



16 Granby

Community Overview

Granby is a rural, low density residential community with a land area of 40.7 square miles and an estimated population of 11,300, resulting in a population density of only 284 persons per square mile. Population is growing, with an estimated 7 new single family homes constructed a year. A 33-unit building has recently been completed, and a large residential development is under construction that will include 130 apartments, 50 homes, and an additional 34 units approved.

Granby’s elevation ranges from less than 200 feet to over 1000 feet above sea level. The main watercourses running through Granby include Beech, Bissell, Dismal, Higley, Hungary, Mountain and Salmon (East and West Branches) Brooks; all drain eventually to the Farmington River.

Major transportation routes include state routes 10/202, 20, 189 and 219. Restaurants and retail space account for most commercial development in Town. The largest employers in Granby are the Town itself, the YMCA, Stop & Shop, Meadowbrook Nursing Home, and Geissler’s Supermarket. The largest property owner is McLean Game Refuge.

Most homes in Town have their own private wells and septic systems. It is estimated that as many as 20% of single family homes have backup generators. Limits on access to public water and sewer infrastructure restrict high density development outside of the Granby Center area.

Critical Facilities

Critical Facilities throughout the Capitol Region are listed in Appendix B. In Granby these include the Town Hall, Police Station (EOC), public library, Department of Public Works, 3 Fire Houses, Salmon Brook Water Company, 2 Sewer Pump Stations, the Middle School (primary shelter), the Senior Center (backup shelter), the High School, 2 Elementary Schools, the Meadow Brook Nursing Home, the YMCA, and Stony Hill Village senior housing (which has a walk-in emergency clinic). The DPW stores emergency shelter cots and supplies, which are used at the Middle School. A portable generator that primarily serves the sewer pumping stations is also stored at the DPW; if necessary, this generator can be connected to the Senior Center. The Meadow Brook Nursing Home has agreed to shelter residents needing special assistance during a disaster. The YMCA is available for showering for those staying at shelters following an emergency.

Table 16-1: Critical Facilities, Granby

Facility	Shelter	Generator
Town Hall		X
Police (EOC)		X
Public Library		
Department of Public Works		Portable
3 Fire Houses		X

Facility	Shelter	Generator
Salmon Brook Water Company		X
2 Sewer Pumping Stations		1 Portable
Middle School	Primary	X
Senior Center	Secondary	X
High School		
2 Elementary Schools		
Meadow Brook Nursing Home	Special Assistance	X
YMCA	Showers	X
Stony Hill Village		
Stony Hill Village Walk-In Clinic		

Capabilities

Hazard mitigation is addressed specifically in Granby’s Plan of Conservation and Development (POCD). The HMP document itself is cited. POCD actions specifically address natural hazards, including climate change.

Granby uses the Everbridge Reverse 9-1-1 system to warn residents of impending disasters.

The Department of Public Works is responsible for re-opening roads that are blocked by fallen trees.

The Town’s YMCA can made available for residents to shower, and the Town distributes water for residents who lose both power and water pressure.

The Town has a community emergency response team (CERT) that can be activated to help coordinate emergency response. The CERT was formed in 2010, following the guidelines of Homeland Security, and works closely with the Fire Department and Emergency Management Director. Large plastic coated maps have been created through the Town’s GIS system and provided to every fire station along with multiple copies to the Police Department and CERT. The Town’s GIS is fully functional and assists with hazard mitigation and response.

The Town has added generators to all of its fire houses, the Senior Center, and Schools. CERT is now working on a plan to utilize these buildings during future emergencies.

Granby has an excellent understanding of the unique challenges posed by its significant elevation variations. While the steep terrain can be difficult to navigate during winter storms, Town crews are well trained and equipped to address such circumstances. New equipment and personnel are made available as necessary.

The Lost Acres Fire Department (LAFD) has an excellent understanding of forests fires and is well equipped to address the situation should it arise. The LAFD regularly updates its equipment as needed.



