

# **Western Connecticut Council of Governments Multi-Jurisdiction Hazard Mitigation Plan Update 2026-2031**

## **Municipal Annex for Town of Ridgefield**

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*Draft: October 2026*



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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 Ridgefield 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 life and damage to 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

Founded in 1708, the Town of Ridgefield is located in central Fairfield County and is home to a population of 25,033 (2020 U.S. Census). Ridgefield is bordered by the municipalities of Danbury to the north, Redding to the east, Wilton to the south, and to the west, Lewisboro and North Salem, New York. Refer to Figure 2-1 for a map showing the location of Ridgefield within the region.

Ridgefield is located in the southern foothills of the Berkshire Mountains. The topography of the town is characterized by ridgelines and hillsides that provide panoramic views, along with rolling terrain with high plateaus, steep slopes, and river and stream valleys. The Norwalk River, Still River, Saugatuck River, and numerous other small rivers and streams course through the town. The varying terrain of Ridgefield makes the town vulnerable to an array of natural hazards.

The Center for Land Use Education and Research (CLEAR) has developed a statewide land cover dataset derived from the 2023 Annual National Land Cover Dataset (NLCD). Areas identified as developed open space are maintained grasses such as residential and commercial lawns or golf courses. The southern portion of Bethel is predominantly forested. The land cover, by percent of total land, for Ridgefield is shown in Table 2-1.

**Table 2-1: Land Cover by Area**

| Land Cover Class     | Percent by Total Area |
|----------------------|-----------------------|
| Developed            | 6%                    |
| Developed Open Space | 28%                   |
| Forest               | 64%                   |
| Agriculture          | 1%                    |

Source: University of Connecticut Center for Land Use Education and Research (CLEAR)

#### 2.1.2 Land Use

Table 2-2 summarizes land use data, which was taken from the Town's 2020 Plan of Conservation and Development (POCD). According to this data, 20,901 acres, or 93.5% of Ridgefield's total land area, are currently occupied by residential development, and 1,020 acres of the town are zoned for business.

**Table 2-2: Ridgefield Land Use Summary**

| Land Use                          | Acres  | % of Total Land Area |
|-----------------------------------|--------|----------------------|
| <b>Residential</b>                |        |                      |
| <i>Low-Density Residential</i>    | 20,901 | 93.5%                |
| R-AAA – About 0.3 units per acre  | 5,887  |                      |
| R-AA – About 0.5 units per acre   | 13,533 |                      |
| R-A – About 1.0 units per acre    | 1,481  | -                    |
| <i>Higher Density Residential</i> | 422    | 1.9%                 |
| R-20 – about 2.0 units per acre   | 160    |                      |

| Land Use                               | Acres         | % of Total Land Area |
|----------------------------------------|---------------|----------------------|
| R-10/R-7.5 – about 4.0+ units per acre | 56            |                      |
| MFDD/CAH/CCF/ARHD/MSDD/HOD             | 206           |                      |
| <b>Business</b>                        | <b>1,020</b>  | <b>4.6%</b>          |
| CBD                                    | 42            |                      |
| B-1 – Business                         | 84            |                      |
| B-2 – Business                         | 260           |                      |
| B-3 General Urban                      | 27            |                      |
| NB – Neighborhood Business             | 7             |                      |
| CDD – Corporate Development            | 599           |                      |
| <b>Total</b>                           | <b>22,342</b> | <b>100%</b>          |

*Source: Plan of Conservation and Development, Town of Ridgefield, 2020*

According to the town's 2010 Plan of Conservation and Development (POCD), “most land in Ridgefield (87%) has been developed or is committed to a land use. Almost 60% of developed/committed land is for residential use, and roughly 30% is open space or institutional uses. Business use comprises the smallest percentage at three percent.”

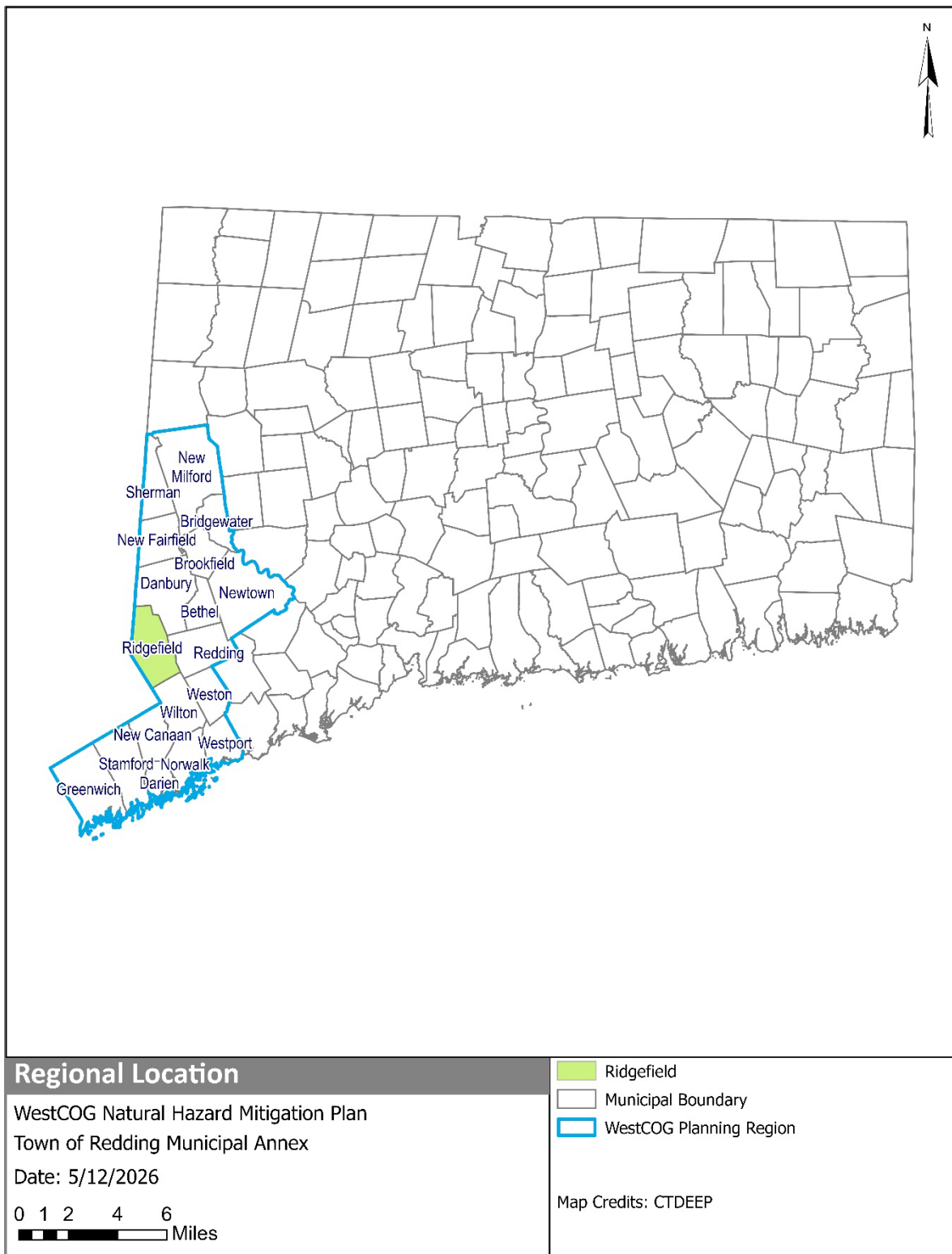


**Figure 2-1: Location Map**

### 2.1.3 Climate and Climate Change

#### *Current Conditions*

Over the course of the year, the temperature in Ridgefield typically varies from 19°F to 81°F and is rarely below 4°F or above 88°F. The warm season lasts from June 1 to September 16, with an average daily high temperature above 72°F. The hottest month of the year is July, with an average high of 80°F and a low of 63°F. The cold season lasts from December 3 to March 12, with an average daily high temperature below 44°F. The coldest month of the year is January, with an average low of 20°F and high of 35°F.

Precipitation falls throughout the year in Ridgefield. The wetter season lasts from April 10 to August 20, 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 smallest chance of a wet day is 22% on January 29. The most rain falls during the month of October with an average total accumulation of 3.7 inches. The least rain falls in January, with an average total accumulation of 1.7 inches. The snowy period of the year lasts from November 4 to April 14, with a sliding 31-day liquid-equivalent snowfall of at least 1.0 inches. The most snow falls during January, with an average snowfall of 10.7 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, developed by the University of Connecticut (UConn) Atmospheric Sciences Group and commissioned by the Connecticut Institute for Resilience and Climate Adaptation (CIRCA) with funding from the Department of Energy and Environmental Protection (DEEP). All projections are based on the IPCC high CO<sub>2</sub> emission scenario (RCP8.5).

#### **Temperature**

Annual temperatures have been increasing throughout Connecticut and are projected to continue to do so in the future. By mid-century, the 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 when the temperature remains above 68°F will quadruple from 10 days per year to more than 40, and the number of extremely hot days will increase from more than 4 per 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 Ridgefield as 3.43 inches.

The NOAA Atlas 14, released on September 30, 2015, puts the 24-hour rainfall amount for a 50% annual-chance annual storm in Ridgefield at 3.60 inches.

These precipitation amounts and more details are summarized in Table 2-3, below.

**Table 2-3: 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                   | 3.43                                                         | 6.43 | 9.10 |
| NOAA Atlas 14          | 3.60                                                         | 6.69 | 8.52 |

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, Ridgefield can expect the 24-hour rainfall amount for a 50% annual-chance storm to be around 3.7 to 3.9 inches or greater.

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

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

#### 2.1.4 Drainage Basins and Hydrology

Ridgefield is divided among the following nine subregional drainage basins: Comstock Brook, Mill River, Miry Brook, Norwalk River, Saugatuck River, Silvermine River, Still River, Titicus River, and Waccabuc River. The drainage basins are described in detail below.

The majority of the drainage basins have FEMA-defined Special Flood Hazard Areas (SFHAs) along the primary watercourses. Such areas consist of 1% annual chance storm floodplains without elevations, 1% annual chance storm floodplains with elevations, and 0.2% annual chance floodplains.

##### *Miry Brook*

Miry Brook originates at the outlet of a swamp south of Shadow Lake Road near the Ridgebury section in northern Ridgefield. The brook generally flows east through Ridgefield and is joined by three unnamed tributaries before entering Danbury near Pine Mountain Road.

#### *Norwalk River*

The Norwalk River originates in ponds located in Ridgefield. The river meanders in a southerly direction, flows into Great Pond, and continues to run parallel to Route 7 through Branchville. The river eventually joins the Silvermine River and flows into Long Island Sound.

#### *Saugatuck River*

The Saugatuck River originates in Danbury, near Wooster Mountain State Park. The drainage basin extends into the northeast portion of Ridgefield, as the river continues to flow in a southerly direction into neighboring Redding. The Saugatuck River collects input from several small tributaries as it flows toward the Connecticut shoreline and ultimately drains into Long Island Sound.

#### *Silvermine River*

The Silvermine River is an 8.4-mile tributary to the Norwalk River. In Ridgefield, the East Branch Silvermine River begins south of Whipstick Street and flows in a southerly direction, past Spectacle Swamp and into neighboring Wilton.

#### *Still River*

Flowing north to the Housatonic River, the Still River begins in Danbury with several tributaries draining into the main river channel. A very small portion of the drainage basin is located in the northwest corner of Ridgefield.

#### *Titicus River*

The Titicus River is an 8.5-mile river that commences in central Ridgefield. The river meanders through Ridgefield in a northern direction until it reaches Ledges Road. At this point the river runs in a westerly direction where it enters New York, just south of Wallace Road. The River continues to run along Route 166 until it reaches Titicus Reservoir, which is part of New York City's water supply system.

#### *Waccabuc River*

The Waccabuc River tributaries in central Ridgefield drain in a westerly direction to the Cross River Reservoir in New York. This river is part of the New York City public water supply.

#### *Comstock Brook*

The Comstock Brook drainage basin drains approximately 640 acres of southern Ridgefield. Comstock Brook is a tributary of the Norwalk River and commences in neighboring Wilton. The Brook flows in a southerly direction until it meets the Norwalk River and eventually flows to Long Island Sound.

#### *Mill River*

The Mill River drainage basin begins in Ridgefield, then flows south by southwest, draining about 1,250 acres of the Town, into the Mill Reservoir in adjacent Pound Ridge, New York.

## 2.2 Society, Culture, and Government

### 2.2.1 Population and Demographic Setting

According to the 2020 U.S. Census, Ridgefield had a population of 25,033 with 726 persons per square mile. The Connecticut State Department of Public Health estimates Ridgefield's 2026 population at 25,109. The American Community Survey (ACS) projects a decline in population, with estimates showing a population of only 16,376 for the year 2030.

One important aspect of natural hazard mitigation planning is to identify a community's demographic trends in relation to natural hazards. The FEMA National Risk Index (NRI) (Version 1.20) explores and illustrates the relationships among social vulnerability, community resilience, expected annual losses from natural hazards, and risk from those hazards. The NRI has four ratings built into the dataset:

1. Risk Index (A composite of the following three variables)
2. Expected Annual Loss
3. Social Vulnerability
4. Community Resilience

The social vulnerability incorporated into the NRI uses data from the United States Census Bureau's Community Resilience Estimate (CRE) dataset. This ten variable dataset represents the socioeconomic factors that are expected to contribute most to a community's ability to prepare for, withstand, and recover from a natural hazard event (Figure 2-2). The data used in the CRE from the 1-year American Community Survey and Population Estimates Program.

The Town of Ridgefield is considered to have very low and relatively low social vulnerability (Figure 2-3).

