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 121,054 (2020 Census). 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 CT*fastrak*, 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' Stadium, Riverfront Recapture, Comcast Music Theater, Wadsworth Athenaeum, Connecticut Science Center, the Old State House, Mark Twain and Harriet Beecher Stowe Houses, and the Bushnell Center for Performing Arts.

Hartford has an old and primarily combined sewer infrastructure system. There are pressures on the system from climate-related weather events, and The Metropolitan District MDC is currently planning impediments to new sewer connections for critical development projects. While some development/redevelopment might occur in areas of flood risk, strict adherence to state and local flood regulations and state building codes will reduce overall risks.

Critical Facilities

In Hartford critical facilities include the Emergency Operations Center, housed at the Hartford Public Safety Complex, 7 Eversource substations and 4 Eversource Area Work Centers. The Fire Chief is also the Emergency Management Director. Please see Table 17.1 on the follow pages for a listing of Hartford's critical facilities.

Table 17-1: Critical Facilities, Hartford

Critical Facility	Shelter	Cooling Center/Warming Center	Generator	School	Public Safety	Infrastructure	Municipal Government	Medical
Hartford Public Safety Complex			X		X		X	
Hartford City Hall							X	
50 Jennings Road - DPW/HPD			X		X		X	
40 Jennings Road - DPW Yard			X			X	X	
250/260 Constitution Plaza							X	
HFD - Station 1					X	X	X	
HFD - Station 2					X	X	X	
HFD - Station 5					X	X	X	
HFD - Station 7					X	X	X	
HFD - Station 8					X	X	X	
HFD - Station 9					X	X	X	
HFD - Station 10					X	X	X	
HFD - Station 11					X	X	X	
HFD - Station 14					X	X	X	
HFD - Station 15					X	X	X	
HFD - Station 16					X	X	X	
North Meadows Pump Station					X	X		
Keney Pump Station					X	X		
Armory Pump Station					X	X		
Bushnell Pump Station					X	X		
Pope Park Pump Station					X	X		
South Meadows Pump Station					X	X		
The Metropolitan District EOC					X	X		
MDC Water Pollution Control Plant					X	X		
North End Senior Center	X	X						
Parker Memorial Community Center	X	X	X					

Critical Facility	Shelter	Cooling Center/Warming Center	Generator	School	Public Safety	Infrastructure	Municipal Government	Medical
South End Senior Center	X	X						
Arroyo Recreation Center	X	X						
Wille Ware Recreation Center	X	X						
Hartford Armory	X	X			X	X		
Metzner Community Center	X	X						
110 Washington Street	X	X						
Hartford Community Correctional Center					X			
Connecticut River Right Bank Flood Risk Management System, Hartford, CT (levee system)					X	X		
Park River Flood Risk Management System, Hartford, CT					X	X		
South Branch Park River Watershed Project – NRCS Flood Control					X	X		
Batterson Park Dam & Dike – Class C Dam located in New Britain / Farmington					X	X		
MDC Sewer Pump Stations						X		
Hyland Recreation & Early Learning Center	X	X		X				
Hartford Hospital								X
St. Francis Hospital								X
Connecticut Children's Medical Center								X
Mount Sinai Rehabilitation Hospital								X
Institute for Living								X
7 Eversource Electrical Substations						x		
4 Eversource Area Work Centers						x		
Trinity College				X				
University of Hartford				X				
Capital Community College				X				
UConn - Hartford Branch				X				

Critical Facility	Shelter	Cooling Center/Warming Center	Generator	School	Public Safety	Infrastructure	Municipal Government	Medical
UConn Law School				X				
Hartford Steam Generation Plant						X		
Union Station Transportation Center						X		
Parkville Community Center	X	X						
Parkville Micro Grid						X		
Brainard Airport						X		
CT Fastrack Stations						X		
Railyard Service Station						X		
South Park Inn	X							
McKinney Shelter	X							
ImmaCare, Inc.	X							
House of Bread	X							
The Open Hearth	X							
St. Elizabeth House	X							
Betances Magnet School				X				
Breakthrough Magnet School - North				X				
Breakthrough Magnet School - South				X				
Burns Latino Academy				X				
Alfred E. Burr Middle School				X				
Capital Preparatory Magnet School				X				
Naylor/CCSU Leadership Academy				X				
Renzulli Gifted & Talented Academy				X				
Dr. Michael D. Fox School				X				
Bellizzi Dual Language Academy				X				
Hartford High School				X				
E. B. Kennelly School				X				
Environmental Sciences Magnet School at Mary Hooker				X				

