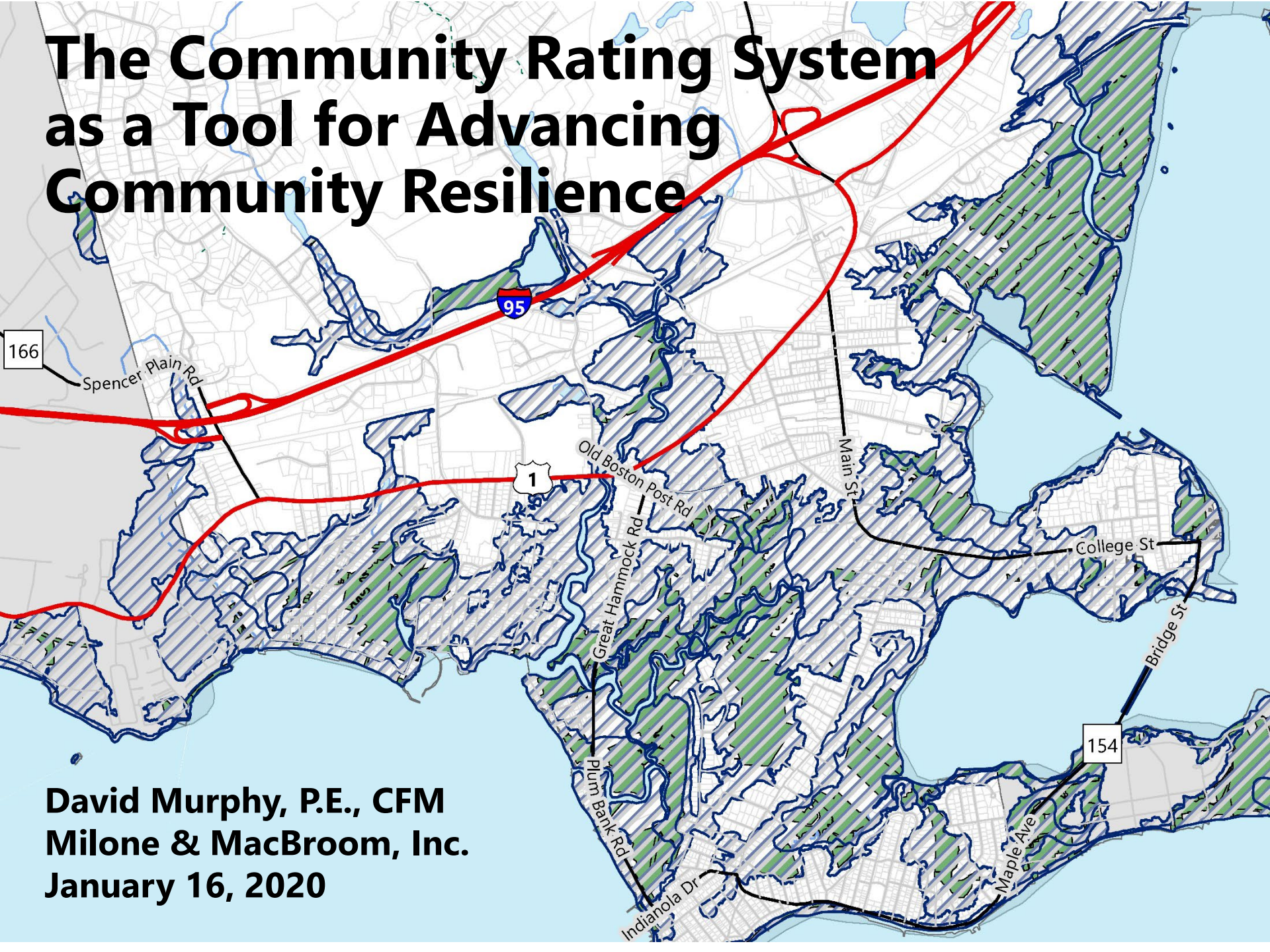


The Community Rating System as a Tool for Advancing Community Resilience



166

Spencer Plain Rd

95

1

Old Boston Post Rd
Great Hammock Rd

Main St

College St

Bridge St

154

Plum Bank Rd

Indianola Dr

Maple Ave

David Murphy, P.E., CFM
Milone & MacBroom, Inc.
January 16, 2020

What is the Community Rating System (CRS)?



A **voluntary** incentive-based program that rewards communities for exceeding the minimum standards of the National Flood Insurance Program (NFIP) to help residents prevent or reduce flood losses.

