6 Canton

Community Overview

Canton is a rural town in Hartford County with a population of about 10,124. The Town encompasses 25 square miles and has an elevation ranging from 250 feet in Collinsville to 1100 feet in North Canton. Canton lies within the boundaries of the Farmington River Watershed. The principal watercourses in Town include the Farmington River and the Cherry, Barbour, and Jim Brooks. The major transportation routes that run through Canton include state routes 44, 202 and 179. Major industries located in Canton include plastic injection molding, small businesses and large commercial retail, restaurants, small farming, art galleries, and antique shops.

Several developments have taken place in Canton, including the completion of large residential complexes at 5 Cherry Brook Road on Rt 44 and 179 and 401 Cherry Brook Road near Daynard. Progress is being made on a large residential complex on Old Canton Road and on Lawton Road. There are discussions about further developments on Dowd Avenue near the Canton Village Center.

Development/redevelopment is not increasing risk to natural hazards.

Critical Facilities

In Canton critical facilities include the water pollution control facility (WPCF), the town garage (public works facility), the community shelter, and a new pet shelter facility, the town library, police station and the newly built fire department since 2019.

Table 6-1: Critical Facilities, Canton

Facility	Shelter	Cooling Center	Generator
Water Pollution Control Facility			X
Town Public Works Garage			X
Community Center	Primary	X	X
Pet Shelter Facility			
Public Works Facility			X
Town Library		X	X
Police Station		X	X
New Fire Department			X
Cherry Brook Primary School			X
Canton Intermediate School (CIS)			
Canton High School			Partial
2 Eversource Substations			

During extreme heat events, Canton Public Library, Canton Police Station and Canton Community Center can all be opened as public cooling or heating centers. All facilities currently have generators. The Community Center is also used as a shelter.

The town is building a new fire department right next to the police department, where there used to be a softball field. Separate generators will be used, but might be a good place for a microgrid because five critical facilities are reportedly (fire, police, community center, town hall, DPW) in a cluster.

The shelter is co-located at the community center. However, the Community Center does not have showers, requiring people being sheltered to go to Mills Pond Park to a shower, which closes in the winter. The town has previously asked for funding to turn two rooms into ADA-compliant showering facilities. This would be less than $75,000.

Cherry Brook School has full capacity generator. CIS has no generator. CHS has generator capacity for emergency lighting and refrigeration.

Capabilities

Canton's hazard mitigation capabilities include its tree, road, and debris management programs, its emergency response departments, and its Community Emergency Response Team. Hazard mitigation is addressed specifically in the community's Plan of Conservation and Development.

Canton has a tree warden within its Public Works Department. Tree maintenance budgets are similar from year to year. The Town coordinates tree trimming around power lines with Eversource, and trimming has been vigorous in the last few years; nevertheless, the Town generally believes that trimming could be more aggressive, and that removal of entire trees rather than trimming would be preferable in some cases. Canton DPW has set up contracts for two (2) hour emergency tree crew response.

Debris from storms is typically processed at Dunning Sand & Gravel, while snow is brought to Town parking lots.

There is only one Canton Volunteer Fire and EMS Department. They are located in three Fire Stations, one of which is owned by a private non-profit corporation.

The Town has been requiring developers to install fire tanks/cisterns in new developments without fire protection.

The Community Emergency Response Teams (CERTs) is active in Canton.

Since adoption of the 2014-2019 Capitol Region Natural Hazards Mitigation Plan Update ("2014 HMP") the Canton DPW facility was constructed within the flood plan.

The Town has access to a portable generator to be used as-needed during emergencies. The Town's Emergency Operations Plan will be updated to describe its use; quick-connect switches will likely be installed at several locations such as shelters, warming stations, and cooking/food service facilities to enable its use during emergencies.

Since the 2014 HMP, the Town has established a pet sheltering facility.

Culverts have been replaced on Hansen Road and Bunker Hill Road; these were in-kind replacements, so capacity has not increased.

Canton Hydro has completed the facility pursuant to the issued FERC licenses. The dam is equipped with automated crest gates that lower when the river level rises.

Heavier snow removal trucks have been acquired.

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

- 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.
- Participate in EMI courses or the seminars and annual conference held by the Connecticut Association of Flood Managers.
- Canton has implemented numerous redundancies within its upstream dam systems to prevent and mitigate catastrophic events, enhancing the overall resilience of the town's water management infrastructure.
- Heat risks are well handled by the police department and other town entities.