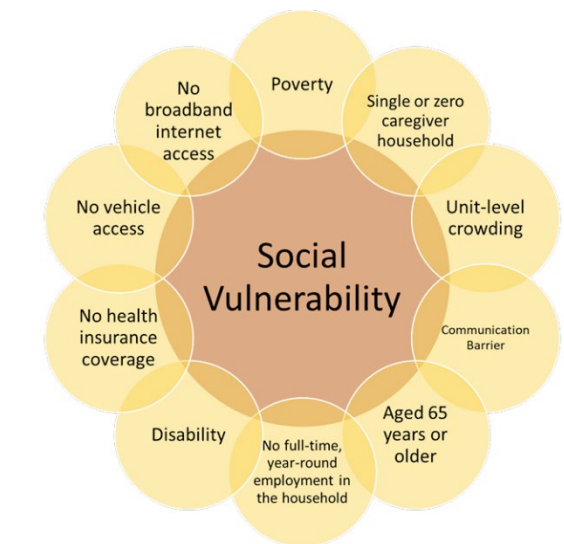


Figure 2-2 Community Resilience Estimates Vulnerability Components (Source: US Census Bureau)

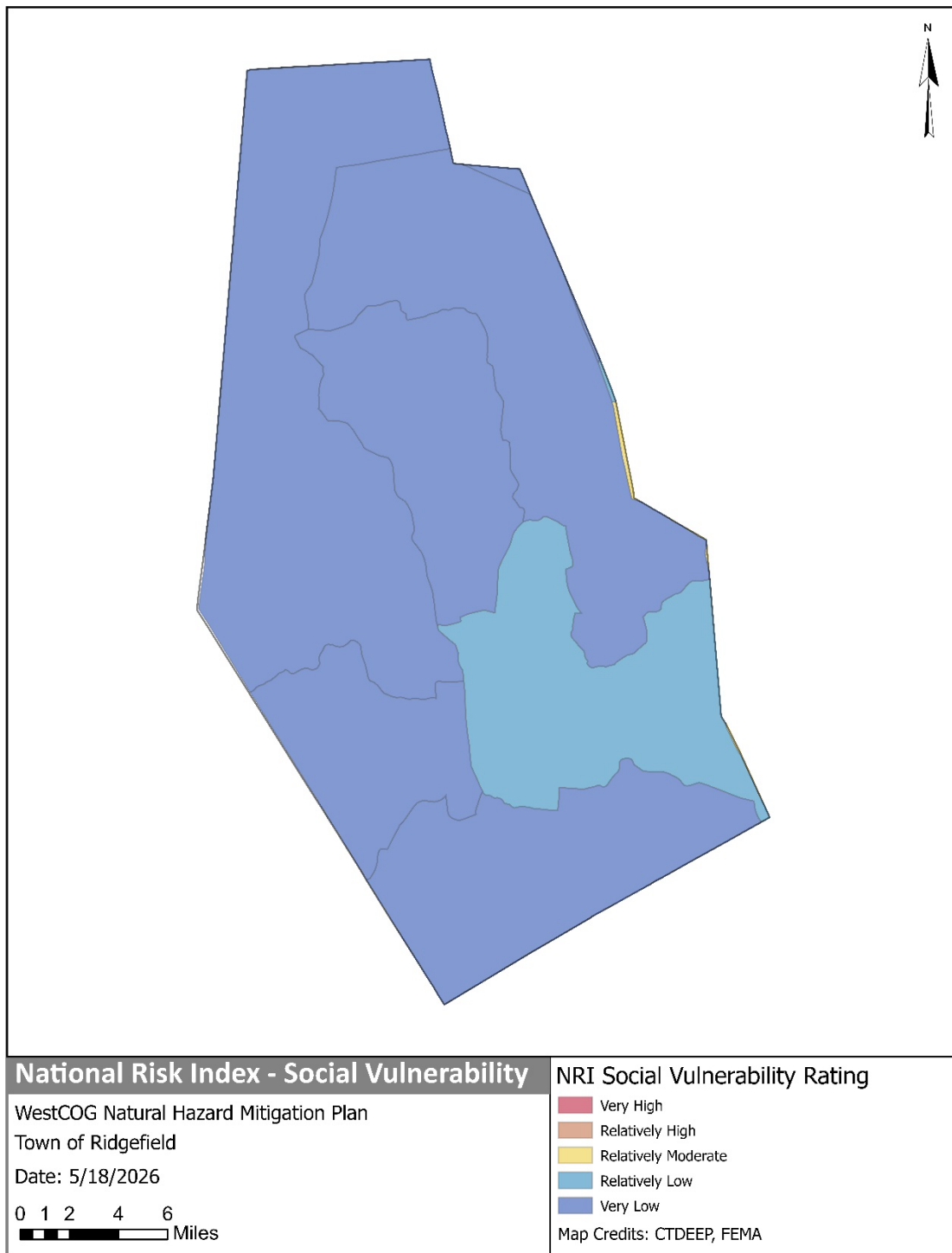


**Figure 2-3 FEMA National Risk Index Social Vulnerability**

### 2.2.2 Development Trends

The Ridgefield POCD emphasizes maintaining the vibrancy of Ridgefield Center and redeveloping the Branchville section of the town (around Branchville Station), which is immediately north of Georgetown in the neighboring town of Redding. The POCD recommends creating new zoning which would require a housing affordability component for any new residential development and would be a “village district” to help maintain and enhance a distinct character for the village area as development occurs. The POCD recommends reviewing zoning of business districts, including the Gateway area (Route 7 and Route 35), and calls for considering a zoning study of the Route 7 corridor to determine whether business or other non-residential uses might be appropriate while controlling the scale and size of developments, as well as expanding adaptive reuse of historic structures and residences in significant streetscapes along other major roadways.

The Schlumberger site in downtown Ridgefield is a significant redevelopment area. This site was formerly used as a research and development facility and will include residential and non-residential development.

The town does not have many pending housing developments at this time. A total of 304 housing units, called the “Eureka 5” development (former IBM property), were approved near the Danbury city line. Boehringer is often expanding. Other development in town includes commercial development just north of downtown.

Some small parcels have been acquired in recent years for open space, but no large acquisitions are planned, as the town already has significant open space.

Redevelopment in Branchville is potentially the most significant area of future development for the town. Much of the development in Branchville will be transit-oriented development (TOD). This area includes flood risk zones and is subject to flooding from the Norwalk River. Route 7 has flooded in various sections of Ridgefield from Route 35 and southward into Wilton, including Branchville. Accordingly, the Town will need to carefully review and regulate development and redevelopment in Branchville. This will ensure that flood risks (and damage) are minimized, even if exposure to flooding may remain. Aside from the specific concerns in Branchville, vulnerabilities to natural hazards in Ridgefield is likely not increasing.

Since the adoption of the 2021 HMP, the town has seen a lot of discussion regarding multi-family development, however, only a few approvals have been made in the past five years, including a 20 unit project at the former Red Rooster property on Danbury Road and a 35 unit project also on Danbury Road. The town reports between three and five single family home permits on an annual basis. Commercial development has been minimal, however Regency Partners (an existing commercial property owner in town) recently acquired one block of commercial buildings in town. Otherwise, commercial vacancy typically ranges between 4% to 6%, regardless of the market.

### 2.2.3 Governmental Structure

The Town of Ridgefield 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 the Board of Selectmen and the Town Meeting, there are boards, commissions, and committees providing input and direction to Town administrators. Also, Town departments provide municipal services and day-to-day administration. Many of these commissions and departments play a role in hazard mitigation, including the Planning and Zoning Commission, Conservation Commission, Inland Wetland and Water Course Agency, the Building Official, the Land Use Office, the Fire Department, Emergency Medical Services, and the Highway Department.

Drainage complaints are routed through the Public Works Department. These complaints are usually received via phone, fax, mail, or email and are recorded in a logbook. The complaints are investigated as necessary until remediation surrounding the individual complaint is concluded. If necessary, the complaints are incorporated into the Capital Improvement program.

#### 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 Ridgefield are concentrated within the Ridgefield Center, Titicus Hill, and West Mountain Historic District. Resources also include the J. Alden Weir Farm, Frederick Remington House, Hickories Farm, Hugh Cain Fulling Mill, Elias Glover Woolen Mill Archaeological Sites, and the Railroad Station.

See Figure 2-4 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 2-4.

**Table 2-4: Number of Historic Assets (by parcel) Exposed to Different Hazards in Ridgefield**

| Hazard                   | Count | Value         |
|--------------------------|-------|---------------|
| Dam Failure              | 0     | -             |
| Earthquake               | 401   | \$454,730,640 |
| Flooding                 |       |               |
| 1% Annual                | 31    | \$42,304,360  |
| 0.2% Annual              | 32    | \$40,601,120  |
| Hurricane/Tropical Storm | 401   | \$454,730,640 |

| Hazard              | Count | Value         |
|---------------------|-------|---------------|
| <b>Thunderstorm</b> | 401   | \$454,730,640 |
| <b>Tornado</b>      | 401   | \$454,730,640 |
| <b>Winter Storm</b> | 401   | \$454,730,640 |
| <b>Wildfire</b>     |       |               |
| Interface           | 6     | \$26,054,910  |
| Intermix            | 45    | \$35,075,460  |

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.

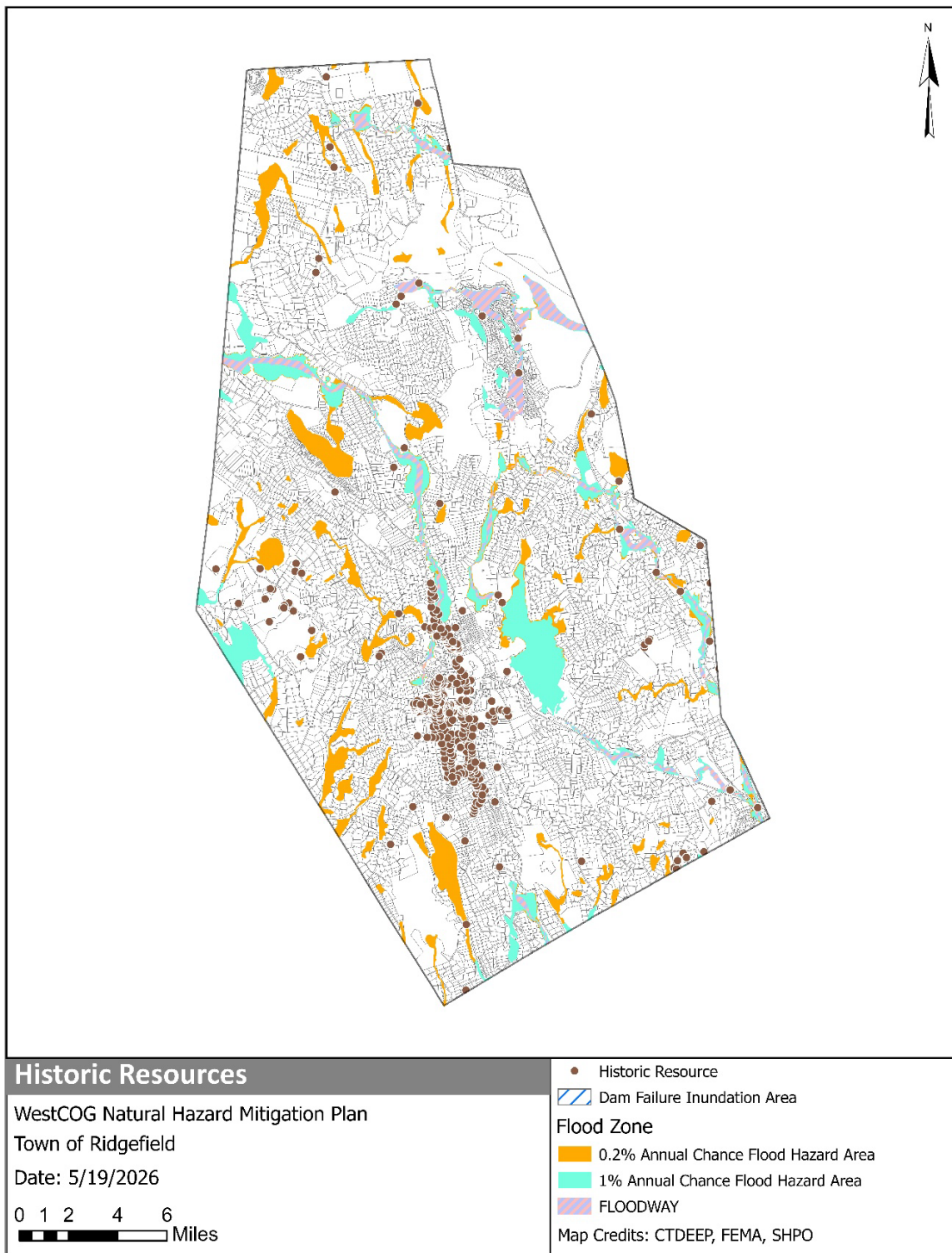


**Figure 2-4: Historic Resources**

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 were identified in the 2021 plan and are no longer current actions for the 2026-2031 update.

## **2.3 Infrastructure**

### **2.3.1 Transportation**

Major transportation routes through Ridgefield include the north-south Route 7 in the western edge of the town, Route 116 connecting Ridgefield center to North Salem in the northwest, Route 102 connecting Ridgefield center to Branchville, and Route 7 to the southeast, Route 33 running south from the town center, and Route 35 that runs east from South Salem to Ridgefield center before turning northeast.

Ridgefield is served by the Metro-North Railroad's New Haven commuter rail line through the Branchville Station.

### **2.3.2 Utilities**

Aquarion Water Company provides drinking water to a large portion of Ridgefield, including: most of the area around Ridgefield Center; near the intersection of Route 7 and Route 35, and north along Bennetts Farm Road; in the Ridgefield Knoll neighborhood around Ridgefield Elementary School; and select other locations. Water is also provided to a handful of homes by the Brookview Water Company. Non-community Public Water Systems serve numerous properties throughout Town, while residents outside these areas rely on well water.

The Ridgefield Water Pollution Control Authority (WPCA) is responsible for the management and oversight of the Town's wastewater pumping stations, pipe infrastructure, and two Wastewater Treatment Facilities (WWTFs): the South Street WWTF serving Sewer District 1, and the Route 7 WWTF serving Sewer District 2. The WPCA is currently completing a Wastewater Facilities Plan to develop the needs and estimated costs for upgrades to the two WWTFs, as well as the wastewater collection systems.

Electricity and natural gas are provided to Ridgefield by Eversource.

According to geoISP (geoISP.com), access to Broadband Internet is available to most residents in Ridgefield. There are 2 DSL Providers (AT&T and Connecticut Education Network), 2 Cable Internet providers (Xfinity and CSC Holdings), and 2 Fiber Internet providers (Fibertech Networks LLC and Level (3) Communications). There are also 4 Mobile Broadband (cellular) providers with service available in Ridgefield.