Critical Facility	Shelter	Cooling Center/Warming Center	Generator	School	Public Safety	Infrastructure	Municipal Government	Medical
Expeditionary Learning Academy at Moylan School	-	-	-	X	-	-	-	-
Fred D. Wish Museum School	-	-	-	X	-	-	-	-
Global Communications Academy	-	-	-	X	-	-	-	-
Hartford Pre-K Magnet	-	-	-	X	-	-	-	-
Kinsella Magnet School of Performing Arts	-	-	-	X	-	-	-	-
Sanchez Elementary School	-	-	-	X	-	-	-	-
MLK, Jr. Middle School	-	-	-	X	-	-	-	-
McDonough Middle School	-	-	-	X	-	-	-	-
Milner Middle School	-	-	-	X	-	-	-	-
Montessori Magnet School at Annie Fisher	-	-	-	X	-	-	-	-
Montessori Magnet School at Batchelder	-	-	-	X	-	-	-	-
Noah Webster MicroSociety Magnet School	-	-	-	X	-	-	-	-
Parkville Community School	-	-	-	X	-	-	-	-
S.A.N.D. School	-	-	-	X	-	-	-	-
Rawson Elementary School	-	-	-	X	-	-	-	-
STEM Magnet School at Annie Fisher	-	-	-	X	-	-	-	-
West Middle School	-	-	-	X	-	-	-	-
Bulkeley High School	-	-	-	X	-	-	-	-
Classical Magnet School	-	-	-	X	-	-	-	-
Hartford Magnet Trinity College Academy	-	-	-	X	-	-	-	-
Hartford Public High School	-	-	-	X	-	-	-	-
Pathways Academy of Technology and Design	-	-	-	X	-	-	-	-
Sport and Medical Sciences Academy	-	-	-	X	-	-	-	-
Weaver High School	-	-	-	X	-	-	-	-
University High School of Science and Engineering	-	-	-	X	-	-	-	-

The shelters in Hartford are not only used as Emergency Shelters but are also always open as homeless shelters. Thus, City staff reported that the shelters are always full. The City is aware that they are the capitol city and have many of the services that are needed to provide for homeless or other vulnerable populations. Shelters are allowed only in Industrial Zones, so the underlying zoning needs to be looked at to have a shelter or resilience hub/shelter placed somewhere in the City.

Prior to COVID, the City had plans to renovate McKinney Shelter in the Coltsville section Hartford, but the pandemic disrupted these efforts, and now there are reports of a developer potentially being involved in its redevelopment.

City staff report a high turnover and frequent changes in the facilities designated for sheltering, cooling, or warming, with inconsistent allocations from year to year.

City staff proposed the idea of refurbishing the abandoned Waverly School to repurpose it as a shelter and cooling center.

The City noted that MDC is a partner in the flood control system, with specific responsibilities in a flood situation. City staff reported that various MDC pump stations including the MDC's Fish Fry Pump Station should be listed as critical facilities.

Capabilities

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

The United States Army Corps of Engineers (USACE) built a series of dikes in Hartford along the Connecticut River following historic floods in 1936 and 1938. Other flood control projects include the flood risk management system for the Park River constructed by the USACE and the South Branch Park River Watershed Project constructed by Natural Resources Conservation Service (NRCS). The South Branch River Watershed Project is currently operated and maintained by the Connecticut Department of Energy and Environmental Protection (CT DEEP). CT DEEP is exploring shifting some of the maintenance responsibilities of the South Branch Park River Watershed Project to the City. 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 floodwall repairs, 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.

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 combined sewer lines in the City and region moves forward, much of which discharges to the Connecticut River in Hartford, it is critical for the City to monitor potential impacts on flood control infrastructure.

Hartford has fourteen (14) 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 regularly attend these meetings.

The Greater Hartford 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.

The Flood Commission, with assistance from the consultants, 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 documents have been finalized.

The City repaired a problem with the Weston Street culvert which was clogged and would not function properly. The City has switched from using sand to using two varieties of salt 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.

Since the 2019 HMP, the following actions have been incorporated as capabilities:

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

Capabilities to address natural hazards and the losses that they have caused, have increased since the last plan has been adopted.

Challenges

Challenges Overview

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

Additional areas of concern (not an exhaustive list):

- North Main Street / North End – the town seeks to address flooding concerns through continued discussions with MDC.
- Theodore Napper Lane
- Cleveland Ave
- Albany Ave – An opportunity for a significant stormwater conveyance pipe beneath this avenue arose, but it was reported that no one was willing to take ownership of the project, resulting in the pipe's non-construction. As a consequence of this and other factors, Upper Albany Ave remains at a high risk of flooding.
- Granby Street and Blue Hills neighborhood
- Scarborough Street
- Properties adjacent to the North Branch of the Park River

The City has six flood control pump stations. Two of the stations, Pope Park and Armory Pump Stations, reportedly have never been called on to pump. The Armory Pump Station has been activated but pumping was not required. The locations of these stations were originally based on the contours of the ground, and they would operate for catastrophic floods.

City staff raised concerns on the topic of the levee system, which reportedly needs to be addressed before any major redevelopment can happen in the vicinity of the Connecticut River. City staff note that work is ongoing, and the flood protection system will continue to provide protection as individual maintenance and repair projects are completed.

Hazard Losses

The economic losses faced by the community from natural hazards can be estimated by reviewing historic loss figures. Loss estimates are summarized below.