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

Challenges

Challenges Overview

The town notes that Canton has Repetitive Loss Properties.

The many upstream Farmington River dams remain a concern for the town. The MDC has repeatedly included the Town in emergency drills and planning for the Goodwin Dam, but not the others (Nepaug, Barkhamsted). The Town would like MDC to be more proactive in disseminating information about risks downstream and conducting planning and drills for the other dams. If the dam at the Barkhamsted Reservoir, located outside of Canton, failed, Canton could experience serious flooding along the Farmington River in about 20 minutes. Similarly, a failure in the Nepaug Reservoir Dam also located just outside of Canton, would quickly cause serious flooding in town.

Flooding remains a constant concern in Canton, necessitating ongoing mitigation efforts and preparedness.

The presence of trees on power lines is a notable concern, requiring consistent maintenance and vegetation management to ensure reliable electricity supply.

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 Canton. 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 6-2: Average Annualized Losses, Canton

Hazard	Source	Average Annualized Losses (AAL)
Hurricanes/Tropical storms	NCEI	$26,016.94
	NRI	$387,825.80
	FEMA PA	$6,487.38
Tornados/High Winds	NCEI	$9,740.27
	NRI	$104,114.54
Winter Storms	NCEI	$7,716.03
	NRI	$5,929.07
	FEMA PA	$6,067.34
Flood	NCEI	$7,886.11
	NRI	$17,088.21
	NFIP	$2,457.07
Drought	NRI	$2,431.18
	USDA	$0.00
Extreme Heat	NRI	$11,534.35
Wildfire	NRI	$254.59
Earthquakes	NRI	$13,060.49
Dam Failure	HMP	$18.00

Losses Summary

A review of the above loss estimates demonstrates that the Town of Canton 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

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

- Work on a comprehensive program to address Repetitive Loss Properties in Canton, including measures to reduce flood risk, educate property owners, and encourage participation in flood insurance programs.
- The town should engage in proactive dialogue with the Metropolitan District Commission (MDC) to emphasize the importance of disseminating information and conducting emergency planning and drills for all upstream dams, including Nepaug and Barkhamsted, and the Goodwin Dam.
- The town should consider collaborating with relevant agencies to develop emergency response plans and evacuation strategies for Canton in case of a dam failure at any of these reservoirs
- Canton should continue to Implement regular tree-trimming and vegetation management programs to minimize the risk of trees on power lines and work with Eversource to ensure a reliable electricity supply, particularly during extreme weather events.

Status of Previous Mitigation Strategies and Actions

The Town of Canton reviewed the mitigation actions proposed in the 2019 HMP and determined the status of each. That information is included in the table below.

Table 6-3: Status of Previous Mitigation Strategies and Actions, Canton

No.	Action	Notes	Status
6	Receive and file current dam failure analysis and EAP for all upstream MDC reservoirs.	The town has all the EAPs.	Complete / Retire
11	Conduct an assessment of the Farmington River and Nepaug River to identify possible flood mitigation activities in this area.	Modify or remove this – not a lot of development has happened along the river. CIRCA staff noted that new FEMA maps are forthcoming for the Farmington River basin, so the Town will be reviewing changes in the maps in 2023.	No longer a need / Retire
2	Conduct outreach and education campaign to residents and property owners downstream of large dams (Goodwin, Nepaug, and Barkhamsted) about risks and emergency alert systems. Work with MDC if possible.	While the dams mentioned in this action are closely monitored by MDC and have been subject to periodic EAP updates and drills, only one (Goodwin) was subject to a drill in 2023. Meanwhile, the owners of the two dams in Collinsville on the Farmington River are in Austria, and the town's EMD worries about the ability to get in touch with them quickly in the event of a catastrophic breach. They are not part of this action, but the Town remains concerned. The outreach to residents part of this action has likely not been done.	Carry forward