## 2.4 Planning and Regulatory Capabilities

### 2.4.1 Review of Existing Local Plans

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

- **Plan of Conservation and Development (POCD):** Ridgefield’s most recent POCD was adopted in 2020. It addresses natural hazard concerns within the community and includes strategies that will mitigate risks from those hazards as the community continues to develop.
- **Stormwater Management:** Ridgefield 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). The Town adopted new Stormwater Management Regulations on September 4, 2020, which will help minimize the impacts of impervious surfaces on runoff.
- **Capital Improvement Plan (CIP):** Ridgefield 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:** Ridgefield is included within the Western Connecticut Comprehensive Economic Development Strategy (CEDS) of 2023, 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):** Ridgefield’s EOP is reviewed annually and updated as needed. Dam failure Emergency Action Plans (EAPs) for dams with failure inundation zones that may impact Ridgefield, and for which EAPs are available, are on file locally.
- **Watershed Management Plan:** Watershed Management Plans have been developed for the Saugatuck-Aspetuck, Still, and Norwalk River Watersheds. The Saugatuck River Watershed Based Plan was developed by the former South Western Regional Planning Agency (SWRPA) in 2012. The Still River Watershed Management Plan was developed by the Housatonic Valley Association with support from the Still River Partners in 2019. 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. These plans are focused on water quality, but can help the community mitigate inland flood risks by incorporating watershed management best practices into its planning efforts.

### 2.4.1 Review of Regulatory Structures

Ridgefield 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 is described in Section 3.

- **Building Code:** Ridgefield enforces the Connecticut State Building Code locally.
- **Zoning Regulations:** Most recently updated in January 2026.
- **Inland Wetlands and Watercourses Regulations:** Most recently updated in May 2018.

- **Subdivision Regulations:** Most recently updated in December 2008. Include provisions promoting control of stormwater runoff, installation of firefighting water sources, construction of adequate emergency access and egress, and burial of utilities.
- **Stormwater Management Requirements:** The Town adopted a new set of Stormwater Management Requirements on September 4, 2020.

## 2.5 Emergency Services, Critical Facilities, Sheltering, and Evacuation

The Town considers its police, fire, governmental, and major transportation arteries to be its most important critical facilities since these are needed to ensure that emergencies are addressed while day-to-day management of Ridgefield continues. The Town also considers various infrastructure and facilities (such as water and sewer pump stations) to be critical facilities, as well as companies and businesses storing hazardous materials. Table 2-5 identifies all of these critical facilities.

**Table 2-5: Ridgefield Critical Facilities**

| Facility                                      | Address or Location                | Comment                                                            | Emergency Power | Shelter | In SFHA |
|-----------------------------------------------|------------------------------------|--------------------------------------------------------------------|-----------------|---------|---------|
| <b>Emergency Operations Center</b>            | Yanney Gymnasium<br>60 Prospect St | EOC; shelter for disaster workers                                  | ✓               | ✓       |         |
| <b>Police Department</b>                      | 76 East Ridge Rd                   | Emergency Response                                                 | ✓               |         |         |
| <b>Fire Headquarters</b>                      | 6 Catoonah St                      | Emergency Response                                                 | ✓               |         |         |
| <b>Ridgebury Fire Station</b>                 | 169 Old Stagecoach Rd              | Emergency Response                                                 | ✓               |         | *       |
| <b>Town Hall</b>                              | 400 Main St                        | Critical Records                                                   | ✓               |         |         |
| <b>Town Hall Annex</b>                        | 66 Prospect St                     | Health Dept. and Engineering Dept.                                 |                 |         |         |
| <b>Venus Municipal Building</b>               | 100 East Ridge Road                | Municipal Services                                                 |                 |         |         |
| <b>Highway Garage</b>                         | 60 South St                        | Emergency Assistance                                               | ✓               |         |         |
| <b>Ridgefield Recreation Center</b>           | 195 Danbury Rd                     | Primary Shelter                                                    | ✓               | ✓       |         |
| <b>Barlow Mountain Elementary School</b>      | 115 Barlow Mountain Rd             | Secondary Shelter                                                  | **              | ✓       |         |
| <b>East Ridge Middle School</b>               | 10 East Ridge Rd                   | Tertiary Shelter                                                   | ✓               | ✓       |         |
| <b>Scotts Ridge Middle School</b>             | 750 North Salem Rd                 | MPOD Emergency Distribution Center                                 | **              |         |         |
| <b>Branchville Elementary School</b>          | 40 Florida Rd                      | School; Emergency Water Supply                                     | P               |         |         |
| <b>Prospect Ridge Congregate Care</b>         | 51 Prospect Ridge                  | Ridgefield Housing Authority owned Assisted and Senior Living      |                 |         |         |
| <b>Ballard Green</b>                          | 25 Gilbert St                      | Ridgefield Housing Authority owned 72-unit senior housing facility |                 |         |         |
| <b>Laurel Ridge</b>                           | 642 Danbury Rd                     | Convalescent home and rehab center                                 | ✓               |         |         |
| <b>Ridgefield Crossing</b>                    | 640 Danbury Rd                     | Assisted living and Alzheimer's care                               | ✓               |         |         |
| <b>Route 7 Wastewater Treatment Facility</b>  | 901 Ethan Allen Hwy                | Critical Facilities                                                | ✓               |         | ***     |
| <b>South St Wastewater Treatment Facility</b> | Various Locations                  | Critical Facilities                                                | ✓               |         |         |

| Facility                      | Address or Location | Comment                                   | Emergency Power | Shelter | In SFHA |
|-------------------------------|---------------------|-------------------------------------------|-----------------|---------|---------|
| <b>Water Pumping Stations</b> | Various Locations   | Critical Facility, Aquarion Water Company |                 |         | Some    |
| <b>Railroad Station</b>       | 50 Ethan Allen Hwy  | Critical Facility                         |                 |         | ✓       |
| <b>Major Roads</b>            | Various             | Transportation arteries                   |                 |         | Some    |
| <b>Boehringer Campus</b>      | 900 Ridgebury Rd    | Large employee base                       |                 |         |         |

- \* Ridgebury Fire Station is adjacent to a Special Flood Hazard Area
- \*\* These generators are sufficient only for lighting and sustaining critical IT systems; they do not support full building use or sheltering
- \*\*\* Access route to the Route 7 WWTF passes through Special Flood Hazard Areas
- P The Branchville Elementary School has provisions for a portable generator hookup to operate as an emergency water supply

Town officials consider the commercial town center, in the vicinity of Main Street & Danbury Road, to be a critical area since the supermarket and Pharmacy are located there. These could provide essential services in an emergency. The two sewage treatment plants will eventually be consolidated into one facility at South Street. The railroad station is owned by the CT DOT and leased by the Town.

The Town Hall has installed a backup generator. Town staff reports that the Town-owned Venus Building, which is used for municipal services, is in need of a generator. The Town would also like to install generators at additional schools, beyond those currently served by backup power. In particular, the Branchville School would benefit from a fixed-in-place generator, given that the school is a non-transient non-community water system. At present, the Branchville School has provisions for a portable generator hookup to provide an emergency water supply. The school should probably be added to the list of critical facilities.

Town officials are interested in evaluating the feasibility of developing a microgrid for the high school/middle school complex or for the area around Town Hall, the EOC, and the Fire Department.

Emergency shelters are an important subset of critical facilities, as they are needed in many emergency situations. There are three identified shelters in the town that are also considered critical facilities. The Ridgefield Recreational Center on Danbury Road is the town's primary shelter and also serves as the warming/cooling/charging center. Barlow Mountain Elementary School on Barlow Mountain Road is the designated backup shelter. The East Ridge Middle School on East Ridge Road could be used as a third shelter if necessary. Each of these facilities have backup generators. Town officials noted during the April 29, 2014, public meeting that it would be beneficial to harden the utilities at the High School and install the necessary supplies and infrastructure to utilize part of the building as a shelter.

Laurel Ridge and Ridgefield Crossing, two residential care facilities, both have standby power, and are both also priority power restoration customers with Eversource.

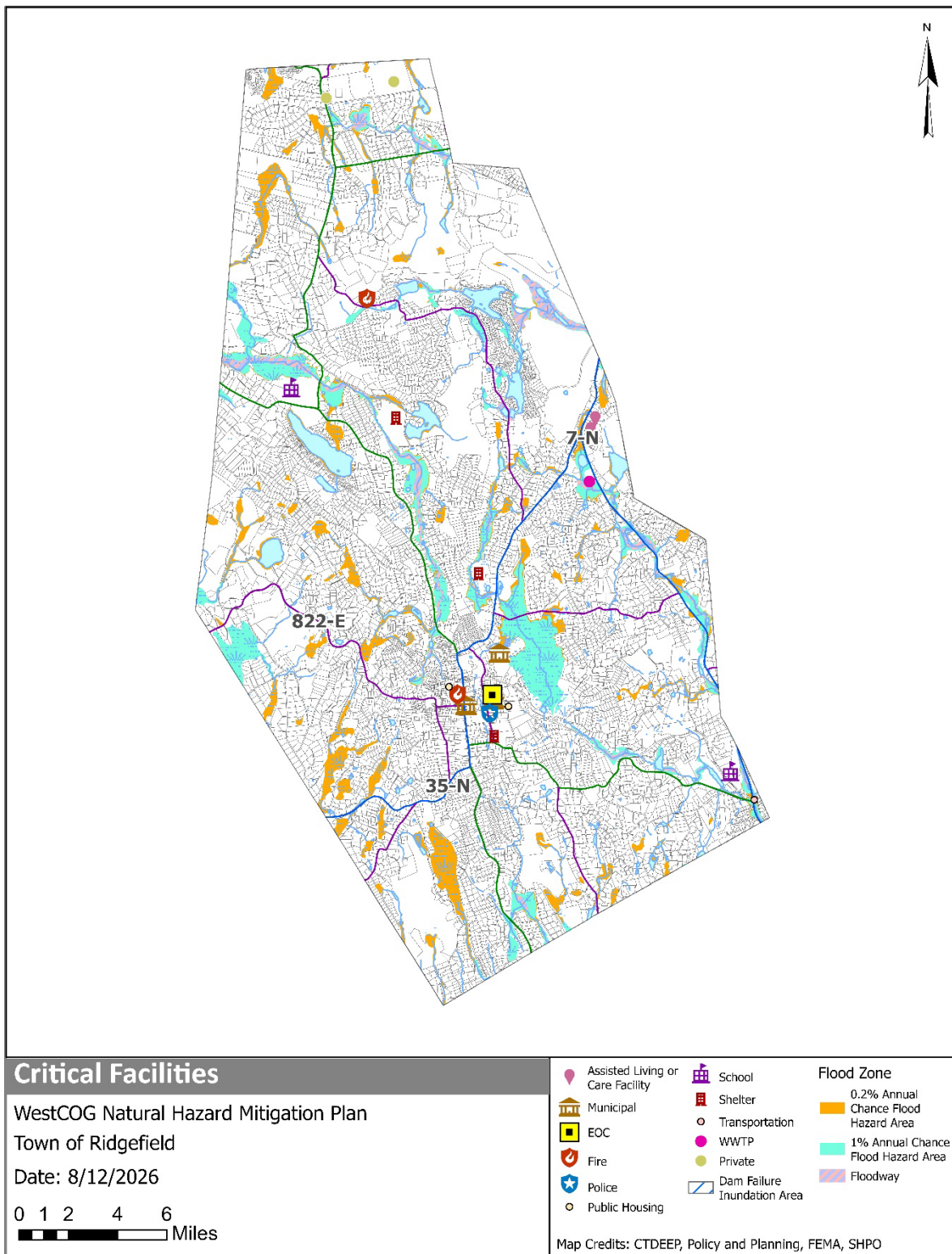


**Figure 2-5: Critical Facilities & Flood Zones**

### *Emergency Response Capabilities*

The Emergency Operations Team and the Police Department coordinate emergency preparedness in the Town of Ridgefield. The Town's Emergency Operations Center (EOC), including its Emergency Communications Center, is located in the Yanity Gymnasium. The EOC's goal is to provide citizens with the highest level of emergency preparedness before, during, and after disasters or emergencies. That Town coordinates with all internal departments to develop plans, protocols, and procedures that ensure the safety of Ridgefield's citizens. It also provides technical assistance to state and local emergency response agencies and public officials.

In Connecticut, the Department of Emergency Services and Public Protection (DESPP) operates, in part, using a regional approach. DESPP has divided Connecticut into five emergency planning regions, and as such, DEMHS (Division of Emergency Management and Homeland Security) has been partnering with the former HVCEO and other regional planning organizations to strengthen emergency response. Ridgefield is located in Region 5, consisting of 43 towns in western Connecticut.

Town officials note that the Spruce Mountain Danbury/Ridgefield/DEMHS radio facility has been repaired and upgraded as needed.

The Town's EOP guides its response to emergencies arising from both natural and anthropogenic hazards. The Town utilizes the statewide emergency notification system known as "CT Alert" to direct geographically specific emergency notification telephone calls into affected areas. The local radio station, WLAD, is also utilized for notification purposes.

The Town's Public Works Department performs tree and shrub removal and trimming on Town-owned lands and rights-of-way. During emergencies and following storms, the Public Works Department, in conjunction with the Parks Department, responds to calls related to downed trees and coordinates directly with Eversource Energy.

Public transportation is also available to move residents into and out of the town. HARTtransit operates regular bus service in the town that may be available for use to move people and supplies. In addition, Town school buses and vans may be available for transportation during emergency situations.

## 3.0 HAZARD ASSESSMENT

### 3.1 FLOODING (COASTAL, INLAND, AND ICE JAMS)

#### 3.1.1 Setting

The Town of Ridgefield has experienced various degrees of flooding in every season of the year throughout its recorded history. Melting snow combined with early spring rains has caused frequent spring flooding. Numerous flood events have occurred in late summer to early autumn resulting from storms of tropical origin moving northeast along the Atlantic coast. Winter floods result from the occasional thaw, particularly during years of heavy snow or periods of rainfall on frozen ground. Other flood events have been caused by excessive rainfall upon saturated soils, yielding greater than normal runoff.

In general, minor flooding problems are widespread throughout Ridgefield. Extreme events along defined floodplains often result in damage to insured structures. The most common damage is to infrastructure and occurs due to flash flooding. The primary areas of flood concern in Ridgefield are along the Norwalk River. Areas of lesser flood risk are located along the Titicus River and Ridgefield Brook. Flooding also occurs throughout Ridgefield due to inadequate drainage systems.

#### 3.1.2 Capabilities

The Town has consistently participated in the NFIP since September 30, 1982, and intends to continue participation in the NFIP. SFHAs in Ridgefield are delineated on a Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS). The FIRM delineates areas within Ridgefield that are vulnerable to flooding and was most recently published on June 18, 2010, as part of the Fairfield County FIS.

