



24 Plainville

Community Overview

Plainville encompasses 9.7 square miles of land and is home to 17,716 residents (2010 census); a population density of 1,826 people per square mile. Plainville has suburban and rural areas as well as urban elements. Development is concentrated in the west-central region of Town. New residential development has continued slowly in recent years, and redevelopment of commercial and industrial properties has also occurred. Approximately 120 acres are available for industrial development, and approximately 1,000 acres are available for residential development; much of this is constrained by shallow bedrock such that the actual acreage may be less.

Elevation ranges from 170 to 660 feet. Most of the land drains to the Quinnipiac River or the Pequabuck River; small portions of the northeast corner and southeast corners of town drain to Bass Brook and Willow Brook, respectively. Another notable stream in Plainville is Trout Brook.

Major transportation routes through Town include Interstate 84 and Routes 72, 10, 177, and 372. The town lies at the intersection of two freight rail lines, one running north from New Haven and the other running east-west between Waterbury and New Britain. Plainville is home to Robertson Airport, owned by the Town. Major businesses and industries include manufacturing, construction, retail trade, and health care and social assistance. Plainville has two industrial parks: Strawberry Fields and Farmington Valley Corporate.

Critical Facilities

Critical Facilities throughout the Capitol Region are listed in Appendix B. In Plainville these include the Fire Department, Police Department (EOC), Municipal Center/Town Hall, Senior Center, Water Pollution Control facility, Belle Marie Assisted Living, Public Works Department, Plainville Senior High School (regional emergency shelter), Plainville Buildings and Grounds Department, three Senior Housing facilities, the Wheeler Elementary School, the Wheeler Clinic / Northwest Village School, an Apple Rehab long-term care facility, the Middle School of Plainville, Toffolon School, Linden Street School, Great Beginnings, Great Beginnings II, Plainville Public Library, Congregational Church / Plainville Early Learning Center, and ten pumping stations.

Table 24-1: Critical Facilities, Plainville

Facility	Shelter	Generator
Fire Department		X
Police Department (EOC)		
Municipal Center/Town Hall		Limited
Senior Center	Backup	Limited
Water Pollution Control Facility		X
Belle Marie Assisted Living		
Public Works Department		

Facility	Shelter	Generator
Plainville Senior High School	X	X
Plainville Buildings and Grounds		
3 Senior Housing		
Wheeler Elementary School		X
Wheeler Clinic / Northwest Village School		
Apple Rehab Long-term Care Facility		
Middle School of Plainville		X
Toffolon School		X
Linden Street School		
Great Beginnings		
Great Beginnings II		
Plainville Public Library		
Congregational Church / Plainville Early Learning Center		
10 wastewater pumping stations		X

The High School is the community’s primary shelter and acts as a regional shelter. It has a sufficient emergency generator. The Senior Center is a backup shelter but has limited backup power capabilities. The Town acquires shelter supplies whenever possible, and all shelters have been recently restocked with cots and blankets.

The wastewater treatment plant and pumping stations have backup power, as does the Fire Department. The Municipal Center has a generator that can only power part of the building. Town staff desire to upgrade the Municipal Center generator to be able to run all necessary computers and servers during an extended power outage. Wheeler Elementary School is currently undergoing a renovation that includes installation of an updated emergency generator and steam heating system.

The Police Station and EOC, and Municipal Center, are located very near the 0.2% annual chance floodplain. The Fire Station lies within the 0.2% annual chance floodplain.

Capabilities

Plainville maintains an Emergency Operations Plan, Emergency Operations Center, shelters, and warming/charging stations. The Town maintains a training program for its emergency personnel. The Town utilizes the statewide CT Alerts emergency notification system when residents need to be informed about a hazard event, and may also utilize local media, and notices left at at-risk houses when needed. The Town posts extensive hazard preparedness information on its website and has pamphlets available at the Municipal Center, the Public Library, and the Senior Center. Hazard mitigation is incorporated into the community’s Plan of Conservation and Development (POCD). POCD actions specifically address natural hazards.

The wastewater treatment plant has preparation, response, and recovery procedures in place in case of flooding, tropical storms and hurricanes, earthquakes, and other natural hazards. Sandbags are available for emergency flood protection. No major hazard mitigation projects are planned for the site.



Plainville has very strong floodplain regulations that prohibit any residential or commercial land use, or any use requiring a “substantial investment in structure or permanent equipment that could be damaged by flooding,” to occur in the floodplain. Basic agricultural and recreational uses are permitted, as well as several industrial uses with restrictions.

The Town’s 2009 Plan of Conservation and Development (POCD, 2009) emphasizes conservation of its limited open space and recommends a management plan to protect open space and land conservation beyond the 182 acres (only 2.9% of the Town of Plainville’s total land area) already designated. Over 34 additional acres within the floodplain and floodway are subject of a purchase and sales agreement; the Town hopes to close on these properties by October 2018.

The Town adopted a Low-Impact Development ordinance in 2010 and developed a manual in 2011 that details a technical framework of methods of stormwater management that can lead to improvements in stormwater quality as well as a reduction in stormwater runoff.

All new bridge and culvert construction is designed using the most recent Northeast Regional Climate Center (NRCC) rainfall return periods in accordance with December 2014 CT DOT guidance. The Town has not evaluated existing culverts in the community based on the new rainfall return periods. Drainage and flooding complaints are routed to either the Fire Department or Public Works.

Removal of the ice and snow for Plainville’s town-owned roads is handled by town workers and contractors; the town handles debris removal. Plowing routes prioritize access to critical facilities. Most tree trimming near power lines is conducted by Eversource Energy. The Town’s Superintendent of Roadways is also the Tree Warden. The Town removes dead or dangerous trees on Town property after consulting an arborist. The Town does not typically cut trees on private property. The tree maintenance budget is part of the roadway budget and is considered sufficient at this time.

Subdivision regulations require utilities in new residential developments to be installed underground, except in areas at risk of flooding; only about 10% of all utilities in town are buried at this point.