No.	Action	Notes	Status
10	Conduct annual exercise with MDC that specifically includes the Nepaug and Barkhamsted Reservoir dams.	There has previously been an annual training related to the Goodwin Dam, although this was not held this year. Trainings for Saville/Barkhamsted and Nepaug have not been held, but the town's EMD thinks these dams would be more relevant to the town of Canton. Revise this action to encompass more dams while ensuring that Nepaug and Barkhamsted are included.	Carry forward with revisions
12	Complete relocation of Town Garage outside of flood zone.	The current Town Garage building is less than 5 years old and is still next to the river.	No longer a need / Retire
13	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.	Still needed	Carry forward
15	Work with CT DEEP to complete a formal validation of the Repetitive Loss Property list and update the mitigation status of each listed property.	Still needed	Carry forward
8	Approach homeowners in Dowd's Corner, in particular on Old Canton Road, to offer assistance if they are interested in property acquisition.	CIRCA followed up with Neil Pade who said he is unaware of any initiatives on this action within the town.	No Longer Needed/Remove.
5	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.	CIRCA followed up with Neil Pade who said he is unaware of any initiatives on this action within the town.	No Longer Needed/Remove.
3	Complete a study of existing municipal communication capabilities to determine opportunities for building resilience into the system.	CIP account has been established for a future radio system consultant.	Complete / Retire
4	Acquire updated radio communication equipment for municipal departments to use for emergency response.	Same as previous action.	Complete / Retire

No.	Action	Notes	Status
7	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.	The Town has worked with NEMO to follow MS4 stormwater management compliance. We currently utilize environmental engineering vendor, Atlas ATC to perform the Town's required MS4 compliance. Below is a link to our Stormwater Management Plan Information on our website. https://www.townofcantonct.org/content/44105/44701/44841/44983/default.aspx	Complete/ Remove
14	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.	CIRCA followed up with Neil Pade who said he is unaware of any initiatives on this action within the town. However, CIRCA advised that this action be changed to Acquire and use new SHPO data layer	Carry Forward with Revisions
9	Participate in EMI courses or the seminars and annual conference held by the Connecticut Association of Flood Managers.	Town's EMD has attended dam awareness training over the years. Chris just went to the Silver Jackets Flood Awareness. When the Goodwin Dam training is held, Chris attends that as well. The intent of this action is being met.	Intent is complete / Retire
1	Enter the Sustainable CT program through Registration and review actions that can be undertaken to pursue Certification. Make progress with the actions related to hazard mitigation.	Town's EMD doesn't know whether the town is part of Sustainable CT. CIRCA staff checked on the SCT website and Canton is not involved in the program.	No Longer Needed/Remove.

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.

Table 6-4: Active Mitigation Strategies and Actions, Canton

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 Score	STAPLEE Score	PERSISTS x STAPLEE =
CA1	Explore options on installing a microgrid near the new fire department which is in close proximity to other critical facilities including the Police Center, Community Center, Town Hall, and DPW.	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	07/2025 - 06/2026	Medium	All Hazards	No	18	4	72
CA2	Turn two un-used rooms in the Community Center into ADA-compliant showering facilities.	Ensure that critical facilities are resilient, with special attention to shelters and cooling centers.	Preparedness & Emergency Response	Emergency Management	$50,000 - $100,000	STEAP; Municipal CIP Budget	07/2025 - 06/2027	High	All Hazards	No	19	5	95
CA3	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	No	19	3	57
CA4	Conduct a town wide assessment of stream crossings to identify vulnerabilities and develop a priority list for maintenance and upsizing.	Reduce flood and erosion risks by reducing vulnerabilities and consequences, even as climate change increases frequency and severity of floods.	Structural Project	Public Works	$10,000 - $50,000	DCRF; Municipal CIP Budget	07/2025 - 06/2027	Medium	Riverine and Pluvial Floods	No	18	6	108
CA5	Conduct outreach and education campaign to residents and property	Reduce flood and erosion risks by reducing	Education and Awareness	Planning	$0- $10,000	Municipal Operating Budget	01/2026 - 12/2026	High	Dam Failure	No	18	5	90

