



## 28 South Windsor

### Community Overview

South Windsor is a suburban community that encompasses roughly 28.5 square miles with a population of about 26,918 (2020 Census). The Town drains into three main watercourses: the mainstem of the Connecticut River in the west, the Scantic River in the north, and the Hockanum River to the east. Other major watercourses include the Podunk and Scantic Rivers and Averys, Bancroft, Dry, Newberry and Waples Brooks. Interstate 291 travels through the southwestern corner of Town; other major transportation routes include state routes 5, 30, 74 and 194. Principal industries include food distribution, fuel cell power plants, and machine and equipment design and manufacture. South Windsor also has significant retail development in the southeast corner of town, around the Buckland Hills regional mall and the Shops at Evergreen Walk.

The town has seen some development emerge in the past 5 years but does not allow new development in the FEMA floodplain, and are not aware of any particularly vulnerable developments. Development/redevelopment is not increasing risk to natural hazards.

### Critical Facilities

In South Windsor critical facilities include Recreation / Public Buildings Maintenance Headquarters, the High School (primary shelter), Capitol Region Education Council School, Town Hall, Police Department, Library, Town Garage, Emergency Operations Center (EOC), Old Orchard Hill School, Community Center, New Orchard Hill and four (4) Elementary Schools.

**Table 28-1: Critical Facilities, South Windsor**

Facility	Shelter	Cooling Center	Generator
Recreation / Public Buildings Maintenance Headquarters			X
High School	Primary		X
Capitol Region Education Council School			X
Town Hall			X
Police Department			X
Fire Department			X
EOC			X
Library	Charging Center		
Town Garage			X
Old Orchard Hill School			
Community Center	Secondary	X	X
New Orchard Hill Elementary School			X
Philip R Smith Elementary School			X
Eli Terry Elementary School			X
Pleasant Valley School			X
Timothy Edwards Middle School			
Waste Water Treatment Facility			X

Facility	Shelter	Cooling Center	Generator
Eleven (11) Waste Water Pump Stations			X

During extreme heat events, the Charles N. Enes Community Center can be opened as a public cooling center. This facility has a generator and is used as a shelter in town.

In 2016 the Town completed renovations on a state-of-the art EOC that can continue operations through most natural hazards (including up to Category 3 Hurricane). The facility has high-speed fiber-optic communication connections to all critical Town offices.

The Town has aggressively pursued installation of emergency generators for critical facilities. Generators have been funded as capital projects. A generator was added to the high school (primary shelter) since the 2014 HMP.

Wapping School ownership is returning back to the BOE, so this will no longer be the shelter that the town originally thought it might become at the time of the last HMP update.

This former Old Orchard Hill School building was converted to a recreation center. This is a possible site for a future shelter, taking over the role that town staff once envisioned for the Wapping School building. However, this facility would still need a generator.

### Capabilities

Hazard mitigation is addressed specifically in South Windsor’s Plan of Conservation and Development (POCD). The HMP document itself is cited. POCD actions specifically address natural hazards.

The Town of South Windsor, through its Flood Plain Regulations (Sec. 5.2 of the Zoning Regulations, revisions adopted in September 2008) prohibits the construction of structures designed for human habitation within flood zones and specifies construction standards that take into account flooding effects on structures.

South Windsor follows State guidelines to require retention or detention basins built on new developments.

The Town maintains trees along roadways and on Town property. Public Works clears snow from municipal roads using GPS-equipped vehicles. The Town keeps records of winter storm costs every year and uses those to inform future efforts.

The Town’s EOP has recently been updated beyond the annual review and maintenance.

The EOC has recently been renovated. All critical data centers in the EOC and the Police Department have redundancies and system back-ups.

Public Works has created a smartphone app called “Connect South Windsor” (powered by PublicStuff.com) that is used to report and track drainage issues, downed trees and power lines, public complaints, etc.

Since the 2014 HMP, three bridges and culverts have been upgraded, and numerous other drainage improvement projects have been implemented. The Town's GIS system has been enhanced, including through mapping and digitizing of stormwater features such as outfalls.

