



17 Hartford

Community Overview

Hartford, Connecticut's capital city, is an urban community centrally located within the Region. It has a land area of 17.3 square miles and an estimated population of nearly 125,000. The elevation ranges from approximately 30 to 150 feet above sea level. Hartford drains to the Connecticut River to the east and the Park River to the west. Other watercourses in the City include Cemetery and Gully Brooks. Interstates 91 and 84 intersect in Hartford. State routes 44, 187 and 189 also traverse the City. An Amtrak commuter rail line and the Hartford Line commuter rail each stop in the City, and CTfastrak, a regional Bus Rapid Transit System, has stations in Hartford.

Hartford is home to the Capitol and numerous state facilities. Brainard Airport is located in the southeastern corner of the City. Numerous industries and businesses operate throughout Hartford, including many insurance companies. The City also houses three major hospitals: Hartford, Connecticut Children's, and St. Francis. The City is also home to Trinity College and the University of Hartford. The University of Connecticut and University of St. Joseph have branches in the Downtown area. Hartford attracts visitors throughout the year to its historic, arts and cultural venues including the Convention Center, XL Center, Dunkin' Donuts Park, Riverfront Recapture, Comcast Music Theater, Wadsworth Athenaeum, Connecticut Science Center, Old State House, Mark Twain and Harriet Beecher Stowe Houses, and Bushnell Center for Performing Arts.

Critical Facilities

Critical Facilities throughout the Capitol Region are listed in Appendix B. In Hartford these include the Emergency Operations Center, housed at the Fire Headquarters. The Fire Chief is also the Emergency Management Director.

Capabilities

Hazard mitigation is addressed specifically in Hartford's Plan of Conservation and Development.

The Army Corps of Engineers built a dike in Hartford along the Connecticut River following historic floods in 1936 and 1938. The City has maintained the levee system for 80 years, and has a capital improvement program (CIP) specifically devoted to the system. CIP projects undertaken in the past include rip-rap repair, vegetation removal, animal burrow repair, construction of access roads, system testing and analysis, pump-station generator replacement, backstop installation, valve operator replacement, sediment removal, dredging, monitoring instrument installation, and drainage improvements. The flood control system is an Accredited Levee under FEMA's map modernization project.

Hartford has not approved any building construction within the 1% annual chance floodplain and has undertaken significant work since 2008 to reduce its vulnerability to flooding as detailed in the list below:

The Metropolitan District Commission's (MDC) Clean Water Project and new, statewide MS4 Stormwater Drainage requirements, pose significant opportunities and challenges for the City. As planning for the separation of storm water and sewer lines in the City and region, much of which discharges to the Connecticut River in Hartford, moves forward, it is critical for the City to monitor potential impacts on flood control infrastructure.

Hartford has fourteen Neighborhood Revitalization Zone (NRZ) Committees that meet regularly as part of "Hartford 2000," a coalition with a mission to "strengthen the collective power of the NRZs and to serve as an advocate for neighborhood issues." City personnel feel these NRZs are a good way to reach the public in Hartford; Fire and Police personnel attend these meetings.

Hartford has a Flood Commission charged with ongoing management of Hartford's flood risks. The City has two private consulting companies on-call to provide continuing services to Hartford regarding flood control.

New Capabilities

The Flood Commission, with assistance from the consultants, recently prepared two submittals for the U.S. Army Corps of Engineers: a System Wide Improvement Framework (SWIF) and a Semi-Qualitative Risk Assessment (SQRA). Both are under review.

The City recently fixed a problem with the Weston Street culvert which was clogged and would not function properly. The City has switched from using sand to using a salt-sand mix for road de-icing, decreasing issues related to drainage system clogging.

In recent years Hartford has implemented new initiatives and completed projects that mitigate hazards, each of which is highlighted in more detail in the Multi-Jurisdictional HMP. These are:

- The City of Hartford Climate Action Plan, which sets forth environmental stewardship initiatives in six action areas: energy, food, landscape, transportation, waste, and water.
- Green Infrastructure Zoning Regulations that promote environmental sustainability in new development, including reducing threats to water quality from stormwater runoff.
- The Hartford Boathouse was designed to allow flood waters into the lower boat-storage level using flood grates and flood-resistant materials. Critical systems are located on the second level. The building also has a community and function room.
- The Parkville Microgrid is a natural gas powered fuel cell that is able to power a school, senior center, library, health center, gas station, and grocery store in a power outage. The system feeds excess energy back into the regional grid under normal conditions.