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 Score	STAPLEE Score	PERSISTS x STAPLEE =
	owners downstream of large dams (Goodwin, Nepaug, and Barkhamsted) about risks and emergency alert systems. Work with MDC if possible.	vulnerabilities and consequences, even as climate change increases frequency and severity of floods.											
CA6	Conduct annual exercise with MDC that include the Goodwin, Saville/Nepaug and Barkhamsted Reservoir dams.	Reduce flood and erosion risks by reducing vulnerabilities and consequences, even as climate change increases frequency and severity of floods.	Education and Awareness	Public Works	$0-$10,000	Municipal Operating Budget	07/2025 - 06/2026	High	Dam Failure	No	18	6	108
CA7	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	No	19	7	133
CA8	Work with CT DEEP to complete a formal validation of the Repetitive Loss Property list and update the mitigation status of each listed property.	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	07/2025 - 06/2026	High	Riverine and Pluvial Floods	No	19	5	95
CA9	Ensure that options are available to help property owners make their water supply wells resilient to droughts, floods, and loss of capacity.	More than one goal.	Water & Wastewater Utility Projects	Planning	$0-$10,000	DWSRF; FEMA HMA; STEAP	07/2025 - 06/2026	High	Riverine and Pluvial Floods/Drought	No	19	10	190
CA10	Expand public water systems to areas served by	Reduce losses from other hazards.	Water & Wastewater	Fire Department	>$1M	DWSRF; FEMA	07/2026 - 06/2028	High	Drought/Wildfire	No	19	8	152

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 Score	STAPLEE Score	PERSISTS x STAPLEE =
	private wells when needed to address drought impacts and provide fire protection		Utility Projects			HMA; STEAP							
CA11	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	Medium	Riverine and Pluvial Floods/Extreme Heat	No	18	5	90
CA12	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	No	18	9	162
CA13	Update town website to include hazard mitigation and emergency preparedness tips for town residents, including sections corresponding to each hazard considered in this Plan Update.	More than one goal.	Education and Awareness	Planning	$0-$10,000	Municipal Operating Budget	01/2025 - 12/2025	Medium	All Hazards	No	17	7	119

