel to Newtown Turnpike where it then runs through Westport. There is designated floodway and floodplain along this river as it traverses through the eastern part of Wilton.

2.2 Society, Culture, and Government

2.2.1 Population and Demographic Setting

According to the 2010 U.S. Census, Wilton had a population of 18,062, with 660 persons per square mile. According to the 2018 American Community Survey five-year estimates, Wilton's population between 2013 and 2018 was approximately 18,542.

One important aspect of natural hazard mitigation planning is to identify a community's demographic trends in relation to natural hazards. The Center for Disease Control and Prevention (CDC) Social Vulnerability Index (SVI) is used to identify vulnerable populations in Wilton. The SVI uses census data to identify populations within the town that may be more vulnerable to natural hazards. As a result of this analysis, the town is identified to have a certain level of overall social vulnerability with a rank of 0 to 1; 1 being the most vulnerable and 0 being the least.

To determine social vulnerability, the CDC incorporates 15 factors into the overall SVI calculation under four categories, or themes: socioeconomic status, household composition and disability, minority status and language, and housing type and transportation. Figure 2-2 represents the breakdown of the SVI process. These themes and their ranking are based on census statistics. By evaluating these factors and determining a level of social vulnerability, a community can identify specific needs for before, during, and

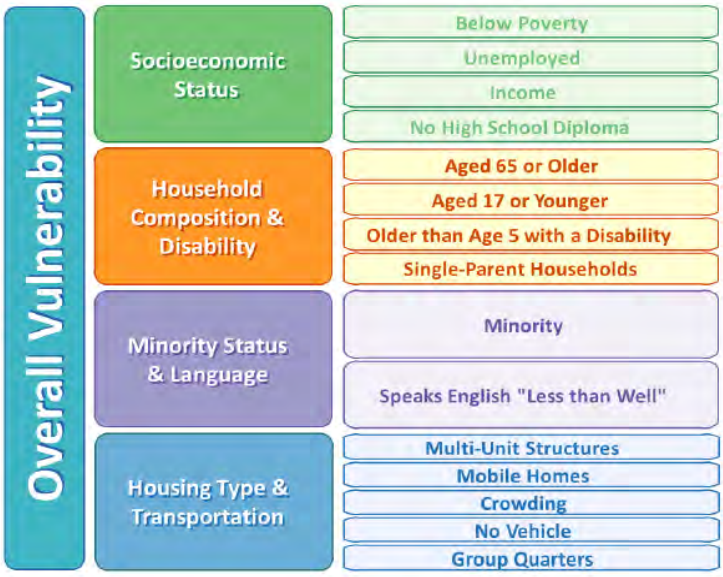

Figure 2-2: The CDC SVI Index Factors

after an event. Such needs may include sheltering capacity, evacuation routes, or to decide how many emergency personnel may be required to respond after an event.

The Town of Wilton is considered to have a low level of vulnerability, with their most vulnerable population based on household composition and disability. In addition, there are vulnerable minority and linguistically challenged populations along with those based on housing type and lack of transportation. The most concentrated areas of the most vulnerable population are identified in the central tract in town. In addition, the two eastern tracts have also ranked high for vulnerability based on household composition and disability. Appendix B explores the SVI for Wilton in more depth.

2.2.2 Development Trends

Agriculture was Wilton's first major industry. In the 1830s, industrial production came to Wilton, and was concentrated along rivers and streams. The first railroad track opened 1852. In spite of this development, Wilton grew slowly. Today, Wilton is characterized by suburban development that is largely focused along Route 7. Commercial and other non-residential land uses are typically located directly along Route 7, whereas residential uses are found everywhere else. Because Route 7 is parallel to the Norwalk River, many of the commercial uses along the road are at risk of flooding, and many have been developed in accordance with requirements to reduce risk of flood damage. Some, like the YMCA facility, we positioned in the least-risk part of the available land.

The 2019 POCD largely reinforces current development patterns. The POCD encourages development for a greater diversity of housing types in context-appropriate areas and the redevelopment of existing commercial zones. It recommends a master planning effort for Wilton Center and regional support for development and redevelopment in Georgetown at the extreme northeast corner of the town (Georgetown is located in Redding, but its radius of influence overlaps the Wilton town line). New context-sensitive commercial development on Danbury Road is encouraged.

The POCD also recommends transit-oriented development (TOD) around the Cannondale train station. TOD was previously explored in a 2010 study that looked at the two existing passenger rain stations (Wilton and Cannondale). The Wilton TOD area already overlaps with the downtown Wilton area, and severe limitations to further development were recognized such as the location of the Norwalk River and the layout of the area. The Cannondale TOD has some similar constraints. The ¼ mile area around the station identified as the TOD study area has limited potential for TOD in part because it has no public water or sewer services; and the areas east and south of the Station contain the Norwalk River floodplain.

Because the Town has already recognized the development limitations in the two TOD areas, it is unlikely that development will increase vulnerabilities in these areas. If development occurs along Route 7, current regulations and the State Building Code will ensure the flood risks are minimized. Therefore, overall vulnerabilities to natural hazards should not increase in Wilton, even if some exposure does occur.

2.2.3 Governmental Structure

The First Selectman of Wilton serves as the Chief Executive and Chief Administrative Officer of the Town. Along with presiding over Board of Selectmen meetings, the First Selectman serves as an ex-officio member of all Town Boards, Commissions and Committees. The First Selectman acts as a link between Wilton and State, regional, and federal agencies.

Town departments provide municipal services and day-to-day administration. Many commissions and departments play a role in hazard mitigation, including the Planning and Zoning, Building, Fire, and Public Works.

2.2.4 Historic and Cultural Resources

Historic and cultural resources include sites, structures, and objects that are significant in history, architecture, archaeology, engineering, and culture. Protection of these resources grows economies and enhances 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 resources in Westport are concentrated within the Cannondale, Georgetown, Hurlbutt Street, Lilacstead-Lambert Corner, Wilton Center, and other Wilton Historic Districts. Resources also include the J. Alden Weir Farm, the Raymond-Ambler Farm, the Town Hall, and the Railroad Station. See Figure 2-3 for a map of historic resources in the community.

Analysis of the State Historic Preservation Office (SHPO) database of historic resources shows that some of these resources are exposed to natural hazards, as shown in Table 2-3.

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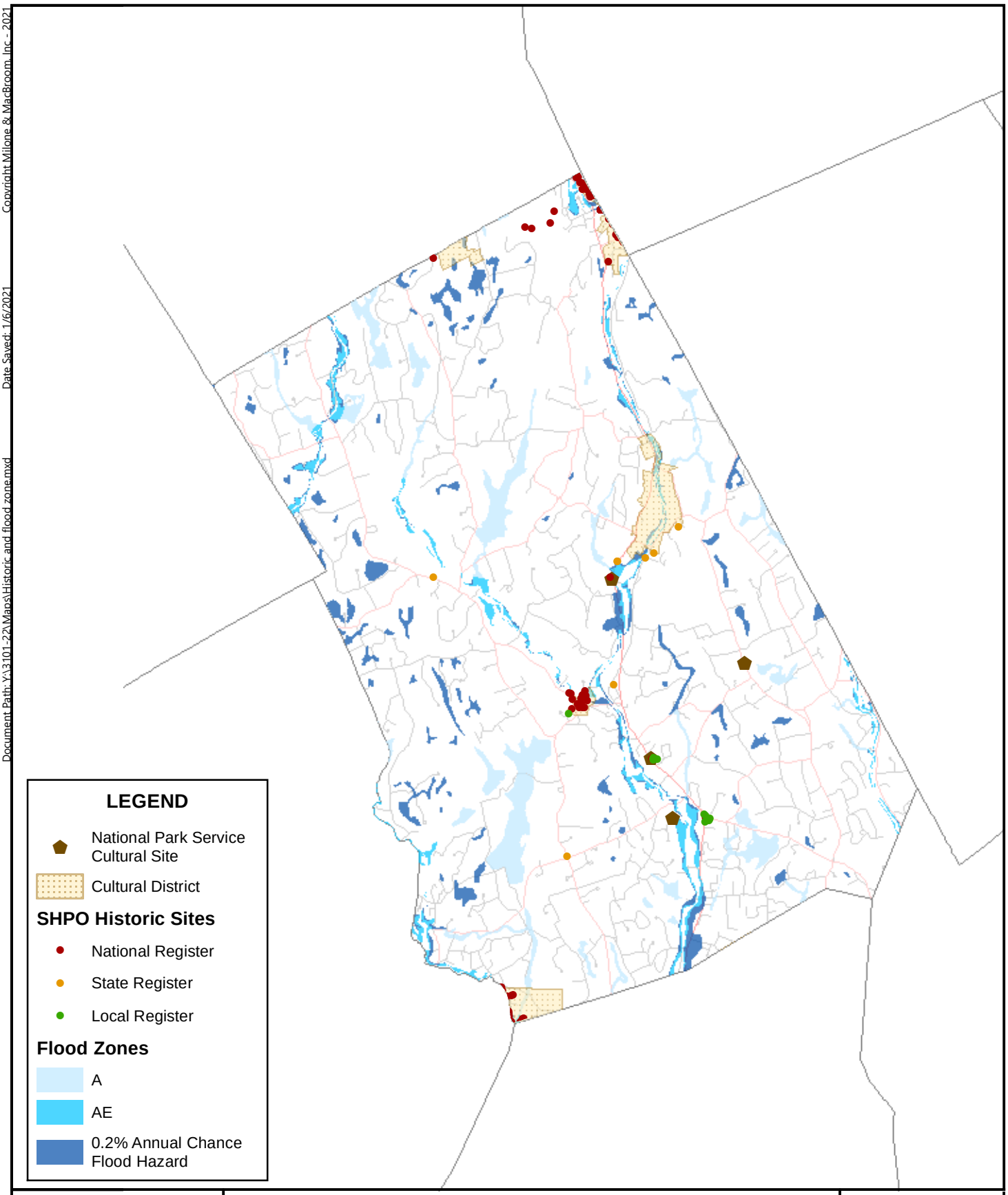

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Historic Resources with Flood Zones and Dam Failure Inundation Areas

WestCOG Hazard Mitigation Plan

Town of Wilton

NPS: Cultural Resources CT DEEP: DFA FEMA: DFRIM & Q3

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Feet

SCALE 1 " = 6,328 '

DATE 1/6/2021

PROJ. NO. 3101-22

FIG. 2-3

Table 2-3: Number of Historic Assets Exposed to Different Hazards in Wilton

Hazard	Count
Dam Failure	0
Earthquake	170
Flooding	
1% Annual	0
0.2% Annual	3
Storm Surge	
Category 1	0
Category 2	0
Category 3	0
Category 4	0
Hurricane/Tropical Storm	170
Sea Level Rise	0
Thunderstorm	170
Tornado	170
Winter Storm	170
Wildfire	129

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.