#### *Ordinances, Regulations, and Plans*

Regulations, codes, and ordinances that apply to flood hazard mitigation in conjunction with and in addition to NFIP regulations include:

- ***Zoning Regulations (Floodplain Management Regulations)***. Effective May 1, 2007, and amended in 202026, Chapter 11 of the Zoning Regulations is essentially the local articulation of the NFIP regulations. The regulations have been enacted to "regulate floodplain development in Special Flood Hazard Areas (SFHA's), to protect the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed to: Protect human life and health, and prevent damage to property; Minimize expenditure of public funds for costly flood control projects; Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public; Minimize prolonged business interruptions and other economic disruptions; Minimize damage to public facilities, infrastructure and utilities, such as water and gas mains, electric, telephone and sewer lines, and streets and bridges, located in the floodplain; Help maintain a stable tax base by providing for the sound use and development of flood hazard areas in such a manner as to minimize flood damage, and future flood blight

areas; Insure that potential buyers are notified that property is in a flood hazard area; Prevent increases in flood heights that could increase flood damage and result in conflicts between property owners; Ensure that those who occupy the flood hazard areas assume responsibility for their actions; and discourage development in a floodplain if there is any practicable alternative to locate the activity, use, or structure outside of the floodplain.

- Section 11.5(a) outlines the general standards for all new construction and substantial improvements in Special Flood Hazard Areas.
  - Section 11.5(b) outlines the standards for watercourses without established base flood elevations, adopted floodways and/or flood mapping.
  - Section 11.5(c) provides specific construction standards for Special Flood Hazard Areas.
  - Section 11.5(c)(1) states that all new residential construction, substantial improvements, and repairs to structures that have sustained substantial damage which are residential structures shall have the bottom of the lowest floor, including basement, elevated to or above the base flood elevation (BFE).
  - Section 11.5(c)(2) states that All new non-residential construction, substantial improvements, and repair to structures that have sustained substantial damage which are commercial, industrial or non-residential structures shall: have the bottom of the lowest floor, including basement, elevated to the same or above the base flood elevation (BFE); or In lieu of being elevated, non-residential structures may be dry flood-proofed to one foot above the BFE, provided that together with all attendant utilities and sanitary facilities, the areas of the structure below the required elevation are watertight with walls substantially impermeable to the passage of water, and provided that such structures are composed of structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy.
  - Section 11.5(c)(5) outlines requirements within floodways and states that No encroachments, including fill, new construction, substantial improvements, repairs to substantially damaged structures and other developments shall be permitted unless certification (with supporting technical data) by a registered professional engineer is provided demonstrating, through hydrologic and hydraulic analyses performed in accordance with standard engineering practice, that encroachments shall not result in any increase in flood levels during occurrence of the base flood discharge.
  - Section 11.6 provides design standards for subdivision proposals.
- 
- ***Wetlands and Watercourse Regulations*** (Amended 2011). The Ridgefield Planning and Zoning Commission was designated the Inland Wetlands Board of the Town of Ridgefield and was authorized to promulgate, enact, and administer these regulations in accordance with the decision of the special town meeting held on June 5, 1974. The purpose of the regulations is to protect the quality of the inland wetlands and watercourses within the Town of Ridgefield by making provisions for the protection, preservation, maintenance, and use of inland wetlands and watercourses, including deterring and inhibiting the danger of flood and pollution.

- Section 2.2 – Regulated Activity means any operation within or use of a wetland or watercourse involving grubbing, removal or deposition of material, or any obstruction, construction, alteration or pollution, of the wetlands or watercourses, but shall not include the activities specified in subsection 4.1 and 4.2 of these regulations. Furthermore, the activities listed in Section 4.5, when occurring or proposed to occur within the distances from wetlands and watercourses specified in that section, are regulated activities.
  - Section 4.1(b) indicates that no residential homes shall be permitted "as of right" in wetlands and watercourses after July 1, 1987.
  - Section 6.1 states that no person shall conduct or maintain a regulated activity without first obtaining a permit for such activity from the Inland Wetland Board of the Town of Ridgefield
  - Section 7 outlines permit application requirements.
- **Subdivision of Land Regulations.** Effective June 17, 1983, the Town's Subdivision Regulations establish minimum acceptable standards with respect to the subdivision of land including provisions for protective flood control, open spaces for parks and playground and conservation, the laying out and improvement of streets and public and private utilities services.
  - Specifically, the regulations state that “no plan for the subdivision of land will be approved unless: (a) the land to be subdivided is of such character that it can be used for building purposes without danger to health or the public safety; (b) proper provision is made for water, drainage and sewerage and, in area contiguous to brooks, rivers or other bodies of water subject to flooding, for protective flood control measures; (c) the proposed streets are in harmony with existing or proposed principal thoroughfares shown in the development plan of the town as now or hereafter amended especially with regard to safe intersections with such thoroughfares, and so arranged as of such width as to provide an adequate and convenient system for present and prospective traffic needs; and (d) open spaces as described in Article IV are provided where deemed proper by the Commission, which open spaces shall be shown on the subdivision plan.”
  - Section 4-35 outlines the following provisions for flood hazard reduction and states that all subdivision of land containing land area of special flood hazard shall: (1) be required to be consistent with the need to minimize flooding. (2) Have adequate drainage provided to reduce exposure to flood damage. (3) have public or private utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage. (4) show contour line(s) identifying and locating base flood elevation data as required by section 325.0 of the zoning regulations; and (5) Show and describe the extent to which any watercourse will be altered or relocated.
- **Plan of Conservation and Development.** This 2020 document is the Town's vision statement for future development. It is updated every 10 years. With respect to
 

Low impact Development is an approach to land development (or redevelopment) that works with nature to manage storm-water as close to its source as possible.

flooding, the POCD notes that land use in floodplains should be strictly controlled in order to minimize potential flood hazards on-site and downstream, to maximize water storage and ground water recharge and to protect wildlife and habitat. The POCD also notes the need to address total runoff in an effort to reduce water pollution. The objectives under the goal “Minimize Flooding” are to “Continue to regulate activities in flood plains” and “Increase on-site stormwater infiltration and retention.”

#### *Floodplain Management, NFIP, and CRS*

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 requirements for regulatory purposes under the NFIP. The Town is not enrolled in the Community Rating System (CRS) program.

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.

#### *Structural Projects and Drainage*

The Town 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 Public Works Department. The Town uses these reports to identify potential problems and plan for maintenance and upgrades.

#### *Communications*

The Town receives regular weather updates through the Division of Emergency Management and Homeland Security (DEMHS) Region 5 email alerts, as well as watches and warnings through the National Weather Service.

The Town can access the National Weather Service website at <http://www.weather.gov/> to obtain the latest flood watches and warnings before and during precipitation events.

The National Weather Service issues a flood watch or a flash flood watch for an area when conditions in or near the area are favorable for a flood or flash flood, respectively. A flash flood watch or flood watch does not necessarily mean that flooding will occur. The National Weather Service issues a flood warning or a flash flood warning for an area when parts of the area are either currently flooding, highly likely to flood, or when flooding is imminent.

#### *Actions Completed and New Capabilities*

The need for drainage studies was discussed in the previous hazard mitigation plan. The Town has made some progress in this area, for example, two studies have been completed for flood mitigation alternatives.

### *Summary*

In summary, the Town primarily attempts to mitigate future flood damage and flood hazards by restricting building activities in floodprone areas. This process is carried out by both the Planning and Zoning Commission and the Inland Wetlands Commission. All watercourses are to be encroached minimally or not at all to maintain the existing flood-carrying capacity. These regulations rely primarily on the FEMA-defined 1% annual chance flood elevations to determine flood areas.

The Town is proceeding with drainage studies in numerous flood concern areas.

The Town has previously pursued property buyouts for repetitive loss properties. Their experiences suggest that inland properties are not prioritized for buyouts at the state and federal levels over coastal areas. A lot of effort was spent with a property owner on Wooster Street recently, who ultimately was not eligible for a grant. In general, property owners interested in buyouts are not eligible (typically because they do not have flood insurance), and those with insurance are not interested.

### 3.1.3 Vulnerabilities and Risk Assessment

Drainage and flooding continue to be the primary natural hazard concerns in Ridgefield, despite progress made in completing drainage studies. The Town is also concerned about possible new flood risks associated with the potential decommissioning of Fox Hill Dam. CT DEEP and NRCS have been evaluating the dam, which was built for flood control. If the dam is removed, numerous properties may have new flood risks.

#### *Vulnerability Analysis of Repetitive Loss Properties*

Based on correspondence with the State of Connecticut NFIP Coordinator at the Connecticut DEEP, six repetitive loss properties (RLPs) are located in the Town of Ridgefield. Of this total, four properties are residential, and two are commercial.

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

| Type        | Flooding Source      | Mapped Floodplain  |
|-------------|----------------------|--------------------|
| Residential | Bennett's Farm Brook | 1% Annual Chance   |
| Residential | Ridgefield Brook     | None               |
| Residential | Unknown              | None               |
| Residential | Ridgefield Brook     | None               |
| Commercial  | Norwalk River        | 1% Annual Chance   |
| Commercial  | Norwalk River        | 0.2% Annual Chance |

Two of the repetitive loss properties are located in Branchville and are associated with the Norwalk River. Three others are near smaller watercourses, but the source of flooding at the remaining property is not understood.

#### *Vulnerability Analysis of Critical Facilities*

The list of critical facilities provided by the Town (Section 2.9) was used with the parcel data to accurately locate each critical facility throughout the town. One of the critical facilities, the Metro-North Railroad, was found to lie within the 1% annual chance floodplain. In addition, the

Ridgebury Fire House was found to be immediately adjacent to the 1% annual chance floodplain. While these facilities are not known to have experienced serious flooding damage in recent years, their proximity to the Norwalk River and Bennett's Farm Brook, respectively, makes them susceptible to flooding. While these facilities are at risk to the 1% annual chance flood, they may also be prone to flooding of a lesser magnitude.

#### *Vulnerability Analysis of Areas Along Watercourses*

The primary waterways in the town are the Norwalk River and the Titicus River. The remaining waterways in Ridgefield are mostly smaller streams and brooks. A regulatory floodplain with AE designation has been mapped along the Titicus River, the Norwalk River, and the Ridgefield Brook. Floodplains without (Zone A) elevations are delineated for the majority of the remaining brooks in the town. Specific areas susceptible to flooding are identifiable by the FEMA defined special flood hazard areas. Refer to Figure 2-5 for the areas of Ridgefield susceptible to flooding based on FEMA flood zones.

#### *Ridgefield Brook*

Town officials indicated that two small drainage basins reportedly merge on the Casagmo Condominiums property, and the condominiums are flooded. Although damage has not yet occurred, town officials believe that it will happen one day as impervious surfaces continue to increase in the watershed upstream of the condominiums. This area is a tributary to Ridgefield Brook and thus a tributary to the Norwalk River. Town officials will need to ensure that new projects in the condominium complex do not increase flooding.

The town is also underway with a drainage study of the Downtown area. This study includes the Casagmo Condominiums and other downtown properties but requires more effort around the Middle School. The results of the study should be used to demonstrate to the land use commissions when the tipping point for flood damage could occur. Continued funding for this study could be sought through the Small Town Economic Assistance Program (STEAP).

#### *Norwalk River*

Redevelopment in Branchville has been a major area of redevelopment for the town. This area includes flood risk zones and is subject to flooding from the Norwalk River. Route 7 has flooded in various sections from Route 35 into Wilton, including Branchville. Precision Brake on Route 7 (32 Ethan Allen Highway) is repeatedly flooded by the Norwalk River.

Town officials also believe that replacement of the North Bridge and the Florida Hill Road Bridge at the Norwalk River are potential mitigation projects that could alleviate flooding.

#### *Titicus River*

The Titicus River corridor is also floodprone. An Army Corps project to conduct selected clearing in the river has long been delayed according to some town representatives. Private properties have been flooded along the river, with some damage over the years. The town has hired contractors over the years to clear out sections of the river to improve conveyance and reduce flood risk.

A house on Wooster Street near the Titicus River would be a good candidate for elevation, and the town could serve as the applicant for FEMA mitigation funds.

#### *Miry Brook*

George Washington Highway in the northern section of town experiences flooding from Miry Brook and its tributaries.

#### *Vulnerability of Other Areas*

Other areas around the town suffer from street flooding due to undersized or nonexistent drainage systems. Specifically, the town has identified the following areas of concern:

- Flooding occurs at Route 116 and Barlow Mountain Road when a storm drainage system becomes clogged. Up to three feet of water has flooded the road in the past.
- Numerous culverts under Bennett's Farms Road may be undersized and are planned for replacement in the future.
- Flooding has also been known to occur at Wilton Road East, Rowland Lane, Oreneca Road, Rippowam Road, Wooster Street, Spring Valley Road, Ledges Road, New Street at Route 7, Portland Avenue, and South Street.
- Beavers cause flooding on Reagan Road.

#### *Changes and Improvements*

The town has made progress with conducting drainage studies. Studies to identify the flood risk reduction alternatives for Portland Avenue and Spring Valley Road have been completed. A flood reduction study is in the design phase for Wooster Street, and another flood reduction project along Portland Avenue will be going to construction in 2027.

## 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.

The Connecticut DEEP administers the statewide Dam Safety Program and designates a classification to each state-inventoried dam based on its potential hazard.

- *Class AA*: negligible hazard potential
- *Class A*: low hazard potential
- *Class BB*: moderate hazard potential
- *Class B*: significant hazard potential
- *Class C*: high potential hazard

While flooding from a dam failure generally has a moderate geographic extent, the effects are potentially catastrophic. A major dam failure is considered only a possible hazard event in any given year.

### 3.2.2 Capabilities

The Dam Safety Section of the Connecticut DEEP Inland Water Resources Division is charged with the responsibility for administration and enforcement of Connecticut's dam safety laws. The existing statutes require that permits be obtained to construct, repair, or alter dams, and that existing dams be inventoried and periodically inspected to ensure that their continued operation does not pose a hazard to life, health, or property.

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.

The dam safety requirements are codified in Sections 22a-401 through 22a-411, inclusive of the Connecticut General Statutes. Sections 22a-409-1 and 22a-409-2 of the Regulations of Connecticut State Agencies have been enacted and set requirements for the registration, classification, and inspection of dams. Dams must be inventoried by the owner with the Connecticut DEEP according to Connecticut Public Act 83-38.

Effective October 1, 2013, the owner of any high or significant hazard dam (Class B and C) must develop and implement an EAP after the Commissioner of DEEP adopts regulations. 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. New regulations shall establish the requirements for such EAPs, including but not limited to (1) criteria and standards for inundation studies and inundation zone mapping; (2) procedures for

monitoring the dam or structure during periods of heavy rainfall and runoff, including personnel assignments and features of the dam to be inspected at given intervals during such periods; and (3) a formal notification system to alert appropriate local officials who are responsible for the warning and evacuation of residents in the inundation zone in the event of an emergency.