Plainville maintains mutual aid agreements with all surrounding communities for fire protection. The Town does not have any dry hydrants or cisterns, but hydrants served by public water supply exist throughout Town. Open Burning Regulations (adopted November 6, 2006) require applicants to apply to the local Open Burning Official for approval a minimum of 48 hours prior to the proposed burn. The Town has one Open Burning Official certified by the Connecticut DEEP.

The Town primarily relies on regional and statewide measures for mitigating the impacts of drought, such as the Connecticut Drought Management Plan. The local water company (Valley Water Systems) maintains an Emergency Contingency Plan that outlines drought response



procedures. The company can implement water use restrictions during a drought, though this has not occurred over the last 30 years. Valley Water Systems is a member of the Water Utility Coordinating Committee (although the Town of Plainville is not).

The Town does not currently have copies of EAPs for dams whose failure could affect the community. The Town participates in dam failure training exercises for the MDC dams. The risk due to failure of the remaining dams is believed to be relatively minor.

New Capabilities

Plainville adopted updated floodplain regulations in March, 2018.

The recently completed Pequabuck River Flooding Study was commissioned by Plainville in partnership with Bristol and Plymouth and made possible by a \$200,000 grant from the Economic Development Administration. The study included major revisions to the hydrology and hydraulics originally used to generate the special flood hazard area for the river and identified measures to reduce the impact of flooding. Specific recommendations from the study have been incorporated into the Hazard Mitigation Plan (HMP). Plainville has not used the results of the study to apply to FEMA for map revisions.

FEMA has recently completed updated mapping of Quinnipiac River flood zones; this has led to changes in the flood risk status of over 50 properties. The Town has worked with affected members of the community and with banks to help them interpret changes and understand the impacts.

Thirteen properties at risk of flooding on Robert Street Extension and Forestville Avenue have been acquired and demolished since adoption of the 2016-2021 Hazard Mitigation Plan for the Former Central Connecticut Region ("2016 HMP"), bringing the total number to 26 since 2011. Two residential homes and one structure, owned by the Town, remains.

The Town POCD will be updated within the next couple of years; an RFP to complete the update was posted in 2018.

The Town has improved its GIS capabilities to assist with emergency response and preparedness.

Plainville Planning Office undertook a Town-wide awareness effort following the most recent update of the FEMA Flood Insurance Rate Maps.

Challenges

Challenges Overview

The top three natural hazards that present a high risk to Plainville are flooding, winter storms, and tropical storms/hurricanes.



A number of structures are within the Pequabuck River floodplain in the downtown area, particularly in the vicinity of Robert Street Extension, the wastewater treatment facility, West Main Street, Forestville Avenue (Route 372), Cronk Road, and Norton Place Extension. The wastewater treatment facility is subject to flooding under extreme conditions; it is a gravity-operated plant built in the 1940s. There is concern that a major flood event on the Pequabuck River could wash out an essential bridge, isolating one side of Plainville from the other.

The Quinnipiac River floods frequently as well. Flooding due to insufficient drainage is a problem in some areas near the Quinnipiac; even slight flooding of the Quinnipiac can cause backups in the sewer and storm water systems.

The primary problem from tropical storms and hurricanes is downed trees that interrupt power supply and hinder egress through neighborhoods. Secondary impacts are generally caused by heavy rainfall accompanying the storm. Tornadoes and thunderstorms are typically less damaging than tropical storms or hurricanes but cause similar problems.

Wildfires in Plainville are very rare. They have typically occurred along the ridgelines near the edge of Plainville along former logging cuts. The greatest areas of concern are those that do not have public water service and have limited access; these are located near Bradley Mountain on the southeast side of Plainville, and the northeast corner of town from the ridgeline with Pinnacle Rock east to Interstate 84. One- to two-acre fires have occurred near Pinnacle Rock.

Approximately 10 dams could affect the Town of Plainville with their failure. Two class C dams are located in Town; although several other Class C dams are located upstream in Bristol and Plymouth, the failure of these dams are not expected to cause inundation that would significantly affect Plainville. The two Class C dams in Plainville are listed in the table below.

Table 24-2: Summary of Dams Whose Failure Could Significantly Impact Plainville.

Dam Name	Hazard Class	Dam Use	Dam Condition	Owner	Downstream Watercourse
Hogback (Goodwin) Dam	C	Hydropower	Satisfactory	Metropolitan District Commission	West Branch Farmington River
Saville Dam (Barkhamsted Reservoir)	C	Water Supply	Good	Metropolitan District Commission	East Branch Farmington River

Municipal officials note that numerous dams in the CT DEEP geospatial database appear to be inaccurately located or no longer in existence. The Fleetwood Arms Dam impoundment has been filled and retains a limited amount of water in wetlands adjacent to the channel. Hamlin Pond dam is located about a quarter mile downstream of where the CT DEEP map places it. The Norton Park Dam was previously associated with a swimming pond located within Norton



Park; the pond has been replaced with a modern swimming pool that is no longer connected to the stream, and that dam no longer exists¹.

Hazard Losses

The economic losses faced by Plainville from natural hazards can be estimated by reviewing historic, and modeling future, loss figures. Loss estimates are summarized below.

Historic FEMA Payments

FEMA reimburses communities for hazard losses through programs including Public Assistance (PA) and the National Flood Insurance Program (NFIP). Combining PA and private flood insurance payments can give an estimate for total losses to a community.

The NFIP has paid 81 property damage claims in the community as of August 2017, totaling \$991,751. Plainville has 23 RL property claims to date from seven RL properties totaling \$319,075.

Total PA reimbursements to the community were as follows:

- Flood Events: \$41,427 (\$2,180 annually)
- Hurricane Events: \$45,520 (\$2,396 annually)
- Winter Storm Events: \$1,046,532 (\$55,081 annually)

These are summarized in the tables below.

Table 24-3: Flood Event PA Reimbursements, Plainville

Incident	Sep 1999	Oct 2005
Declaration	9/23/1999	12/16/2005
Disaster No.	1302	1619
Entity	FEMA PA Reimbursement	
State	\$822	\$1,019
Municipal	\$39,586	\$0
Nonprofit	\$0	\$0
Total	\$40,408	\$1,019
Annualized	\$2,127	\$54

¹¹ It is possible the dam mapped by CT DEEP was associated with another historical impoundment located a quarter mile south of the mapped location. This pond still exists but no dam structure remains.