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.

2.3 Infrastructure

2.3.1 Transportation

Major transportation routes in Wilton include Route 7, which run north to south through town. In addition, the Metro North/Amtrak rail lines also run through town, parallel to Route 7. There are two trains station, one in the center of town and one in Cannondale. The CTtransit bus system is also active in town with several stops throughout the community.

2.3.2 Utilities

Water service is provided by Aquarion Water Company and the Norwalk 2nd Taxing District. Service is available along the entirety of the Danbury Road corridor as well as the Westport Road area and in the Silvermine neighborhood.

Residents and businesses use oil, propane, or natural gas for heat. Natural gas is available from Southern Connecticut Gas, service has been extended to Wilton Center and River Road as well as all schools and the Comstock Community Center. Wilton sends its sewerage to the City of Norwalk treatment plant.

2.4 Planning and Regulatory Capabilities

Wilton has in place a number of community planning mechanisms, regulations, and policies that serve to mitigate natural hazards by limiting development in hazardous areas, requiring buildings be constructed to certain standards, or otherwise directing development and construction toward increased resilience. These are summarized below. More specific information about how each of these capabilities is relevant to each specific natural hazard type covered in this document is presented in each hazard chapter.

2.4.1 Review of Existing Local Plans

The Town of Wilton has a number of plans that are relevant to hazard mitigation. These are noted here:

- **Plan of Conservation and Development (POCD):** Wilton's most recent POCD was adopted in 2019. It does not explicitly address natural hazard concerns within the community, but does include strategies that will mitigate risks from such hazards as the community continues to develop.
- **Stormwater Management:** Wilton maintains a Stormwater Management Plan. This document has been updated to comply with the requirements of the US EPA 2017 updated *General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems* (MS4 General Permit).
- **Capital Improvement Plan (CIP):** Wilton maintains a CIP that is updated annually and lays out capital investments for a five-year period. The CIP often includes road, drainage, and other infrastructure improvement projects relevant to hazard mitigation.
- **Economic Development Plan:** Wilton is included within the Western Connecticut Economic Development Plan of 2017, developed by WestCOG. The plan aligns with the COG's other efforts to promote climate sustainability and resiliency in the region.
- **Emergency Operations Plan (EOP):** Wilton's EOP is reviewed annually and updated as needed. Dam failure Emergency Action Plans (EAPs) for dams with failure inundation zones that may impact Wilton, and for which EAPs are available, are on file locally.
- **Watershed Management Plan:** A Watershed Management Plan has been developed for the Norwalk River Watershed. The Norwalk River Watershed Action Plan was prepared by the Norwalk River Watershed Initiative Committee, HDR/HydroQual, and the former South Western Regional Planning Agency (SWRPA) in 1998 and updated in 2011. This plan is focused on water quality, but can help the community mitigate inland flood risks by incorporating watershed management best practices into its planning efforts.
- **Open Space:** Wilton does not maintain a stand-alone Open Space Plan; instead, open space planning is incorporated into the community's POCD.

2.4.1 Review of Regulatory Structures

Wilton regulates development through a number of regulations, codes, and ordinances. These are summarized below. More detailed information about how these regulations relate to specific natural hazards are described in Section 3.

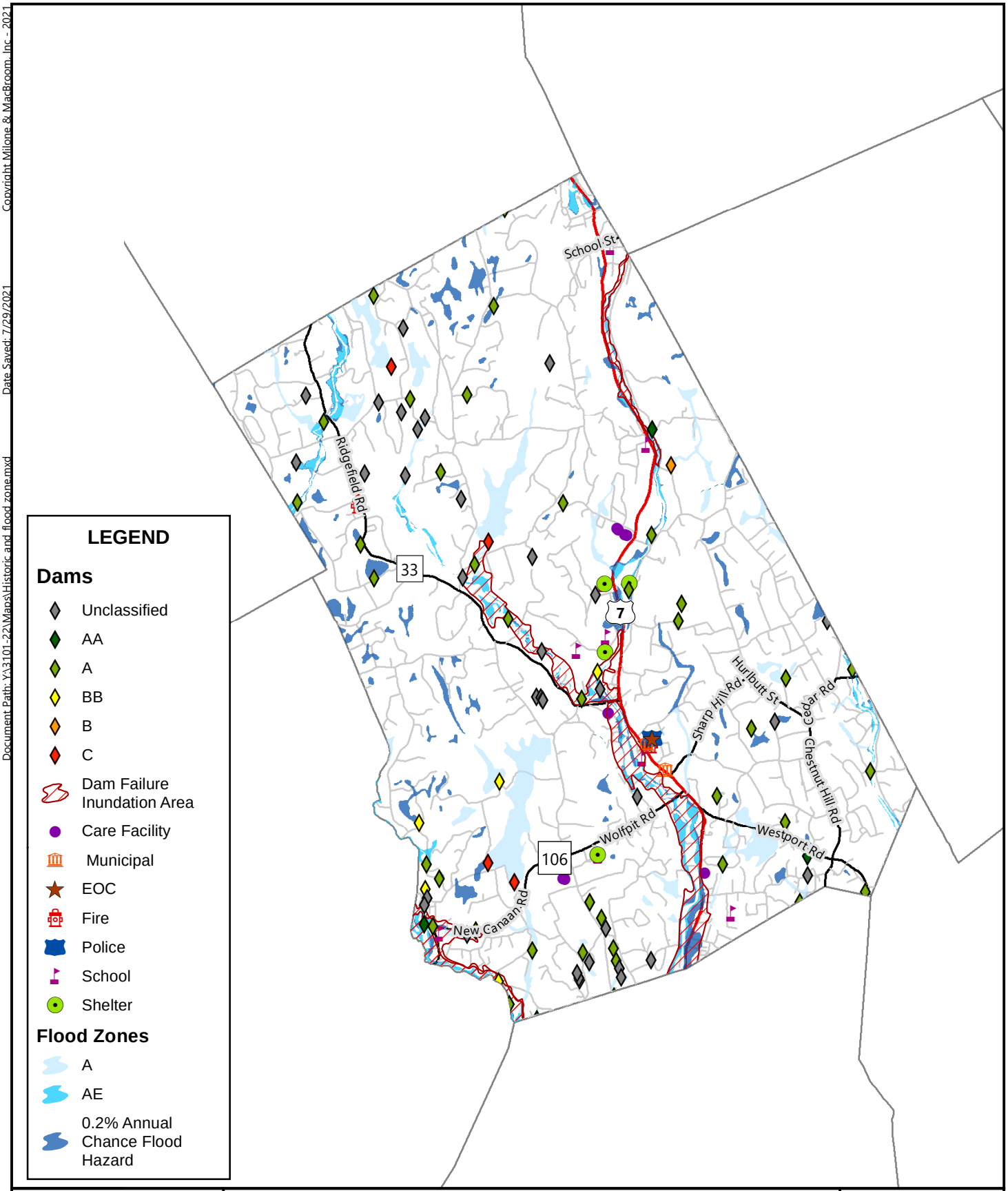
- **Building Code:** Wilton enforces the 2018 Connecticut State Building Code, which is based on the International Code Council's widely-adopted 2015 International Codes and applies to projects with permit applications filed from October 1, 2018.
- **Zoning Regulations:** Most recently updated in June 2019.
- **Inland Wetlands and Watercourses Regulations:** Most recently updated in June 2007.

2.5 Emergency Services, Critical Facilities, Sheltering, and Evacuation

The Town considers its police, fire, and governmental facilities to be critical since these are needed to ensure that emergencies are addressed while day-to-day management of Wilton continues.