Average Annualized Losses

Average Annualized Loss (AAL) estimates are summarized below. 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 Hartford. National Centers for Environmental Information (NCEI) data, from the last 20 years, was categorized by hazard and averaged based on the proportion of population within each town in the CRCOG Region. National Flood Insurance Program (NFIP) losses were calculated based on the 50-year span of the program. FEMA Public Assistance (PA) data from the past 11 years was categorized based on hazard and used to compute AAL. United States Department of Agriculture (USDA) from the past 10 years was calculated to get AAL. Expected Annual Loss data from the National Risk Index (NRI) was downloaded and categorized to get AAL for the below hazards. Dam failure data was taken from the 2019-2024 CROCG Hazard Mitigation Plan (HMP) plan since no new dam failures have occurred in the past five years. The 2019 HMP Dam failures 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.

Table 17-2: Average Annualized Losses, Hartford

Hazard	Source	Average Annualized Losses (AAL)
Hurricanes/Tropical storms	NCEI	$311,088.03
	NRI	$3,334,928.51
	FEMA PA	$106,374.59
Tornados/High Winds	NCEI	$116,465.66
	NRI	$981,694.16
Winter Storms	NCEI	$92,261.63
	NRI	$62,452.40
	FEMA PA	$174,491.35
Flood	NCEI	$94,295.21
	NRI	$26,684.77
	NFIP	$13,104.65
Drought	NRI	$9,205.87
	USDA	$13,187.38
Extreme Heat	NRI	$137,715.12
Wildfire	NRI	$2,065.14
Earthquakes	NRI	$410,595.09
Dam Failure	HMP	$223.00

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

This HMCAP includes new goal statements that are aligned with *Resilient Connecticut* and the efforts of the GC3. The five new goals developed for this HMCAP were developed with cooperation from CIRCA in the *Resilient Connecticut* planning process, and are:

- Ensure that critical facilities are resilient, with special attention to shelters and cooling centers.
- Address risks associated with extreme heat events, especially as they interact with other hazards.
- Reduce flood and erosion risks by reducing vulnerabilities and consequences, even as climate change increases frequency and severity of floods.
- Reduce losses from other hazards.
- Invest in resilient corridors to ensure that people and services are accessible during floods and that development along corridors is resilient over the long term.

The previous goals of the 2019 HMP have been replaced and incorporated into these five new goals in accordance with the explanation in the Multijurisdictional document.

Noted Hazard Mitigation Needs

During the course of this Plan development, specific hazard mitigation needs were noted.

- A culvert at New Park Avenue needs attention.
- Continue to work with MDC to address the flooding concerns in Hartford.
- Continue to seek funding to improve the aging stormwater infrastructure.

Status of Previous Mitigation Strategies and Actions

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

Table 17-3: Status of Previous Mitigation Strategies and Actions, Hartford

No.	Action	Notes	Status
1	Develop an EAP for the Batterson Park levee in Farmington, and provide it to the Town of Farmington.	When the City is finished refurbishing the park, the ownership will be taken over by the state. The City is trying to make sure the levee is included in this transfer of ownership, as the staff don't think it makes sense for the City to retain ownership. The EAP is either done or almost done – Frank will check and confirm. There were no tabletop exercises.	Complete/retire
2	Supplement or replace the generators at the city's Fire Houses to support their roles as emergency places of refuge.	City staff weren't sure about the fire houses – this kicked off a further conversation about shelters, see the critical facilities section of the notes. City staff present for the meeting generally seemed unfamiliar with this action. Perhaps revise to encompass the issues discussed in critical facilities section of discussion.	Carry Forward with Revision
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.	City staff said that this action doesn't make sense with the reality on the ground in Hartford. The City reportedly has flooding issues, but telling business owners that they should move their equipment and stock to a higher floor is unlikely to help. Perhaps revise to encourage City staff watch the one-hour DEEP webinar training on this topic.	Carry Forward with Revision
4	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.	City staff says that stormwater and MS4 compliance is still very much a concern. CIRCA staff suggested that the City needs to solve stormwater challenges, rather than rely on the technical assistance suggested by the action (i.e., learning how to submit annual reports, etc.). Erin and the other attendees explained the challenges of a combined system, and the MDC has been telling the City that there can be no net increase in stormwater right now, which impacts redevelopment. Another concern is outfall ownership -- the City thinks they know what outfalls they own, and MDC disagrees. It would be helpful to have a third party assess this. Keep; perhaps with revisions to reflect the specific concerns.	Carry Forward/Carry Forward with Revision
5	Participate in EMI courses or the seminars and annual conference held by the Connecticut Association of Flood Managers.	While the City staff may not have participated in the events recommended by the action, they participate in the ongoing Army Corps exercises about the flood protection system. CIRCA staff mentioned the Silver Jackets flood awareness workshops as an example of training presently available, noting that continuing education is often available from DEMHS and other agencies. The City may wish to continue this action with a revision to provide some flexibility.	Carry Forward with Revisions