It is likely that in the coming years towns on the Park River upstream of Hartford will perform maintenance activities for the river; CT DEEP has contacted these Towns to inform them that



maintenance will be required. Funding and resources for such maintenance has not yet been sourced, so it is unclear what the timeframe for improvements will be. It is important to note that the impact of maintenance on Hartford’s flood risk is not clear at this point.

Hartford was awarded the Silver Certification level within the SustainableCT program in October 2018.

Challenges

Challenges Overview

Historically, Hartford has suffered significant losses from flooding and continues to be vulnerable to the risks posed by flooding.

Hazard Losses

The economic losses faced by Hartford 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 52 property damage claims in Hartford totaling \$656,509 to-date. Hartford has had 11 Repetitive Loss (RL) Property claims to-date on three properties with payments totaling \$117,755.

Total PA reimbursements to the community were as follows:

- Flood Events: \$276,561 (\$14,556 annually)
- Hurricane Events: \$773,573 (\$40,714 annually)
- Winter Storm Events: \$17,295,315 (\$910,280 annually)

These are summarized in the tables below.

Table 17-1: Flood Event PA Reimbursements, Hartford

| Incident | Sep 1999 | Oct 2005 |
|-------------------|------------------------------|------------------|
| Declaration | 9/23/1999 | 12/16/2005 |
| Disaster No. | 1302 | 1619 |
| Entity | FEMA PA Reimbursement | |
| State | \$92,630 | \$51,987 |
| Municipal | \$65,979 | \$0 |
| Nonprofit | \$0 | \$65,965 |
| Total | \$158,609 | \$117,952 |
| Annualized | \$8,348 | \$6,208 |



Table 17-2: Hurricane Wind Event PA Reimbursements, Hartford

| Incident | Aug - Sep 2011 (T.S. Irene) | Oct - Nov 2012 (Storm Sandy) |
|-------------------|--------------------------------|---------------------------------|
| Declaration | 9/2/2011 | 10/30/2012 |
| Disaster # | 4023 | 4087 |
| Entity | FEMA PA Reimbursement | |
| State | \$358,574 | \$117,578 |
| Municipal | \$240,798 | \$0 |
| Nonprofit | \$56,623 | \$0 |
| Total | \$655,995 | \$117,578 |
| Annualized | \$34,526 | \$6,188 |

Table 17-3: Winter Storm PA Reimbursements, Hartford

| 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 | \$298,900 | \$237,901 | \$294,637 | \$340,113 | \$422,927 | \$5,717,066 | \$795,677 |
| Municipal | \$218,122 | \$190,502 | \$251,403 | \$316,330 | \$326,283 | \$5,121,195 | \$2,191,316 |
| Nonprofit | \$12,121 | \$14,357 | \$22,366 | \$12,162 | \$45,324 | \$282,277 | \$184,337 |
| Total | \$529,143 | \$442,759 | \$568,406 | \$668,605 | \$794,533 | \$11,120,538 | \$3,171,330 |
| Annualized | \$27,850 | \$23,303 | \$29,916 | \$35,190 | \$41,818 | \$585,291 | \$166,912 |

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 the community since 2012.

Table 17-4: NCEI Database Losses since 2012, Hartford

| Date | Event | Property Damage |
|---------------------------|-------------------|-----------------|
| 6/22/2012 | Thunderstorm Wind | \$15,000 |
| 6/22/2012 | Flood | \$0 |
| 7/7/2013 | Thunderstorm Wind | \$30,000 |
| 7/10/2013 | Flash Flood | \$3,000 |
| 11/1/2013 | Thunderstorm Wind | *\$8,300 |
| 2/25/2016 | Thunderstorm Wind | \$15,000 |
| 10/24/2017 | Flood | \$0 |
| Total Thunderstorm | | \$68,300 |
| Total Flood | | \$3,000 |

* Damages from storm divided between multiple communities



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

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.