Table 2-4: Critical Facilities

Facility	Address or Location	Type	Emergency Power	Shelter	In 1% Floodplain
Public Works	238 Danbury Road	Public Works			
Wilton Transfer Station	Mather Street	Public Works			
Middlebrook School	131 School Rd.	School			
Miller-Driscoll School	217 Wolfpit Road	School / Shelter		✓	
Our Lady Of Fatima Regional Sc	225 Danbury Road	School			
Wilton Volunteer Ambulance Corps	234 Danbury Road	Ambulance Services			
Wilton FD Station 1 - Headquarters	236 Danbury Rd	Fire			
Town Hall	238 Danbury Road	Town Hall			
Wilton Health Department	238 Danbury Road	Administration			
Wilton Police Department	240 Danbury Road	Police / EOC			
Lourdes Health Care Center, Inc.	345 Belden Hill Road	Care Facility			
Wilton High School	395 Danbury Rd.	School / Shelter			
Wilton YMCA	404 Danbury Road	Shelter		✓	
The Greens At Cannondale	435 Danbury Road	Care Facility			
Wilton Meadows Health Care Center	439 Danbury Rd Rt 7	Care Facility			
Catholic Family Services Of Wilton	44 Old Ridgefield Road	Care Facility			
Wilton Fire Department Station 2	707 Ridgefield Road	Fire			
Brookdale Wilton	96 Danbury Rd	Care Facility			
Comstock Community Center	180 School Road	Shelter		✓	



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Critical Facilities with Flood Zones and Dam Failure Inundation Areas

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SCALE	1 " = 6,328 '
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FIG. 2-4

Emergency Response

The Town's Emergency Operations Center (EOC), including its Emergency Communications Center, is located on Route 1 near the commercial center. Wilton is located in the Connecticut Department of Emergency Services and Public Protection (DESPP) Region 1, consisting of 14 municipalities in southwestern Connecticut.

The Town's Department of Public Works performs tree and shrub removal and trimming on town-owned lands and rights-of-way. During emergencies and following storms, the Department, responds to calls related to downed trees.

The Town also prepares for the possible evacuation and sheltering of some populations that could be impacted by the upcoming storm (especially the elderly and special needs persons).

Emergency Communication Capabilities

The Town of Wilton utilizes the CodeRED Emergency Notification System for the distribution of recorded telephone messages from the First Selectman and/or our public safety departments. Messages are generally distributed when emergency conditions exist or to update residents regarding important information after significant storms. It would also be used if an emergency evacuation or shelter in place situation was necessary.

The Town of Wilton utilizes the CT Alert notification system to alert residents of emergency situations. This system allows the state to direct geographically specific emergency notification telephone calls into affected areas.

The town maintains several antennas around town, located on schools and other critical facilities, which provide radio coverage to throughout 99% of the town.

Changes to Emergency Services since the Previous HMP

The Miller-Driscoll School and Comstock Community Center have been fully renovated. The Community Center has been used as a shelter during the COVID-19 pandemic, and will be used as a shelter in the future if necessary. The School now likely includes backup power.

3.0 HAZARD ASSESSMENT

3.1 FLOODING (COASTAL, INLAND, AND ICE JAMS)

3.1.1 Setting

The potential for flooding exists across Wilton, with the majority of major flooding occurring along established riverine SFHAs. The areas impacted by overflow of river systems are generally limited to river corridors and floodplains. Indirect flooding that occurs outside floodplains and localized nuisance flooding along tributaries can also be a concern. This type of flooding occurs particularly along roadways as a result of inadequate drainage and other factors. The frequency of flooding in Wilton is considered likely for any given year, with flood damage potentially having significant effects during extreme events.

A regulatory floodplain with AE designation has been mapped along the Norwalk River and Comstock Brook. The Areas identified as providing flood storage are identified with A Zone designations, meaning they are regulated as floodplain, but flood elevations have not been established. The South Norwalk Reservoir and Streets Pond have these traits. Floodplain and floodway designations have also been established along the rivers with AE designations. Refer to Figure 2-4 for the areas of Wilton susceptible to flooding based on FEMA flood zones. In general, potential flooding problems in Wilton are concentrated along the multiple rivers.

3.1.2 Capabilities

Wilton has rigorous land use regulations designed to protect natural resources and restrict development in flood zones and other hazard-prone areas. These regulations help prevent the loss of life and property by preventing inappropriate development in flood zones and reducing the amount of stormwater discharge that may exacerbate flooding.

The town monitors levels along the Norwalk river, as well as precipitation and weather condition forecasts, to monitor for potential flooding. When a flood threat is predicted, the town utilizes sends out a mass notification alert to warn residents of the situation.

Floodplain Management, NFIP and CRS

The town has consistently participated in the NFIP since March 15, 1974 and intends to continue participation in the NFIP. SFHAs in Wilton are delineated on a Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS). The FIS and FIRMs for the town were most recently revised in 2013.

The NFIP administrator for the Town oversees the enforcement of NFIP regulations. The degree of flood protection established by the variety of regulations in the Town meets the minimum reasonable for regulatory purposes under the NFIP. The City has a minimum elevation standard to include one foot of freeboard.

The Town's Planning and Zoning Commission uses the 1% annual chance flood lines from the FIRM delineated by FEMA to determine floodplain areas. Site plan standards require that all proposals be consistent with the need to minimize flood damage, that public facilities and utilities be located and constructed to minimize flood damage, and that adequate drainage is provided.

Ordinances, Regulations, and Plans

Regulations, codes, and ordinances that apply to flood hazard mitigation in conjunction with and in addition to NFIP regulations are listed below, with examples of sections and content with specific relevance to flood mitigation.

- ***Zoning Regulations***:
  - 29-9.F: Development in Floodplain Areas
    - 29.9.F.7: Flood Protection Requirements

- ***Inland Wetland and Watercourse Regulations***:
  - Many of the regulations outlined in the 2007 revision are to enhance, maintain, and control flooding and erosion.

- ***Subdivision Regulations:***
  - Section F: Development in Floodplain Areas regulations are used to "promote health, safety and general welfare within the town through the regulation of development in Flood-prone areas to secure safety from flood and prevent property damage and losses"
  - There is a 10-year lookback for substantial improvements.

- ***Plan of Conservation and Development:***
  - Outlines open space acquisition criteria, including 100-year flood zones.
  - Calls for evaluating and addressing developmental impacts along Wilton Center's riverfront.
  - Aims to conserve riparian corridors which assist in flood control.

Drainage and Street Flooding

The Town Department of Public Works (DPW) is in charge of the maintenance of the town's drainage systems and performs clearing of bridges and culverts and other maintenance as needed. This includes during and after periods of rainfall, snowfall, and storms. The Town has been working to increase storm drain maintenance activities; however, funding challenges have slowed progress.

Public Information

The Town receives regular weather updates through Division of Emergency Management and Homeland Security (DEMHS) Region 1 email alerts as well as watches and warnings through the National Weather Service.

Actions Completed and New Capabilities

The town routinely inspects culverts and catch basins for necessary repairs, replacement, and cleaning. An asset management system is currently in place for tracking infrastructure. The town has about 70% of storm drains mapped in GIS. This system allows for easy tracking of damages and necessary repairs throughout town.

3.1.3 Vulnerabilities and Risk Assessment

Flooding can impact properties along the various river corridors in town, as well as those along the coastline. With climate change projections showing more intense precipitation events in the future, flooding in any of these areas may be exacerbated under future conditions. Areas that already see flooding may see increased levels, while areas that may not be a concern may see flooding issues in the future. While future conditions are uncertain, there are currently some areas in town that are presently experiencing flooding challenges.

Repetitive Loss Properties

There are 15 repetitive loss properties (RLPs) located in Wilton; 11 are residential, 4 are non-residential. The majority are on the Norwalk River.

Critical Facilities

There are no facilities located within the 100-year flood zones.

At-Risk Areas

Wilton has reported flooding to be a concern at the following locations:

- Norwalk River corridor
- Merwin Meadows
- Arrowhead Road

Changes and Improvements

The Town has paved roughly 13 miles of road per year since 2018. During this process the town evaluates culverts and catch basing and repairs, replaces, and cleans as necessary.

3.2 DAM FAILURE

3.2.1 Setting

Dam failures can be triggered suddenly, with little or no warning, and often from other natural disasters such as floods and earthquakes. Dam failures often occur during flooding when the dam breaks under the additional force of floodwaters. In addition, a dam failure can cause a chain reaction where the sudden release of floodwaters causes the next dam downstream to fail. While flooding from a dam failure generally has a moderate geographic extent, the effects are potentially catastrophic. Fortunately, a major dam failure is considered very unlikely in any given year.

3.2.2 Capabilities

Dam failure inundation areas are included in the CT Alert emergency notification system contact database. The Town has the Emergency Action Plan (EAP) for the South Norwalk Electric and Water (SNEW) owned dams on file in the event of a potential failure. There are four high hazard dams in town.

Actions Completed and New Capabilities

There is currently an engineering study being conducted regarding the removal of Dana Dam.

3.2.3 Vulnerabilities and Risk Assessment

As of 2013, there were 91 DEEP-inventoried dams within the Town of Wilton. The higher hazard dams are shown in Figure 2-4. Four of these dams are Class C, or high hazard dam, and seven others are a Class B, or significant hazard dam. As shown in Table 3-1, the higher hazard dams located in the town pose a risk to Wilton.

Table 3-1: High Hazard Dams with Potential to Affect the Town of Wilton

#	Name	Location	Class	Owner
16101	South Norwalk Reservoir Dam	South Norwalk Reservoir aka City Lake	C	South Norwalk Electric and Water
16104	Popes Pond Dam	Popes Pond	C	South Norwalk Electric and Water
16109	Spectacle Swamp Flood Control Dam	Spectacle Swamp Flood control	C	Connecticut DEEP
16110	South Norwalk Reservoir Dike	South Norwalk Reservoir aka City Lake	C	South Norwalk Electric and Water
16103	Thayers Pond Dam	Thayers Pond	BB	Private
16105	Strong Pond Dam	Dana Dam Merwins Meadows	BB	Town of Wilton
16106	Blanchard Pond	Silvermine River	BB	Private
16107	Huckleberry Pond	Parting Brook	BB	Private
16108	Dominick's Pond	Parting Brook	BB	LEON C. &TURI HIRSCH
16134	Rock Lake Dam	Rock Lake	BB	South Norwalk Electric and Water
16102	Seeley Pond Dam	Seeley Pond	B	Private

Failure of a high hazard dam can affect properties downstream of the impoundment both in and outside of the town, with potential large inundation zones traveling along each respective waterway.