The Town has an excellent understanding of local flooding and is prepared to address areas of flooding. In most cases this involves short term road closures. No new development is anticipated within the areas of potential flooding. Granby has had no new construction or demolition since 2008 in floodplains or other vulnerable areas. The Town did a complete review and adopted modifications to Section 8.18 of the Zoning Regulation Special Flood Hazard Areas in September of 2008. These changes were adopted in accordance with recommendations of the Connecticut Department of Energy and Environmental Protection (DEEP). The changes are designed to decrease Granby's vulnerability to flooding.

Hurricane Irene, which occurred in August of 2011, provided an opportunity for the Town to test its preparation for such major events. Early on the Emergency Management team was activated. Many roads were flooded during the height of the storm and the Town quickly closed such roads and re-routed traffic. As expected the floodwaters quickly receded after the storm and the Town returned to normal. The October 2011 snowstorm, proved a much greater problem. Again the emergency management team was called into operation. However, the heavy snowfall and resulting tree and power line damage completely crippled the Town. The power outages were extensive and prolonged. The Town's emergency shelter proved to be a great help in accommodating those without power, but also proved inadequate. In response to these events the Town has added generators to most of its public building and plans are being considered as to the future use of these building during prolonged emergencies.

Challenges

Challenges Overview

Granby's large elevation variation results in unique hazard concerns. Winter weather often hovers around 32 degrees, and even a slight decrease in temperature due to the increase in elevation will result in a snow/ice division. This is a common occurrence in Granby, where ice/snow conditions may be found in half the town while rain falls in the remaining portion.

The Town contains significant forested lands, including state forest and the privately held properties of the McLean Game Refuge and Granby Land Trust; therefore wildfire is a significant concern.

Only a small portion of the Town is within the 1%-annual-chance flood zone and very little development has occurred or is allowed to occur within the area; therefore the Town has had relatively minor losses due to flooding. Because of its steep terrain, when flooding does occur, the flood waters quickly recede following the storm. Areas at risk of flooding include the center of Town, some higher elevation areas, and in particular Salmon Brook Street.

The Town is completely dependent on groundwater for its potable water supply. Most homes in Granby have individual wells, most of which are bedrock wells, though gravel pack or point wells are not uncommon. The Town has no history of droughts seriously impacting local wells, though shallow wells can be temporarily impacted; however, wells cannot operate without electricity and prolonged electrical outages will result in potable water and sewage disposal



issues. Most residents (and all of those who live at higher elevations) who lose power will also lose water. Areas that need to be prioritized during emergencies include the Meadowbrook Nursing Home and the water tanks and pumps that service the Salmon Brook Water District.

Granby is serviced by two water companies, the Salmon Brook Water District and the Aquarian Water Company, that are both supplied by well water. The Aquarian Water Company’s wells are located in Simsbury. The Salmon Brook Water District has a 190,000 gallon water tank off of Pendleton Road and wells located near the Town’s Salmon Brook Park. There is no history of water supply quantity problems. The Town works cooperatively with the Salmon Brook Water District to maintain the quality of the water.

Hazard Losses

The economic losses faced by the community 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 17 property damage claims in Granby totaling \$98,904 to-date. The NFIP has paid out four Repetitive Loss (RL) Property claims on one property in Granby to-date. These claims have totaled \$23,045.

Total PA reimbursements to the community were as follows:

- Flood Events: \$11,940 (\$628 annually)
- Hurricane Events: \$85,139 (\$4,481 annually)
- Winter Storm Events: \$2,230,681 (\$117,404 annually)

These are summarized in the tables below.