Dam failure analyses have been prepared for many of the high hazard dams, and these are included in the EAPs. The inundation limits portrayed in the dam failure analysis maps represent a highly unlikely, worst-case scenario (1,000-year) flood event and should be used for emergency action planning only. These analyses should not be interpreted to imply that the dams evaluated are not stable, that the routine operation of the dams presents a safety concern to the public, or that any particular structure downstream of the dam is at imminent risk of being affected by a dam failure.

The CT DEEP also administers the Flood and Erosion Control Board program, which can provide non-competitive state funding for the repair of municipality-owned dams. Funding is limited by the State Bond Commission. State statute Section 25-84 allows municipalities to form Flood and Erosion Control Boards, but municipalities must take action to create the board within the context of the local government such as by revising the municipal charter. The Town's Planning and Zoning Commission is responsible for reviewing all development activities that occur within flood hazard or flood-prone areas.

#### *Actions Completed and New Capabilities*

Ridgefield continues to maintain its strong dam failure mitigation capabilities.

### 3.2.3 Vulnerabilities and Risk Assessment

As of March 2026, there were 74 DEEP-inventoried dams within the Town of Ridgefield. These dams are shown in Figure 2-5. Five of these dams are considered high hazard (Class B or C). As shown in Table 3-2, one of the high hazard dams is owned by the Town of Ridgefield, three by private residents, one by a homeowners association and one by the CT DEEP. Failure of these structures may have an impact on Ridgefield.

**Table 3-2: High Hazard Dams with Potential to Affect the Town of Ridgefield**

| Number | Name                          | Location                        | Class           | Owner                              |
|--------|-------------------------------|---------------------------------|-----------------|------------------------------------|
| 11801  | Millers Pond Dam              | Norwalk River, Ridgefield       | BB <sup>1</sup> | Dana Matthow                       |
| 11809  | Roberts Pond Dam              | Titicus River, Ridgefield       | B               | Joseph M. & Barbara G. Lane        |
| 11814  | Johns Pond Dam                | Cooper Pond Brook, Ridgefield   | B               | Kenneth Smith                      |
| 11823  | Shadow Lake Dam               | Trib. to Miry Brook, Ridgefield | B               | Town of Ridgefield                 |
| 11856  | Lake Naraneka Dam             | Titicus River, Ridgefield       | B               | Twixt Hills Homeowners Assoc. Inc. |
| 11858  | Great Swamp Flood Control Dam | Ridgefield Brook, Ridgefield    | C               | Connecticut DEEP                   |

<sup>1</sup> Identified as a Class B in the 2021 HMP

#### *Millers Pond (Dam No. 11801) – Norwalk River, Ridgefield*

The Millers Pond Dam is a Class B dam located at the southern end of Millers Pond and impounds a reservoir from a contributing watershed of 7.04 square miles. The earthen dam is 13 feet high and 152 feet long. It is privately owned and used to impound a reservoir for

aesthetic purposes. The dam discharges into the Norwalk River, which crosses under Florida Hill Road before flowing alongside State Route 7 into Redding. Three houses are located directly downstream of the dam and would be affected by floodwaters.

*Roberts Pond Dam (Dam No. 11809) – Titicus River, Ridgefield*

The Roberts Pond Dam is a privately owned Class B dam located at the southern end of Roberts Pond and impounds a reservoir from a contributing watershed of 1.0 square miles. The earthen dam is 120 feet in length. The dam discharges to the Titicus River and flows northward towards North Salem, New York. Houses on Saw Mill Hill Road and the downstream Freemans Pond Dam would be affected by floodwaters.

*Johns Pond Dam (Dam No. 11814) – Cooper Pond Brook, Ridgefield*

The Johns Pond Dam is a Class B dam located at the southeast end of Johns Pond and impounds a storage volume of 10.67 acre-feet from a contributing watershed of 0.91 square miles. The earthen dam is 8 feet high and 150 feet long. It is privately owned and used to impound a reservoir for recreation. The dam discharges to Cooper Pond Brook and flows southeast parallel to Route 102 through two additional Class A dams and on to its confluence with the Norwalk River. Floodwaters have the potential to affect a number of residences, including one house on Stony Hill Road, and four houses with driveways off Branchville Road that are located adjacent to the downstream watercourse.

*Shadow Lake (Dam No. 11823) – Ridgefield (unnamed tributary to Miry Brook)*

The Shadow Lake Dam is a Class B dam located at the western end of Shadow Lake and impounds a storage volume of 101 acre-feet from a contributing watershed of 0.42 square miles. It is owned by the Town of Ridgefield and used to impound a reservoir for recreation. The earthen dam was constructed in 1937 and is 18 feet high and 1,000 feet long. The reservoir discharges to an unnamed watercourse that flows southward to Miry Brook, crossing Beaver Brook Road before the confluence. Miry Brook flows to the southeast under the George Washington Highway before continuing into Redding. Floodwaters may affect residences on Beaver Brook Road, Chipmunk Lane, and the George Washington Highway.

*Lake Naraneka (Pierrepont Lake Dam) (Dam No. 11856) – Titicus River, Ridgefield*

The Lake Naraneka Dam is a Class B dam located at the northwest end of Pierrepont Lake and impounds a storage volume of 677 acre-feet from a contributing watershed of 0.46 square miles. It is owned by the Twixt Hills Homeowners Associations, Inc. and used to impound a reservoir for recreation.

The concrete gravity dam was constructed in 1937 and is 18 feet in height and 156 feet in length. The reservoir discharges to Shadow Brook, which flows northward to the Titicus River, crossing under Barlow Mountain Road and Kiahs Brook Lane before the confluence. An unclassified dam known as Kiahs Brook Pond Dam is located on the upstream side of Kiahs Brook Lane, and would most likely be affected by an upstream dam breach.

An EOP for the Lake Naraneka Dam was originally prepared in May 1996 and updated in September 2006. The EOP includes the results of a dam breach analysis completed for the

structure. The dam breach analysis predicts that four residences and two roadways would be affected by dam failure. The roadways potentially affected by a flood wave include Barlow Mountain Road and Kiah's Brook Lane/Ledges Road, and the four residences on Ledges Road. In the event of a failure, the EOP specifies that the owner will contact the Ridgefield Police Department and the CT DEEP, and that the police department is then responsible for notification of the potentially affected parties.

#### *Great Swamp Flood Control Dam (Dam No. 11858) – Ridgefield Brook, Ridgefield*

The Great Swamp Flood Control Dam, also known locally as the Fox Hill dam, is a Class C dam located on Ridgefield Brook approximately 450 feet upstream of its crossing of Danbury Road (Route 35). It is owned by the Connecticut DEEP and used to impound a reservoir for flood control. The dam impounds a storage volume of 1,202 acre-feet from a contributing watershed of 2.59 square miles. The dam was constructed in 1979 and is 10 feet high and 450 feet long. The Great Swamp extends from the dam and Farmingville Road southward to Ivy Hill Road. Ridgefield Brook flows northward to its confluence with the Norwalk River.

Outflow from the Great Swamp Dam flows under Fox Hill Drive and Danbury Road within 500 feet downstream of the dam. A number of residences along Fox Hill Drive may be affected by flood waters.

#### *Other Dams*

Town officials reported that the Mamanasco Lake Dam (Class BB) may be leaking and is in need of repair. The town has been unable to compel the property owner to evaluate the dam.

In recent years, DEEP and NRCS came to Ridgefield, recommending that a town-owned dam needed to be removed. The dam is reportedly undersized when compared to current precipitation statistics. DEEP and NRCS recommended that either the Town perform \$8 million in improvements to protect downstream properties or let them remove the dam (potentially for free). However, the dam provides a measure of flood mitigation, and the removal would have resulted in an exacerbation of flooding conditions downstream, so the Town did not do this.

### **3.3 HURRICANES AND TROPICAL STORMS**

#### **3.3.1 Setting**

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 Ridgefield are susceptible to flooding damage caused by hurricanes, wind damage can occur anywhere in the town. A hurricane striking Ridgefield is considered a possible event each year and could cause critical damage to the town and its infrastructure.

In general, as the residents and businesses of the state of Connecticut become more dependent on the internet and mobile communications, the impact of hurricanes on commerce will continue to increase. A major hurricane has the potential of causing complete disruption of power and communications for up to several weeks, rendering electronic devices and those that rely on utility towers and lines inoperative.

Debris such as signs, roofing material, and small items left outside become flying missiles in hurricanes. Extensive damage to trees, towers, aboveground and underground utility lines (from uprooted trees or failed infrastructure), and fallen poles causes considerable disruption for residents. Streets may be flooded or blocked by fallen branches, poles, or trees, preventing egress. Downed power lines from heavy winds can also start fires during hurricanes with limited rainfall.

#### **3.3.2 Capabilities**

Existing mitigation measures appropriate for flooding were discussed in Section 3.1.2. 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 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, 2013, 2016, and 2018. The code was then updated and amended in 2022, with the current code having been updated and effective as of October 1, 2022. The code specifies the design wind speed for construction in all Connecticut municipalities. Effective 2022, the design wind speed for Ridgefield is 110 miles per hour for a Category 1, 120 miles per hour for a Category 2, 125 miles per hour for a Category 3, and 130 miles per hour for a Category 4 or 5. Ridgefield has adopted the Connecticut Building Code as its building code. The town website provides links to the State Building Inspector so that developers are able to find additional resources, including wind design standards.

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.

The Ridgefield Tree Warden is responsible for all tree work on town roads (within Town right-of-way only). Eversource, the local electric utility, provides tree maintenance near its power lines.

During Tropical Storm Irene, the Town used the CT Alert system to notify all residents in the SFHA that they may evacuate and use a shelter. The Board of Education used its notification system to notify people on its list of emergency procedures. Prior to severe storm events, the Town ensures that warning/notification systems and communication equipment are working properly and prepares for the possible evacuation of impacted areas.

As the Town of Ridgefield is not affected by storm surge, hurricane sheltering needs have not been calculated by the U.S. Army Corps of Engineers for the town. The Town determines sheltering needs based upon areas damaged or needing to be evacuated 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 the town will relocate, while most will stay in their homes until power is restored.

#### *Actions Completed and New Capabilities*

The Town has strengthened its tree management capabilities in recent years. The Town is active with tree trimming and works with Eversource to reduce risks of power loss due to downed lines.

### 3.3.3 Vulnerabilities and Risk Assessment

The Town of Ridgefield is vulnerable to hurricane damage from wind and flooding, and from any tornadoes accompanying the storm. In fact, the roof of the EOC/Yanity Gymnasium was damaged during Hurricane Sandy. This facility also has windows on the second floor that must be boarded up before wind events and cannot be used to its full capacity as a regional shelter during these situations.

Some critical facilities are more susceptible than others to flooding damage associated with hurricane rainfall. Such facilities susceptible to flooding were discussed in Section 3.1.3.

Ridgefield's housing stock consists of historic buildings older than 50 years, and sometimes older than 100 years, relatively younger buildings built before 1990, when the building code changed to address wind damage, and relatively recent buildings that utilize the new code changes. Since most of the existing housing stock in the town predates the recent code changes, many structures are highly susceptible to roof and window damage from high winds. Homes located within SFHAs are also at risk from flooding as a result of the heavy rainfall that typically occurs during tropical storms and hurricanes.

#### *Changes and Improvements*

The Town continues to mitigate for hurricanes and tropical storms.

### 3.4 SUMMER STORMS AND TORNADOES

#### 3.4.1 Setting

Summer storms and tornadoes have the potential to affect any area within Ridgefield. Because these types of storms and the hazards that result (flash flooding, wind, hail, and lightning) might have a 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 the Town of Ridgefield 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

Warning is the primary existing mitigation method 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.

Several methods of mitigation for wind damage are employed in Ridgefield, as explained in Section 3.3.2. In addition, the Connecticut State Building Code includes guidelines for the proper grounding of buildings and electrical boxes. Eversource trims trees along power lines. The town tree warden can remove dead and diseased trees in rights-of-way or Town land, working through the Public Works Department. Town-owned equipment is used except for complex situations, which would call for the use of a contractor. Most downed power lines in Ridgefield are detected quickly, and any associated fires are quickly extinguished.

Municipal responsibilities relative to summer storm and tornado mitigation and preparedness include:

- Developing and disseminating emergency public information and instructions concerning tornado, thunderstorm wind, lightning, and hail safety, especially guidance regarding in-home protection and evacuation procedures and locations of public shelters
- Designating appropriate shelter space in the community that could potentially withstand lightning and tornado impact
- Periodically testing and exercising tornado response plans
- Putting emergency personnel on standby at tornado "watch" stage

Instead, the state has provided NOAA weather radios to all public schools as well as many local governments for use in public buildings. The general public continues to rely on mass media for knowledge of weather warnings. Warning time for tornadoes is very short due to the nature of these types of events, so pre-disaster response time can be limited. However, the NOAA weather radios provide immediate notification of all types of weather warnings, in addition to tornadoes, making them very popular with communities.

#### *Actions Completed and New Capabilities*

The town maintains capabilities for mitigating and responding to the impacts of summer storms and tornadoes.

#### 3.4.3 Vulnerabilities and Risk Assessment

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. Thunderstorms are expected to impact Ridgefield 20 to 30 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 Ridgefield 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 Ridgefield is considered moderate in any given year.

According to the 2023 *Natural Hazard Mitigation Plan Update*, Fairfield County has a moderately high risk of tornado activity based on historical occurrences. Therefore, by virtue of its location in Fairfield County, the Town of Ridgefield has a moderate to high potential to experience tornado damage.

Most thunderstorm damage is caused by straight-line winds exceeding 100 mph. Straight-line winds occur as the first gust of a thunderstorm or from a downburst from a thunderstorm and have no associated rotation. The risk of downbursts occurring during such storms and damaging the Town of Ridgefield 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 the town center, while more tree damage is expected in the less densely populated areas.

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. Strong thunderstorms are likely to cause power lines to fall all over the town.

The Town is concerned that power restoration efforts are sometimes delayed after an event due to the fact that Eversource reportedly outsources restoration crews from faraway locations. While the town has no direct influence on this, they are aware of the post-event challenges this may incur.

#### *Changes and Improvements*

The Town continues to mitigate for summer storms and tornadoes.

#### *Summary*

The entire Town of Ridgefield is at relatively equal risk for experiencing damage from summer storms and tornadoes. Based on the historic record, very few summer storms or tornadoes 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.

### **3.5 WINTER STORMS AND NOR'EASTERS**

#### **3.5.1 Setting**

Winter storms and the hazards that result (wind, snow, and ice) have the potential to affect any area of Ridgefield. Due to its variable elevation, the Town can have higher amounts of snow in the outskirts of the town than in the town center. In general, winter storms are considered highly likely to occur each year (although major storms are less frequent), and the hazards that result typically have a widespread geographic extent.