The South Norwalk Reservoir Dam is 810 feet in length, with a maximum height of 34 feet. It is an earthen and concrete structure, and impounds roughly 1,950 acres at normal water levels with a contributing watershed of 2.39 square miles.

The Popes Pond Dam is a 650-foot-long and 18-foot-high masonry dam. This dam impounds roughly 980 acres, with a contributing watershed of 2.32 square miles.

The Spectacle Swamp Flood Control Dam is 250 feet in length, with a maximum height of 21 feet. It is an earthen structure, and impounds roughly 420 acres at normal water levels with a contributing watershed of 1.16 square miles.

The South Norwalk Reservoir Dike is a 600-foot-long and 18-foot-high earth dam. This dam impounds roughly 1,950 acres, with a contributing watershed of 2.39 square miles.

Changes and Improvements

Wilton continues to be at low risk from dam failure.

3.3 HURRICANES AND TROPICAL STORMS

3.3.1 Setting

A hurricane striking Wilton is considered a possible event each year and could cause critical damage to the town and its infrastructure. Several types of hazards may be associated with tropical storms and hurricanes including heavy or tornado winds, heavy rains, and flooding. While only some of the areas of Wilton are susceptible to flooding damage caused by hurricanes, wind damage can occur anywhere in the town. Hurricanes, therefore, have the potential to affect any area within the Town of Wilton. A hurricane striking Wilton is considered a possible event each year and could cause critical damage to the town and its infrastructure.

3.3.2 Capabilities

Wind loading requirements are addressed through the state building code. The 2018 Connecticut State Building Code was amended in 2009 and adopted with an effective date of October 1, 2018. The code specifies the design wind speed for construction in all the Connecticut municipalities, with the addition of split zones for some towns. Effective 2018, the design wind speed for Wilton is 110 miles per hour for a Category 1, 120 miles per hour for a Category 2 and 130 for Category 3 or greater. Wilton has adopted the Connecticut Building Code as its building code. The town website provides links to the State Building Codes so that developers are able to find design standards for wind.

Wilton has a tree warden and assistance tree warden, and an aggressive tree maintenance program. The assistant is designated to work directly with utility companies. The town uses See Click Fix for reporting tree damage throughout town.

The Town of Wilton has worked to ensure that citizens have the information needed to properly plan and prepare for natural disasters. A packet of comprehensive educational brochures and materials were developed and distributed to all local citizens. The brochures identified simple and inexpensive tasks to prepare your family and home for a natural disaster. The Town's Fire department website has also been outlined with a message banner which can be used to display real-time information in the event of an emergency.

Actions Completed and New Capabilities

The town actively monitors street trees for maintenance and removal. The Town of Wilton tree committee is developing a strategy and policy so that future trees are not planted in the Town right of way underneath powerlines, or where they may blow over and become a hazard in the roadways

3.3.3 Vulnerabilities and Risk Assessment

The Town of Wilton is vulnerable to hurricane damage from wind and flooding and from any tornadoes accompanying the storm. In fact, most of the damage to the town from historical tropical cyclones has been due to the effects of flooding.

The Town of Wilton is vulnerable to hurricane damage from wind and flooding and from any tornadoes accompanying the storm. In fact, most of the damage to the town from historical tropical cyclones has been due to the effects of flooding. Fortunately, Wilton is less vulnerable to

hurricane damage than coastal towns in Connecticut because it does not need to deal with the effects of storm surge. Factors that influence vulnerability to tropical cyclones in the town include building codes currently in place, local zoning and development patterns, and the age and number of structures located in highly vulnerable areas of the community.

Changes and Improvements

Wilton continues to mitigate hurricane and storm damage where possible by implementing mitigation strategies and conducting regular maintenance.

3.4 SUMMER STORMS AND TORNADOES

3.4.1 Setting

Summer storms and tornadoes have the potential to affect any area within the Town of Wilton. Because these types of storms and the hazards that result (flash flooding, wind, hail, and lightning) might have limited geographic extent, it is possible for a summer storm to harm one area within the town without harming another.

Based on the historic record, it is considered highly likely that a summer storm that includes lightning will impact Wilton each year, although lightning strikes have a limited effect. Strong winds and hail are considered likely to occur during such storms but also generally have limited effects. A tornado is considered a possible event in Fairfield County each year that could cause significant damage to a small area.

3.4.2 Capabilities

The town's capabilities regarding mitigation of high wind events are described in Section 3.3.2.

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. Wilton's emergency communication capabilities are described in Section 2.5.

Actions Completed and New Capabilities

The town actively monitors street trees for maintenance and removal.

3.4.3 Vulnerabilities and Risk Assessment

The entire Town of Wilton is at relatively equal risk for experiencing damage from summer storms and tornadoes. Based on the historic record, a few summer storms have resulted in costly damages to the Town. Most damages are relatively site specific and occur to private property (and therefore are paid for by private insurance). For municipal property, the town budget for tree removal and minor repairs is generally adequate to handle summer storm damage.

According to the 2019 State Natural Hazard Mitigation Plan Update, Fairfield County has a moderate to high risk of tornado activity based on historical occurrences. Therefore, by virtue of its location in Fairfield County, the Town of Wilton has moderate to high potential to experience tornado damage. In general, thunderstorms and hailstorms in Connecticut are more frequent in the western and northern parts of the state and less frequent in the southern and eastern parts. The majority of these events do not cause any measurable damage. Although lightning is usually associated with thunderstorms, it can occur on almost any day. The likelihood of lightning strikes in the Wilton area is very high during any given thunderstorm although no one area of the town is at higher risk of lightning strikes. The risk of at least one hailstorm occurring in Wilton is considered moderate in any given year.

Thunderstorms are expected to impact Wilton about 20 days each year. The majority of these events do not cause any measurable damage. Although lightning is usually associated with thunderstorms, it can occur on almost any day. The likelihood of lightning strikes in the Wilton

area is high during any given thunderstorm although no one area of the town is at higher risk of lightning strikes. There is also risk of a hailstorm occurring at least once per year in Wilton.

The risk of downbursts occurring during such storms and damaging the town is believed to be low for any given year. All areas of the town are susceptible to damage from high winds although more building damage is expected in downtown and surrounding areas, while more tree damage is expected in the less densely populated areas in the northern part of the town.

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. Most downed power lines in Wilton are detected quickly, and any associated fires are quickly extinguished. Such fires can be extremely dangerous during the summer months during dry and drought conditions. It is important to have adequate water supply for fire protection to ensure the necessary level of safety is maintained.

Changes and Improvements

Wilton has improved its tree maintenance capabilities, reducing the vulnerability of the town's electric grid and roads system to high wind events.

3.5 WINTER STORMS AND NOR'EASTERS

3.5.1 Setting

The entire Town of Wilton is susceptible to winter storms. In general, winter storms are considered highly likely to occur each year (although major storms are less frequent), and the hazards that result (nor'easter winds, snow, and blizzard conditions) can potentially have a significant effect over a large area of the town.

The northern areas of Wilton typically experience more snowfall than other areas. The Town has taken this into account when preparing for and responding to storms. In addition, most residents throughout the area are also typically aware of the heavier snowfall trends and are diligent in regard to preparation and clean up.

According to the 2019 Connecticut State Natural Hazard Mitigation Plan the state can expect to experience at least two or more major snow events each year, with an average of 14 winter events in a season. It is estimated that Wilton's average annual snowfall is about 2.5 to 4 feet.

3.5.2 Capabilities

Prior to a winter weather event, the town ensures that all warning/notification and communications systems are ready and ensures that appropriate equipment and supplies, especially snow removal equipment, are in place and in good working order. In some known problem areas, prestorm treatment is applied to roadways to reduce the accumulation of snow. The town also prepares for the possible evacuation and sheltering of some populations that could be impacted by the upcoming storm (especially the elderly and special needs persons).

Actions Completed and New Capabilities

In 2017 and 2018 the Town worked with WestCOG on developing a local snow action plan, which included an update of road clearing routes and the salt distribution plan. This was part of the regional winter maintenance practices initiative led by WestCOG. Reports produced as part of that initiative are:

- Winter Maintenance Practices Baseline Assessment Report, November 2017. Prepared for WestCOG by Axiomatic, LLC
- Winter Maintenance Practices Guide, September 2018. Prepared for WestCOG by Axiomatic, LLC

3.5.3 Vulnerabilities and Risk Assessment

The entire Town of Wilton is at relatively equal risk for experiencing damage from winter storms although some areas (such as icing trouble spots and neighborhoods with a high concentration of flat roofs) are more susceptible. The public assistance reimbursement from Winter Storm Alfred was $380,555, proving that winter storms can be costly. However, many damages are relatively site specific and occur to private property (and therefore are paid for by private insurance) while repairs for power outages are often widespread and difficult to quantify to any one municipality.

The structures and utilities in Wilton are vulnerable to a variety of winter storm 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. Drifting snow can occur after large storms, but the effects are generally mitigated through municipal plowing efforts.