Table 16-2: Flood Event PA Reimbursements, Granby

Incident	Sep 1999	Oct 2005
Declaration	9/23/1999	12/16/2005
Disaster No.	1302	1619
Entity	FEMA PA Reimbursement	
State	\$523	\$649
Municipal	\$0	\$10,768
Nonprofit	\$0	\$0
Total	\$523	\$11,416
Annualized	\$28	\$601



Table 16-3: Hurricane Wind Event PA Reimbursements, Granby

Incident	Aug - Sep 2011 (T.S. Irene)
Declaration	9/2/2011
Disaster #	4023
Entity	FEMA PA Reimbursement
State	\$496
Municipal	\$84,643
Nonprofit	\$0
Total	\$85,139
Annualized	\$4,481

Table 16-4: Winter Storm PA Reimbursements, Granby

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	\$9,782	\$8,769	\$11,569	\$14,043	\$12,235	\$5,046	\$23,777
Municipal	\$21,492	\$30,404	\$33,468	\$31,303	\$39,537	\$1,925,978	\$63,279
Nonprofit	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$31,274	\$39,173	\$45,037	\$45,346	\$51,772	\$1,931,023	\$87,056
Annualized	\$1,646	\$2,062	\$2,370	\$2,387	\$2,725	\$101,633	\$4,582

National Centers for Environmental Information Losses

The table below summarizes events in the National Centers for Environmental Information (NCEI) severe storm database that were specifically noted as having impacted this community since 2012.

Table 16-5: NCEI Database Losses since 2012, Granby

Date	Event	Property Damage
8/5/2012	Thunderstorm Wind	\$5,000
8/9/2013	Flash Flood	\$30,000
5/31/2015	Flood	\$0
3/17/2016	Thunderstorm Wind	\$500
7/22/2016	Thunderstorm Wind	\$30,000
6/19/2017	Thunderstorm Wind	\$1,000
7/13/2017	Lightning	\$1,000
Total Thunderstorm		\$37,500
Total Flood		\$30,000



NCEI losses under other event categories (such as drought, high wind, flooding, and winter storms) were not specifically noted as impacting this community, 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 16-6: Estimated Damages to Granby from a 1% Annual-Chance Flood

Loss Type	2014 Results	2018 Results
Households Displaced	290	126
People Needing Shelter	538	89
Buildings at Least Moderately Damaged	66	0
Economic Losses		
Residential Building & Content Losses	\$26,430,000	\$7,898,266
Other Building & Content Losses	\$15,940,000	\$3,707,379
Total Building & Content Loss	42,370,000	\$11,605,645
Total Business Interruption Losses	\$90,000	\$150,109
TOTAL	\$42,450,000	\$11,755,754

Table 16-7: Estimated Damages to Granby from a 1% Annual-Chance Hurricane

Loss Type	2014 Results (1938 event)	2018 Results (1% track)
Buildings at Least Moderately Damaged	200	1
Buildings Completely Damaged	9	0
Total Debris Generated (tons)	39,975	594
Truckloads (at 25 tons/truck) of building debris	93	24
Economic Losses		
Residential Building & Content Losses	\$26,053,000	\$2,248,353
Other Building & Content Losses	\$1,783,000	\$32,515
Total Building & Content Loss	\$27,836,000	\$2,280,868
Total Business Interruption Losses	\$2,111,000	\$2,925
TOTAL LOSSES	\$29,947,000	\$2,283,793



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 16-8: Estimated Damages to Granby from a Probabilistic Earthquake

Loss Type	2018 Results
Wage Loss	\$1,077
Rent Loss	\$780
Relocation Loss	\$1,550
Income Loss	\$902
Inventory Loss	\$53
Total Business Disruption	\$4,361
Structural Loss	\$3,267
Non-Structural Loss	\$11,375
Total Building Loss	\$14,642
Total Content Loss	\$4,100
TOTAL LOSSES	\$23,104

Table 16-9: Estimated Damages to Granby from Modeled Earthquake Scenarios

Epicenter Location	Magnitude	Estimated Total Losses
East Haddam	6.4	\$34,757.22
Haddam	5.7	\$8,628.11
Portland	5.7	\$20,437.89
Stamford	5.7	\$2,585.40

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.

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 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.



Table 16-10: Average Annualized Losses, Granby

Dam Failure	Drought	Earthquakes	Flooding	Hurricanes and Tropical Storms	Severe Winter Storms	Thunderstorms	Tornadoes	Wildfires	Total
\$20	\$0	\$23,104	\$3,231	\$707,252	\$117,404	\$1,498	\$165,528	\$7,561	\$1,025,599

Losses Summary

A review of the above loss estimates demonstrates that the community 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

During the course of this Plan development, multiple hazard mitigation needs of Granby were noted, including:

- The portable generator at the DPW needs replacement.
- The two sewer pumping stations need permanent backup generators installed so that the Public Works portable generator can be used at other locations.
- The Town feels its existing analog communication system is antiquated and must be replaced. The estimated cost of replacement is \$3 million.