South Windsor has improved its tree maintenance capabilities. The Town has two tree wardens: one for roadways and another for Town property. The tree wardens work closely with Eversource to coordinate trimming efforts. The annual tree maintenance budget has been increased and the Town feels it is sufficient. South Windsor has a very robust debris management plan that was updated, with new staging and storage sites identified, in 2022.

South Windsor was awarded the Silver Certification level within the SustainableCT program in October 2019.

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

- Improve use of municipal website and social media to educate residents on emergency preparedness.
- 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.

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

## Challenges

### Challenges Overview

Flooding and severe storms are the primary natural hazards of concern of the Town of South Windsor. Severe storms can result in prolonged power outages, disruptions to communications and transportation, and debris management issues. In August of 2020 South Windsor reports that they had many trees down, roads blocked, and power outages for 4-5 days. Eversource has been trimming trees the last 3-4 years and town consults with them.

Forest- and wildland fires are not considered to be a significant concern by the Town; because it is mostly built-out, there are few locations where such a fire could burn. The majority (80-90%) of South Windsor is on public water with hydrants; no additional fire suppression needs are known.

There are 4 dams in town that are owned and maintained by DEEP; none poses a significant threat to the community.

As a result of Henri, South Windsor has three HMP grants to address issues in the following locations:

- A culvert off Chandler Rd washed out.
- Culvert on Sele Dr was in danger of being undermined. This area did not flood but was of concern to the town.
- Spring Pond overflowed and damaged the pool.

Additional culverts that are in poor conditions and are a concern for the town include:

- A culvert on Griffin Rd east of Rye St that is very old and in poor condition.
- Two Culverts on Rye Street. One culvert is failing and if/when that one fails, then the other will be impacted and likely fail.
- Rye St culvert at Griffin Rd.
- Darthill Rd culvert at Vernon Town line.
- Strong Road culvert east of Main St.

Town staff mentioned they are managing their sewer system and looking for grants. Areas in the collection system may be affected by infiltration.

### 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 South Windsor. 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 CROCG 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 28-2: Average Annualized Losses, South Windsor**

Hazard	Source	Average Annualized Losses (AAL)
Hurricanes/Tropical storms	NCEI	\$69,174.65
	NRI	\$1,360,003.29
	FEMA PA	\$27,080.25
Tornados/High Winds	NCEI	\$25,897.72
	NRI	\$275,499.46
Winter Storms	NCEI	\$20,515.63
	NRI	\$17,983.37
	FEMA PA	\$18,775.30
Flood	NCEI	\$20,967.82
	NRI	\$89,586.47
	NFIP	\$3,103.13

Hazard	Source	Average Annualized Losses (AAL)
Drought	NRI	\$176,600.93
	USDA	\$25,887.33
Extreme Heat	NRI	\$30,990.66
Wildfire	NRI	\$1,554.17
Earthquakes	NRI	\$66,445.43
Dam Failure	HMP	\$46.00

#### Other Hazard Costs

Town officials report that South Windsor sustained over \$8 million in damages following a large winter storm in 2015.

#### Losses Summary

A review of the above loss estimates demonstrates that the Town of South Windsor 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:

- South Windsor should continue their relationship with Eversource to ensure that dead/dying trees are cut and reduce the risk of power outages and blocked roads.
- South Windsor should complete a town wide assessment of the town culverts and prioritize replacing and/or upsizing underperforming/failing culverts.
- Town staff should conduct a town wide bridge assessment.