Changes and Improvements

Wilton continues to identify and address the areas that reportedly received higher snowfall, and mitigate challenges in these areas and town-wide.

3.6 WILDFIRES AND DROUGHT

3.6.1 Setting

Wilton is generally considered a moderate risk area for small wildfires but a low risk area for large wildfires. Wildfires are of particular concern in outlying areas without public water service and other areas with poor access for fire-fighting equipment. Such areas in Wilton are limited to the southern and eastern areas of the town. Hazards associated with wildfires include property damage and loss of habitat.

In addition, Wilton, and Fairfield County overall, has experienced drought challenges over recent years. The U.S. Drought Monitor (USDM), which has been monitoring nationwide drought conditions since 2000, estimates that over the past two decades Connecticut experienced its longest drought of 46 weeks beginning June 21, 2016 and lasting until May 2, 2017. It was also estimated that the most intense period of this extended drought occurred the week of November 15, 2016, where approximately 44.5% of Connecticut lands were impacted. Figure 3-1 depicts the various drought conditions in Fairfield County since 2000, where the warmer colors represent more advanced drought stages.

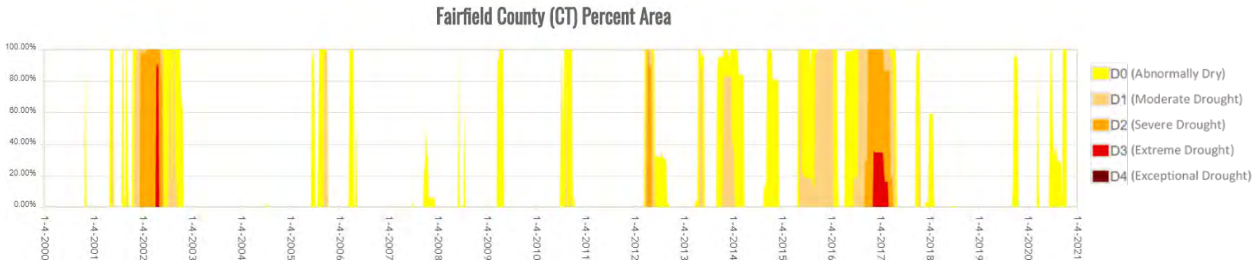


Figure 3-1: USDM Drought Time Series for Fairfield County

The 2019 Connecticut Natural Hazard Mitigation Plan assumes that the State of Connecticut has a medium probably of future drought events. This assumption is based on climate change projections anticipating hotter and wetter conditions in the near future. Climate forecasts often suggest that while precipitation may increase, the overall pattern will generally be higher intensity storms, with longer than average dry periods between events. The State Plan also identifies that Fairfield County accounts for roughly 7.34% of the state's total number of farms, with a market value of over $34 million in product sold from these farms.

3.6.2 Capabilities

Regulations regarding fire protection in Westport are outlined in the *Zoning Regulations* and the town *Code of Ordinances*, respectively:

- Zoning regulations require housing developments to be serviced by fire hydrants or fire protection systems to the specifications of the fire Marshal. Including assisted living, congregate housing, multi-family, and singly family development.
- The site plan approval process includes evaluation of the adequacy of fire department access.

- Chapter 15 - FIRE PREVENTION

- 1(a): No person, without a permit granted by the Fire Marshal or his/her designee, shall kindle or maintain any outdoor fire in the Town
- 3: – No fire should be started within 15 feet of a structure or combustible material.
- 13: - Accumulation of waste that may pose as a fire hazard is allowed.

The Wilton Fire Department is a professional fire department serving the Wilton Fire District. It protects approximately 24 square miles, which is home to approximately 16,000 residents. The department provides 24-hour fire, rescue, emergency medical service, and hazardous material mitigation. Wilton's line firefighting staff consists of 24 career firefighters made up of four Captains, four Lieutenants, and 16 Firefighters.

The Fire Department has two locations: Wilton Fire Department Headquarters at 236 Danbury Road on the Wilton Town Hall campus and Fire Station #2 at 707 Ridgefield Road.

The approximately 2,000 residents of Georgetown are served by the Georgetown Fire District.

Open burning and permit information can be found on the town website. This includes actions to take during a burn, a link to DEEP for more information, and a link to the permit application page.

3.6.3 Vulnerabilities and Risk Assessment

In the drought year of 1999, the average wildfire in Connecticut burned five acres in comparison to the two most extreme wildfires recorded since 1986 that burned 300 acres each. Given the availability of firefighting water in Wilton, including the use of nearby water bodies, it is believed that this average value for a drought year and the extreme value are applicable to the town as well.

Much of the Town of Wilton can be classified as medium and high-density development intermixed with vegetation that may more susceptible to wildfires. While this classification does not equate to a high fire risk, it is important to understand that there is some level of risk to some areas of town. With high water availability throughout developments and town, this reduces the risk of widespread, large scale fire.

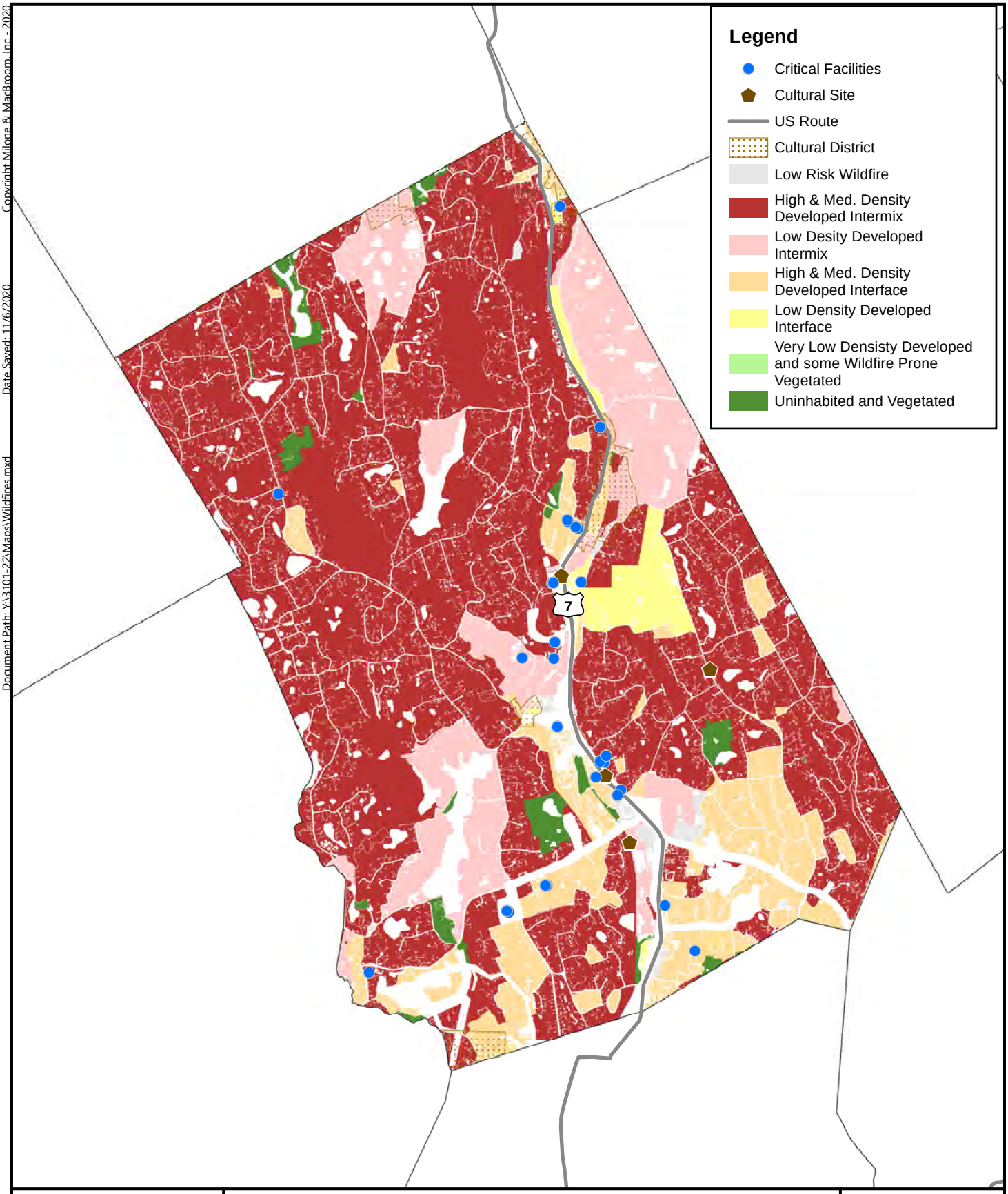
Wildfire Risk Areas are mapped in Figure 3-2.

Changes and Improvements

The town's vulnerability to wildfires continues to be low.

Date Saved: 11/6/2020

Document Path: Y:\3101-22\Maps\Wildfires.mxd



MILONE & MACBROOM
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
WWW.MMINC.COM

Wildland-Urban Interface: Wildfire Risk Areas

WestCOG Hazard Mitigation Plan
Town of Wilton

NPS: Cultural Resources
Wildland-Urban Interface:USFA

N

0 2,500 5,000
Feet

SCALE	1 " = 5,672 '
DATE	11/13/2020
PROJ. NO.	3101-22

FIG. 3-2

3.7 EARTHQUAKES AND LANDSLIDES

3.7.1 Setting

The entire Town of Wilton is susceptible to earthquake damage. However, even though earthquake damage has the potential to occur anywhere both in town and in the northeastern United States, the effects may be felt differently in some areas based on the type of geology. In general, earthquakes are considered a hazard that may possibly occur but that may cause significant effects to a large area.