Table 17-5: Estimated Damages to Hartford from a 1% Annual-Chance Flood

| Loss Type | 2014 Results | 2018 Results |
|---|----------------------|---------------------|
| Households Displaced | 812 | 441 |
| People Needing Shelter | 2,034 | 984 |
| Buildings at Least Moderately Damaged | 61 | 1 |
| | | |
| All Building Loss | | \$21,159,886 |
| All Content Loss | | \$39,035,955 |
| Residential Building & Content Losses | \$38,770,000 | \$30,312,678 |
| Other Building & Content Losses | \$165,740,000 | \$29,881,786 |
| Total Building & Content Loss | \$204,510,000 | \$60,194,463 |
| Total Business Interruption Losses | \$1,950,000 | \$1,435,037 |
| TOTAL | \$206,450,000 | \$61,629,500 |

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 17-6: Estimated Damages to Hartford from a 1% Annual-Chance Hurricane

| Loss Type | 2014 Results (1938 event) | 2018 Results (1% track) |
|--|------------------------------|----------------------------|
| Buildings at Least Moderately Damaged | 3134 | 7 |
| Buildings Completely Damaged | 58 | 1 |
| Total Debris Generated (tons) | 88,973 | 11487 |
| Truckloads (at 25 tons/truck) of building debris | 2820 | 459 |
| Economic Losses | | |
| Residential Building & Content Losses | \$343,675,000 | \$43,308,799 |
| Other Building & Content Losses | \$140,680,000 | \$3,923,419 |
| Total Building & Content Loss | \$484,355,000 | \$47,232,218 |
| Total Business Interruption Losses | \$80,175,000 | \$4,561,075 |
| TOTAL LOSSES | \$564,530,000 | \$51,793,293 |

Table 17-7: Estimated Damages to Hartford from a Probabilistic Earthquake

| Loss Type | 2018 Results |
|----------------------------------|------------------|
| Wage Loss | \$28,753 |
| Rent Loss | \$28,358 |
| Relocation Loss | \$39,064 |
| Income Loss | \$21,579 |
| Inventory Loss | \$1,380 |
| Total Business Disruption | \$119,133 |
| Structural Loss | \$68,628 |
| Non-Structural Loss | \$209,683 |
| Total Building Loss | \$278,311 |
| Total Content Loss | \$80,103 |
| TOTAL LOSSES | \$477,547 |

Table 17-8: Estimated Damages to Hartford from Modeled Earthquake Scenarios

| Epicenter Location | Magnitude | Estimated Total Losses |
|--------------------|-----------|------------------------|
| East Haddam | 6.4 | \$3,297,825.23 |
| Haddam | 5.7 | \$753,818.68 |
| Portland | 5.7 | \$3,971,143.17 |
| Stamford | 5.7 | \$49,519.13 |

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 in dollars per year. Note that Hurricanes and Tropical Storms represent the largest share of total annualized losses.

Table 17-9: Average Annualized Losses, Hartford

| Dam Failure | Drought | Earthquakes | Flooding | Hurricanes and Tropical Storms | Severe Winter Storms | Thunderstorms | Tornadoes | Wildfires | Total |
|-------------|---------|-------------|----------|--------------------------------|----------------------|---------------|-------------|-----------|--------------|
| \$223 | \$0 | \$477,547 | \$31,832 | \$7,821,964 | \$910,280 | \$16,572 | \$1,830,682 | \$3,230 | \$11,092,331 |

Losses Summary

A review of the above loss estimates demonstrates that the City of Hartford 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, specific hazard mitigation needs were noted.

- There is a need for more table-top drills to practice different emergency scenarios. Implementing a more frequent drill schedule may help address this issue.
- A culvert at New Park Avenue near a tire facility that needs attention.
- Many drainage swales that are clogged with sand from years when the City used sand for deicing need to be cleared.
- The City of Hartford owns Batterson Park in Farmington and is responsible for the levee EOP; this needs to be developed.