Figure 6-1: CIRCA Environmental Justice Rank and Critical Facilities, Canton

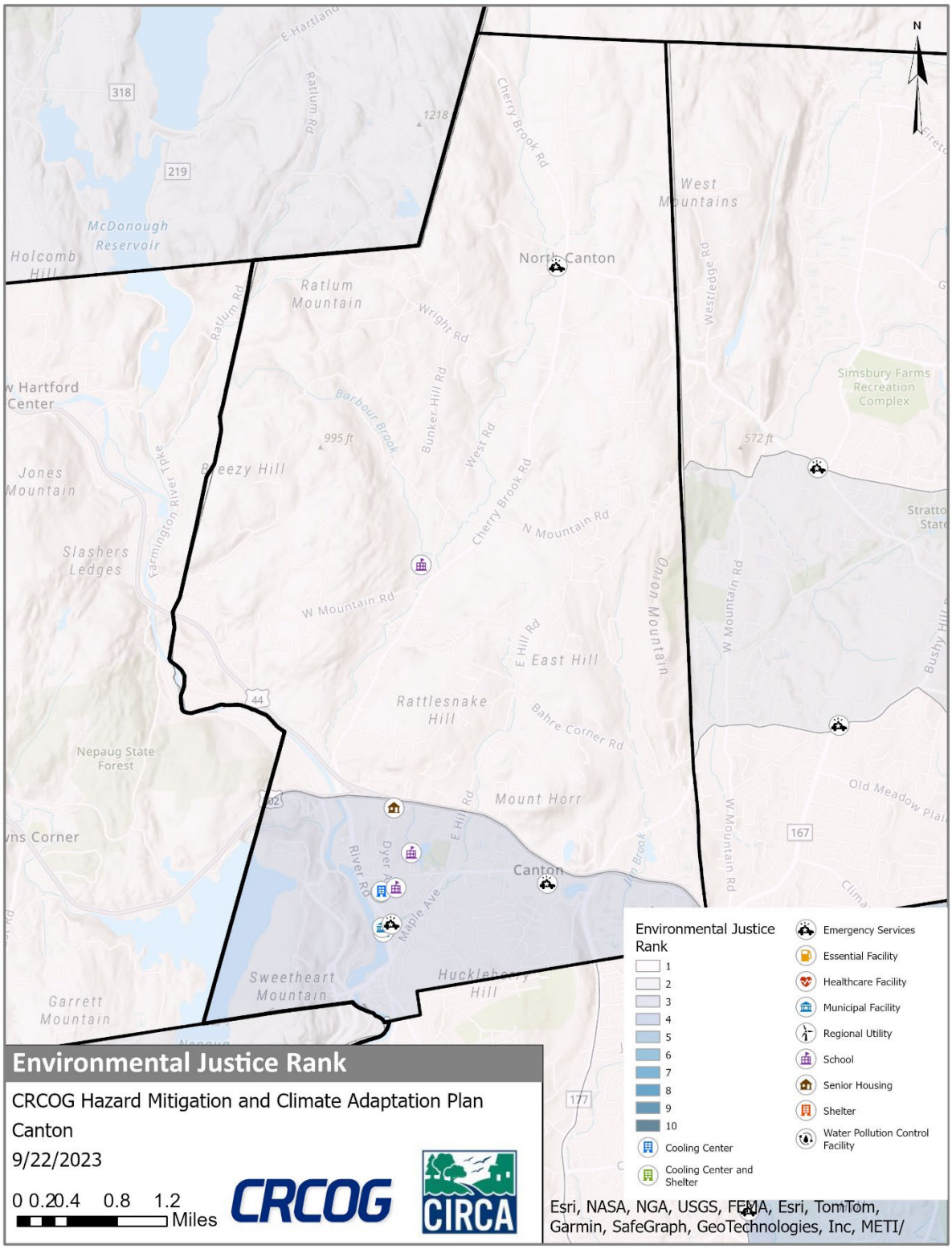

Figure 6-2: FEMA Flood Zones and Critical Facilities, Canton