No.	Action	Notes	Status
6	Work with MDC to identify potential hazard mitigation actions for MDC facilities, and list those actions in the next HMP Update.	Given the sensitivity of MDC operations in the City, CIRCA staff explained the background for this action. The reason this action is in here is because Greater New Haven Water Pollution Control Authority previously missed out on FEMA funding because they didn't list sewer pumping stations in the appropriate annexes of the HMP. The City noted that MDC is a partner in the flood control system, with specific responsibilities in a flood situation. This arrangement works well. Erin raises the concern that MDC might compete with the City for FEMA funds. After some discussion, attendees agreed that Fish Fry pumping station should be listed as a critical facility. Frank notes that a number of sluice gates in the city are also important. Erin suggests listing all the MDC infrastructure near the "hot spot" areas in Hartford. CIRCA staff notes that the new FEMA guidance requires more robust stakeholder engagement, so CIRCA will likely be reaching out to MDC directly as well. Revise to include Fish Fry, perhaps others?	Remove; addressed in the critical facilities section of the town annex
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.	West Hartford applied for a DCRF grant for Kane Brook, which would include Hartford. Not known yet whether this will be funded. CIRCA staff notes that Kane Brook is also a very good candidate for a Resilient Connecticut study and concept design. City staff aren't sure what the "tire facility" referenced here is. Revise to be more clear that this is Kane Brook, and to tie to the DCRF project for Kane Brook if that is funded.	Carry Forward with Revisions
8	Complete implementation of System Wide Improvement Framework and Semi-Qualitative Risk Assessment for the Hartford Flood Control System, submitted to USACE in 2018.	The "SWIF" is underway and therefore the intent of this action ("complete implementation" is complete. Toe drain project and closure structure still need to be completed. Revise To describe the next steps.	Complete/ Revise to describe next steps that need funding

No.	Action	Notes	Status
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.	City staff were unsure about who the floodplain manager may be. Some outreach/education is being conducted and underway, in collaboration with an MDC program to address flooding associated with sewer backups and infrastructure challenges. Janice Castle (Hartford Office of Community Engagement) is the city staff member who would know about this. Frank notes that this is complicated, because for a while MDC was saying it wasn't their responsibility. A change in mindset may be occurring, as MDC has reportedly canvassed about 1,000 homes in North Hartford. Check with Janice Castle, Director of city Engagement, for more information on this. CIRCA staff noted that, ideally, outreach related to flooding may inherently address areas with repetitive loss properties. Nevertheless, the two issues (sewer backups and repetitive losses under NFIP) are different.	Carry Forward
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.	This was a top-down action from the last plan update, given to most of the CRCOG towns because SHPO had completed a historic resources resiliency planning project. SHPO has since created a data layer of historic and cultural resources. Revise to suggest that City staff should acquire and review the new SHPO layer Combine with Action 12.	Carry Forward with Revision.
11	Make progress with the hazard mitigation goals associated with SustainableCT certified actions.	The City is certified Silver. Cecilia says it would be helpful if the City could implement green infrastructure without the MDC limiting the use of green infrastructure, but currently MDC is an obstacle because even green infrastructure still adds to the stormwater system, and would add more maintenance to MDC's plate. Therefore further action towards greater certification in this specific area is unlikely to happen. CIRCA staff suggests adding another action about green infrastructure since FEMA is funding these types of projects. There is an arrangement between the City and MDC that MDC is responsible for maintaining green infrastructure, which is another reason why MDC might not be in favor of additional green infrastructure. Perhaps the new action should skate around this maintenance issue. Remove or broaden the Sustainable CT action, as CRCOG and the state are no longer pushing this. Perhaps add a new action for green infrastructure.	Complete/Retire Or Carry Forward with Revisions to broaden or include green infrastructure

No.	Action	Notes	Status
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.	Another top-down action, can be combined #10.	Carry Forward with Revisions
13	Conduct tabletop natural hazard emergency response drills with local departments more frequently. Ensure multiple hazard scenarios are drilled.	City staff participate in drills with the Army Corps (as mentioned above) and agencies such as DEMHS. This is a capability.	Complete/Retire
14	Increase DPW budget or personnel to allow for proper maintenance of drainage swales.	The City has a good relationship with DOT, and DOT does some of this work. This is maintenance, which FEMA doesn't fund. This will be addressed in other ways, but not with FEMA funding.	Partly Complete/ Retire

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.

Table 17-4: Active Mitigation Strategies and Actions, Hartford

Number	Hazard Mitigation and Climate Adaptation Actions	Hazard Mitigation and Climate Adaptation Goal	Type of Action	Responsible Department	Approx. Cost Range	Potential Funding Sources	Timeframe	Priority	Hazard(s)	EJ?	PERSISTS	STAPLEE Score	PERSISTS x STAPLEE =
HF1	Conduct a city-wide facilities inventory and assessment study to identify and prioritize facilities that could serve as shelter and cooling centers.	Ensure that critical facilities are resilient, with special attention to shelters and cooling centers.	Preparedness & Emergency Response	Emergency Management	$10,000 - $50,000	DCRF; FEMA HMA; Municipal CIP Budget	7/2026 - 6/2027	High	All Hazards	Yes - Distressed Municipality	19	5	95
HF2	Renovate Waverly School to serve as a shelter and cooling center.	Ensure that critical facilities are resilient, with special attention to shelters and cooling centers.	Preparedness & Emergency Response	Emergency Management	$50,000 - $100,000	FEMA HMA; DEHMS and Other Preparedness Grants	07/2025 - 06/2026	High	All Hazards	Yes - Distressed Municipality	19	5	95
HF3	Complete the feasibility study for a new microgrid and determine next steps.	Ensure that critical facilities are resilient, with special attention to shelters and cooling centers.	Preparedness & Emergency Response	Chief Elected Official	$10,000 - $50,000	DCRF; FEMA HMA	07/2024 - 06/2026	Medium	All Hazards	Yes - Distressed Municipality	18	4	72
HF4	Ensure that transportation and transit options are available to bring people to cooling centers.	Address risks associated with extreme heat events, especially as they interact with other hazards.	Preparedness & Emergency Response	Emergency Management	$10,000 - $50,000	Transit; IIJA BBFP	07/2024 - 06/2026	High	Extreme Heat	Yes - Distressed Municipality	19	3	57
HF5	Conduct a city-wide assessment of stream crossings to identify	Reduce flood and erosion risks by reducing	Structural Project	Public Works	$10,000 - $50,000	DCRF; Municipal CIP Budget	07/2026 - 06/2028	Medium	Riverine and Pluvial	Yes - Distressed	19	6	114