Status of Previous Mitigation Strategies and Actions

The City of Hartford 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 17-10: Status of Previous Mitigation Strategies and Actions, Hartford

| Action # | Action | Notes | Status |
|--|---|--|------------|
| GOAL: REDUCE LOSS OF LIFE, PROPERTY AND ECONOMIC CONSEQUENCES AS A RESULT OF NATURAL DISASTERS | | | |
| Objective 1: Reduce the likelihood of flooding by improving existing natural and artificial drainage systems. | | | |
| 1.1 | Pursue priority drainage projects identified in Capital Improvement Plan. | This is an established and sustained effort. Work is expected to be undertaken annually contingent upon availability of funding. | Capability |



| Action # | Action | Notes | Status |
|---|--|--|---------------|
| Objective 2: Address combined sewer overflows. The MDC has made systematic improvements to the sewer systems within city limits to address overflow issues consistent with heavy rains. | | | |
| 2.1 | Continue to participate in the MDC's Clean Water Project planning process. | This is an established and sustained effort. Staff will continue participation in periodic meetings with MDC. | Capability |
| 2.2 | Ensure that the City's flood control pump stations can handle changes that may result from MDC measures to address combined sewer overflows. | This is an established and sustained effort. Reviews are conducted as information becomes available. | Capability |
| Objective 3: Ensure proper maintenance of flood control system. The City's DPW has a detailed plan for maintaining the existing flood control systems. | | | |
| 3.1 | Continue to implement necessary repairs and upgrades required by FEMA and the Army Corps of Engineers to retain certification. | This is an established and sustained effort. | Capability |
| 3.2 | Update the flood control system maintenance manual. | This is an established and sustained effort. Periodic updates will be made as needed. | Capability |
| 3.3 | Train City employees, according to the updated manual, in proper maintenance techniques. | Delayed as flood control system was updated. Now that manual update is complete, carry forward | Carry Forward |
| 3.4 | Upgrade flood control facilities to automate warning systems and as many other features as possible to increase safety. | Deferred due to lack of resources. This action is dropped and replaced by a new action to implement the recommendations of the System Wide Improvement Framework and Semi-Qualitative Risk Assessment for the Hartford Flood Control System. | Drop |
| Objective 4: Develop system for identifying and addressing potential debris hazards. The Department of Public Works has contingent plans and resources to address potential post-storm debris issues and is working with the State's Interagency Debris Management Task Force CCM Municipal Management Bulletin #13-24. | | | |
| 4.1 | Pursue priority debris related projects, especially along the North Branch of the Park River, identified in the Capital Improvement Plan | This is an established and sustained effort. | Capability |
| 4.2 | Inspect and clean Park River relief conduit. | This is an established and sustained effort. | Capability |
| Objective 5: Improve the ability of emergency responders to prepare and respond to natural disasters. Hartford Fire Department's Department Directive titled "Storm Warnings and Preparedness" (DD 4.1 EOP) directly addresses the preparation levels necessary to effectively organize and respond to natural disasters. CRCOG's Regional Emergency Support Plan (RESP Plan) also provides preparedness and response direction. | | | |
| 5.1 | Continue with National Incident Management System (NIMS) and Incident Management Team training, with a particular focus on response to natural disasters. | This is an established and sustained effort. | Capability |
| 5.2 | Investigate communications systems that will allow for emergency personnel to communicate in currently uncovered areas, and will facilitate interdepartmental communications along the flood control system. | System is upgraded continuously. | Capability |