Status of Previous Mitigation Strategies and Actions

The community reviewed the mitigation actions proposed in the 2014-2019 Capitol Region Natural Hazards Mitigation Plan Update and determined the status of each. That information is included in the table below.

Table 16-11: Status of Previous Mitigation Strategies and Actions, Granby

Action #	Action	Notes	Status
GOAL: REDUCE PROPERTY DAMAGE DUE TO UNSAFE CONDITIONS RESULTING FROM WINTER STORMS.			
Objective 1: Improve snow removal equipment and techniques.			
1.1	Pursue increased funding for equipment and labor as necessary.	The Town has purchased new and improved snow removal equipment (trucks, loader and back hoe). Need large wood chipper and new utility vehicle	Carry Forward with Revisions
1.2	Continue to pursue opportunities for service and equipment sharing with neighboring communities through CRCOG’s service sharing initiative and otherwise.	No opportunity for snow equipment sharing but Granby has participated in service sharing opportunities in the past and will continue to pursue these.	Capability



Action #	Action	Notes	Status
1.3	Improve Public Works personnel contracts to ensure adequate staffing for storm situations.	Contracts have been revised and the Town feels that, absent unforeseen circumstances staffing is adequate for most storms. Lacking MOU's with local vendors to prep for storm response.	Capability
Objective 2: Remove and prevent impediments to snow removal operations.			
2.1	Educate private snow-removal contractors and residents on not obstructing roads and the right-of-way.	Continuing efforts have been made. Outreach will be conducted periodically.	Capability
2.2	Enforce existing ordinance prohibiting roadway obstructions.	Lacking an ordinance to address these concerns.	Carry Forward with Revisions
Objective 3: Educate public on hazardous conditions during storm events - promote safe driving techniques.			
3.1	Continue to issue press releases and advisories.	Actively using the Everbridge Aware emergency notification system, which notifies its citizens through a variety of communication devices based on their preferences. Need to create social media and update Town website.	Carry Forward with Revisions
GOAL: IMPLEMENT GUIDELINES AND REGULATIONS TO REDUCE EXPOSURE TO PROPERTY DAMAGE AND LOSS OF LIFE AS A RESULT OF FLOODING.			
Objective 1: Restrict development of buffer areas in flood prone zones and promote best development practices for minimizing environmental impacts.			
1.1	Continue to work with FEMA and DEEP to maintain zoning, subdivision and wetlands regulations current with best practices.	The Town updated its Flood Hazard Regulations following recommendations of the State DEEP and FEMA (2008).	Carry Forward with Revisions
1.2	Update the stormwater management plan as necessary.	A comprehensive Stormwater Management Plan was revised and adopted in 2008.	Carry Forward with Revisions
1.3	Investigate participation in the National Flood Insurance Program's Community Rating System.	Town does not believe participation in CRS on its own is feasible at this time. It will consider participating in a regional CRS program if available in the future.	Completed
Objective 2: Maintain waterways, drainage and other structures in critical flood areas.			
2.1	Address priority bridges, culverts and other drainage projects as may be identified in Capital Improvement Plan.	Town was in final stages of a complete reconstruction of the Silver Street Bridge. Numerous drainage projects have been completed, mostly in conjunction with road reconstruction projects.	Carry Forward with Revisions
2.2	Work with DEEP to continue to monitor dams as necessary.	This is an established practice. Periodic monitoring of dams and retention ponds in town with DEEP will continue.	Capability
Objective 3: Ensure traffic safety during flood events.			
3.1	Regularly update the communication protocols with neighboring communities on road closures and detour routing.	DPW and Police provide this service. Updates will be made periodically.	Capability
3.2	Educate police personnel on detour routing protocols to ensure alternative routes can accommodate trucks.	Continuing training will continue to be conducted periodically.	Capability