Table 24-4: Hurricane Wind Event PA Reimbursements, Plainville

Incident	Aug - Sep 2011 (T.S. Irene)
Declaration	9/2/2011
Disaster #	4023
Entity	FEMA PA Reimbursement
State	\$779
Municipal	\$44,741
Nonprofit	\$0
Total	\$45,520
Annualized	\$2,396

Table 24-5: Winter Storm PA Reimbursements, Plainville

Incident	Mar 2003	Dec 2003	Jan 2005	Feb 2006	Jan 2011	Oct 2011	Feb 2013
Declaration	3/11/03	1/15/04	2/17/05	5/2/06	3/3/11	11/17/11	3/21/13
Disaster #	3176	3192	3200	3266	1958	4046	4106
Entity	FEMA PA Reimbursement						
State	\$15,361	\$13,770	\$18,167	\$22,051	\$19,212	\$7,923	\$37,337
Municipal	\$47,475	\$36,883	\$57,399	\$67,252	\$61,031	\$495,400	\$139,330
Nonprofit	\$0	\$0	\$0	\$0	\$3,376	\$3,001	\$1,565
Total	\$62,836	\$50,654	\$75,566	\$89,302	\$83,619	\$506,324	\$178,231
Annualized	\$3,307	\$2,666	\$3,977	\$4,700	\$4,401	\$26,649	\$9,381

National Centers for Environmental Information Losses

The National Centers for Environmental Information (NCEI) severe storm database was reviewed for hazards that have impacted Plainville. No hazards were specifically noted as having impacted the community since 2012, though they did impact Hartford County and nearby towns. NCEI losses are reported in Section II of this Plan.

HAZUS-MH Losses

CRCOG used FEMA’s Hazus-MH model to analyze the risks that the community might face from flooding, hurricanes, and earthquakes. The model estimates economic losses due to damage to buildings and building contents, as well as other economic disruptions. Both residential and commercial structures are addressed. Losses from different hazards are summarized below. Where available, estimates from the previous and current versions of the HMP are provided side-by-side; differences between the two may have been caused by a combination of the following:

- Changes in methodology: such as hazard zone mapping
- Changes in data: such as population and property values
- Changes in the model: this HMP utilized Hazus-MH version 4.0 rather than 2.1
- Other factors: inherent in a complex software like Hazus-MH



Table 24-6: Estimated Damages to Plainville from a 1% Annual-Chance Flood

Loss Type	2014 Results	2018 Results
Households Displaced	667	267
People Needing Shelter	1,297	352
Buildings at Least Moderately Damaged	61	0
Economic Losses		
Residential Building & Content Losses	\$34,290,000	\$15,482,185
Other Building & Content Losses	\$59,870,000	\$27,398,361
Total Building & Content Loss	\$94,160,000	\$42,880,546
Total Business Interruption Losses	\$480,000	\$1,888,879
TOTAL	\$94,640,000	\$44,769,425

Table 24-7: Estimated Damages to Plainville from a 1% Annual-Chance Hurricane

Loss Type	2014 Results (1938 event)	2018 Results (1% track)
Buildings at Least Moderately Damaged	2,497	1
Buildings Completely Damaged	27	0
Total Debris Generated	171,080	787
Truckloads (at 25 tons/truck) of building debris	6,843	31
Economic Losses		
Residential Building & Content Losses	\$54,967,720	\$3,290,629
Other Building & Content Losses	\$17,106,210	\$111,815
Total Building & Content Loss	\$72,073,930	\$3,402,444
Total Business Interruption Losses	\$2,320,940	\$17,946
TOTAL LOSSES	\$74,394,870	\$3,420,390

Losses were calculated from a modeled probabilistic earthquake (1% annual-chance of occurrence), as well as for four specific scenarios with epicenters around Connecticut.

Table 24-8: Estimated Damages to Plainville from a Probabilistic Earthquake

Loss Type	2018 Results
Wage Loss	\$3,490
Rent Loss	\$2,830
Relocation Loss	\$4,549
Income Loss	\$2,656
Inventory Loss	\$488
Total Business Disruption	\$14,015
Structural Loss	\$8,853
Non-Structural Loss	\$28,242
Total Building Loss	\$37,095
Total Content Loss	\$11,787
TOTAL LOSSES	\$62,897



Table 24-9: Estimated Damages to Plainville from Modeled Earthquake Scenarios

Epicenter Location	Magnitude	Estimated Total Losses
East Haddam	6.4	\$294,368.89
Haddam	5.7	\$80,314.36
Portland	5.7	\$310,017.82
Stamford	5.7	\$7,986.35

More details are available in the Multi-Jurisdictional HMP. Ultimately, changes in the loss estimates reflect the reality that small differences in hazard event features can have a significant impact on losses incurred.

Other Hazard Costs

The table below considers the impact of Severe Winter Storms on the Town of Plainville based on Winter Storm Alfred in late October 2011. Debris removal was the biggest impact, with the total municipal cost to clean up after the storm totaling nearly a half-million dollars.

Table 24-10: October 2011 Severe Winter Storm Losses for Plainville.

Impact	Estimated Losses
Number of Electrical Customers Served (2013)	9,328
Maximum Outages During Severe Winter Storm (2011)	9,278
Maximum Outages Percentage of Customers (2011)	99.46%
Number of Businesses Experiencing Outages	>100
Total Lost Wages (Daily)	\$2,012.09
Average Lost Wages (Weekly)	\$48,775.00
Miles of Local Roads Plowed by Town of Plainville	84.36
Municipal Cost (Plowing, Road Treatment, Debris Removal)	\$495,400.17

Source: Eversource, CCRPA Internal Analysis

Average Annualized Losses

Average Annualized Loss (AAL) figures are useful tools for comparison of the risks faced from different hazards with different likelihoods of occurring in a given time period. AAL estimates were prepared for each natural hazard which may impact the community based on the methodologies discussed in Section II of the Multi-Jurisdictional HMP. Dam failure, drought, tornado, and wildfire losses were sourced from the 2014 Connecticut Natural Hazard Mitigation Plan Update, with dam failure data supplemented by the National Performance of Dams Program and the Connecticut Department of Energy & Environmental Protection. Earthquake and hurricane losses were calculated in HAZUS-MH. Losses for flooding came from NFIP claims, for winter storms from Public Assistance Reimbursements, and for thunderstorms from the NCEI database. These are presented in the table below in dollars per year. Note that Hurricanes and Tropical Storms represent the largest share of total annualized losses.