## Status of Previous Mitigation Strategies and Actions

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

**Table 28-3: Status of Previous Mitigation Strategies and Actions, South Windsor**

No.	Action	Notes	Status
4	Perform dam assessment of public and private structures including, but not limited to, Avery Heights dam, dam at Lake St., dam at Veteran's Park off Parkview Dr., and Dzen's dam.	<p>Town Staff said that some of these have been completed.</p> <p>Avery Heights Dam - complete                      Lake St Dam – complete. This dam is on private property and the town does not own it.                      Veteran's Park Dam – The town has a grant application for HMGP for this dam. The summer 2021 storms caused some flooding that did not breach the Dam, but flooding occurred below the Dam.                      Dzen's Dam – the dam by Mill Rd. Town has not done any assessment of this dam, and attendees do not believe this dam is of concern. Town does not own this dam or the embankment. The town has an access road and has an easement to maintain the dam.</p> <p>Revise this to take out the completed Dam projects and DZen project which the town isn't interested in doing and move forward with the Veteran's Park Dam project.</p>	Carry forward with Revisions
12	Develop and prioritize recommended actions based on dam assessment, and work with property owners to implement.	Attendees reported that recommended actions have been developed for Veteran's Park Dam and all the dams that they believe necessary.	Complete/Retire
3	Update Open Space Plan in 2020.	Town staff reported that the POCD was completed about a month ago, and that the POCD includes an open space plan.	Complete/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.	Town staff did not believe that they had any RLP. CIRCA told staff they have one residential and one non-residential RLP and this action should stay in their list.	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.	Town staff are not aware of any properties that are RLP. The town will work with DEEP/CRCOG to get the property information so they have the RLP on file.	Carry Forward

No.	Action	Notes	Status
1	Acquire generator for Wapping Elementary School to make progress towards creation of an emergency shelter in that space.	Town staff said the Wapping Elementary School does not have a generator but that it is no longer going to be used as a shelter as they no longer own it and BOE does. The building will now be used as an annex to the high school. The town is now looking at Old Orchard Hill School (currently a recreational facility) for creating the back-up shelter space indicated in this action. Old Orchard Hill School does not have a generator so this action (with revisions) is still needed.	Carry Forward with Revisions for the new selected shelter location
16	Work with senior housing developments to have them each install emergency generators to power at least a communal space. If this is unsuccessful, consider adoption of regulation.	Town staff said they are working on this but the facility owners are concerned with costs. South Windsor hosts two senior living facilities (Wapping Muse and Flaxville), both of which the town has communicated with. There are also private senior housing complexes which have generators. Town staff said they don't feel the need to change regulations.	Intent is complete/Retire
18	Reach out to local gas stations to encourage and offer assistance with private emergency generator installation.	Attendees believe that the Town does not have authority to compel local service stations to become involved with generators.. This is no longer a need.	No longer need/Retire
20	Install an emergency generator at the Public Library.	Town has not done this but is still an interest.	Carry Forward
14	Improve use of municipal website and social media to educate residents on emergency preparedness.	Town staff said Emergency management has its own information feed which links to other departments, public works., etc. The Town maintains signs throughout the town as well. This is a capability.	Complete/Retire
19	Conduct outreach and education program to provide technical assistance to private owners of generators to ensure they are installed correctly.	Town staff said this hasn't been completed. There have reportedly been a huge influx of people putting generators into their homes, which are all inspected before they are activated. Town staff feel the inspection is sufficient.	No longer needed/Retire
2	Develop a plan to ensure residents have access to important medications after storm events when roads and pharmacies are closed.	Town staff believe Human services has conducted a significant amount of outreach through their population. Likely complete, and also a capability.  CIRCA will confirm with Andrea Cofrancesco, Director of Human Services.  From Andrea: We do not have any plans on how to get people their -meds if the roads and pharmacies are closed. We continue to encourage planning for an emergency and that is part of it. If there are issues with the person not being able to get their meds due to other issues (they can't drive, their health prevents them from getting them, etc.) we can help them. So I think more discussion on this subject would be a good idea.	Carry Forward