Goals:

1. Reduce and avoid flood damage to insurable property
2. Strengthen and support the insurance aspects of the NFIP
3. Foster comprehensive floodplain management

What is the Community Rating System (CRS)?

Credit points are awarded for engaging in any of 19 activities, organized under four categories:

- Public Information
- Mapping and Regulations
- Flood Damage Reduction
- Warning and Response

Numerous elements and sub-elements are found under each of the 19 activities



How is CRS Aligned with Resilience?

- The entry process tests and builds municipal communication, thus building capacity
- Participation enhances public and community strengths in preparing for, withstanding, recovering from, and adapting to floods
- CRS performance metrics help assess flood resilience annually
- Let's look at the CRS activities one by one and comment on the potential for increasing flood resilience:
 - ✓ A: High potential
 - ✓ B: Good potential
 - ✓ C: Moderate potential
 - ✓ D: Not necessarily applicable



How is CRS Aligned with Resilience?

Series	Activities	Resilience Grade	Why?
300	PUBLIC INFORMATION ACTIVITIES		
310	Elevation Certificates	B	An accurate read of an EC will drive compliance
320	Map Information Services	B	Providing risk information helps residents and businesses
330	Outreach Projects	A	Targeted outreach helps residents and businesses
340	Hazard Disclosures	A	Disclosure during transactions reduces surprises
350	Flood Protection Information	A	Providing information directly will help property owners
360	Flood Protection Assistance	A	Providing information directly will help property owners
370	Flood Insurance Promotion	C	Insurance can help recovery from floods
400	MAPPING AND REGULATIONS		
410	Floodplain Mapping	D	Category not typically used in Connecticut
420	Open Space Preservation	C	Tends to be a static measure unless towns are acquiring
430	Higher Regulatory Standards	A	Directly increases ability to withstand floods
440	Flood Data Maintenance	C	Helps developers and property owners access information
450	Stormwater Management	A	Stringent regulations may reduce localized flooding
500	FLOOD DAMAGE REDUCTION		
510	Floodplain Management Planning	B	Hazard mitigation plans help communities understand risks
520	Acquisition and Relocation	A	Directly removes people and property from flood risks
530	Flood Protection	A	Directly increases ability to withstand floods
540	Drainage System Maintenance	C	Category not well-aligned with Connecticut but can help
600	WARNING AND RESPONSE		
610	Flood Warning and Response	A	Directly helps with preparing, withstanding, and recovery
620	Levees	C	Category not typically used in Connecticut
630	Dams	A	Seldom-used category with potential for more usage

Review of Current Usage

300 Series

Public Information

Activity	Resilience Grade	Points Available	Town 1 Class 9	Town 2 Class 8	Town 3 Class 7
310 Elevation Certificates	B	162	38	38	38
320 Map Information Service	B	140	70	--	90
330 Outreach Projects	A	315	33	78	130
340 Hazard Disclosure	A	81	10	10	18
350 Flood Protection Information	A	102	11	23	48
360 Flood Protection Assistance	A	71	--	--	--
370 Flood Insurance Promotion	C	65	--	--	--

Review of Current Usage 400 Series Flood Damage Reduction

Activity	Resilience Grade	Points Available	Town 1 Class 9	Town 2 Class 8	Town 3 Class 7
410 Floodplain Mapping	D	1,346	--	--	--
420 Open Space Preservation	C	900	435	232	282
430 Higher Regulatory Standards	A	2,740	21	181	299
440 Flood Data Maintenance	C	239	100	114	134
450 Stormwater Management	A	670	50	54	112

Review of Current Usage

500 Series

Public Information

Activity	Resilience Grade	Points Available	Town 1 Class 9	Town 2 Class 8	Town 3 Class 7
510 Floodplain Mgmt. Planning	B	359	181	205	195
520 Acquisition and Relocation	A	3,200	--	--	--
530 Flood Protection	A	2,800	--	--	--
540 Drainage System Maintenance	C	430	--	--	--

Review of Current Usage 600 Series Warning and Response

Activity	Resilience Grade	Points Available	Town 1 Class 9	Town 2 Class 8	Town 3 Class 7
610 Flood Warning & Response	A	255	--	--	253
620 Levees	C	900	--	--	--
630 Dams	A	175	--	42	22

How Were Participants Selected?