Number	Hazard Mitigation and Climate Adaptation Actions	Hazard Mitigation and Climate Adaptation Goal	Type of Action	Responsible Department	Approx. Cost Range	Potential Funding Sources	Timeframe	Priority	Hazard(s)	EJ?	PERISTS	STAPLEE Score	PERSISTS x STAPLEE =
	vulnerabilities and develop a priority list for maintenance and upsizing.	vulnerabilities and consequences, even as climate change increases frequency and severity of floods.							Floods/ Tidal Connecticut River Flooding	Municipality			
HF6	Execute the DEEP Climate Resilience Fund (Kennedy/Kane Brook) project and apply for funds to pursue the recommendations.	Reduce flood and erosion risks by reducing vulnerabilities and consequences, even as climate change increases frequency and severity of floods.	Structural Project	Public Works	$500,000 - $1M	DCRF	07/2024 - 06/2026	High	Riverine and Pluvial Floods	Yes - Distressed Municipality	20	4	80
HF7	Acquire funding for the Toe Drain Project and Closure Structure for the System Wide Improvement Framework.	Reduce flood and erosion risks by reducing vulnerabilities and consequences, even as climate change increases frequency and severity of floods.	Structural Project	Public Works	$50,000 - $100,000	FEMA HMA; Municipal CIP Budget	07/2025 - 06/2027	Medium	Riverine and Pluvial Floods	Yes - Distressed Municipality	19	6	114
HF8	Seek a combination of federal and state funds for flood mitigation and sewer system projects in the North End.	Reduce flood and erosion risks by reducing vulnerabilities and consequences, even as climate change increases frequency and severity of floods.	Structural Project	Public Works	>$1M	FEMA HMA; EPA; CWSRF	07/2025 - 06/2027	High	Riverine and Pluvial Floods	Yes - Distressed Municipality	20	4	80

Number	Hazard Mitigation and Climate Adaptation Actions	Hazard Mitigation and Climate Adaptation Goal	Type of Action	Responsible Department	Approx. Cost Range	Potential Funding Sources	Timeframe	Priority	Hazard(s)	EJ?	ERISTS	STAPLEE Score	PERSISTS x STAPLEE =
HF9	Undertake a flood mitigation study for the North Branch Park River that identifies potential acquisitions and green infrastructure projects that will reduce flooding and flood damage and that provide other co-benefits such as habitat enhancement.	Reduce flood and erosion risks by reducing vulnerabilities and consequences, even as climate change increases frequency and severity of floods.	Structural Project	Public Works	$50,000 - $100,000	DCRF; FEMA HMA	07/2025 - 06/2027	High	Riverine and Pluvial Floods	Yes - Distressed Municipality	20	6	120
HF10	Execute the DEEP Climate Resilience Fund (Climate Resilience Assessment) project and apply for funds to pursue the recommendations.	More than one goal.	Structural Project	Public Works	$100,000 - $500,000	DCRF	07/2024 - 06/2026	High	All Hazards	Yes - Distressed Municipality	20	6	120
HF11	Work with the Connecticut Institute for Resilience and Climate Adaptation (CIRCA) to develop an appropriate scope of work to address flooding and extreme heat concerns in Resilient Opportunity Areas (ROARs).	More than one goal.	More than one type	Public Works	$0- $10,000	CIRCA	07/2024 - 06/2027	High	Riverine and Pluvial Floods/ Extreme Heat/Tidal Connecticut River Flooding	Yes - Distressed Municipality	20	5	100
HF12	Watch the DEEP Chemical Management and Climate Resilience Webinar: https://portal.ct.gov/DEE	Reduce flood and erosion risks by reducing vulnerabilities and consequences, even	Education and Awareness	Emergency Management	$0- $10,000	Municipal Operating Budget	01/2025- 12/2025	Low	Riverine and Pluvial Floods/ Tidal	Yes - Distressed	18	7	126