Most winter weather events occur between December and March. Winter weather may include snow, sleet, freezing rain, and cold temperatures. Most deaths from winter storms are indirectly related to the storm, such as from traffic accidents on icy roads and hypothermia from prolonged exposure to cold. Damage to trees and tree limbs, and the resultant downing of utility cables, are common effects of these types of events. Secondary effects include loss of power and heat, and flooding as a result of snowmelt.

#### **3.5.2 Capabilities**

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

According to the Ridgefield Department of Public Services website, town roads are treated with “Ice B’ Gone” for de-icing. The town owns several plow trucks. Town plowing is typically ahead of CT DOT plowing. Priority is given to plowing egresses to critical facilities. Homeowners, private associations, and businesses are responsible for plowing their own driveways and roads.

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, pre-storm treatment is applied to roadways to reduce the accumulation of snow. The Town also prepares for the possible evacuation and sheltering of populations that could be affected by the upcoming storm (especially the elderly and persons with special needs).

Town officials noted during the public meeting for this planning process that, following the winter 2011 storms, Ridgefield developed a snow removal and response protocol for municipal buildings. A professional engineer performed calculations to determine safe snow thresholds for the roofs and identified when clearing should occur. This will help to reduce roof collapses.

#### *Actions Completed and New Capabilities*

Ridgefield continues to maintain winter storm capabilities.

### 3.5.3 Vulnerabilities and Risk Assessment

According to the 2023 Connecticut State Natural Hazard Mitigation Plan, the state can expect to experience at least four or more major snow events each year, with an average of 14 winter events in a season. It is estimated that Ridgefield's average annual snowfall is about 2.5 to 4 feet.

After a storm, snow piled along the sides of roadways can reduce sightlines and reflect blinding amounts of sunlight. When coupled with slippery road conditions, poor sightlines, and heavy glare, these conditions create dangerous driving conditions. Stranded motorists, especially senior and/or handicapped citizens, are at particularly high risk of injury or death from exposure during a blizzard. The elderly population in Ridgefield, in particular, is susceptible to the impacts created by winter storms due to resource needs (heat, electricity loss, safe access to food, etc.).

The structures and utilities in the Town of Ridgefield 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.

It is possible that several thousand members of the population impacted by a severe winter storm could consist of the elderly, a few thousand could consist of linguistically isolated households, and several thousand could be disabled. It is important for Ridgefield's emergency personnel to continue to be prepared to assist these special populations during emergencies such as winter storms.

No critical facilities are believed to be more susceptible to winter storm damage than any other. Some critical facilities are more susceptible than others to flooding damage due to winter storms.

The snowfall, sleet, freezing rain, and rain that affected Connecticut during the 2010-2011 winter season proved to be catastrophic for a number of buildings. With severely low temperatures coupled with the absence of the removal of snow and ice buildup from roofs of buildings in Connecticut, numerous roofs collapsed during the winter season.

During the snow load disaster in January 2011, significant snow removal was done throughout the town, including the town buildings and schools. East Ridge Middle School experienced some minor cracking of walls, and an engineer was dispatched to investigate. The school did not sustain any major damage. A few barns collapsed in town. As a result of this event, the town developed a snow removal protocol for its municipal and school roofs.

#### *Changes and Improvements*

The town has made several improvements in regard to wind and flooding, which could also be impacts related to winter storms and nor'easters.

## 3.6 WILDFIRES AND DROUGHT

### 3.6.1 Setting

Wildfires are any non-structure fire, other than a prescribed burn, that occurs in undeveloped areas. They can be highly destructive, uncontrollable fires. Although the term brings to mind images of tall trees engulfed in flames, wildfires can occur as brush and shrub fires, especially under dry conditions. Wildfires are also known as "wildland fires."

Hazards associated with wildfires include property damage and habitat loss. According to the USGS, wildfires can increase the potential for flooding, debris flows, or landslides; increase pollutants in the air; temporarily destroy timber, foliage, habitats, scenic vistas, and watershed areas; and have long-term impacts such as reduced access to recreational areas, destruction of community infrastructure, and reduction of cultural and economic resources.

Wildfires are considered a likely event each year, but when one occurs, it is generally contained to a small range with limited damage to nonforested areas.

In addition, Ridgefield and Fairfield County overall have experienced drought challenges over recent years. The 2023 Connecticut Natural Hazard Mitigation Plan assumes that the State of Connecticut is likely to experience a drought every two to three years. This assumption is based on climate change projections that anticipate hotter, 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 7.28% of the state's total number of farms, with a market value of over \$42 million in product sold from these farms.

### 3.6.2 Capabilities

Mitigation for wildland fire control is typically focused on Fire Department training and maintaining an adequate supply of equipment.

The Connecticut DEEP Division of Forestry monitors the weather each day during non-winter months as it relates to fire danger. This allows the DEEP and the Town to monitor the drier areas of the state to be prepared for forest fire conditions. Forest fire danger levels are classified as low, moderate, high, very high, or extreme. In addition, the National Weather Service issues a Red Flag warning when winds will be sustained, or there will be frequent gusts above a certain threshold (usually 25 mph), the relative humidity is below 30%, and precipitation for the previous five days has been less than one-quarter inch. Such conditions can cause wildfires to spread quickly from their source.

The Ridgefield Fire Department goes to the fires whenever possible. This proactive approach is believed to be effective for controlling wildfires.

The Connecticut DEEP Open Burning Program requires the designation of certified Open Burning Officials in each municipality. This individual oversees the permitting of open burning.

Regulations regarding fire protection are outlined in the *Subdivision Regulations*:

- **Section 4-8** states that the arrangement of streets shall provide for the possible future continuation thereof into adjacent properties when such continuation shall be advisable for the convenient movement of traffic, effective fire protection, or efficient provision for public utilities, or where such continuation is in accordance with the plan of development.
- **Section 4-11** requires streets to be situated in a manner that provides suitable access for firefighting.
- **Section 6-6** outlines application requirements and requires provisions for water supply, stormwater management, sewage disposal, and fire protection.

The town POCD identifies a need for continued improvements to the hydrant and non-hydrant water supply areas, including the addition of hydrants, dry hydrants, and cisterns where possible, and the continued monitoring of large single-family home construction in non-hydrant areas.

#### *Actions Completed and New Capabilities*

The Town has made significant changes in its fire protection capabilities, and additional changes are underway. Town capabilities for fire suppression include:

### 3.6.3 Vulnerabilities and Risk Assessment

According to the Connecticut DEEP, the actual forest fire risk in Connecticut is low due to several factors. First, the overall incidence of forest fires is very low. According to the 2023 State Hazard Mitigation Plan, an average of 243 fires per year occurred from 2013 to 2022; an increase from the average 109 fires per year reported in the 2019 State HMP. In 2020 alone, there were a reported 603 wildland fire events. Secondly, as the wildfire/forest fire prone areas become fragmented due to development, the local fire departments have increased access to those neighborhoods for firefighting equipment. Third, the problematic interface areas such as driveways too narrow to permit emergency vehicles are site specific. Finally, trained firefighters at the local and state levels are readily available to fight fires in the state, and inter-municipal cooperation on such instances is common.

Traditionally, the highest forest fire danger in Connecticut occurs in the spring from mid-March to mid-May. The worst wildfire year for Connecticut in the recent past occurred during the extremely hot and dry summer of 1999. Over 1,733 acres in Connecticut burned in 345 separate wildfires, averaging about 5 acres per fire. Only one wildfire occurred between 1994 and 2003 that burned over 300 acres, and a wildfire in 1986 in the Mattatuck State Forest in the town of Watertown, Connecticut, burned 300 acres.

The Town of Ridgefield is generally considered a moderate-risk area for wildfires. Wildfires are of particular concern in outlying areas without public water service and in other areas with limited access to firefighting equipment. The Pine Mountain area in northern Ridgefield is at risk for wildfires. Sometimes they reach 100+ acres in size, and multiple fires have occurred

there. A wildfire at Bear Mountain, also in northern Ridgefield, was allowed to burn to completion because it was unsafe to try to stop it. Bear Mountain is also considered a high-risk area. Wildfire Risk Areas are mapped in Figure 3-1.

As suggested by the historic record, most wildfires in Connecticut are relatively small. In the drought year of 1999, the average wildfire burned 5 acres, compared with the two most extreme wildfires recorded since 1986, which burned 300 acres each. Given the availability of firefighting water in the town, 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.

In 2024, a brush fire occurred in the Pine Mountain open space area. It took about one and a half days to extinguish the fire. The overall impact was nominal, however there was elevated concern regarding the fire.

The Wildland-Urban Interface (WUI) index (Figure 3-1) is used to identify areas that may be at greater risk of wildfires based on the density of development in comparison to the amount of wildfire prone vegetation. Outside of the developed southcentral area of town, as well as those areas outside of the Aquarion service area, could be considered at greater risk due to moderate to high levels of development intermixed with fire prone vegetation. However, given firefighting capacity and water availability, it is likely that the town has effective capabilities to minimize damage from fires that may occur.

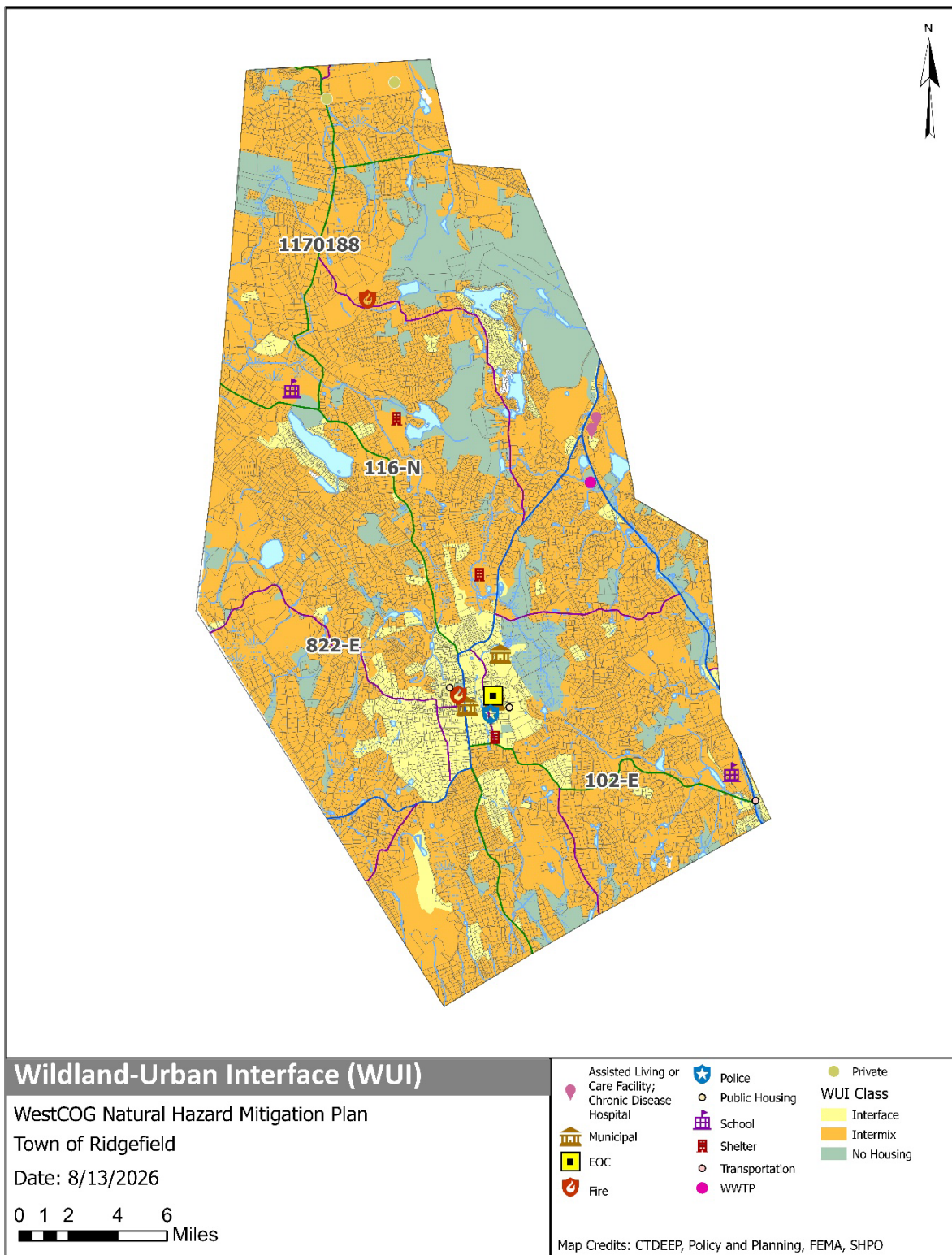


**Figure 3-1: Wildfire Risk Areas**

## 3.7 EARTHQUAKES AND LANDSLIDES

### 3.7.1 Setting

The entire Town of Ridgefield is susceptible to earthquake damage. However, even though earthquake damage has the potential to occur anywhere, both in the 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 of the town.

Earthquakes can cause buildings and bridges to collapse; disrupt gas, electric and telephone lines; and often cause landslides, flash floods, fires, avalanches, and tsunamis. Earthquakes can occur at any time without warning.

### 3.7.2 Capabilities

The Connecticut Building Codes include design criteria for buildings specific to each municipality as adopted by the Building Officials and Code Administrators (BOCA). These include the seismic coefficients for building design in the Town of Ridgefield. The Town has adopted these codes for new construction, and they are enforced by the Building Official. Due to the infrequent nature of damaging earthquakes, land use policies in the 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. For example, the Subdivision and Zoning Regulations require that soil erosion and sediment control plans be developed for proposed projects.

#### *Actions Completed and New Capabilities*

Ridgefield continues to have appropriate capabilities for mitigating earthquake events.

### 3.7.3 Vulnerabilities and Risk Assessment

Surficial earth materials behave differently in response to seismic activity. Unconsolidated materials such as sand and artificial fill can amplify the shaking associated with an earthquake. In addition, artificial fill material is susceptible to liquefaction. When liquefaction occurs, the strength of the soil decreases, and the ability of the soil to support building foundations and bridges is reduced. Increased shaking and liquefaction can cause greater damage to buildings and structures and a greater loss of life.