No.	Action	Notes	Status
8	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.	Town staff said the town is compliant with MS4, and this is an ongoing process. Town staff do an annual report every year and post to the website. This is a capability.	Complete/ Retire
10	Work with MDC to identify potential hazard mitigation actions for MDC facilities, and list those actions in the next HMP Update.	Town staff said MDC does not have any facilities in town aside from water mains. No water or sewage pump stations owned by MDC are present. MDC does have water mains which are gravity fed from out of town. The town staff do not feel this action is needed.	No longer needed/ Retire
6	Complete an analysis of costs and benefits of joining the FEMA Community Rating System. Get information from participating Towns, solicit input from residents and from experts, and request assistance from CRCOG.	Attendees do not believe progress has been made. The Town does not allow new building in the FEMA floodplain. There are a few buildings that are flood prone. There are some homes in the floodplains and they may carry flood insurance. Town staff believe there is not a need and is no longer an interest.	No Longer Needed/ Retire
7	Assign a municipal staff-member to be a utility liaison responsible for maintaining contact with utility representatives.	Town staff said all the staff take on this role when needed and this is an ongoing process. During every storm a person is assigned as a liaison, and sometimes the specific person who serves as a liaison changes depending on the specific needs of the situation. The intent of this action is complete.	Intent is complete/ Retire
11	Determine additional updates to town GIS data and capabilities needed to assist with hazard mitigation. Pursue those updates.	Town staff said they are updating GIS all the time and the town has \$100,000 in the budget next year for additional GIS work. Determining the specific updates needed for Hazard Mitigation is still of interest.  Check to see if there is FEMA funding for GIS work.	Carry Forward with Revisions
17	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.	Town staff said there was three historic resource inventories done in the past few years.  CIRCA recommended to revise to say acquire and review SHPO-supplied GIS data and town staff agreed.	Carry Forward with Revisions.
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.	Town staff do not believe they have an issue with this but would like to keep an action for training.  Revise to say watch the DEEP's online training.	Carry Forward with Revisions



No.	Action	Notes	Status
9	Participate in EMI courses or the seminars and annual conference held by the Connecticut Association of Flood Managers.	Staff said they are actively participating in courses. This is a capability.	Complete/ Retire

## 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 28-4: Active Mitigation Strategies and Actions, South Windsor**

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	PERISTS x STAPLEE =
SW1	Acquire a generator for Old Orchard Hill School which will act as the secondary shelter in town.	Ensure that critical facilities are resilient, with special attention to shelters and cooling centers.	Preparedness & Emergency Response	Emergency Management	\$100,000 - \$500,000	FEMA HMA; STEAP	07/2024 - 06/2025	High	All Hazards	No	18	5	90
SW2	Install an emergency generator at the Public Library.	Ensure that critical facilities are resilient, with special attention to shelters and cooling centers.	Preparedness & Emergency Response	Emergency Management	\$100,000 - \$500,000	FEMA HMA; STEAP	07/2024 - 06/2025	High	All Hazards	No	18	5	90
SW3	Develop a plan to ensure residents have access to important medications after storm events when roads and pharmacies are closed.	Ensure that critical facilities are resilient, with special attention to shelters and cooling centers.	Preparedness & Emergency Response	Emergency Management	\$0-\$10,000	Municipal Operating Budget	01/2025 - 12/2025	High	All Hazards	No	18	6	108
SW4	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	Human Services / Emergency Management	\$10,000 - \$50,000	Transit; IJJA BBFP	07/2024 - 06/2026	High	Extreme Heat	No	19	3	57
SW5	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

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	PERISTS x STAPLEE =
SW6	Conduct a town wide bridge assessment to identify vulnerabilities and develop a priority list for maintenance/replacement.	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.	Structural Project	Public Works	\$10,000 - \$50,000	DCRF; Municipal CIP Budget	07/2026 - 06/2028	Medium	Riverine and Pluvial Floods	No	18	6	108
SW7	Perform dam assessment of the dam at Veteran's Park off Parkview Drive.	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	07/2024 - 06/2026	High	Dam Failure	No	19	6	114
SW8	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
SW9	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
SW10	Work with CT DEEP to complete a formal validation of the Repetitive Loss Property list and update the mitigation	Reduce flood and erosion risks by reducing vulnerabilities and consequences, even as	Property Protection	Planning	\$0-\$10,000	Municipal Operating Budget	01/2025 - 12/2025	High	Riverine and Pluvial Floods	No	19	5	95