Number	Hazard Mitigation and Climate Adaptation Actions	Hazard Mitigation and Climate Adaptation Goal	Type of Action	Responsible Department	Approx. Cost Range	Potential Funding Sources	Timeframe	Priority	Hazard(s)	EJ?	ERISTS	STAPLEE Score	PERSISTS x STAPLEE =
	P/P2/Chemical-Management-and-Climate-Resilience/Chemical-Management-and-Climate-Resilience	as climate change increases frequency and severity of floods.							Connecticut River Flooding	Municipality			
HF13	Coordinate with CLEAR/NEMO 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.	Reduce flood and erosion risks by reducing vulnerabilities and consequences, even as climate change increases frequency and severity of floods.	Prevention	Public Works	$0-$10,000	Municipal Operating Budget	7/2026 - 6/2027	High	Riverine and Pluvial Floods	Yes - Distressed Municipality	20	7	140
HF14	Complete an assessment of outfall ownership to determine which outfalls are owned by the City of Hartford and which are owned by MDC; consider a third party contractor for this assessment.	Reduce flood and erosion risks by reducing vulnerabilities and consequences, even as climate change increases frequency and severity of floods.	Structural Project	Public Works	$50,000 - $100,000	Muncipal CIP Budget	07/2024 - 06/2026	High	Riverine and Pluvial Floods	Yes - Distressed Municipality	20	6	120
HF15	Participate in EMI, DEMHS and/or courses or the seminars and annual conference held by CIRCA and the Connecticut Association of Flood Managers.	Reduce flood and erosion risks by reducing vulnerabilities and consequences, even as climate change increases frequency	Education and Awareness	Floodplain Manager	$0-$10,000	Municipal Operating Budget	01/2025 and annually during this month	High	All Hazards	Yes - Distressed Municipality	19	6	114

Number	Hazard Mitigation and Climate Adaptation Actions	Hazard Mitigation and Climate Adaptation Goal	Type of Action	Responsible Department	Approx. Cost Range	Potential Funding Sources	Timeframe	Priority	Hazard(s)	EJ?	ERISTS	STAPLEE Score	PERSISTS x STAPLEE =
		and severity of floods.											
HF16	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.	Reduce flood and erosion risks by reducing vulnerabilities and consequences, even as climate change increases frequency and severity of floods.	Property Protection	Planning	$0-$10,000	Municipal Operating Budget	01/2026 - 12/2026	High	Riverine and Pluvial Floods	Yes - Distressed Municipality	20	7	140
HF17	Review the Connecticut Cultural Resource Information System (ConnCRIS) to identify and understand historic and archaeological resources in areas of hazard risks found here: https://conncris.ct.gov.	Reduce flood and erosion risks by reducing vulnerabilities and consequences, even as climate change increases frequency and severity of floods.	Property Protection	Planning	$0-$10,000	SHPO; Municipal Operating Budget	01/2026 - 12/2026	Medium	Wildfires/Tornadoes and High Winds/ Riverine and Pluvial Floods	Yes - Distressed Municipality	19	9	171
HF18	Make progress with the hazard mitigation goals associated with green infrastructure and the SustainableCT certified actions.	More than one goal.	Natural Resources Protection	Planning	$0-$10,000	Municipal Operating Budget	07/2025 - 06/2026	Low	All Hazards	Yes - Distressed Municipality	19	7	133
HF19	Update the city website to include hazard mitigation and emergency preparedness	Reduce losses from other hazards.	Education and Awareness	Planning	$0-$10,000	Municipal Operating Budget	01/2025 - 12/2025	Medium	All Hazards	Yes - Distressed	18	7	126

Number	Hazard Mitigation and Climate Adaptation Actions	Hazard Mitigation and Climate Adaptation Goal	Type of Action	Responsible Department	Approx. Cost Range	Potential Funding Sources	Timeframe	Priority	Hazard(s)	EJ?	ERISTS	STAPLEE Score	PERSISTS x STAPLEE =
	tips for residents, including sections corresponding to each hazard considered in this Plan Update.									Municipality			