1. Conduct case study of RiverCOG communities to see how many points open space would provide
2. Conduct individual community assistance with the following goals:
 - Geographic spread across Connecticut
 - Riverine and coastal flood risk areas
 - Help at least one community enter program
 - Help at least one community improve its score
 - Continue assistance for one of the communities that participated in the SCCOG-funded effort
 - **Find points in the categories with good resilience grades!**

RiverCOG



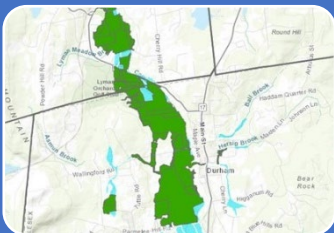
What We Did

- Utilized CRS method and identified categories like NFOS
- Delivered to towns for review using ArcGIS Online



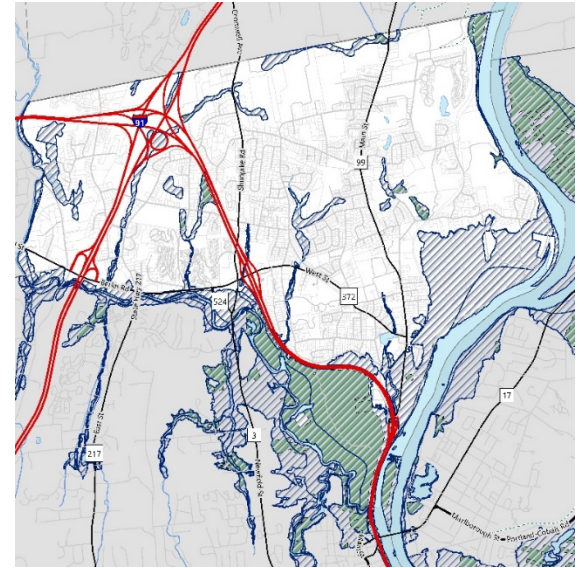
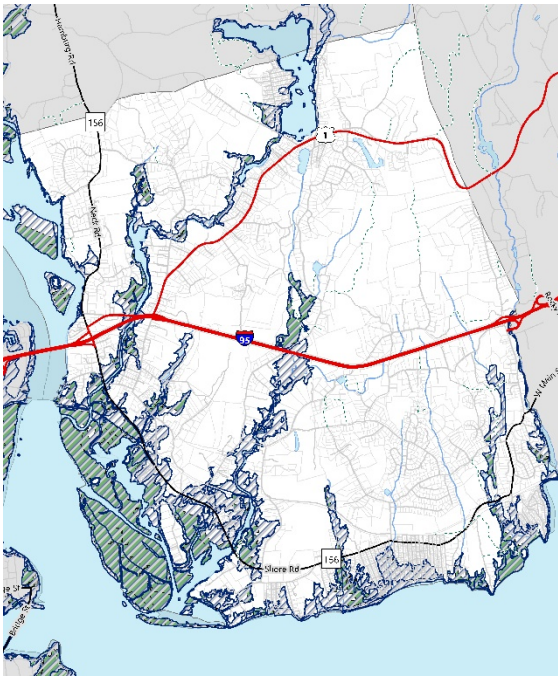
Lessons Learned

- Open space can help a community gain 250 to 1,300 points
- With other categories pursued, CRS class could be 7 to 9



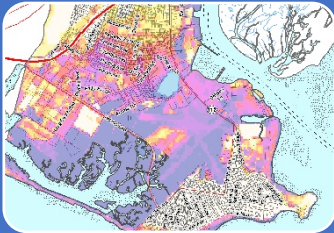
Connection to Resilience

- Open space in flood zones will reduce community risks
- Tallying open space leads to more critical thinking about it



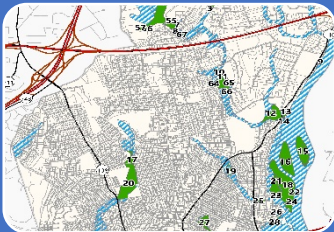
420 "Open Space Mapping"

Stratford



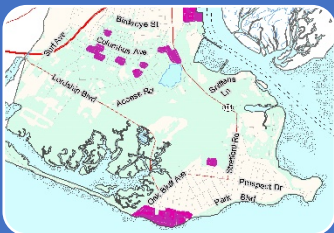
What We Did

- Prepared open space mapping and other maps
- Developed a flood information brochure



Lessons Learned

- Extra effort with open space mapping helps gain points
- Timing is critical – this was during the verification phase



Connection to Resilience

- Open space in flood zones will reduce community risks
- Flood information brochure helps educate residents

Guilford



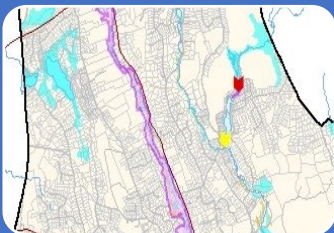
What We Did

- Prepared dam failure inundation map and descriptions
- Submitted materials to Town for future use