Some areas in Ridgefield are underlain by sand and gravel, particularly within the Norwalk River and Titicus River sub-regional basins. Structures in these areas are at increased risk from earthquakes due to amplification of seismic energy and/or collapse. The best mitigation for future development in areas of sandy material may be the application of the most stringent building codes or possibly the prohibition of new construction. However, many of these areas occur in floodplains associated with the various streams and rivers in Ridgefield, so they are already regulated. The areas that are not at increased risk during an earthquake due to unstable soils are the areas underlain by glacial till, which includes most of the town.

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. For this Plan, dam failure has been addressed separately in Section 9.0.

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 Town of Ridgefield. Results are presented in Table 3-3 below.

**Table 3-3: Probability of a Damaging Earthquake in the Vicinity of Ridgefield**

| 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%                                                             |

### 3.8 EXTREME HEAT

#### 3.8.1 Setting

Extreme heat can occur at any time during the warmer months and can be defined as temperatures that hover 10 degrees or more above the average high temperature for the region. The NWS defines extreme heat as a period of abnormally hot weather generally lasting more than two days. A *heat wave* typically lasts three or more days with temperatures over 90 degrees for those days. These events typically last for a prolonged period of time, can vary in extent and intensity, and are often accompanied by high humidity.

An extreme heat event or heat wave can occur anywhere throughout Connecticut and any of the WestCOG communities. According to the 2023 Connecticut State Natural Hazard Mitigation Plan, Fairfield and Litchfield counties experienced, between 2012 and 2021, the greatest and least average annual number of days with temperatures greater than 90 degrees, respectively. Fairfield County experienced five days on average, while Litchfield County experienced zero days on average.

Extreme heat events are expected to increase. The WestCOG Regional Climate Assessment (2026) notes that “by 2050, in a high CO<sub>2</sub>-emissions scenario (RCP 8.5), average temperatures are expected to rise by approximately 5°F and continue to increase thereafter.” The region is also likely to see an increase in heat wave days, summer days (where daily maximum temperatures are above 77 degrees), and tropical nights (where the daily minimum is below 68 degrees).

#### 3.8.2 Capabilities

The Town of Ridgefield has identified cooling centers in town which can provide respite to members of the community during an extreme heat event or heat wave. The Town also

monitors the National Weather Service and local forecasts for heat warnings and advisories, in addition to guidance set forth by the State.

#### *Actions Completed and New Capabilities*

The town has identified one cooling centers in Ridgefield.

### 3.8.3 Vulnerabilities and Risk Assessment

While the entire town is at risk of an extreme heat event, vulnerability can vary widely throughout the community as it does across Connecticut. To better characterize vulnerability to extreme heat, UConn CIRCA has developed a tool to aid in understanding extreme heat vulnerability for communities across the state. This tool, known as the Climate Change Vulnerability Index (CCVI), comprises dozens of factors that contribute to a community's heat sensitivity, exposure, adaptive capacity, and, ultimately, overall heat vulnerability. The CCVI can be used to characterize heat vulnerability in Ridgefield.

In general, the most vulnerable populations in Ridgefield would include the young and the elderly, and those populations living in the more densely developed areas in town which may have reduced tree coverage and a greater density of impervious surface. According to the CCVI, more heat vulnerable areas in Town are concentrated in the Town Center area, along Route 33, and in the Ridgebury area.

#### *Changes and Improvements*

The town, like all WestCOG communities, is now including extreme heat in its HMP and beginning to plan more intently to address extreme heat impacts.

## 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.

**Table 4-1 Status of Previous Mitigation Actions**

| # | Action                                                                                                                                                                                                                                                                                                                                                                       | Status        | Notes                                                                                                                                                                         |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Provide information on the Town website about CT DEEP training and information around small business chemical management for hazard resilience.                                                                                                                                                                                                                              | Remove        | State pushed this action onto municipalities 5 years ago. Potential for regional action or discarded                                                                          |
| 2 | 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.                                                                                                                                                | Remove        | State pushed this action onto municipalities 5 years ago. Potential for regional action or discarded                                                                          |
| 3 | Host a CT DEEP presentation for municipal staff and local businesses about business chemical management for hazard resilience.                                                                                                                                                                                                                                               | Remove        | State pushed this action onto municipalities 5 years ago. Potential for regional action or discarded                                                                          |
| 4 | 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. | Carry Forward | Depends on municipality's existing desire to maintain Sustainable CT status. Currently silver status, was bronze before. Sustainable CT done but need POCD update (2020 POCD) |
| 5 | Collaborate with CIRCA on the "Resilient Connecticut" project                                                                                                                                                                                                                                                                                                                | Capability    | Sounds like a capability                                                                                                                                                      |

| #  | Action                                                                                                                                                                                                                                                              | Status        | Notes                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6  | 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.                                                       | Remove        | State pushed this action onto municipalities 5 years ago. Potential for regional action or discarded                                                                                                                                                                                                                                                                                                                        |
| 7  | Ensure that the appropriate municipal personnel are trained in flood damage prevention methods by becoming a CAFM member, and/or by attending DEEP, FEMA-deployed, or CAFM trainings.                                                                               | Capability    | Unclear if there is still a need for this as a specific action - but the Town has the ability to attend trainings                                                                                                                                                                                                                                                                                                           |
| 8  | 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.                                                                                             | Carry Forward | Did not happen - "to or above BFE"                                                                                                                                                                                                                                                                                                                                                                                          |
| 9  | Increase Substantial Damage and Substantial Improvement lookback periods to two or more years.                                                                                                                                                                      | Carry Forward | Did not happen - no lookback period                                                                                                                                                                                                                                                                                                                                                                                         |
| 10 | Compare local floodplain regulations with Revised State Model Flood Regulations to identify any remaining opportunities for improvement                                                                                                                             | Carry Forward |                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 11 | Require consideration of the most recent Northeast Regional Climate Center rainfall statistics ( <a href="http://precip.eas.cornell.edu">precip.eas.cornell.edu</a> ) when developing alternatives for culvert and bridge replacement designs and sizes.            | Capability    | These are out of date; NOAA Atlas 14 is the new standard, and NOAA Atlas 15 is on the way. A couple of years ago the Town was told by DEEP that they needed to make improvements to a dam based on changing precipitation statistics. DEEP/NRCS wanted them to either do \$8 million repairs or they could let the agencies remove the dam for free. Town did not want to do it because flooding would be worse downstream. |
| 12 | 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. | Remove        | This could be a regional action through WestCOG. RLPs on Wooster Street, Gilbert, etc. There is local concern about RLPs in inland communities getting dead-ended because these buildings aren't prioritized for inland communities.                                                                                                                                                                                        |

| #  | Action                                                                                                                                                                                                                                                                       | Status                       | Notes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13 | Require a new town grant coordinator (see Grant Coordinator action) work with ACOE and NYCDEP to support flood mitigation and channel improvements along the Titicus River.                                                                                                  | Carry Forward with Revisions | Town is mixed on having a full-time grant writer - may not be enough work for them. Grant work generally lies with Jake. Relatively successful at getting grants through STEAP. A grant coordinator could help with administration. But DEEP grants are very competitive and difficult to get (and administer). Hoping to approve a property acquisition gift soon that could result in acquisition of a "breached" dam that would allow the Town to restore the dam for some flood mitigation in the future that would relieve potential flooding downstream but do not mention the dam at this time.                                                                                                    |
| 14 | 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. | Remove                       | State pushed this action onto municipalities 5 years ago. Potential for regional action or discarded. Some designs done on Wooster.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 15 | Work with the State (DEEP or DEMHS), or utilize State materials, to provide technical assistance regarding floodproofing to the commercial properties prone to flooding, such as Precision Brake on Route 7.                                                                 | Remove                       | Potential regional action by WestCOG. This is the area with the dam that the state was looking to remove. There are currently projects going on near precision brake to replace two bridges, the projects are designed to current standards. The question is how to mitigate flooding along Branchville Road and Route 7 - probably need to add more storage to the existing dams as opposed to removing dams. One of the dams is Taylor Pond (built to hold water back during flooding). There is a push from environmental groups to remove dams. Lots of factors to consider. Other dams in town that may provide flood control are "WindWing" and Shadow Lake - There are other projects in the queue |
| 16 | Coordinate with CT DEEP to include dam failure inundation areas in the CT Alert emergency notification system contact database.                                                                                                                                              | Carry Forward with Revisions | Potential WestCOG coordination                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 17 | Complete the ongoing drainage study of the Downtown area and implement recommendations of that study to mitigate flood damage in the neighborhood.                                                                                                                           | Carry Forward with Revisions | Still in design, but some projects completed. \$113,000. Needs some more effort /'design around the Middle School. Going to need a grant to correct the situation at the condominium site. Jake will send link to stormwater page with a list of projects for more understanding.                                                                                                                                                                                                                                                                                                                                                                                                                         |

| #  | Action                                                                                                                     | Status                       | Notes                                                                                                                                                                                                                                                                                                                    |
|----|----------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 18 | Conduct a feasibility study for microgrids at the high school / middle school complex and Town Hall / EOC/ Fire Department | Carry Forward with Revisions | 1/3 of power is generated by solar at this complex. Three of these have generators. They looked at this 10 years ago at the high school and never got far with it. Cost prohibitive and not pursued against other projects. Possibility of a fuel cell installation and/or battery storage at sites - depending on costs |
| 19 | Work with CT DEEP to validate and/or correct the RL list and update the mitigation status of each listed property.         | Remove                       | Potential regional action by WestCOG                                                                                                                                                                                                                                                                                     |
| 20 | Conduct a study to identify flood risk reduction alternatives for Wilton Road East.                                        | Carry Forward                | Potential consolidation of these studies. In downtown district                                                                                                                                                                                                                                                           |
| 21 | Conduct a study to identify flood risk reduction alternatives for Rowland Lane.                                            | Carry Forward                | Pursuing DEEP grant (Long Island Ecosystems Grant) - this is related to the Downtown area study above (17)                                                                                                                                                                                                               |
| 22 | Conduct a study to identify flood risk reduction alternatives for Oreneca Road.                                            | Carry Forward                |                                                                                                                                                                                                                                                                                                                          |
| 23 | Conduct a study to identify flood risk reduction alternatives for Rippowam Road.                                           | Carry Forward                |                                                                                                                                                                                                                                                                                                                          |
| 24 | Conduct a study to identify flood risk reduction alternatives for Wooster Street.                                          | Carry Forward                | This is under design                                                                                                                                                                                                                                                                                                     |
| 25 | Conduct a study to identify flood risk reduction alternatives for Spring Valley Road.                                      | Completed                    | Mitigation has been installed and more will be added next year                                                                                                                                                                                                                                                           |
| 26 | Conduct a study to identify flood risk reduction alternatives for Ledges Road.                                             | Carry Forward                |                                                                                                                                                                                                                                                                                                                          |
| 27 | Conduct a study to identify flood risk reduction alternatives for New Road at Route 7.                                     | Carry Forward                |                                                                                                                                                                                                                                                                                                                          |
| 28 | Conduct a study to identify flood risk reduction alternatives for Portland Avenue.                                         | Completed                    | Under construction next year                                                                                                                                                                                                                                                                                             |
| 29 | Conduct a study to identify flood risk reduction alternatives for South Street.                                            | Carry Forward                | This is more about pipe restoration (collapsed pipes) and removing obstruction than flood risk reduction                                                                                                                                                                                                                 |
| 30 | Annually conduct an emergency operations exercise for a local terrorism, sabotage, or mass casualty event.                 | Capability                   | This may be a capability if the Town already participates in DEMHS's annual drill. They work a lot with Region 5 on drills.                                                                                                                                                                                              |

| #  | Action                                                                                                                                                                                     | Status                       | Notes                                                                                                                                                                          |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 31 | Pursue funding for home elevations and or acquisitions should any residents become interested. The home along Wooster Street near the Titicus River may be a good candidate for elevation. | Carry Forward with Revisions | Ultimately they were not eligible for funding. Could work with WestCOG's assistance on a general action                                                                        |
| 32 | Develop a grant coordinator position within the town.                                                                                                                                      | Remove                       | see above                                                                                                                                                                      |
| 33 | Replace the North Bridge and the Florida Hill Bridge at the Norwalk River if application of the Northeast Regional Climate Center guidance demonstrates a benefit from doing so.           | Carry Forward                | Revise for updated rainfall data? This is on the list for evaluation but there are other bridges ahead of it. Lower priority. A new bridge assessment might happen in 3 years. |

#### 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.

## APPENDIX A

### Appendix A: STAPLEE Matrix

| Action # | Action Description                                                                                                                                                                                                                                                                               | Responsible Entity | Cost Range     | Funding Sources  | Timeframe                                           | Community Priority | Type of Action | Hazard   | Social Benefit | Social Cost | Technical Benefit | Technical Cost | Admin Benefit | Admin Cost | Political Benefit | Political Cost | Legal Benefit | Legal Cost | Economic Benefit | Economic Cost | Environ. Benefit | Environ. Cost | STAPLEE Score |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------------|------------------|-----------------------------------------------------|--------------------|----------------|----------|----------------|-------------|-------------------|----------------|---------------|------------|-------------------|----------------|---------------|------------|------------------|---------------|------------------|---------------|---------------|
| RFD-01   | Compare local floodplain regulations with Revised State Model Flood Regulations to identify opportunities for improved consistency when adopting the new FEMA maps for the Saugatuck, Southwestern CT, and Housatonic studies. Ensure that freeboard is consistent with the State Building Code. | Planning           | \$0 - \$25,000 | Operating Budget | 2026 or when directed by the State NFIP Coordinator | High               | Prevention     | Flooding | 1              | 0           | 1                 | 0              | 1             | 0          | 1                 | 0              | 1             | 0          | 1                | 0             | 1                | 0             | 9             |

| Action # | Action Description                                                                             | Responsible Entity | Cost Range     | Funding Sources   | Timeframe                                           | Community Priority | Type of Action | Hazard   | Social Benefit | Social Cost | Technical Benefit | Technical Cost | Admin Benefit | Admin Cost | Political Benefit | Political Cost | Legal Benefit | Legal Cost | Economic Benefit | Economic Cost | Environ. Benefit | Environ. Cost | STAPLEE Score |
|----------|------------------------------------------------------------------------------------------------|--------------------|----------------|-------------------|-----------------------------------------------------|--------------------|----------------|----------|----------------|-------------|-------------------|----------------|---------------|------------|-------------------|----------------|---------------|------------|------------------|---------------|------------------|---------------|---------------|
| RFD-02   | Increase Substantial Damage and Substantial Improvement lookback periods to two or more years. | Plannin g          | \$0 - \$25,000 | Operatin g Budget | 2026 or when directed by the State NFIP Coordinator | Med                | Prevention     | Flooding | 0              | 0           | 1                 | 0              | 1             | 0          | 0                 | 0              | 1             | 0          | 0                | 0             | 1                | 0             | 5             |