Action #	Action	Notes	Status
3.3	Use GIS technology in coordinating and prioritizing response.	New maps with updated information recently produced for first responders. GIS technology is available, and education continues.	Carry Forward with Revisions
GOAL: REDUCE PERSONAL PROPERTY DAMAGE AND POWER FAILURES CAUSED BY HIGH WINDS			
Objective 1: Aggressively work with utility companies to identify high risk areas and promote tree trimming. Status: Tree trimming is ongoing and aggressive.			
Objective 2: Relocate high density utility facilities underground.			
2.1	Create a long-range plan for placing utility facilities underground.	Town will continue to work with the utilities to develop an appropriate plan, including actions other than utility burial.	Carry Forward with Revisions
Objective 3: Promote an ongoing tree maintenance program along public rights-of-way.			
3.1	Seek to increase local budget for tree trimming.	Since storms of 2011 the DPW has been actively involved in tree trimming. More funds are still needed.	Carry Forward
GOAL: REDUCE PERSONAL PROPERTY DAMAGE AND LOSS OF LIFE RESULTING FROM FOREST FIRES.			
Objective 1: Promote forest management to reduce fire risks.			
1.1	Develop and implement timber management program for town-owned property.	Town discussed developing and implementing a timber management plan, subject to public review process.	Carry Forward
1.2	Promote timber management planning with other major landholders including McLean Game Refuge, Granby Land Trust and the State.	Deferred due to limited municipal staff and funding availability.	Carry Forward with Revisions
Objective 2: Determine and implement best practices to facilitate forest-fire fighting.			
2.1	Promote and implement best practices, such as fire roads, dry hydrants, etc.	Town developed relationship with Lost Acres Fire Department to review the developments. Have dry hydrants at some subdivisions (currently have six and want to add ten). Hydrants required where public water is available.	Carry Forward with Revisions
2.2	Consider regulations requiring dry hydrant installations in new developments.	The Town is working with the Lost Acres Fire Dept. on a dry hydrant requirement.	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

Review snow removal policy for emergency situations and adopt a policy that will limit road obstruction.

Goal	2. Ensure Municipal Codes and Regulations support hazard mitigation
Category	Prevention
Lead	Public Works
Cost	\$0 - \$10,000
Funding	Town Operating Budget
Timeframe	01/2019 - 12/2019
Priority	High

Action #2

Develop the Town's social media presence and utilize that media to improve public communication about natural hazards.

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 #3

Update the Town website to include up-to-date information about natural hazards.

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 #4

Develop a standard operating procedure to address trees that fall into streams and block bridges and culverts.

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	01/2019 - 12/2019
Priority	High

Action #5

Consider and document the labor resource needs and benefits of participation in the Sustainable CT program.

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 #6

Develop and implement timber management program for town-owned property.

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 / Grants / CT DEEP
Timeframe	01/2019 - 12/2020
Priority	High



Action #7

Increase local budget for tree trimming.

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	\$25,000 - \$50,000
Funding	Town Operating Budget / Grants
Timeframe	01/2020 - 12/2020
Priority	High

Action #8

Replace analog communication system and acquire new computers for the EOC.

Goal	7. Improve the emergency response capabilities of the region and its communities
Category	Preparedness & Emergency Response
Lead	Emergency Management
Cost	\$25,000 - \$50,000
Funding	Grants / DEMHS
Timeframe	07/2020 - 06/2021
Priority	High

Action #9

Complete the reconstruction of the Silver Street Bridge.

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	07/2019 - 06/2020
Priority	High



Action #10

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 #11

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 #12

Pursue opportunities, including MOUs and CRCOG's service sharing initiative, for service and equipment sharing with neighboring communities. Specifically, the Fire Department needs access to a utility vehicle.

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	01/2020 - 12/2020
Priority	Medium



Action #13

Establish ordinance to prevent road obstruction due to illegal snow removal.

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 #14

Draft a regulation requiring dry hydrant installation in new developments.