Lessons Learned

- Compare ISO verification letter to others in the State
- Look for categories where points should be available



Connection to Resilience

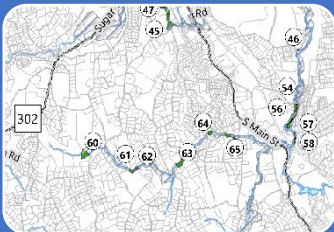
- Increased awareness of dam-related risks is beneficial
- Annual recertification will ensure future consideration

Newtown



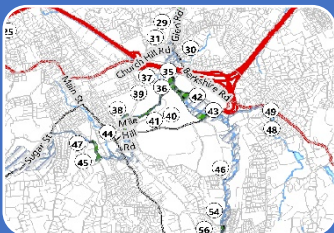
What We Did

- Prepared open space mapping
- Submitted materials to Town for future use



Lessons Learned

- Compare ISO verification letter to others in the State
- Look for categories where points should be available



Connection to Resilience

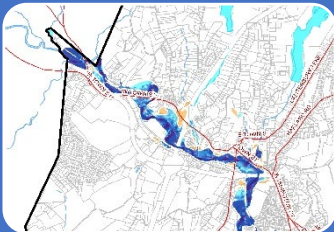
- Open space in flood zones will reduce community risks
- Tallying open space leads to more critical thinking about it

Norwich



What We Did

- Provided assistance across all categories
- Urged community to apply for seldom-used categories



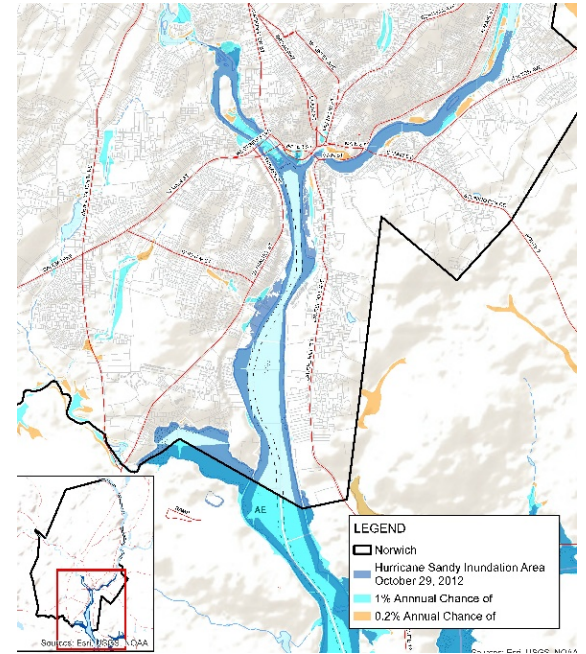
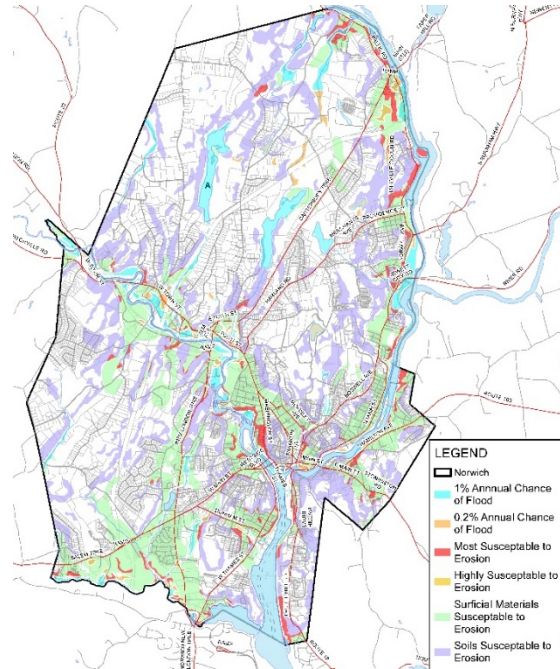
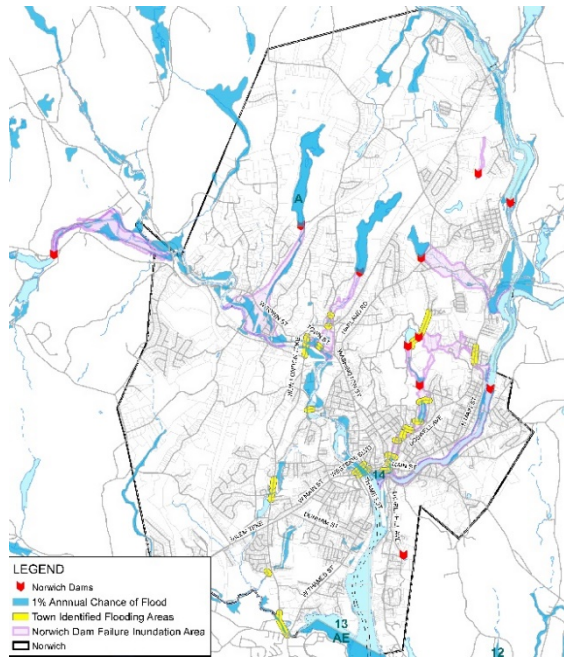
Lessons Learned