According to the 2019 *Connecticut Natural Hazard Mitigation Plan Update*, Connecticut is at a low to moderate risk for experiencing an earthquake of a magnitude greater than 3.5 and at a moderate risk of experiencing an earthquake of a magnitude less than 3.0 in the future. No earthquake with a magnitude greater than 3.5 has occurred in Connecticut within the last 30 years, and the USGS currently ranks Connecticut 43rd out of the 50 states for overall earthquake activity.

3.7.2 Capabilities

The town has adopted the state building codes for new construction, and they are enforced by the Building Official. Due to the infrequent nature of damaging earthquakes, land use policies in town do not directly address earthquake hazards. However, various documents do indirectly discuss areas susceptible to earthquake damage and regulations that help to minimize potential earthquake damage.

Actions Completed and New Capabilities

Wilton continues to have appropriate capabilities for mitigating earthquake events.

3.7.3 Vulnerabilities and Risk Assessment

Some areas in Wilton are underlain by sand and gravel, particularly along the route 7 corridor. Structures in these areas are at increased risk from earthquakes due to amplification of seismic energy and/or collapse. Most of the remaining area is underlain by glacial till and is therefore not at increased risk during an earthquake due to unstable soils.

A series of earthquake probability maps was generated using the 2009 interactive web-based mapping tools hosted by the USGS. These maps were used to determine the probability of an earthquake of greater than magnitude 5.0 or greater than magnitude 6.0 damaging the City of Westport. Results are presented in Table 3-2 below.

Table 3-2: Probability of a Damaging Earthquake in the Vicinity of Wilton

Time Frame (Years)	Probability of the Occurrence of an Earthquake Event > Magnitude 5.0	Probability of the Occurrence of an Earthquake Event > Magnitude 6.0
50	2% to 3%	< 1%
100	4% to 6%	1% to 2%
250	10% to 12%	2% to 3%
350	12% to 15%	3% to 4%

Changes and Improvements

The town's vulnerability to earthquakes continues to be low.

4.0 MITIGATION STRATEGIES AND ACTIONS

4.1 Goals and Objectives

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

4.2 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.

#	Description	Status	Notes
1	Work with telecommunications entities to strengthen mobile network telecommunications to increase resiliency.	Ongoing/carry forward	Constantly working with carriers to see where additional towers are necessary. 5G installation in the near future
2	Work with assisted living facilities in town to ensure preparedness and resiliency to natural hazards, including providing the town a better understanding of needs and vulnerabilities for each facility.	Carry forward	Recent high levels of high communication, so this is possible.
3	Encourage the study of alternative systems for delivering reliable power to residents.	Remove	No longer a priority. The Town has determined that other redundancies are in place.
4	Continue to provide education materials on preparing for natural disasters. Including exploring template guides for EOC operators.	Capability	This is considered to be a capability.
5	Develop a GIS application to assist personnel in the event of an emergency or natural disaster.	Carry forward with revisions	Residents can use See Click Fix now, and trees can be mapped and identified. Could be used for flooding/electrical/even in a pandemic
6	Implement a town-wide GIS.	Carry forward with revision	There is online GIS where residents have access. The GIS that is available needs to be continually updated.
7	Inventory and update conditions of town owned significant culverts and bridges. and consider repairs or replacement as necessary or as funding becomes available.	Carry forward with revision	28 bridges/culverts as part of list. Engineers developed priority and cost. Include/address the plan specifically.
8	Continue to work to implement recommendations from the current storm water management plan.	Ongoing	MS4 revisions updates done annually.
9	Enhance storm drain maintenance activities: Maintain records for storm drain maintenance.	Complete/ Remove	Complete. Asset management software exists.
10	Enhance storm drain maintenance activities: Continue to work to increase frequency of storm drain clean out.	Carry forward with revision	Progress impeded due to lack of funding.

#	Description	Status	Notes
11	Continue to assess the ecological and health implications of winter road salting and investigate alternatives.	Carry forward with revision	Water company was looking to have discussions on some areas of concern/priority areas. Revise Include coordination, include drinking water supply areas.
12	Ensure that Fire Station 2 continues to serve western Wilton and analyze options for meeting expansion needs of Fire Station 2 on-site, on other sites, or by sharing services with neighboring communities.	Capability	Voters approved $90,000 bond authorization to complete architectural and engineering schematics in preparation for renovations in 2015. Town continues to make progress on meeting the needs of the station, making this action a capability.
13	Explore opportunities to add cisterns where fire protection is lacking.	Carry forward with revision	There is a subdivision that was going to put in own private cistern.
14	Consider options for Merwin Meadows dam removal as identified in the engineering study.	Carry forward with revision	Dana dam removal project. Engineering study currently underway. Another study was done and approved in 2008/2010.
15	Conduct a Town-wide inventory and assessment of street trees, consider conducting the inventory in conjunction with other municipalities in the region.	Carry forward	Trees being tracked through See Click Fix, but there is little to no coordination with other municipalities. Recommend for Regional action
16	Budget appropriate money necessary to maintain and remove dead, dying, dangerous or diseased trees in rights-of-way and on other town land.	Carry forward	Have a line item for this action, there is an ongoing program. Tree warden and assistant tree warden, both are part time.
17	Seek financial assistance to manage tree debris in the Norwalk River.	Carry forward	Still a concern, funding has not been acquired.
18	Ensure that the Town is up-to-date in its storm water management planning (NPDES) requirements.	Complete and ongoing	Yearly submission. Ongoing.
19	Prepare an assessment of bridges/overpasses along Route 7 to determine susceptibility to flooding and corresponding mitigation measures (natural and engineered).		Follow up with WestCOG

4.3 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.

4.4 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 WLT-01	
Provide information on the Town website about CT DEEP training and information around small business chemical management for hazard resilience.	
Lead	EM, BOS
Cost	$0 - $25,000
Funding	Operating Budget, CT DEEP
Timeframe	2021
Priority	High

Action WLT-02	
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, BOS
Cost	$0 - $25,000
Funding	Operating Budget, CT DEEP
Timeframe	2021
Priority	High

Action WLT-03	
Host a CT DEEP presentation for municipal staff and local businesses about business chemical management for hazard resilience.	
Lead	EM, BOS
Cost	$0 - $25,000
Funding	Operating Budget, CT DEEP
Timeframe	2021
Priority	High

Action WLT-04	
Take one of the following actions that will mitigate natural hazard risks while also meeting Sustainable CT objectives: - Disseminate a toolkit for pre-disaster business preparedness. - Revise regulations to promote Low Impact Development. - Include the goals of this Hazard Mitigation Plan, and at least three other sustainability concepts, in your next POCD update.	
Lead	BOS
Cost	$0 - $25,000
Funding	Operating Budget, Sustainable CT Community Match Fund
Timeframe	2021
Priority	High

Action WLT-05	
Develop a strategy and policy so that future trees are not planted in the town right of way underneath powerlines or where they may blow over and become a hazard in the roadways	
Lead	Tree Committee, CC
Cost	$0 - $25,000
Funding	Operating Budget
Timeframe	2021
Priority	High

Action WLT-06	
Collaborate with CIRCA on the "Resilient Connecticut" project	
Lead	BOS
Cost	$0 - $25,000
Funding	Operating Budget
Timeframe	2022
Priority	Med

Action WLT-07	
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	Planning
Cost	$0 - $25,000
Funding	Operating Budget, CT SHPO
Timeframe	2022
Priority	Med

Action WLT-08	
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 identify historic resources at risk and support the preparation of resiliency plans across the state.	
Lead	Planning
Cost	$25,000 - $50,000
Funding	CT SHPO
Timeframe	2024
Priority	Med

Action WLT-09	
Explore opportunities to add cisterns where fire protection is lacking.	
Lead	EM, P&Z
Cost	$100,000 - $500,000
Funding	Capital Improvement Plan, Other Grant
Timeframe	2025
Priority	Med

Action WLT-10	
Develop a schedule for updating the town-wide GIS database to ensure data is accurate.	
Lead	EM, Police, Fire
Cost	$0 - $25,000
Funding	Operating Budget, Grant
Timeframe	2022
Priority	Med

Action WLT-11	
Enhance storm drain maintenance activities, such as increasing clean out frequency, and locate funding sources for this action.	
Lead	DPW
Cost	$25,000 - $50,000
Funding	Capital Improvement Plan, FEMA Grant
Timeframe	2024
Priority	Med

Action WLT-12	
Seek financial assistance to manage tree debris in the Norwalk River.	
Lead	DPW, CC
Cost	$25,000 - $50,000
Funding	Capital Improvement Plan, FEMA Grant
Timeframe	2024
Priority	Med

Action WLT-13	
Work with assisted living facilities in town to ensure preparedness and resiliency to natural hazards, including providing the town a better understanding of needs and vulnerabilities for each facility.	
Lead	EM
Cost	$25,000 - $50,000
Funding	Operating Budget
Timeframe	2024
Priority	Med

Action WLT-14	
Coordinate with Aquarion and SNEW to assess the ecological and health implications of winter road salting in areas of concern and drinking water supply areas, and investigate alternatives.	
Lead	BOS, DPW, CC
Cost	$25,000 - $50,000
Funding	Operating Budget, Grant
Timeframe	2024
Priority	Med

Action WLT-15	
Revise floodplain zoning regulations to reflect the new State Building Code requirements for one foot of freeboard for construction in the 1% annual-chance flood zone.	
Lead	Planning
Cost	$0 - $25,000
Funding	Operating Budget
Timeframe	2023
Priority	Low