Table 24-11: Average Annualized Losses, Plainville

Dam Failure	Drought	Earthquakes	Flooding	Hurricanes and Tropical Storms	Severe Winter Storms	Thunderstorms	Tornadoes	Wildfires	Total
\$32	\$0	\$62,897	\$28,279	\$1,110,590	\$55,081	\$2,353	\$259,927	\$1,805	\$1,520,963

Losses Summary

A review of the above loss estimates demonstrates that the Town of Plainville has experienced significant expenses as a result of natural hazards, and is at risk for additional losses if some of the less-frequent events were to occur. These actual and potential losses justify hazard mitigation actions to reduce losses in the future.

Mitigation Strategies and Actions

Noted Hazard Mitigation Needs

Over the course of Plan development, multiple hazard mitigation needs were noted.

- Although buildings repeatedly flood, the damage and the repairs do not meet substantial damage/substantial improvement thresholds, necessary flood mitigation improvements are not made, and the homes continue to be at risk. Lowering the substantial damage/substantial improvement threshold might help but is not believed to be politically achievable at this time.
- The Town would like to consider adopting an underground utility requirement for industrial subdivisions.
- There is concern about potential washout of an essential bridge on the Pequabuck River. The cost of setting up satellite emergency response facilities or elevating the bridge may be prohibitive, so the Town is interested in pursuing agreements with neighboring communities to respond in case of isolation.
- The Town is interested in upgrading its EOC equipment, potentially in a new building.
- Municipal staff recognize a need for more public awareness efforts.
- Plainville staff want to ensure that existing contacts with utility representatives are maintained.

Status of Previous Mitigation Strategies and Actions

The Town of Plainville reviewed the mitigation actions proposed in the 2016 HMP and determined the status of each. That information is included in the table below.



Table 24-12: Status of Previous Mitigation Strategies and Actions, Plainville

Action #	Action	Notes	Status
GOAL: REDUCE LOSSES OF LIFE AND PROPERTY, AND MINIMIZE ECONOMIC CONSEQUENCES OF NATURAL HAZARDS			
Objective 1: Update and formalize existing plans			
1.1	Adopt requirements to address the consequence of development on hillsides and steep slopes. The 2009 POCD recommends adoption of requirements to address the consequence of development in these areas, including the adoption of a two-foot contour mapping requirement to be included on the site plan for all development proposals.	No new development has occurred on significant hillsides or steep slopes. Ridgeline protection regulations already exist. The Town expects to adopt regulations promoting conservation subdivisions in R-40 areas with no sanitary sewer service, which often exist in steep-sloped areas.	Carry Forward with Revisions
1.2	Develop a watershed compact with other Pequabuck River communities. Town staff wish to develop low-impact design standards that will be adopted by each community in the watershed and enforced by inter-municipal agreement.	Pequabuck River watershed study has been completed, recommends flood mitigation actions including LID, and is available to all communities in the watershed. LID design standards have been developed and adopted by Plainfield. Other communities implement at their own discretion	Completed
1.3	Adopt a regulation requiring the installation of cisterns or dry hydrants. Although most of Plainville has public water service, fire protection in outlying areas is limited. The proposed regulation would require the installation of cisterns or dry hydrants as part of new developments where public water service will not be provided.	This action has been explored but not yet implemented as the need and authority was not agreed upon.	Carry Forward
1.4	Incorporate updated hazard mitigation information into community plan updates. Hazard mitigation information will be incorporated into future plan updates of other planning documents.	No new community plan updates have occurred since the previous HMP was adopted. Information from this Plan will be incorporated into the POCD update that will occur around 2019.	Carry Forward with Revisions
1.5	Participate in the statewide Water Utility Coordinating Committee process. The Connecticut DPH is preparing a Coordinated Water Supply Plan for the entire state beginning in 2016. The Town will participate as a non-member (or provide comments to Valley Water Systems) to encourage that drought-related public water supply needs are met throughout the community.	This action is currently underway, and is a capability.	Capability



Action #	Action	Notes	Status
1.6	Ensure local officials have most updated version of the Connecticut Drought Management Plan. The Connecticut Drought Management Plan is periodically updated. Local officials, land use commissions, health departments, fire departments, and local water utilities should all be made aware of updates to this plan.	Current Drought Management Plan is still from 2003. Local officials will be made aware of updates as they occur.	Capability
Objective 2: Increase Town capacity to plan for and simulate hazard impacts			
2.1	Improve GIS capacity to assist in emergency planning and response. The Town has GIS capacity but this capacity has not yet been fully implemented for emergency planning and response. Certain Town staff should be trained in basic GIS use, in more advanced techniques such as the use of HAZUS-MH, and attend FEMA trainings on the use of GIS in emergency planning.	Sanitary sewer, storm sewer, and fire hydrants are mapped. GIS is used on mobile tablets to locate fire hydrants. The Town has limited staff time to perform more updates but continued work on this action is desired.	Carry Forward with Revisions
2.2	Create a Community Emergency Response Team. A Community Emergency Response Team (CERT) is composed of trained volunteers who can assist in disaster preparedness and response, including staffing of emergency shelters and performing education and outreach to the public.	Town has had difficulty organizing volunteers, but will continue efforts.	Carry Forward
2.3	Develop a Pequabuck River flood response plan for dams. Several dams in the Pequabuck River watershed have spillways which can be controlled by gates. A coordinated plan to mitigate peak flows could allow for reduced flooding damage in downstream communities. Plainville would work with upstream communities and dam owners to prepare this plan for reducing downstream flooding.	Dam owners have taken steps to promote dam safety, and CT DEEP has changed its dam safety regulations. Plainville is still interested in pursuing this action.	Carry Forward with Revisions
2.4	Encourage sign-ups for the CT Alerts emergency notification system. The Town uses CT Alerts to provide a town-wide emergency notification system. Targeted mailings may be used to encourage signups in particularly vulnerable areas, such as special flood hazard areas and dam failure inundation areas.	Town uses the Everbridge Reverse 9-1-1 system and encourages sign-ups through its website. Facebook is also used for emergency alerts. Town does not feel targeted mailings are necessary at this time.	Completed
Objective 3: Improve critical infrastructure and ensure access to critical facilities			
3.1	Upgrade the generator at the Town Hall to provide full backup power to the building. The current generator at the Town Hall can only power part of the building. Many computers and servers remain inoperable during power outages.	Generator has not yet been upgraded due to funding limitations.	Carry Forward