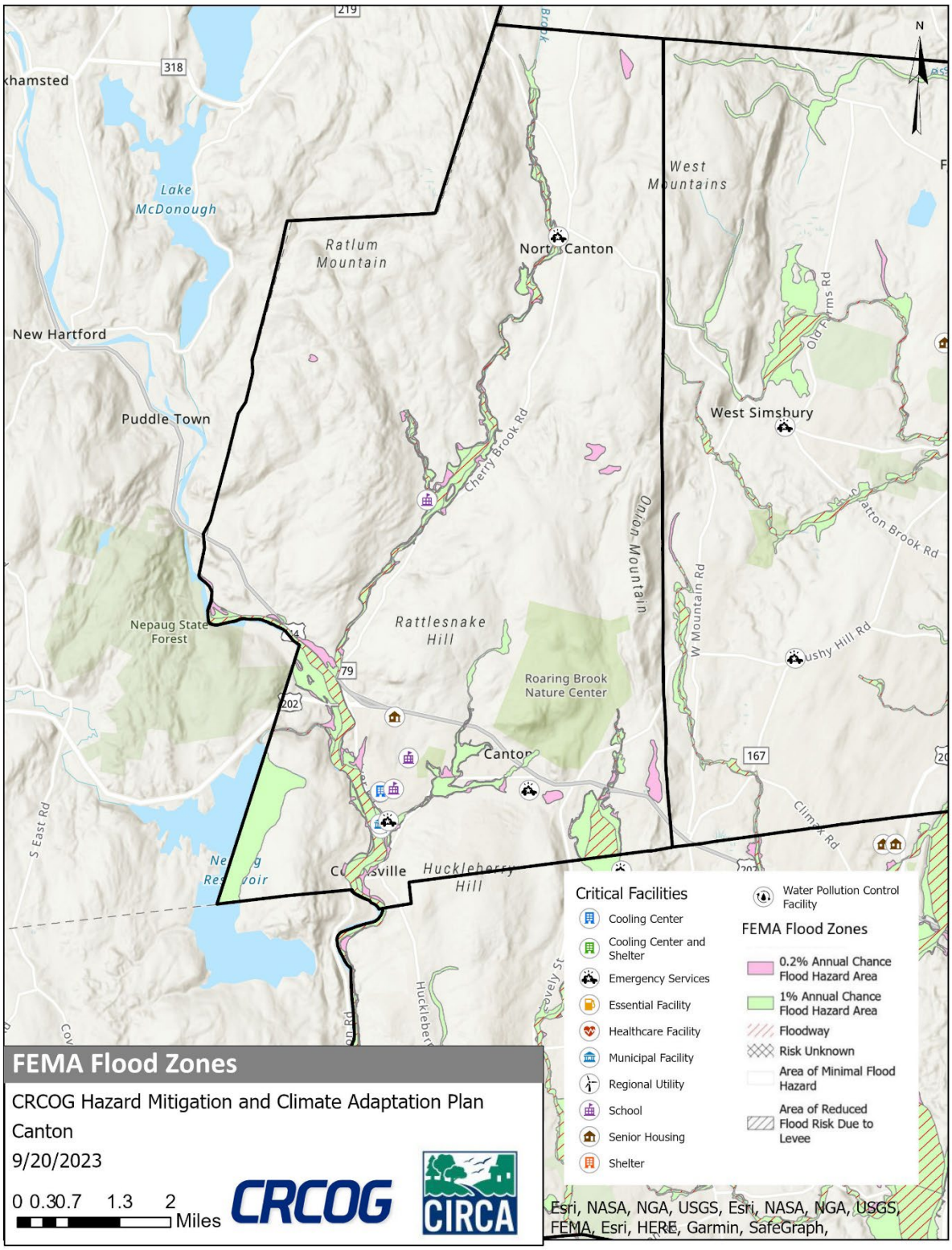

Figure 6-3: CIRCA Flood CCVI and Critical Facilities, Canton

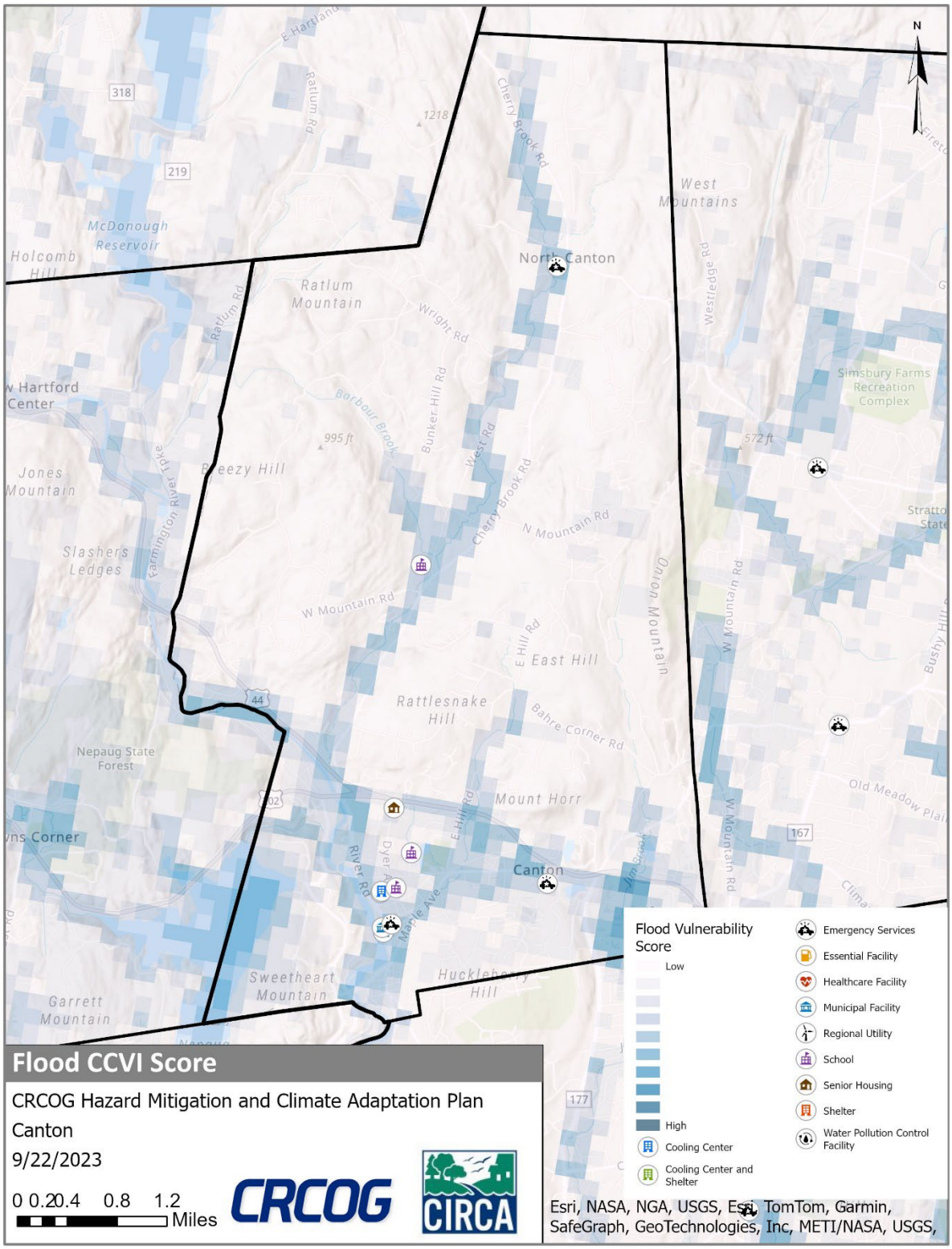