Figure 17-1: CIRCA Environmental Justice Rank and Critical Facilities, Hartford

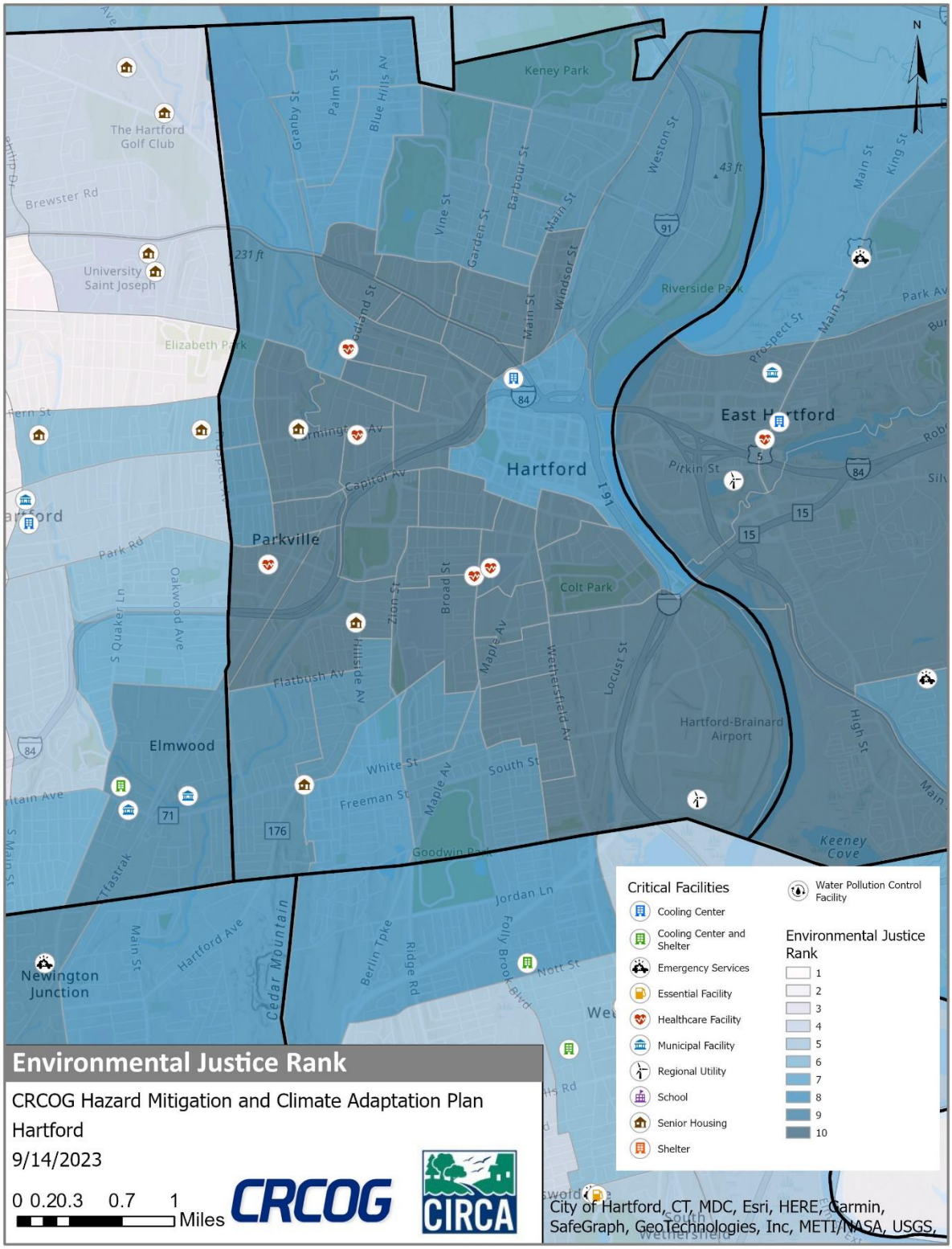

Figure 17-2: FEMA Flood Zones and Critical Facilities, Hartford