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 #15

Conduct outreach to promote timber management planning with major landholders.

Goal	6. Improve public outreach, education, and warning systems
Category	Natural Resources Protection
Lead	Public Works
Cost	\$0 - \$10,000
Funding	Town Operating Budget
Timeframe	07/2020 - 06/2021
Priority	Medium

Action #16

Pursue MOUs with local vendors on an annual basis to provide assistance during and following storms.

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	07/2019 - 06/2024
Priority	Medium



Action #17

Annually evaluate and update training protocols, particularly in relation to flooding.

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	Public Works
Cost	\$0 - \$10,000
Funding	Town Operating Budget
Timeframe	07/2019 - 06/2024
Priority	Medium

Action #18

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 #19

Evaluate and update the stormwater management plan to state requirements.

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	07/2020 - 06/2022
Priority	Medium



Action #20

Conduct outreach efforts to prevent road obstruction due to illegal snow removal.

Goal	5. Improve the resilience of local and regional utilities and infrastructure using strategies including adaptation, hardening, and creating redundancies.
Category	Education & Awareness
Lead	Public Works
Cost	\$10,000 - \$25,000
Funding	Town Operating Budget
Timeframe	01/2020 - 12/2022
Priority	Medium

Action #21

Evaluate and update the zoning, subdivision and wetland regulations to ensure they limit exposure to natural hazards.

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	01/2020 - 12/2022
Priority	Medium

Action #22

Conduct a wildfire vulnerability and needs assessment to guide construction of additional dry hydrants and/or cisterns and fire roads through forested areas.

Goal	3. Improve institutional awareness and understanding of natural hazard impacts and mitigation within municipal governments and other decision-making bodies
Category	Prevention
Lead	Fire Department
Cost	\$25,000 - \$50,000
Funding	Town Operating Budget / Grants / CT DEEP / DEMHS
Timeframe	07/2021 - 06/2023
Priority	Medium



Action #23

Update GIS technology to coordinate and prioritize response.

Goal	7. Improve the emergency response capabilities of the region and its communities
Category	Preparedness & Emergency Response
Lead	Planning
Cost	\$25,000 - \$50,000
Funding	Town Operating Budget / Grants / DEMHS
Timeframe	01/2021 - 12/2023
Priority	Medium

Action #24

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.

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 #25

Generate a list of priority bridge, culvert, and other drainage projects identified in the Capital Improvement Plan to be included as individual actions in the next HMP update.

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



Action #26

Complete an analysis of costs and benefits of joining the FEMA Community Rating System.

Goal	1. Minimize the impact of natural hazards on physical buildings and infrastructure
Category	Prevention
Lead	Planning
Cost	\$0 - \$10,000
Funding	Town Operating Budget
Timeframe	01/2021 - 12/2022
Priority	Low

Action #27

Coordinate with CT SHPO to conduct outreach to historic property owners to educate them on methods of retrofitting their properties to be more hazard-resilient while maintaining historic character.

Goal	8. Ensure community character and social equity are addressed in mitigation activities
Category	Education & Awareness
Lead	Planning, in coordination with SHPO
Cost	\$0 - \$10,000
Funding	SHPO
Timeframe	01/2021 - 12/2022
Priority	Low

Action #28

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 #29

Create a long-range plan for relocating high density utility facilities.

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	\$25,000 - \$50,000
Funding	Town Operating Budget / Grants
Timeframe	07/2023 - 06/2024
Priority	Low

Action #30

Purchase large wood chipper and new utility vehicle.