Figure 6-4: Dam Inundation Area and Critical Facilities, Canton

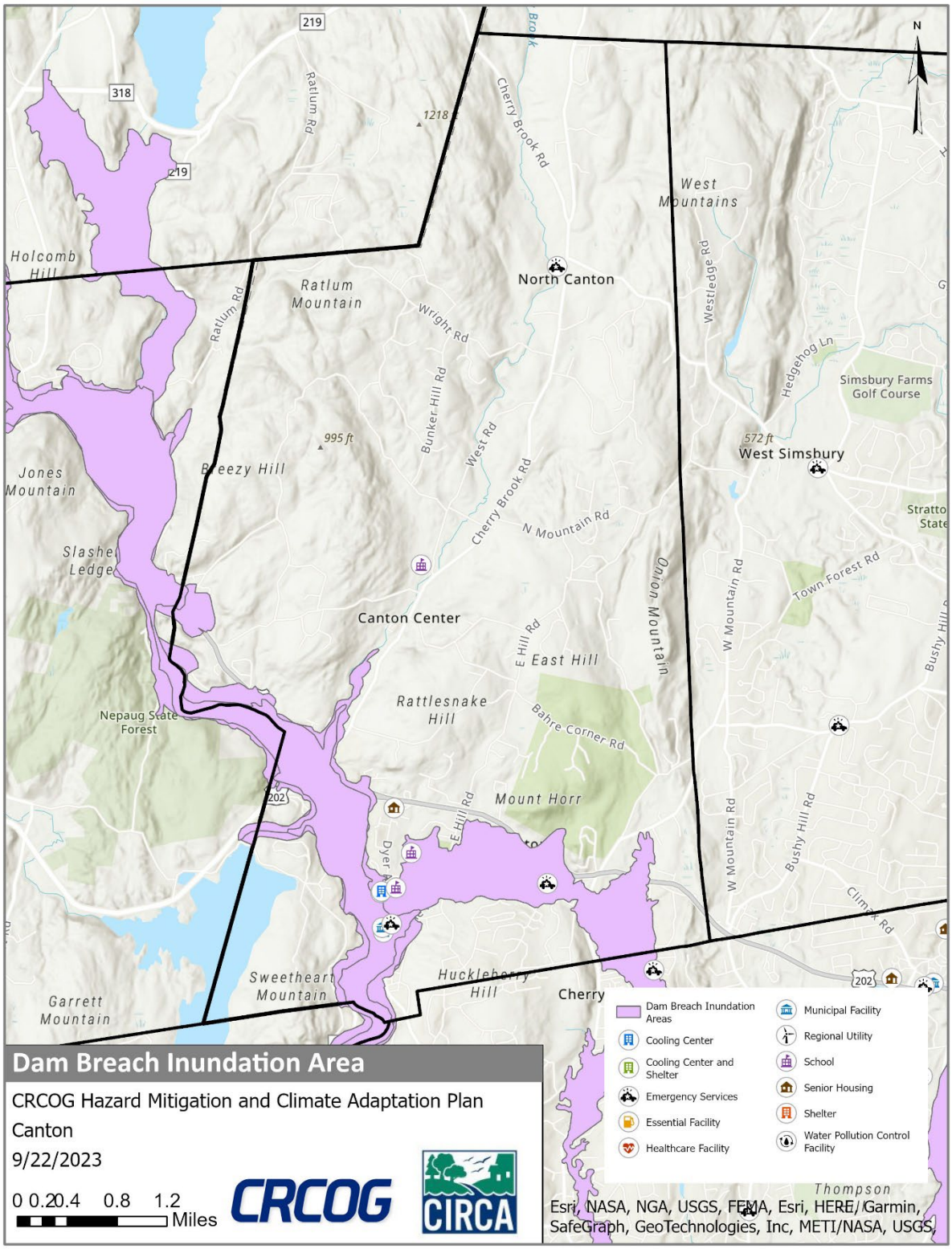

Figure 6-5: CIRCA Heat CCVI and Critical Facilities, Canton