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	PERISTS x STAPLEE =
	status of each listed property.	climate change increases frequency and severity of floods.											
SW11	Review the Connecticut Cultural Resource Information System (ConnCRIS) to identify and understand historic and archaeological resources in areas of hazard risks found here: <a href="https://conncris.ct.gov">https://conncris.ct.gov</a> .	Reduce flood and erosion risks by reducing vulnerabilities and consequences, even as climate change increases frequency and severity of floods.	Property Protection	GIS Department	\$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
SW12	Continue to update town GIS data and capabilities needed to assist with hazard mitigation. Pursue those updates.	More than one goal.	Prevention	GIS Department	\$0-\$10,000	Municipal Operating Budget	01/2025 - 12/2025	Medium	All Hazards	No	18	7	126
SW13	Watch the DEEP Chemical Management and Climate Resilience Webinar: <a href="https://portal.ct.gov/DEEP/P2/Chemical-Management-and-Climate-Resilience/Chemical-Management-and-Climate-Resilience">https://portal.ct.gov/DEEP/P2/Chemical-Management-and-Climate-Resilience/Chemical-Management-and-Climate-Resilience</a>	Reduce flood and erosion risks by reducing vulnerabilities and consequences, even as climate change increases frequency and severity of floods.	Education and Awareness	Emergency Management	\$0-\$10,000	Municipal Operating Budget	01/2025-12/2025	Low	Riverine and Pluvial Floods	No	17	7	119
SW14	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	Information Technology	\$0-\$10,000	Municipal Operating Budget	01/2025 - 12/2025	Medium	All Hazards	No	17	7	119

Figure 28-1: CIRCA Environmental Justice Rank and Critical Facilities, South Windsor