Goal	7. Improve the emergency response capabilities of the region and its communities
Category	Preparedness & Emergency Response
Lead	Public Works
Cost	More than \$100,000
Funding	Grants
Timeframe	01/2024 - 12/2024
Priority	Low













**Capitol Region Natural Hazards
Mitigation Plan Update**

Granby, Connecticut



Flood Plains, Dams
& Critical Facilities

Critical Facilities



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

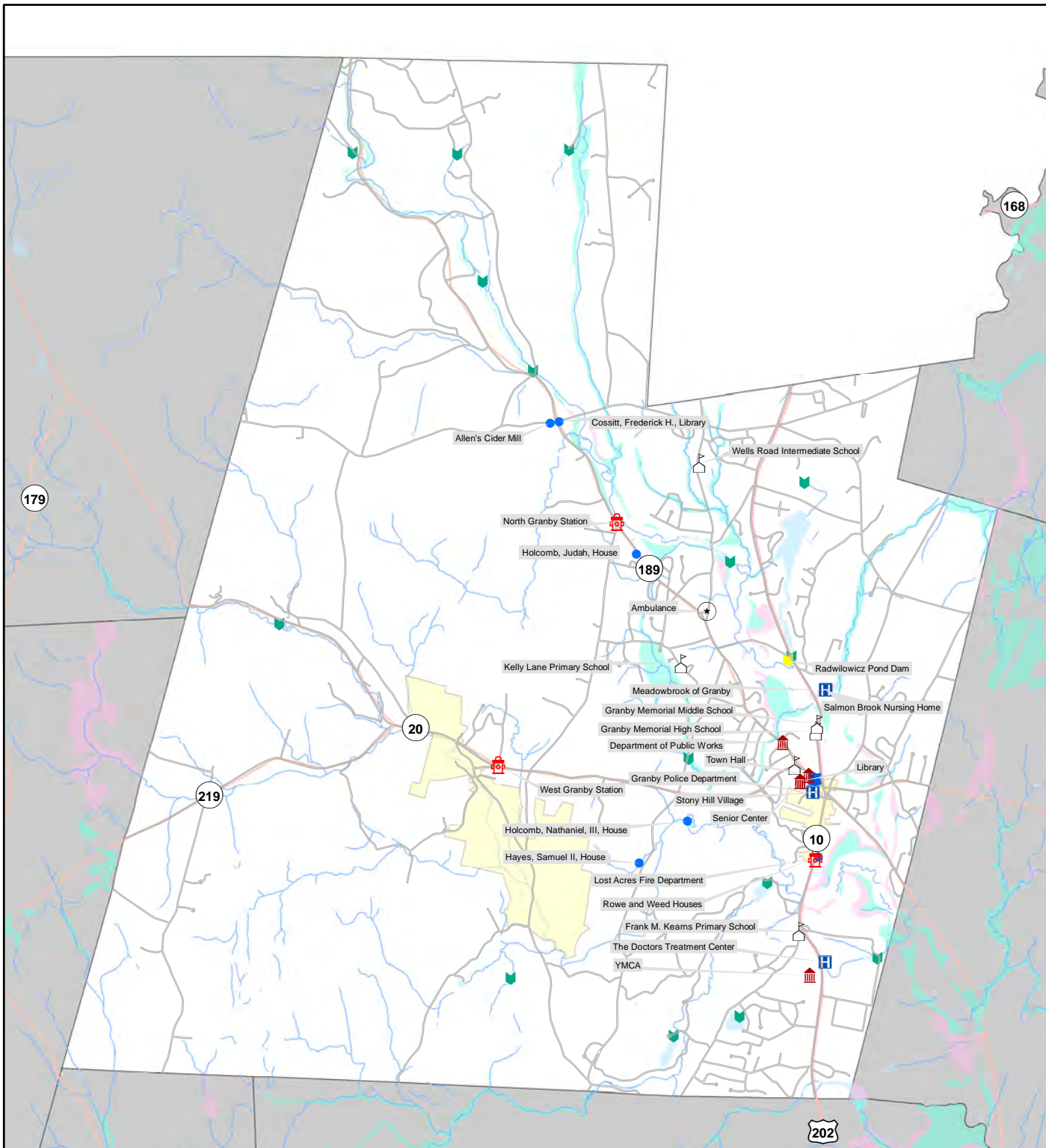
 NRHP Districts/Areas

Dam Hazard Class

-  A, AA, BB or Unclassified
-  Class B-Significant Hazard

FEMA Flood Hazard Area

-  100 Year Flood Zone
-  500 Year Flood Zone



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