| Action # | Action | Notes | Status |
|--|--|--|------------|
| 5.3 | Research, identify means, including potential acquisition of public address systems, for facilitating communications with residents, especially those in low-income areas vulnerable to disasters. | The City takes full advantage of social media (twitter, Facebook) plus outreach through the NRZ groups and the four CERT teams | Completed |
| Objective 6: Improve the ability of emergency responders to serve special needs populations during natural disasters. The Hartford Fire Department's Special Services division in conjunction with the City of Hartford's CERT team have prepared and trained to address this specific issue. CROG's Regional Emergency Support Plan (RESP Plan) also provides preparedness and response direction. | | | |
| 6.1 | Take full advantage of the Reverse-911 system. | City utilizes Reverse-911 system effectively. This is a capability | Capability |
| 6.2 | Continue training for evacuation of special needs populations. | Lists of special needs citizens are maintained in the computer aid dispatch (CAD) system managed by ES&T. | Capability |
| 6.3 | Support regional assessments of how to identify, maintain and use databases of special needs populations. | The FD Special Services Unit works with the City Health Department to do this | Capability |
| Objective 7: Improve emergency communications to residents prior to and during natural disasters. Hartford Fire Department has several communication methods in place such as Twitter, Facebook, Social Media, Media, Everbridge Notification System, as well as a new method soon to be implemented utilizing a smart phone app. | | | |
| 7.1 | Continue to offer educational forums for residents on personal emergency planning. | 14 NRZ and four CERT meetings are regularly occurring | Capability |
| 7.2 | Consider applying to FEMA's Community Rating System (CRS) program to help reduce flood insurance premiums for property owners. | City has considered this but is not interested at this time. | Drop |
| Objective 8: Ensure ability of City to safely shelter in place, and when necessary, evacuate residents and visitors. The City has several shelters in place to serve as gathering points in an emergency. The Hartford Fire Department's Special Services division in conjunction with the City of Hartford's CERT team have prepared and trained to address this specific issue. CROG's Regional Emergency Support Plan (RESP Plan) also provides preparedness and response direction. | | | |
| 8.1 | Participate in local and regional hurricane evacuation training. | City participates in such trainings. This is a capability | Capability |
| GOAL: ENSURE THE ABILITY TO DISTRIBUTE COMMODITIES. | | | |
| Objective 9: Improve viability of food commodities during natural disasters. The Hartford Fire Department's Special Services division in conjunction with the City of Hartford's CERT team have prepared and trained to address this specific issue. CROG's Regional Emergency Support Plan (RESP Plan) also provides preparedness and response direction. The City's Board of Education also has a plan to address this issue. | | | |
| 9.1 | Maintain refrigeration for perishable food items. | The City Health Department and others complete this action. This is a capability | Capability |

Active Mitigation Strategies and Actions

The City 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

Develop an EAP for the Batterson Park levee in Farmington & provide it to the Town of Farmington.

| | |
|------------------|--|
| 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 |
| Timeframe | 01/2020 - 12/2020 |
| Priority | High |

Action #2

Supplement or replace the generators at the city's Fire Houses to support their roles as emergency places of refuge.

| | |
|------------------|--|
| 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 | Town Operating Budget / DEMHS |
| Timeframe | 07/2022 - 06/2023 |
| Priority | High |

Action #3

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 #4

Coordinate with NEMO and CROG 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 #5

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 #6

Work with MDC to identify potential hazard mitigation actions for MDC facilities, and list those actions in the next HMP Update.

| | |
|------------------|---|
| Goal | 5. Improve the resilience of local and regional utilities and infrastructure using strategies including adaptation, hardening, and creating redundancies. |
| Category | Property Protection |
| Lead | Public Works |
| Cost | \$10,000 - \$25,000 |
| Funding | Town Operating Budget / DEMHS |
| Timeframe | 07/2020 - 06/2022 |
| Priority | Medium |



Action #7

Determine the best course for addressing drainage issues at the culvert on New Park Avenue near the tire facility. Complete the determined action or include it in the next plan.

| | |
|------------------|--|
| 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 | Town Operating Budget / Grants |
| Timeframe | 07/2022 - 06/2024 |
| Priority | Medium |

Action #8

Complete implementation of System Wide Improvement Framework and Semi-Qualitative Risk Assessment for the Hartford Flood Control System, submitted to USACE in 2018.

| | |
|------------------|--|
| 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 #9

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 #10

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 #11

Make progress with the hazard mitigation goals associated with SustainableCT certified actions.

| | |
|------------------|--|
| 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 | 07/2021 - 06/2022 |
| Priority | Low |

Action #12

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 #13

**Conduct tabletop natural hazard emergency response drills with local departments more frequently.
Ensure multiple hazard scenarios are drilled.**