Action #	Action	Notes	Status
3.2	Pursue structural floodproofing and elevating the walls of the open tanks at the wastewater treatment plant. The Pequabuck River Study determined that a ring levee around the plant was not feasible, but smaller-scale projects should be considered. Floodproofing part of the facility could prevent damage to interior equipment, and raising the walls of the open tanks could prevent sewage from mixing with floodwaters.	Action has not yet been taken due to funding limitations and lack of clarity about preferred flood mitigation measures. Actions will be changed to reflect the need for a study to identify and prioritize mitigation actions.	Carry Forward with Revisions
Objective 4: Enable residents to better help themselves through preparedness education			
4.1	Evaluate the effects of climate change and how to assess hazards that change over time. The Town wishes to perform a study to evaluate the effects of climate change which will assess the effects of natural hazards as they may change over time.	This action has not yet been pursued due to limited staffing and funding, and the need to pursue other priorities.	Carry Forward with Revisions
Objective 5: Mitigate impacts to properties in the National Flood Insurance Program			
5.1	Update the local floodplain management ordinance to meet or exceed current model ordinance requirements. The Town of Plainville has a strong floodplain management ordinance, but recent revisions to the NFIP have triggered national and state revisions to the model floodplain management ordinance.	Update completed by Technical Services in 2017 and adopted by the Town Council.	Completed
5.2	Survey and then acquire or elevate residential properties in the floodplain. The Town will complete or update elevation certificates for residential structures at risk of flooding and work with property owners to develop grant applications for acquisition or elevation. This activity will focus first on repetitive loss properties and then on other floodprone properties. Alternatively, the information could be used for property owners to pursue LOMAs which could potentially reduce the cost of flood insurance for this residents. If sufficient contiguous parcels are acquired, the area could be made into a municipal park.	Town has acquired and demolished 13 additional at-risk properties since the previous HMP. Town does not complete elevation certificates for privately-owned properties. Town keeps LOMAs on record.	Completed
5.3	Implement a floodproofing technical assistance program. The Town will coordinate an outreach program to commercial and industrial property owners and assist with developing benefit-cost analyses and FEMA grant applications to obtain dry floodproofing if possible. This activity will focus first on repetitive loss properties and then on other floodprone properties.	The Town does not have the experience or expertise to complete this action.	Carry Forward with Revisions



Action #	Action	Notes	Status
5.4	Remove sediment from the Pequabuck River channel to lower flood elevations. The Town will pursue removal of approximately 4,000 cubic yards of sediment upstream of the railroad crossing and west of Neal Court to reduce flood elevations in the area. This will remove nine buildings from the 1% annual chance floodplain and reduce the flood risk to an additional four buildings. A significant permitting effort may be required.	Town has not pursued this action due to funding and staff limitations. Replace with "Characterize the degree to which removal of sediment from the Pequabuck River channel will lower flood elevations. If determined to be feasible and prudent, the Town may pursue removal of approximately 4,000 cubic yards of sediment upstream of the railroad crossing and west of Neal Court. A significant permitting effort would be required."	Carry Forward with Revisions

Active Mitigation Strategies and Actions

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.

Each of the following actions has been prioritized based on FEMA guidelines, listed from highest to lowest priority, and numbered.

Action #1	
Encourage residents to register for emergency alerts to their cell phones through the Everbridge Reverse 911 system. Include links and information on the Town website and Facebook page.	
Goal	6. Improve public outreach, education, and warning systems
Category	Education & Awareness
Lead	Emergency Management
Cost	\$0 - \$10,000
Funding	Town Operating Budget
Timeframe	01/2019 - 12/2019
Priority	High

Action #2	
Enter the Sustainable CT program through Registration and review actions that can be undertaken to pursue Certification. Make progress with the actions related to hazard mitigation.	
Goal	4. Increase the use of natural, "green," or "soft" hazard mitigation measures, such as open space preservation and green infrastructure.
Category	Natural Resources Protection
Lead	Planning
Cost	\$0 - \$10,000
Funding	Town Operating Budget
Timeframe	01/2019 - 12/2019
Priority	High



Action #3

Work with upstream communities, dam owners, and CT DEEP to develop a coordinated plan to mitigate peak flows from dam releases on the Pequabuck River.

Goal	1. Minimize the impact of natural hazards on physical buildings and infrastructure
Category	Prevention
Lead	Emergency Management
Cost	\$0 - \$10,000
Funding	Town Operating Budget
Timeframe	07/2019 - 06/2020
Priority	High

Action #4

Designate a Town floodplain administrator.

Goal	3. Improve institutional awareness and understanding of natural hazard impacts and mitigation within municipal governments and other decision-making bodies
Category	Prevention
Lead	Administration
Cost	\$0 - \$10,000
Funding	Town Operating Budget
Timeframe	07/2019 - 06/2020
Priority	High

Action #5

Pursue permitting to remove sediment from the Pequabuck River channel upstream of the railroad crossing and west of Neal Court.

Goal	4. Increase the use of natural, "green," or "soft" hazard mitigation measures, such as open space preservation and green infrastructure.
Category	Natural Resources Protection
Lead	Public Works
Cost	\$10,000 - \$25,000
Funding	Town Operating Budget
Timeframe	01/2019 - 12/2020
Priority	High



Action #6

Incorporate new Hazard Mitigation priorities, based on this Plan, in the 2019/2020 update to the POCD.