Action WLT-16	
Compare local floodplain regulations with Revised State Model Flood Regulations to identify any remaining opportunities for improvement	
Lead	Planning
Cost	$0 - $25,000
Funding	Operating Budget
Timeframe	2023
Priority	Low

Action WLT-17	
Contact the owners of Repetitive Loss Properties and nearby properties at risk to inquire about mitigation undertaken and suggest options for mitigating flooding in those areas. This should be accomplished with a letter directly mailed to each property owner.	
Lead	EM, BOS
Cost	$0 - $25,000
Funding	Operating Budget, FEMA Grant
Timeframe	2023
Priority	Low

Action WLT-18	
Conduct a Town-wide inventory and assessment of street trees, consider conducting the inventory in conjunction with other municipalities in the region.	
Lead	Tree Committee, CC
Cost	$0 - $25,000
Funding	Operating Budget, Grant
Timeframe	2023
Priority	Low

Action WLT-19	
Work with CT DEEP to validate and/or correct the RL list and update the mitigation status of each listed property.	
Lead	Planning
Cost	$25,000 - $50,000
Funding	FEMA Grant
Timeframe	2024
Priority	Low

Action WLT-20	
Annually conduct an emergency operations exercise for a local terrorism, sabotage, or mass casualty event.	
Lead	EMD
Cost	$25,000 - $50,000
Funding	Operating Budget
Timeframe	2024
Priority	Low

Action WLT-21	
Address the high priority bridge repairs and upgrades identified in the engineering study.	
Lead	DPW
Cost	More than $1 million
Funding	Capital Improvement Plan, FEMA Grant, Other Grant
Timeframe	2026
Priority	Low

Action WLT-22	
Elevate Arrowhead Road Bridge above the 100-year flood elevation	
Lead	DPW
Cost	More than $1 million
Funding	Capital Improvement Plan, FEMA Grant, Other Grant
Timeframe	2026
Priority	Low

Action WLT-23	
Address the repairs and upgrades as necessary to the approximately 28 bridges and culverts listed in the infrastructure engineering report, with a target goal of completing at least five in the 5-year lifespan of this plan.	
Lead	DPW
Cost	More than $1 million
Funding	Capital Improvement Plan, FEMA Grant, Other Grant
Timeframe	2026
Priority	Low

Action WLT-24	
Pursue the Dana Dam removal project in accordance with engineering studies.	
Lead	DPW, DEEP
Cost	More than $500,000
Funding	Capital Improvement Plan, Other Grant
Timeframe	2026
Priority	Low

Action WLT-25	
Work with telecommunications companies to strengthen mobile network telecommunications, and continue to identify where additional towers are necessary.	
Lead	P&Z, Utilities
Cost	$0 - $25,000
Funding	Operating Budget
Timeframe	2024
Priority	Low

Action WLT-26	
Budget appropriate money necessary to maintain and remove dead, dying, dangerous or diseased trees in rights-of-way and on other town land.	
Lead	DPW
Cost	$0 - $25,000
Funding	Operating Budget
Timeframe	2024
Priority	Low

APPENDIX A

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	
WLT-01	Provide information on the Town website about CT DEEP training and information around small business chemical management for hazard resilience.	CT DEEP Small Business Chem	EM, BOS	$0 - $25,000	Operating Budget, CT DEEP	2021	1	1	1	0	1	1	1	0	0	0	0	0	0	0	8
WLT-02	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.	CT DEEP Small Business Chem	EM, BOS	$0 - $25,000	Operating Budget, CT DEEP	2021	1	1	1	0	1	1	1	0	0	0	0	0	0	0	8
WLT-03	Host a CT DEEP presentation for municipal staff and local businesses about business chemical management for hazard resilience.	CT DEEP Small Business Chem	EM, BOS	$0 - $25,000	Operating Budget, CT DEEP	2021	1	1	1	0	1	1	1	0	0	0	0	0	0	0	8
WLT-04	Take one of the following actions that will mitigate natural hazard risks while also meeting Sustainable CT objectives: - Disseminate a toolkit for pre-disaster business preparedness. - Revise regulations to promote Low Impact Development. - Include the goals of this Hazard Mitigation Plan, and at least three other sustainability concepts, in your next POCD update.	Sustainable CT	BOS	$0 - $25,000	Operating Budget, Sustainable CT Community Match Fund	2021	1	1	1	1	0	1	1	0	0	0	0	0	0	0	8
WLT-05	Develop a strategy and policy so that future trees are not planted in the town right of way underneath powerlines or where they may blow over and become a hazard in the roadways	Tree Management	Tree Committee, CC	$0 - $25,000	Operating Budget	2021	1	1	1	1	0	1	1	0	0	0	0	0	0	0	8
WLT-06	Collaborate with CIRCA on the "Resilient Connecticut" project	ResilientCT	BOS	$0 - $25,000	Operating Budget	2022	1	1	1	0	0	1	1	0	0	0	0	0	0	0	7
WLT-07	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.	SHPO	Planning	$0 - $25,000	Operating Budget, CT SHPO	2022	1	1	1	1	0	1	0	0	0	0	0	0	0	0	7
WLT-08	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 identify historic resources at risk and support the preparation of resiliency plans across the state.	SHPO	Planning	$25,000 - $50,000	CT SHPO	2024	1	1	1	1	0	1	0	0	0	0	0	0	0	0	7
WLT-09	Explore opportunities to add cisterns where fire protection is lacking.	Wildfire Fighting Capacity	EM, P&Z	$100,000 - $500,000	Capital Improvement Plan, Other Grant	2025	0	1	1	0	1	1	1	0	0	0	0	0	0	0	7
WLT-10	Develop a schedule for updating the town-wide GIS database to ensure data is accurate.	Municipal Capacities	EM, Police, Fire	$0 - $25,000	Operating Budget, Grant	2022	1	1	1	1	1	1	0	0	-1	0	0	0	0	0	6
WLT-11	Enhance storm drain maintenance activities, such as increasing clean out frequency, and locate funding sources for this action.	Drainage	DPW	$25,000 - $50,000	Capital Improvement Plan, FEMA Grant	2024	1	1	0	1	1	1	1	0	0	0	0	0	-1	0	6
WLT-12	Seek financial assistance to manage tree debris in the Norwalk River.	Drainage	DPW, CC	$25,000 - $50,000	Capital Improvement Plan, FEMA Grant	2024	1	1	0	1	1	1	1	0	0	0	0	0	-1	0	6
WLT-13	Work with assisted living facilities in town to ensure preparedness and resiliency to natural hazards, including providing the town a better understanding of needs and vulnerabilities for each facility.	Emergency Response	EM	$25,000 - $50,000	Operating Budget	2024	1	1	1	1	1	0	0	0	0	0	0	0	0	0	6
WLT-14	Coordinate with Aquarion and SNEW to assess the ecological and health implications of winter road salting in areas of concern and drinking water supply areas, and investigate alternatives.	Roadways	BOS, DPW,CC	$25,000 - $50,000	Operating Budget, Grant	2024	1	1	1	1	1	1	0	0	-1	0	0	0	0	0	6
WLT-15	Revise floodplain zoning regulations to reflect the new State Building Code requirements for one foot of freeboard for construction in the 1% annual-chance flood zone.	Floodplain Management Regulations	Planning	$0 - $25,000	Operating Budget	2023	0	1	1	0	1	1	0	0	0	0	-1	0	0	0	5
WLT-16	Compare local floodplain regulations with Revised State Model Flood Regulations to identify any remaining opportunities for improvement	Floodplain Management Regulations	Planning	$0 - $25,000	Operating Budget	2023	0	1	1	0	1	1	0	0	0	0	-1	0	0	0	5
WLT-17	Contact the owners of Repetitive Loss Properties and nearby properties at risk to inquire about mitigation undertaken and suggest options for mitigating flooding in those areas. This should be accomplished with a letter directly mailed to each property owner.	RLPs	EM, BOS	$0 - $25,000	Operating Budget, FEMA Grant	2023	0	1	1	0	1	1	0	0	0	-1	0	0	0	0	5