| Action # | Action Description                                                                                                                                                                                                                                                                                                                                               | Responsible Entity | Cost Range     | Funding Sources                                       | Timeframe | Community Priority | Type of Action         | Hazard           | Social Benefit | Social Cost | Technical Benefit | Technical Cost | Admin Benefit | Admin Cost | Political Benefit | Political Cost | Legal Benefit | Legal Cost | Economic Benefit | Economic Cost | Environ. Benefit | Environ. Cost | STAPLEE Score |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------------|-------------------------------------------------------|-----------|--------------------|------------------------|------------------|----------------|-------------|-------------------|----------------|---------------|------------|-------------------|----------------|---------------|------------|------------------|---------------|------------------|---------------|---------------|
| RFD-03   | Take one of the following actions that will mitigate natural hazard risks while meeting Sustainable CT objectives: Disseminate toolkit for 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 the next POCD update in 2029-2030 | BOS                | \$0 - \$25,000 | Operating Budget, Sustainable CT Community Match Fund | 2029-2030 | High               | More than one category | Multiple Hazards | 1              | 0           | 1                 | 0              | 1             | 1          | 0                 | 0              | 0             | 0          | 1                | 0             | 1                | 0             | 6             |

| Action # | Action Description                                                                                                                                            | Responsible Entity | Cost Range     | Funding Sources                                                  | Timeframe                                    | Community Priority | Type of Action         | Hazard           | Social Benefit | Social Cost | Technical Benefit | Technical Cost | Admin Benefit | Admin Cost | Political Benefit | Political Cost | Legal Benefit | Legal Cost | Economic Benefit | Economic Cost | Environ. Benefit | Environ. Cost | STAPLEE Score |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------------|------------------------------------------------------------------|----------------------------------------------|--------------------|------------------------|------------------|----------------|-------------|-------------------|----------------|---------------|------------|-------------------|----------------|---------------|------------|------------------|---------------|------------------|---------------|---------------|
| RFD-04   | As the opportunity arises, collaborate with CIRCA on the "Resilient Connecticut" project to advance further study in areas with flood and extreme heat risks. | BOS                | \$0 - \$25,000 | Operating Budget plus CIRCA funds from State and Federal sources | 2028-2030                                    | Low                | More than one category | Multiple Hazards | 1              | 0           | 1                 | 0              | 1             | 1          | 1                 | 0              | 0             | 0          | 1                | 0             | 1                | 0             | 7             |
| RFD-05   | Continue to participate in the WestCOG program that provides outreach to repetitive loss property owners.                                                     | BOS                | \$0 - \$25,000 | Operating Budget and COG general services budgets                | Annually in 2026, 2027, 2028, 2029, and 2030 | Med                | Property Protection    | Flooding         | 1              | 0           | 1                 | 0              | 1             | 0          | 1                 | 0              | 0             | 0          | 1                | 0             | 1                | 0             | 8             |

| Action # | Action Description                                                                                                                          | Responsible Entity | Cost Range            | Funding Sources                                   | Timeframe                                    | Community Priority | Type of Action      | Hazard   | Social Benefit | Social Cost | Technical Benefit | Technical Cost | Admin Benefit | Admin Cost | Political Benefit | Political Cost | Legal Benefit | Legal Cost | Economic Benefit | Economic Cost | Environ. Benefit | Environ. Cost | STAPLEE Score |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------|---------------------------------------------------|----------------------------------------------|--------------------|---------------------|----------|----------------|-------------|-------------------|----------------|---------------|------------|-------------------|----------------|---------------|------------|------------------|---------------|------------------|---------------|---------------|
| RFD-06   | Coordinate with WestCOG to identify potential candidates for home elevations and acquisitions and pursue funding to support these projects. | BOS                | \$100,000 - \$500,000 | Capital Improve ment Plan, FEMA HMA               | Annually in 2026, 2027, 2028, 2029, and 2030 | Med                | Property Protection | Flooding | 0              | 0           | 1                 | 0              | 1             | 1          | 1                 | 0              | 1             | 0          | 1                | 0             | 1                | 0             | 7             |
| RFD-07   | Work with WestCOG to update the mitigation status of repetitive loss properties.                                                            | Planning           | \$0 - \$25,000        | Operating Budget and COG general services budgets | 2029                                         | Med                | Property Protection | Flooding | 1              | 0           | 1                 | 0              | 1             | 0          | 1                 | 0              | 0             | 0          | 1                | 0             | 1                | 0             | 8             |

| Action # | Action Description                                                                                                                          | Responsible Entity | Cost Range          | Funding Sources  | Timeframe | Community Priority | Type of Action                    | Hazard               | Social Benefit | Social Cost | Technical Benefit | Technical Cost | Admin Benefit | Admin Cost | Political Benefit | Political Cost | Legal Benefit | Legal Cost | Economic Benefit | Economic Cost | Environ. Benefit | Environ. Cost | STAPLEE Score |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------|------------------|-----------|--------------------|-----------------------------------|----------------------|----------------|-------------|-------------------|----------------|---------------|------------|-------------------|----------------|---------------|------------|------------------|---------------|------------------|---------------|---------------|
| RFD-08   | Coordinate with CT DEEP and WestCOG to include dam failure inundation areas in the CT Alert emergency notification system contact database. | EMD                | \$25,000 - \$50,000 | Operating Budget | 2027      | Med                | Preparedness & Emergency Response | Dam-Related Concerns | 1              | 0           | 1                 | 0              | 1             | 1          | 0                 | 0              | 1             | 0          | 0                | 0             | 1                | 0             | 5             |
| RFD-09   | Coordinate with ACOE and NYCDEP to support flood mitigation and channel improvements along the Titicus River.                               | DPW, BOS           | \$25,000 - \$50,000 | Operating Budget | 2027-2029 | Low                | Structural Projects               | Flooding             | 1              | 0           | 1                 | 0              | 1             | 1          | 1                 | 0              | 1             | 0          | 1                | 1             | 1                | 0             | 6             |

| Action # | Action Description                                                                                                                                                                                                          | Responsible Entity | Cost Range            | Funding Sources                         | Timeframe | Community Priority | Type of Action      | Hazard   | Social Benefit | Social Cost | Technical Benefit | Technical Cost | Admin Benefit | Admin Cost | Political Benefit | Political Cost | Legal Benefit | Legal Cost | Economic Benefit | Economic Cost | Environ. Benefit | Environ. Cost | STAPLEE Score |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------|-----------------------------------------|-----------|--------------------|---------------------|----------|----------------|-------------|-------------------|----------------|---------------|------------|-------------------|----------------|---------------|------------|------------------|---------------|------------------|---------------|---------------|
| RFD-10   | Complete the ongoing drainage study of the Downtown area, with particular need around the Middle School and the condominium site, and implement recommendations of that study to mitigate flood damage in the neighborhood. | DPW                | \$100,000 - \$500,000 | Operating Budget, DCRF, FEMA HMA, STEAP | 2026-2028 | High               | Structural Projects | Flooding | 1              | 0           | 1                 | 0              | 1             | 1          | 1                 | 0              | 1             | 0          | 1                | 1             | 1                | 0             | 6             |
| RFD-11   | Conduct a study to identify flood risk reduction alternatives for Wilton Road East.                                                                                                                                         | DPW                | \$100,000 - \$500,000 | Operating Budget, DCRF, FEMA HMA, STEAP | 2028-2030 | Med                | Structural Projects | Flooding | 1              | 0           | 1                 | 0              | 1             | 1          | 1                 | 0              | 1             | 0          | 1                | 1             | 1                | 0             | 6             |

| Action # | Action Description                                                               | Responsible Entity | Cost Range            | Funding Sources                         | Timeframe | Community Priority | Type of Action      | Hazard   | Social Benefit | Social Cost | Technical Benefit | Technical Cost | Admin Benefit | Admin Cost | Political Benefit | Political Cost | Legal Benefit | Legal Cost | Economic Benefit | Economic Cost | Environ. Benefit | Environ. Cost | STAPLEE Score |
|----------|----------------------------------------------------------------------------------|--------------------|-----------------------|-----------------------------------------|-----------|--------------------|---------------------|----------|----------------|-------------|-------------------|----------------|---------------|------------|-------------------|----------------|---------------|------------|------------------|---------------|------------------|---------------|---------------|
| RFD-12   | Conduct a study to identify flood risk reduction alternatives for Rowland Lane.  | DPW                | \$100,000 - \$500,000 | Operating Budget, DCRF, FEMA HMA, STEAP | 2028-2030 | Med                | Structural Projects | Flooding | 1              | 0           | 1                 | 0              | 1             | 1          | 1                 | 0              | 1             | 0          | 1                | 1             | 1                | 0             | 6             |
| RFD-13   | Conduct a study to identify flood risk reduction alternatives for Oreneca Road.  | DPW                | \$100,000 - \$500,000 | Operating Budget, DCRF, FEMA HMA, STEAP | 2028-2030 | Med                | Structural Projects | Flooding | 1              | 0           | 1                 | 0              | 1             | 1          | 1                 | 0              | 1             | 0          | 1                | 1             | 1                | 0             | 6             |
| RFD-14   | Conduct a study to identify flood risk reduction alternatives for Rippowam Road. | DPW                | \$100,000 - \$500,000 | Operating Budget, DCRF, FEMA HMA, STEAP | 2028-2030 | Med                | Structural Projects | Flooding | 1              | 0           | 1                 | 0              | 1             | 1          | 1                 | 0              | 1             | 0          | 1                | 1             | 1                | 0             | 6             |

| Action # | Action Description                                                                     | Responsible Entity | Cost Range            | Funding Sources                         | Timeframe | Community Priority | Type of Action      | Hazard   | Social Benefit | Social Cost | Technical Benefit | Technical Cost | Admin Benefit | Admin Cost | Political Benefit | Political Cost | Legal Benefit | Legal Cost | Economic Benefit | Economic Cost | Environ. Benefit | Environ. Cost | STAPLEE Score |
|----------|----------------------------------------------------------------------------------------|--------------------|-----------------------|-----------------------------------------|-----------|--------------------|---------------------|----------|----------------|-------------|-------------------|----------------|---------------|------------|-------------------|----------------|---------------|------------|------------------|---------------|------------------|---------------|---------------|
| RFD-15   | Conduct a study to identify flood risk reduction alternatives for Wooster Street.      | DPW                | \$100,000 - \$500,000 | Operating Budget, DCRF, FEMA HMA, STEAP | 2028-2030 | Med                | Structural Projects | Flooding | 1              | 0           | 1                 | 0              | 1             | 1          | 1                 | 0              | 1             | 0          | 1                | 1             | 1                | 0             | 6             |
| RFD-16   | Conduct a study to identify flood risk reduction alternatives for Ledges Road.         | DPW                | \$100,000 - \$500,000 | Operating Budget, DCRF, FEMA HMA, STEAP | 2030-2031 | Low                | Structural Projects | Flooding | 1              | 0           | 1                 | 0              | 1             | 1          | 1                 | 0              | 1             | 0          | 1                | 1             | 1                | 0             | 6             |
| RFD-17   | Conduct a study to identify flood risk reduction alternatives for New Road at Route 7. | DPW                | \$100,000 - \$500,000 | Operating Budget, DCRF, FEMA HMA, STEAP | 2030-2031 | Med                | Structural Projects | Flooding | 1              | 0           | 1                 | 0              | 1             | 1          | 1                 | 0              | 1             | 0          | 1                | 1             | 1                | 0             | 6             |

| Action # | Action Description                                                                                                                                                               | Responsible Entity | Cost Range            | Funding Sources                           | Timeframe | Community Priority | Type of Action      | Hazard   | Social Benefit | Social Cost | Technical Benefit | Technical Cost | Admin Benefit | Admin Cost | Political Benefit | Political Cost | Legal Benefit | Legal Cost | Economic Benefit | Economic Cost | Environ. Benefit | Environ. Cost | STAPLEE Score |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------|-------------------------------------------|-----------|--------------------|---------------------|----------|----------------|-------------|-------------------|----------------|---------------|------------|-------------------|----------------|---------------|------------|------------------|---------------|------------------|---------------|---------------|
| RFD-18   | Conduct a study to identify flood risk reduction alternatives for South Street.                                                                                                  | DPW                | \$100,000 - \$500,000 | Operating Budget, DCRF, FEMA HMA, STEAP   | 2030-2031 | Med                | Structural Projects | Flooding | 1              | 0           | 1                 | 0              | 1             | 1          | 1                 | 0              | 1             | 0          | 1                | 1             | 1                | 0             | 6             |
| RFD-19   | Replace the North Bridge and the Florida Hill Bridge at the Norwalk River if application of the Northeast Regional Climate Center guidance demonstrates a benefit from doing so. | DPW                | >\$1M                 | Operating Budget, FEMA HMA, STEAP, LOTCIP | 2030-2031 | Med                | Structural Projects | Flooding | 1              | 0           | 1                 | 0              | 1             | 1          | 1                 | 0              | 1             | 0          | 1                | 1             | 1                | 0             | 6             |

| Action # | Action Description                                                                                                                                            | Responsible Entity | Cost Range            | Funding Sources                       | Timeframe | Community Priority | Type of Action                    | Hazard      | Social Benefit | Social Cost | Technical Benefit | Technical Cost | Admin Benefit | Admin Cost | Political Benefit | Political Cost | Legal Benefit | Legal Cost | Economic Benefit | Economic Cost | Environ. Benefit | Environ. Cost | STAPLEE Score |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------|---------------------------------------|-----------|--------------------|-----------------------------------|-------------|----------------|-------------|-------------------|----------------|---------------|------------|-------------------|----------------|---------------|------------|------------------|---------------|------------------|---------------|---------------|
| RFD-20   | Conduct a feasibility study for fuel cell installation and or/battery storage at the high school / middle school complex and Town Hall / EOC/ Fire Department | BOS                | \$100,000 - \$500,000 | Capital Improvement Plan, STEAP, DCRF | 2028-2029 | Low                | Preparedness & Emergency Response | All Hazards | 1              | 0           | 1                 | 0              | 1             | 1          | 1                 | 0              | 1             | 0          | 1                | 1             | 0                | 0             | 5             |
| RFD-21   | Work with Aquarion Water Company to enforce mandatory twice-per-week irrigation schedule.                                                                     | BOS                | \$0 - \$25,000        | Operating Budget                      | 2027-2031 | Low                | Education & Awareness             | Drought     | 1              | 0           | 1                 | 0              | 1             | 1          | 0                 | 0              | 0             | 0          | 0                | 0             | 1                | 0             | 4             |