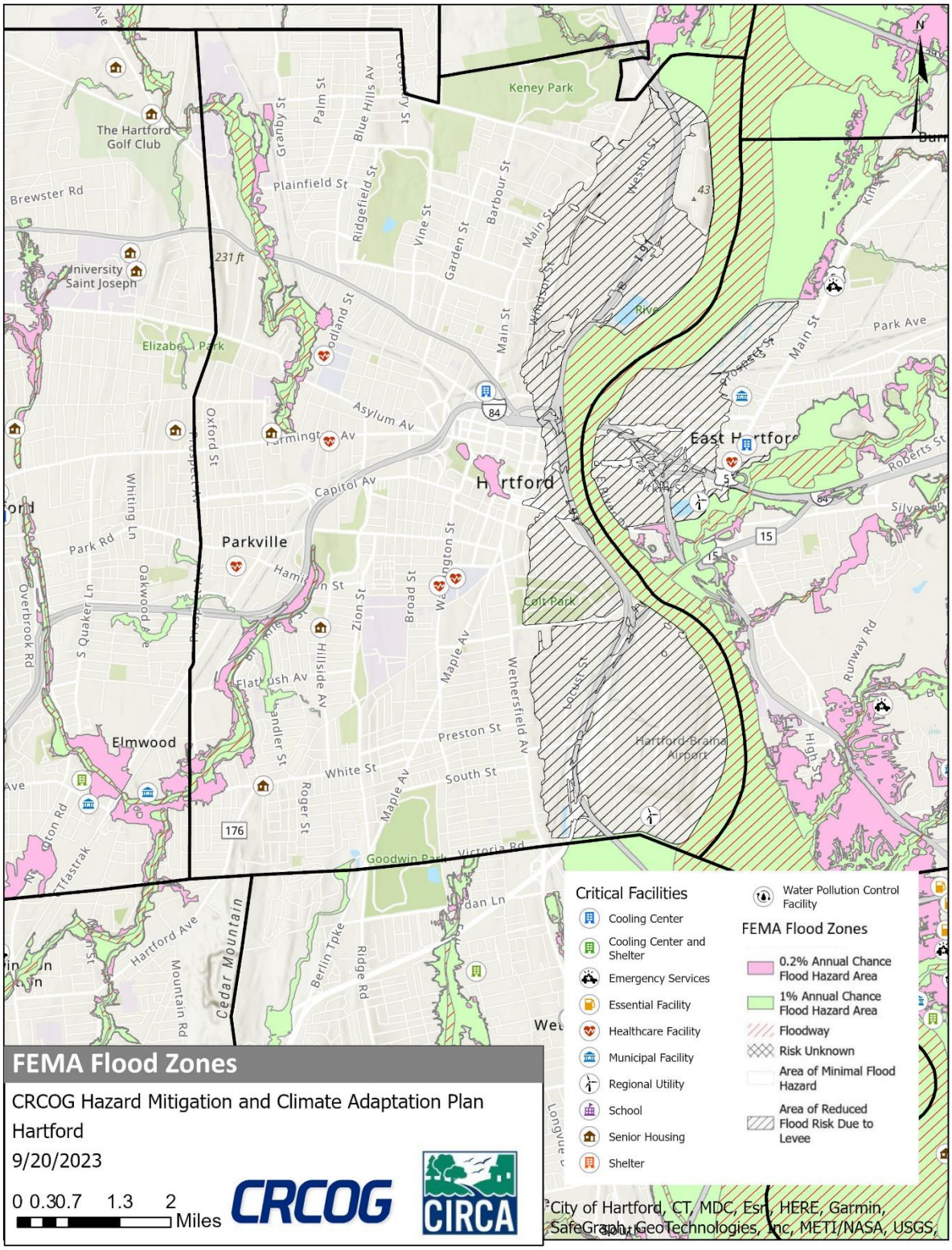

Figure 17-3: CIRCA Flood CCVI and Critical Facilities, Hartford

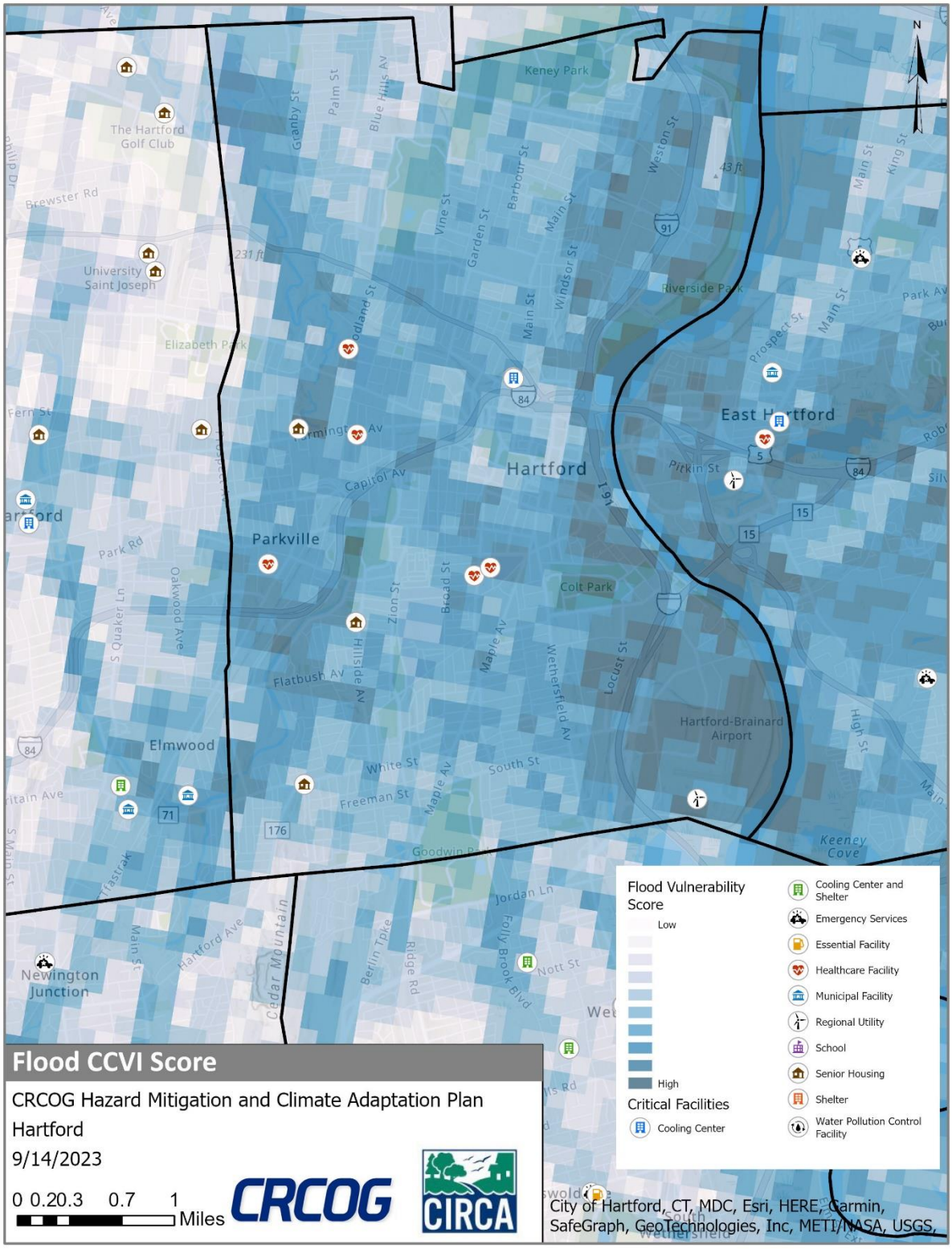

Figure 17-4: CIRCA Heat CCVI and Critical Facilities, Hartford