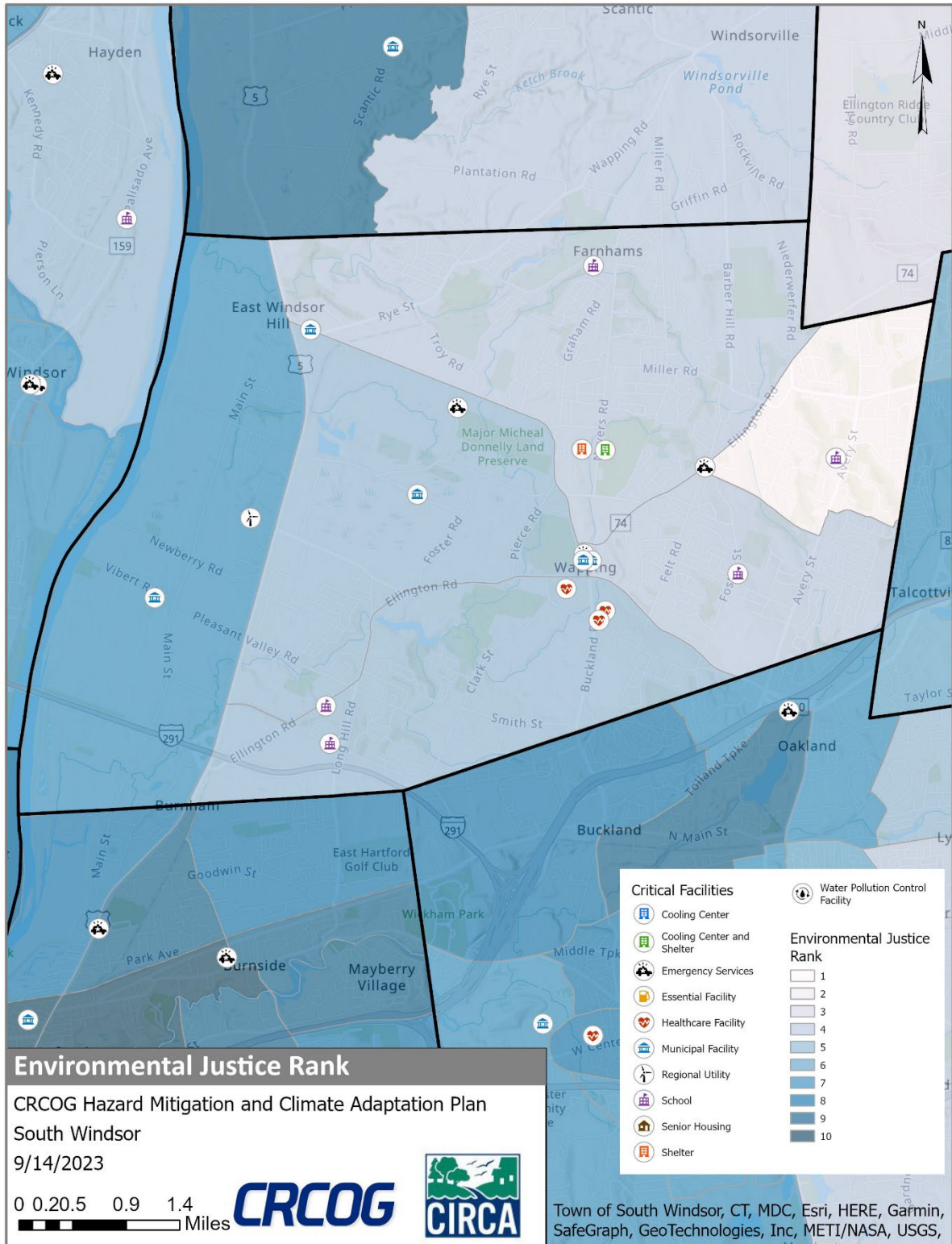




Figure 28-2: FEMA Flood Zones and Critical Facilities, South Windsor

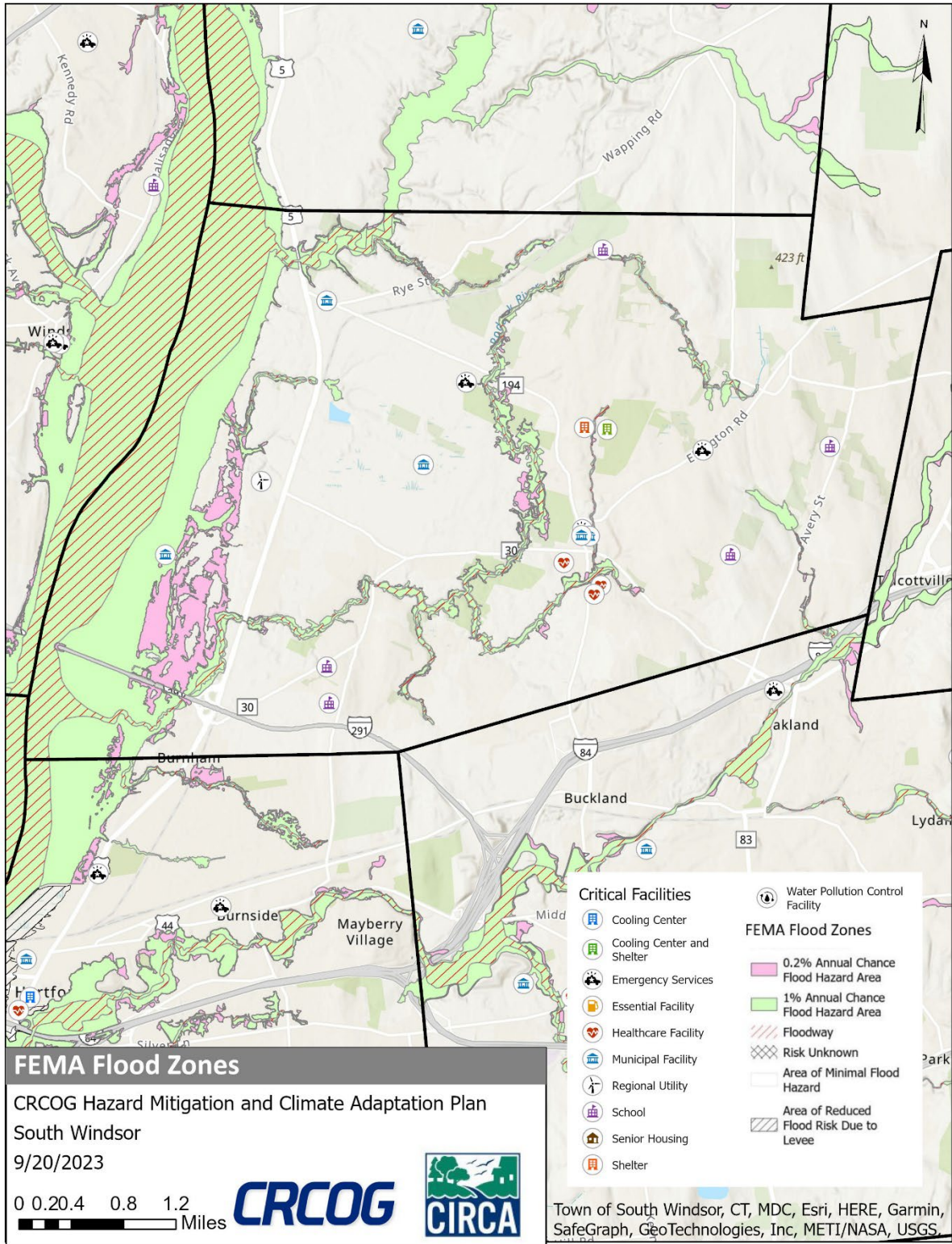