Goal	2. Ensure Municipal Codes and Regulations support hazard mitigation
Category	Prevention
Lead	Planning
Cost	\$10,000 - \$25,000
Funding	Town Operating Budget / Grants
Timeframe	07/2019 - 12/2020
Priority	High

Action #7

Upgrade the generator at the Town Hall to provide full backup power to the building.

Goal	5. Improve the resilience of local and regional utilities and infrastructure using strategies including adaptation, hardening, and creating redundancies.
Category	Structural Projects
Lead	Emergency Management
Cost	\$10,000 - \$25,000
Funding	Town Operating Budget / DEMHS
Timeframe	07/2019 - 06/2021
Priority	High

Action #8

Identify unusable properties on which it would be appropriate to create detention ponds.

Goal	4. Increase the use of natural, "green," or "soft" hazard mitigation measures, such as open space preservation and green infrastructure.
Category	Prevention
Lead	Planning
Cost	\$10,000 - \$25,000
Funding	Town Operating Budget / Grants
Timeframe	07/2019 - 06/2021
Priority	High



Action #9

Provide for periodic survey of waterways to remove obstructions.

Goal	1. Minimize the impact of natural hazards on physical buildings and infrastructure
Category	Prevention
Lead	Public Works
Cost	\$10,000 - \$25,000
Funding	Town Operating Budget
Timeframe	07/2019 - 06/2021
Priority	High

Action #10

Acquire emergency generators for the Police and Fire Departments.

Goal	7. Improve the emergency response capabilities of the region and its communities
Category	Preparedness & Emergency Response
Lead	Emergency Management
Cost	\$10,000 - \$25,000
Funding	Town Operating Budget / DEMHS
Timeframe	07/2019 - 06/2021
Priority	High

Action #11

Adopt stormwater retention regulations.

Goal	2. Ensure Municipal Codes and Regulations support hazard mitigation
Category	Prevention
Lead	Planning
Cost	\$25,000 - \$50,000
Funding	Town Operating Budget
Timeframe	07/2020 - 06/2021
Priority	High

Action #12

Complete renovation of Wheeler Elementary School with a generator and steam heat.

Goal	7. Improve the emergency response capabilities of the region and its communities
Category	Structural Projects
Lead	Public Works
Cost	More than \$100,000
Funding	Town Operating Budget / Grants / DEMHS
Timeframe	07/2022 - 06/2023
Priority	High



Action #13

Purchase a tanker for the fire department to bring water to underserved areas on outskirts of town.

Goal	7. Improve the emergency response capabilities of the region and its communities
Category	Preparedness & Emergency Response
Lead	Fire Department
Cost	More than \$100,000
Funding	Grants
Timeframe	01/2022 - 12/2023
Priority	High

Action #14

Conduct outreach to local small businesses with the aim of preventing the accidental release and pollution from chemicals stored and used at their facilities during or following natural hazard events.

Goal	6. Improve public outreach, education, and warning systems
Category	Education & Awareness
Lead	Planning, in coordination with DEEP
Cost	\$0 - \$10,000
Funding	Materials & Resources Provided by CT DEEP
Timeframe	01/2019 - 12/2019
Priority	Medium

Action #15

Adopt regulations to promote conservation subdivisions in R-40 residential areas with no sanitary sewer service.

Goal	2. Ensure Municipal Codes and Regulations support hazard mitigation
Category	Prevention
Lead	Planning
Cost	\$0 - \$10,000
Funding	Town Operating Budget
Timeframe	01/2020 - 12/2020
Priority	Medium



Action #16

Assign a municipal staff-member to be a utility liaison responsible for maintaining contact with utility representatives.

Goal	5. Improve the resilience of local and regional utilities and infrastructure using strategies including adaptation, hardening, and creating redundancies.
Category	Preparedness & Emergency Response
Lead	Emergency Management
Cost	\$0 - \$10,000
Funding	Town Operating Budget
Timeframe	01/2020 - 12/2020
Priority	Medium

Action #17

Coordinate with NEMO and CRCOG to share resources and gain technical support for hazard mitigation actions involving stormwater management and public outreach, which have parallel benefits related to MS4 stormwater permit compliance.

Goal	1. Minimize the impact of natural hazards on physical buildings and infrastructure
Category	Prevention
Lead	Public Works
Cost	\$0 - \$10,000
Funding	Town Operating Budget
Timeframe	01/2020 - 12/2020
Priority	Medium

Action #18

Identify specific potential uses for GIS in emergency planning and pursue development of those capabilities.

Goal	3. Improve institutional awareness and understanding of natural hazard impacts and mitigation within municipal governments and other decision-making bodies
Category	Preparedness & Emergency Response
Lead	Planning
Cost	\$0 - \$10,000
Funding	Town Operating Budget
Timeframe	07/2020 - 06/2021
Priority	Medium



Action #19

Work with internet providers to help ensure internet remains available after storm events.

Goal	7. Improve the emergency response capabilities of the region and its communities
Category	Preparedness & Emergency Response
Lead	Emergency Management
Cost	\$0 - \$10,000
Funding	Town Operating Budget
Timeframe	07/2020 - 06/2021
Priority	Medium

Action #20

Participate in EMI courses or the seminars and annual conference held by the Connecticut Association of Flood Managers.

Goal	3. Improve institutional awareness and understanding of natural hazard impacts and mitigation within municipal governments and other decision-making bodies
Category	Education & Awareness
Lead	Planning
Cost	\$0 - \$10,000
Funding	Town Operating Budget
Timeframe	07/2019 - 06/2024
Priority	Medium

Action #21

Create lists of local resources for residents and business owners and supply that information prior to forecast hazard events.

Goal	7. Improve the emergency response capabilities of the region and its communities
Category	Preparedness & Emergency Response
Lead	Emergency Management
Cost	\$10,000 - \$25,000
Funding	Town Operating Budget
Timeframe	07/2020 - 06/2022
Priority	Medium



Action #22

Initiate a study to evaluate the effects of climate change on natural hazards in Plainville.