#	Action Description	Regional Theme	Lead Department	Cost Estimate	Potential Funding Sources	Timeframe for Completion	Weighted STAPLEE Criteria														Total STAPLEE Score
							Benefits							Costs							
							Social	Technical (x2)	Administrative	Political	Legal	Economic (x2)	Environmental	Social	Technical (x2)	Administrative	Political	Legal	Economic (x2)	Environmental	
WLT-18	Conduct a Town-wide inventory and assessment of street trees, consider conducting the inventory in conjunction with other municipalities in the region.	Tree Management	Tree Committee, CC	$0 - $25,000	Operating Budget, Grant	2023	0	1	1	1	1	1	0	0	-1	0	0	0	0	0	5
WLT-19	Work with CT DEEP to validate and/or correct the RL list and update the mitigation status of each listed property.	RLPs	Planning	$25,000 - $50,000	FEMA Grant	2024	0	0	1	0	1	1	0	0	0	0	0	0	0	0	4
WLT-20	Annually conduct an emergency operations exercise for a local terrorism, sabotage, or mass casualty event.	Terrorism & Mass Casualty	EMD	$25,000 - $50,000	Operating Budget	2024	1	1	1	1	1	0	0	0	0	-1	0	0	0	0	5
WLT-21	Address the high priority bridge repairs and upgrades identified in the engineering study.	Bridge & Culvert	DPW	More than $1 million	Capital Improvement Plan, FEMA Grant, Other Grant	2026	0	1	0	1	1	1	1	0	0	0	0	0	-1	0	5
WLT-22	Elevate Arrowhead Road Bridge above the 100-year flood elevation	Bridge & Culvert	DPW	More than $1 million	Capital Improvement Plan, FEMA Grant, Other Grant	2026	0	1	0	1	1	1	1	0	0	0	0	0	-1	0	5
WLT-23	Address the repairs and upgrades as necessary to the approximately 28 bridges and culverts listed in the infrastructure engineering report, with a target goal of completing at least five in the 5-year lifespan of this plan.	Bridge & Culvert	DPW	More than $1 million	Capital Improvement Plan, FEMA Grant, Other Grant	2026	0	1	0	1	1	1	1	0	0	0	0	0	-1	0	5
WLT-24	Pursue the Dana Dam removal project in accordance with engineering studies.	Dam Safety	DPW, DEEP	More than $500,000	Capital Improvement Plan, Other Grant	2026	0	1	0	0	1	1	1	0	0	-1	-1	0	0	0	4
WLT-25	Work with telecommunications companies to strengthen mobile network telecommunications, and continue to identify where additional towers are necessary.	Emergency Response	P&Z, Utilities	$0 - $25,000	Operating Budget	2024	0	1	1	0	0	0	0	0	0	0	0	0	0	0	3
WLT-26	Budget appropriate money necessary to maintain and remove dead, dying, dangerous or diseased trees in rights-of-way and on other town land.	Tree Management	DPW	$0 - $25,000	Operating Budget	2024	0	0	1	0	1	0	1	0	0	0	0	0	0	0	3

APPENDIX B

Appendix B: SVI Summary

Town of Wilton
Climate Vulnerability Assessment
A Component of Sustainable CT Action 5.4

The Town of Wilton, for this Climate Vulnerability Assessment (CVA) is considered a suburban inland town, resulting in various climate change vulnerabilities. Inland flooding, extreme heat, and winter storms may impact the community the most as many issues have been identified.

Hazards

Inland Flooding

With FEMA flood zones in town along several streams and rivers, such as along the Comstock Brook and Naugatuck River, there is continuously concern for riverine flooding. The numerous streams in town pose a flood risk to adjacent properties, whether it is a larger storm event or a short intense rainstorm. For example, Arrowhead Road is often overtopped by the Norwalk River during a 100-year event. With precipitation expected to increase due to climate change, flooding events may occur more frequently. Overall, flooding may continue, or become a larger issue with future shifts in precipitation.

Winter Storms

Wilton is largely residential with commercialized areas along Route 7. Suburban communities are often impacted by strong winter storms in several ways; power outages from downed trees, accessibility issues, and icing concerns. Wilton tends to experience heavier snowfall in the northern areas of town. Anticipated shifts in winter precipitation may bring more freezing rain events, which can result in an increase of downed trees and iced roads during a winter storm event. Downed trees can result in power outage, and lack of emergency access and egress.

Drought and Extreme Temperatures

A majority of town relies on private wells for drinking water, with the exception of some service lines running north along Route 7 from Norwalk. Therefore, impacts to water supply may be an issue to the town as temperatures rise in the future, resulting in isolated issues with water scarcity. With increased temperatures, and high pumping levels, private wells may be impacted during times of drought.

In addition to private wells, many suburban communities have high levels of agricultural activity, whether it be crop production or livestock, these operations are heavily water dependent for healthy growing and revenue generation.

When considering these impacts from climate change, the primary vulnerabilities for the town of Westport include:

- Private well owners
- Emergency access
- Agricultural operations

Secondary Impacts

Economic Impacts

With areas vulnerable to flooding and winter storm events, the town faces an economic challenge of addressing the flooding concerns and increasing snow and debris removal capacity. There is also a potential economic impact to local businesses during flooding events, and heavy winter storms. Businesses may incur expenses related to flood mitigation or clean-up efforts, or experience loss of income if there is no site access during a storm.

Winter storm snow removal or icing also presents financial responsibility to the town by way of roadway treatment. As precipitation events may increase during winter months, the town may seek to increase sand or salt stockpiles to account for increased icing events.

Private property owners who rely on private drinking water wells may also be impacted economically during droughts or periods of extreme heat. With increasing heat, typically comes increased water demand. This demand would be placed upon local aquifers, potentially resulting in the need for new well construction, or deepening of an existing well.

The many impacts of climate change can result in economic impacts to many citizens, business owners, and municipal budgets as the impacts can be felt on a town level, down to building level.

Social Impacts

To identify social impacts to the town, the Center for Disease Control and Prevention (CDC) Social Vulnerability Index (SVI) was used to identify any vulnerable populations within the town. This index was developed to supplement a community's natural hazard preparation actions. To evaluate social vulnerability, the CDC incorporates 15 factors (Fig. 1) into the overall calculation under the categories, or themes, of: socioeconomic status, household composition and disability, minority status and language, and housing type and transportation. These themes and their ranking are based on census statistics. By evaluating these factors and determining a level of social vulnerability, a community can identify specific needs for before, during, and after an event. Such needs may include sheltering capacity, evacuation routes, or to decide how many emergency personnel may be required to respond after an event.

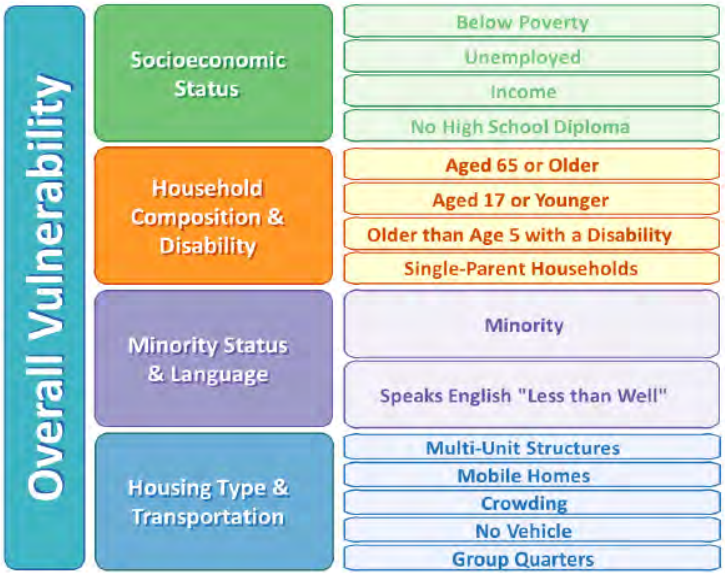


Figure 1: The CDC SVI Index Factors. Graphic: svi.cdc.com

Each municipalities' census tracts were ranked for overall vulnerability, and theme vulnerability, in comparison to other Connecticut municipalities. This rank, 0 to 1, is based on the percentile rank among all tracts within the State of Connecticut. A value closer to 0 indicates a lower vulnerability, while a value closer to

1 indicates a higher vulnerability. Table 1 presents the overall vulnerability and theme rankings for Wilton.

Table 1: Wilton SVI Factor Rankings

	Overall SVI	Socioeconomic	Household Composition & Disability	Minority Status & Language	Housing Type & Transportation
WILTON	.20	.04	.43	.32	.33

The Town of Wilton is considered to have a low level of vulnerability, with their most vulnerable population based on household composition and disability. In addition, there are vulnerable minority and linguistically challenged populations along with those based on housing type and lack of transportation. The most concentrated areas of the most vulnerable population are identified in the central tract in town. In addition, the two eastern tracts have also ranked high for vulnerability based on household composition and disability.

These populations may be vulnerable to impacts from drought, flooding and storm events based on the geographic concentrations.

Public Health Considerations

Of the primary vulnerabilities identified, drought and flooding can potentially have public health repercussions. During hot summer months, or drought, if private wells were to be impacted, certain populations may find themselves without adequate drinking water supply, resulting in health problems. Also, when considering the environmental shifts occurring during drought periods, drinking water contamination may become an issue as aquifers become stressed due to excessive pumping.

Food scarcity is another consideration when discussing the impacts of drought and extreme temperatures. Agricultural operations that are impacted by water shortages may find that crop or livestock yields are below average, ultimately resulting in food scarcity concerns. Depending on the size of an operation, the impacts can be on a small or large scale.

Flooding also presents the concern of pollution into nearby water bodies as commercialized and impervious areas drain, they collect pollutants and excess sediment. Depending upon the drainage areas, this runoff can have environmental impacts in associated ecosystems, or public health impacts if water bodies are used for recreational activities.

Vulnerable Populations

The SVI identified the presence of certain populations within the town that may be more vulnerable to climate change hazards. Communities, including Wilton, should pay special attention to elderly or disabled populations, linguistically challenged population, and those that may need evacuation assistance due to lack of transportation. In addition to the SVI, the Connecticut Department of Public

Health (DPH)[1] has identified at least three assisted living facilities and two convalescent homes in the Town of Wilton.

Some populations often need additional time for hazard response, so evacuation or preparation, and may find it more challenging to recover due to financial constraints or health concerns. These populations should be considered more vulnerable for the reasons that emergency response and preparation may be more challenging, health issues may be of higher concern, and language barriers may exist when working to communicate with the community on risks, response, and recovery efforts.

In addition to the populations, it is important to identify the facilities that can provide different types of assistance to the populations, and others, during or after an event. These facilities, and their proximity to flood zones, can be found in Figure 2-4.

[1] https://www.elicense.ct.gov/Lookup/LicenseLookup.aspx