Figure 28-3: CIRCA Flood CCVI and Critical Facilities, South Windsor

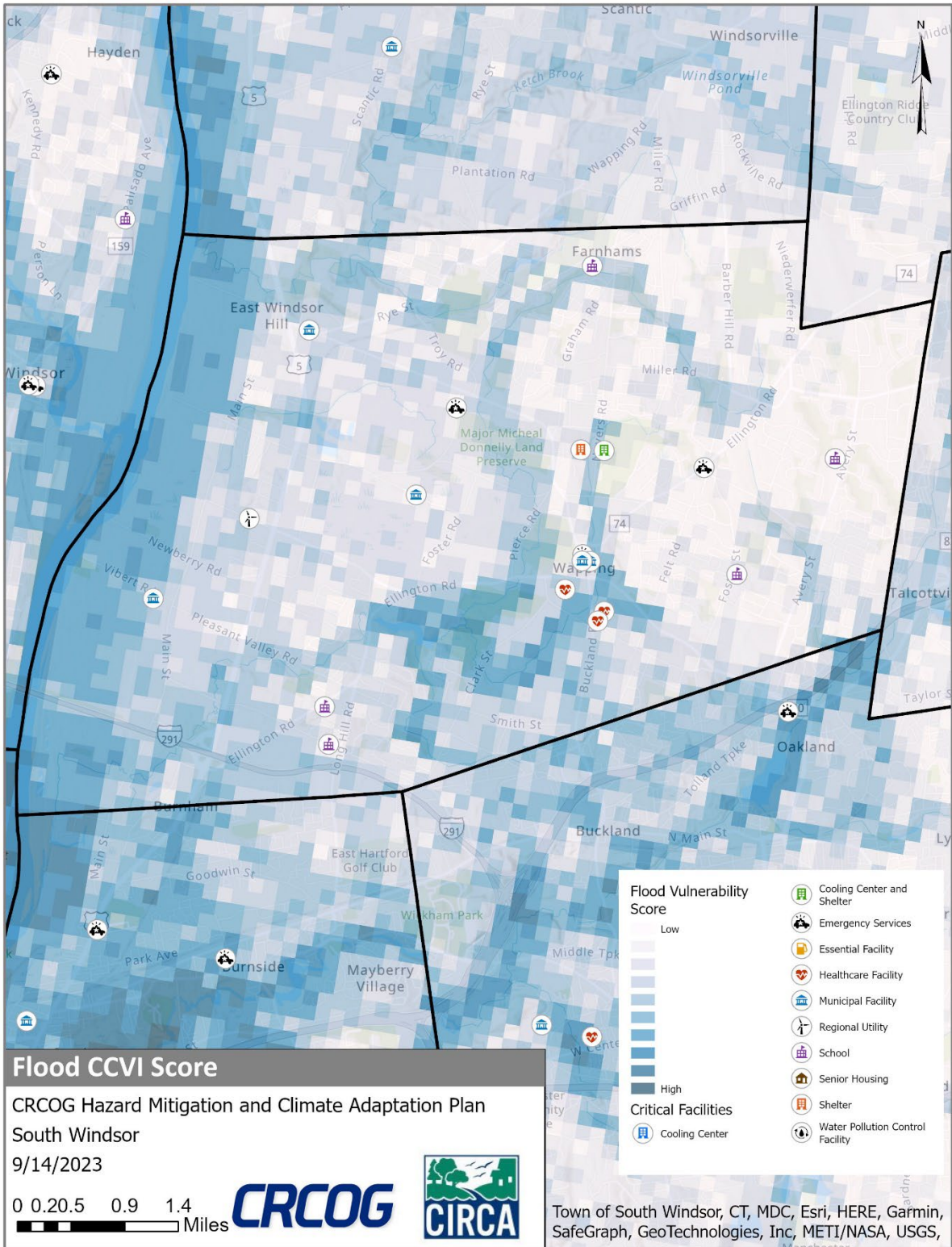




Figure 28-4: Dam Inundation Area