Goal	1. Minimize the impact of natural hazards on physical buildings and infrastructure
Category	Prevention
Lead	Planning
Cost	\$10,000 - \$25,000
Funding	Town Operating Budget / Grants
Timeframe	07/2020 - 06/2022
Priority	Medium

Action #23

Create an informational pamphlet to provide to potential floodplain developers about regulations and codes, and their reasons, relevant to developing in floodplain.

Goal	6. Improve public outreach, education, and warning systems
Category	Education & Awareness
Lead	Planning
Cost	\$10,000 - \$25,000
Funding	Town Operating Budget / Grants
Timeframe	07/2020 - 06/2022
Priority	Medium

Action #24

Create a Plainville Community Emergency Response Team (CERT).

Goal	7. Improve the emergency response capabilities of the region and its communities
Category	Preparedness & Emergency Response
Lead	Emergency Management
Cost	\$10,000 - \$25,000
Funding	Town Operating Budget / Grants / DEMHS
Timeframe	01/2020 - 12/2022
Priority	Medium

Action #25

Adopt a regulation requiring installation of cisterns or dry hydrants in new developments where public water service will not be provided.

Goal	1. Minimize the impact of natural hazards on physical buildings and infrastructure
Category	Prevention
Lead	Planning
Cost	\$10,000 - \$25,000
Funding	Town Operating Budget
Timeframe	07/2020 - 06/2022
Priority	Medium



Action #26

Expand emergency communication and notification methods to a variety of media, including radio, television, social media, and the Town Website.

Goal	6. Improve public outreach, education, and warning systems
Category	Preparedness & Emergency Response
Lead	Emergency Management
Cost	\$25,000 - \$50,000
Funding	Town Operating Budget / Grants / DEMHS
Timeframe	07/2021 - 06/2023
Priority	Medium

Action #27

Delete the floodplain overlay zone from zoning regulations and replace with an "open space preservation" overlay zone that can be applied to areas outside flood zones to limit development.

Goal	2. Ensure Municipal Codes and Regulations support hazard mitigation
Category	Prevention
Lead	Planning
Cost	\$25,000 - \$50,000
Funding	Town Operating Budget / CT DEEP
Timeframe	07/2021 - 06/2023
Priority	Medium

Action #28

Perform an assessment of in-stream structures (such as small dams) to identify and prioritize those that can be removed.

Goal	4. Increase the use of natural, "green," or "soft" hazard mitigation measures, such as open space preservation and green infrastructure.
Category	Prevention
Lead	Public Works
Cost	\$25,000 - \$50,000
Funding	Town Operating Budget / Grants / CT DEEP
Timeframe	07/2021 - 06/2023
Priority	Medium



Action #29

Develop a plan for making the wastewater treatment plant more resilient to flooding. The Pequabuck River Study determined that small-scale floodproofing projects should be considered; this plan should determine which such measures should be implemented. (Examples include structural floodproofing and elevation of the walls of the open tanks).

Goal	5. Improve the resilience of local and regional utilities and infrastructure using strategies including adaptation, hardening, and creating redundancies.
Category	Structural Projects
Lead	Public Works
Cost	\$50,000 - \$100,000
Funding	Grants
Timeframe	07/2023 - 06/2024
Priority	Medium

Action #30

Perform a town-wide drainage study to identify and prioritize culverts that need to be upsized.

Goal	5. Improve the resilience of local and regional utilities and infrastructure using strategies including adaptation, hardening, and creating redundancies.
Category	Structural Projects
Lead	Public Works
Cost	\$50,000 - \$100,000
Funding	Grants
Timeframe	07/2023 - 06/2024
Priority	Medium

Action #31

Construct a new EOC.

Goal	7. Improve the emergency response capabilities of the region and its communities
Category	Structural Projects
Lead	Emergency Management
Cost	More than \$100,000
Funding	Grants / DEMHS
Timeframe	07/2022 - 06/2024
Priority	Medium



Action #32

Reconstruct the Woodford Avenue Bridge over the Quinnipiac River at a higher elevation to allow larger flows and debris to pass through unimpeded.

Goal	1. Minimize the impact of natural hazards on physical buildings and infrastructure
Category	Structural Projects
Lead	Public Works
Cost	More than \$100,000
Funding	Grants
Timeframe	07/2022 - 06/2024
Priority	Medium

Action #33

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, including property acquisition. This should be accomplished with a letter directly mailed to each property owner.

Goal	1. Minimize the impact of natural hazards on physical buildings and infrastructure
Category	Property Protection
Lead	Planning
Cost	\$0 - \$10,000
Funding	Town Operating Budget / DEMHS
Timeframe	07/2021 - 06/2022
Priority	Low

Action #34

Have Town staff attend a FEMA or State training in basic GIS use, and/or in the use of GIS in emergency planning.

Goal	3. Improve institutional awareness and understanding of natural hazard impacts and mitigation within municipal governments and other decision-making bodies
Category	Education & Awareness
Lead	Planning
Cost	\$0 - \$10,000
Funding	Town Operating Budget
Timeframe	07/2021 - 06/2022
Priority	Low



Action #35

Develop formal agreements with neighboring communities to provide emergency assistance in case bridges are washed out by flooding and areas become isolated.

Goal	7. Improve the emergency response capabilities of the region and its communities
Category	Preparedness & Emergency Response
Lead	Emergency Management
Cost	\$0 - \$10,000
Funding	Town Operating Budget
Timeframe	01/2021 - 12/2022
Priority	Low

Action #36

Work with CT DEEP to complete a formal validation of the Repetitive Loss Property list and update the mitigation status of each listed property.

Goal	1. Minimize the impact of natural hazards on physical buildings and infrastructure
Category	Property Protection
Lead	Planning
Cost	\$10,000 - \$25,000
Funding	Town Operating Budget / CT DEEP / DEMHS
Timeframe	07/2021 - 06/2023
Priority	Low

Action #37

Coordinate with CT SHPO to conduct historic resource surveys, focusing on areas within natural hazard risk zones (such as flood or wildfire hazard zones and areas near steep slopes), to support identification of vulnerable historic properties and preparation of resiliency plans across the state. This action leverages existing resources and best practices for protection of historic and cultural resources through an ongoing statewide initiative by CT SHPO.