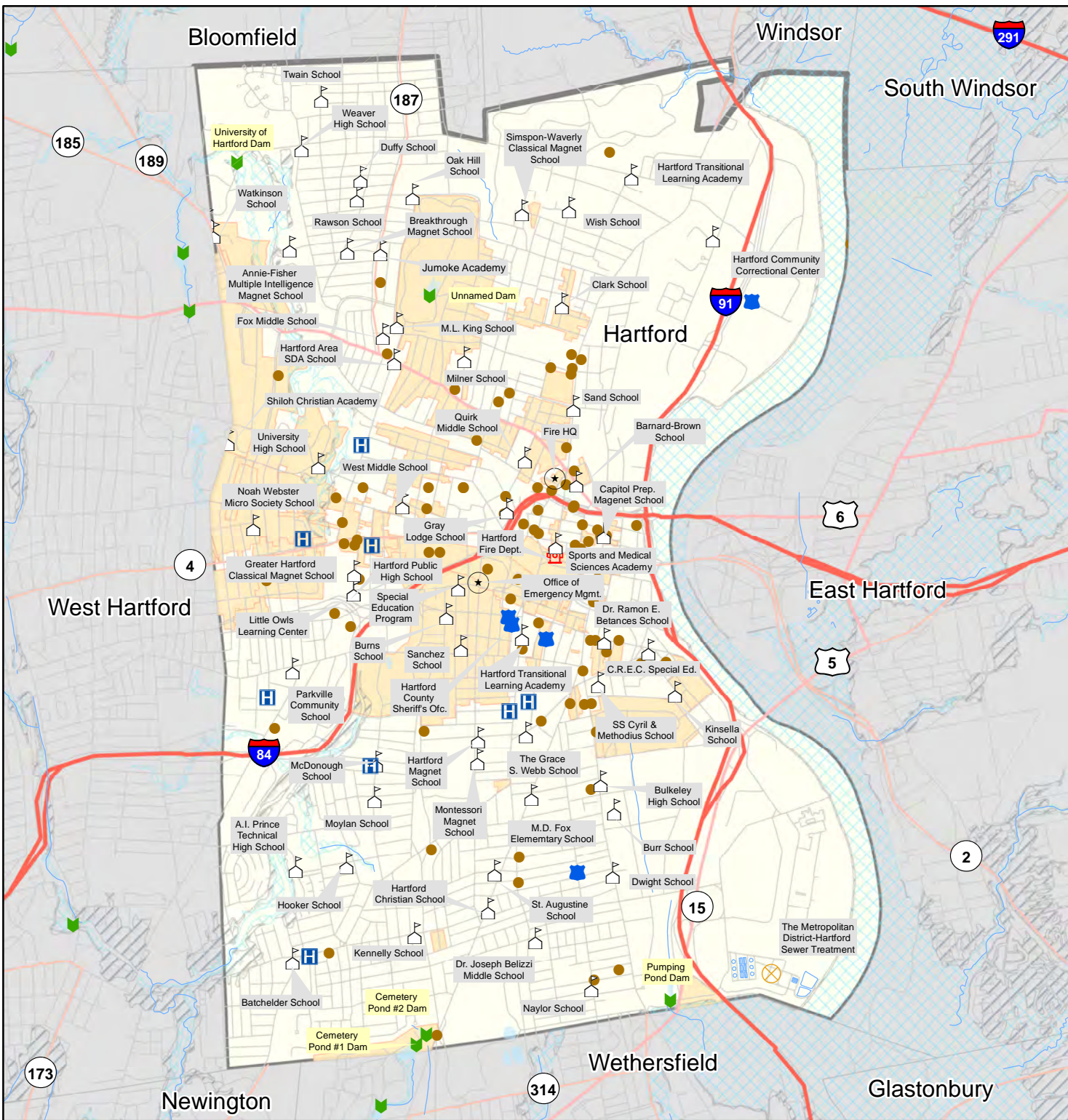
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|------------------|--|
| Goal | 7. Improve the emergency response capabilities of the region and its communities |
| Category | Preparedness & Emergency Response |
| Lead | Emergency Management |
| Cost | \$25,000 - \$50,000 |
| Funding | Town Operating Budget / DEMHS |
| Timeframe | 01/2023 - 12/2024 |
| Priority | Low |

Action #14

Increase DPW budget or personnel to allow for proper maintenance of drainage swales.

| | |
|------------------|--|
| Goal | 1. Minimize the impact of natural hazards on physical buildings and infrastructure |
| Category | Prevention |
| Lead | Public Works |
| Cost | More than \$100,000 |
| Funding | Town Operating Budget |
| Timeframe | 01/2024 - 12/2024 |
| Priority | Low |














Capitol Region Natural Hazards Mitigation Plan Update




Hartford, 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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