and Critical Facilities, South Windsor

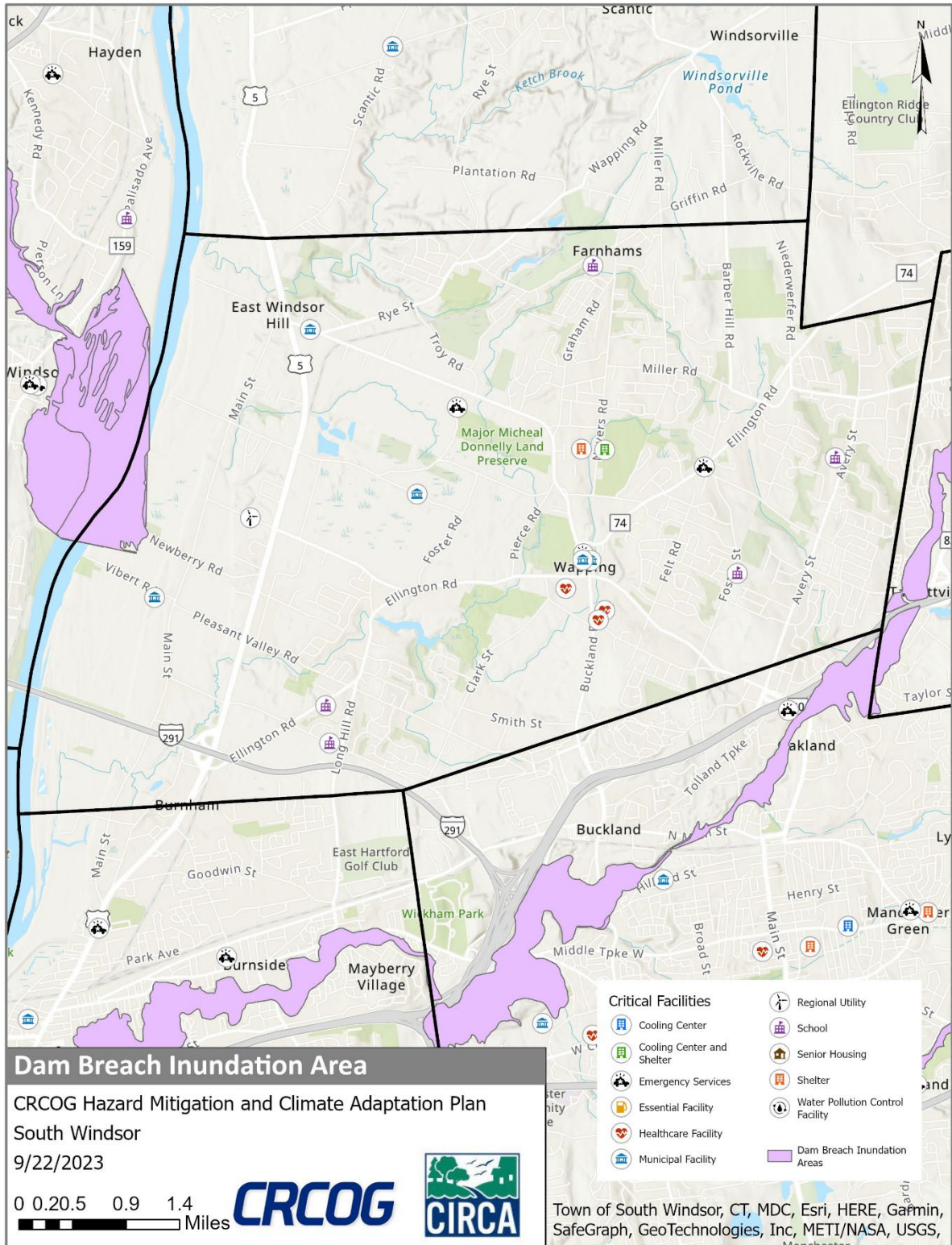




Figure 28-5: CIRCA Heat CCVI and Critical Facilities, South Windsor