Goal	8. Ensure community character and social equity are addressed in mitigation activities
Category	Property Protection
Lead	Planning, in coordination with SHPO
Cost	\$10,000 - \$25,000
Funding	SHPO
Timeframe	07/2021 - 06/2023
Priority	Low



Action #38

Develop a set of informational resources to which commercial and industrial property owners interested in floodproofing can be directed. Have hard copies of the resources available at Town Hall and electronic links on the Town website.

Goal	6. Improve public outreach, education, and warning systems
Category	Education & Awareness
Lead	Planning
Cost	\$10,000 - \$25,000
Funding	Town Operating Budget / Grants
Timeframe	01/2021 - 12/2023
Priority	Low



Capitol Region Natural Hazards Mitigation Plan Update

Plainville, Connecticut

Flood Plains, Dams & Critical Facilities

Critical Facilities

-  Fire Station
-  Police Station
-  School
-  Healthcare Facility
-  State Facility
-  Town Facility
-  Waste Water Facility
-  Emergency Center
-  NRHP Buildings/Sites

Dam Hazard Class

-  BB, A, AA OR Unclassified
-  Class B - Significant Hazard
-  Class C - High Hazard

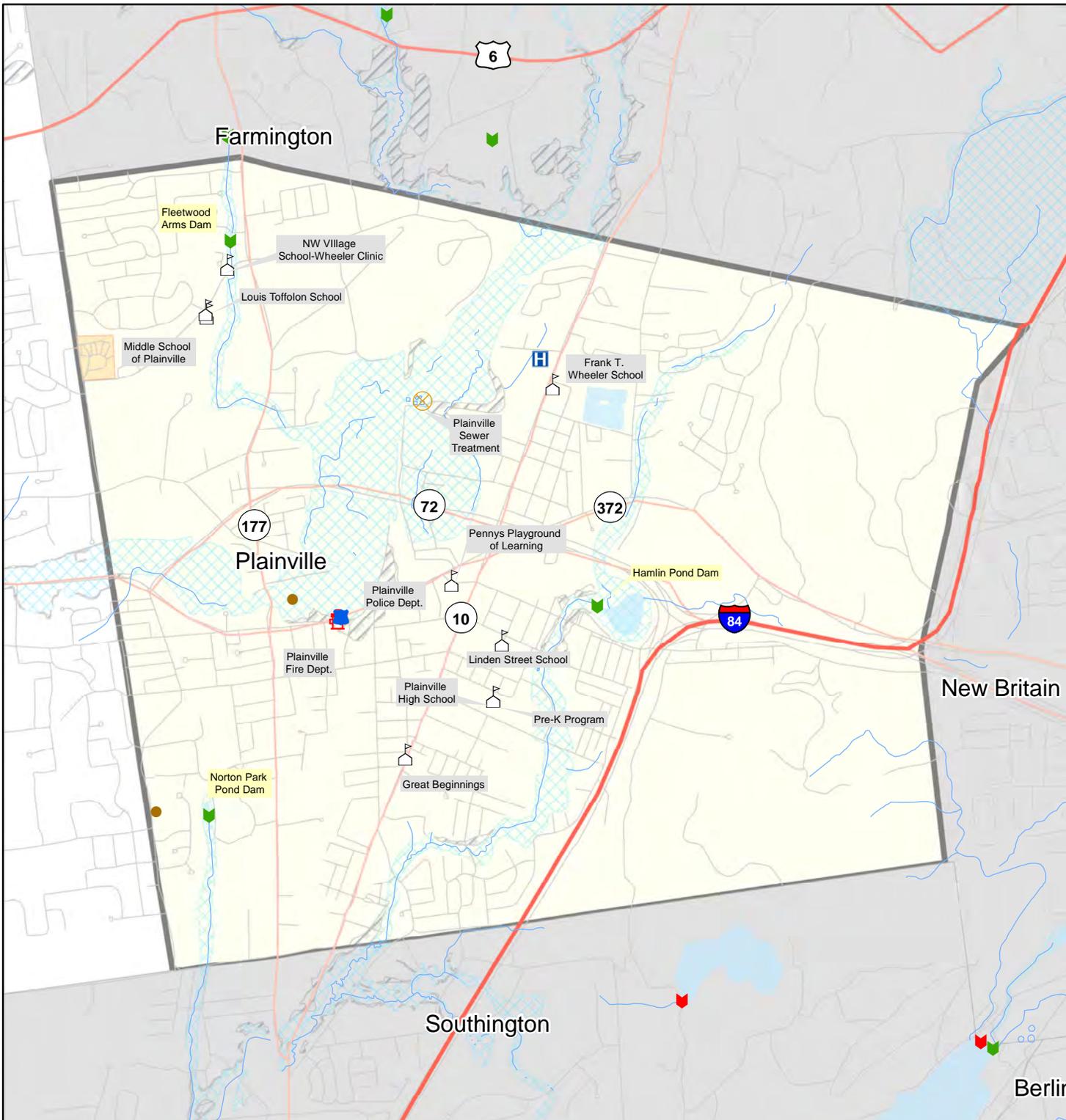
FEMA Flood Hazard Area

-  100 Year Flood Zone
-  500 Year Flood Zone
-  NRHP Districts/Areas

Data Sources: FEMA, National Register of Historic Places, CT DEEP, CRCOG, ESRI



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Capitol Region Natural Hazards Mitigation Plan Update

Plainville, Connecticut

Dam Breach Inundation Area & Critical Facilities

Critical Facilities

-  Fire Station
-  Police Station
-  School
-  Healthcare Facility
-  State Facility
-  Town Facility
-  Waste Water Facility
-  Emergency Center
-  NRHP Buildings/Sites

Dam Hazard Class

-  BB, A, AA OR Unclassified
-  Class B - Significant Hazard
-  Class C - High Hazard
-  Dam Breach Inundation Areas
-  NRHP Districts/Areas

Data Sources: FEMA, National Register of Historic Places, CT DEEP, CRCOG, ESRI



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