- Aim high!
- Know when to say "that's enough"



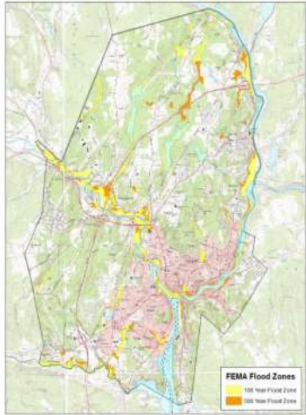
Connection to Resilience

- Points for acquisitions generated interest in doing more
- CRS entry process tightened up internal communications



320 "Map Information"

Flood Brochure



WHERE ARE THE RISK AREAS?

- The yellow and orange areas on the map above show areas with highest flood risk. Flood risk maps can be viewed on the City of Norwich web site.
- As of 2018, Connecticut has 37,322 active flood insurance policies.
- Norwich has 266 active flood insurance policies with a combined coverage of \$43 million. A total of 208 flood losses have been paid in Norwich.
- Areas of Norwich downstream of dams may have additional risks associated with dams. These generally occur in some of the yellow and orange areas above. Contact the City to learn about specific locations.

Before a Flood

Build Smart

- **Builders should obtain appropriate permits** and comply with flood requirements and regulations.
- **Elevate your home or business to the required level to reduce flood damage.**

Know Your Flood or Dam Hazard Risks

- **Understand Flood Insurance Re** Sea Level Rise; and Sea, Lake, and Overland Surges from Hurricane maps. <https://msc.fema.gov/pc>
- **Learn** if your property is in a flood downstream of a dam.

Protect What Matters

- Purchase flood insurance for you, business, or contents insurance.
- Contact the Norwich Emergency Management Department to learn live downstream of a dam.
- Develop an evacuation plan and safe meeting place in case an ev due to potential flood or dam fail
- Prepare a safety kit with a radio, flashlights, blankets, drinking water, canned food, and a first aid kit.

How do floods occur

Flooding in Norwich can come from many places. Snowmelt runoff combined with heavy rains can develop rapidly as a result of heavy rainfall that the ground can't absorb, or in tidally influenced areas where water levels rising from heavy rains and runoff, or in tidally influenced areas.

During a Flood

Safety at Home or on the Road

- **Stay away from flooded areas** or areas with rapid water flow. Never attempt to cross a flowing stream.
- **Never drive through floodwaters.** Roads may be damaged or moving water could cause your vehicle to float away.

Flood Insurance

The National Flood Insurance Program (NFIP) provides Norwich property owners, businesses, and renters with insurance options depending on their risk.

In a flood zone? If you own property in the Special Flood Hazard Area (SFHA) you are required to purchase flood insurance if the mortgage is from a federal lender. **Renters and business owners can also purchase flood insurance.**

Not in a flood zone? While you are not required to carry flood insurance, property owners and renters should ask their agent if they are eligible for a Preferred Risk Policy.

More than 20% of flood insurance claims are filed by people outside of the SFHA

Resources

Visit www.floodsmart.gov to assess your flood risk, find an insurance agent, or to view flood maps. Call **1-800-427-2417** for more information

Visit the NFIP website for resources and answers to common questions <https://www.fema.gov/national-flood-insurance-program>

The National Weather Service provides tips and resources for flood safety www.weather.gov/safety/flood

The Otis Library has a number of publications about floods and flood insurance. Ask for help at the desk.

Did you know that Norwich is a **StormReady** community? Learn more at www.norwichct.org/190/Emergency-Management



 **NORWICH** Connecticut
Established 1659

Flood Information

98% of U.S. states have flood risk.

Make sure you are financially prepared for flooding.

Is your insurance portfolio complete?

Insurance
✓ Auto
✓ Home
✓ Flood

Questions about flood insurance? Call the NFIP help center: (800) 427-4661



MILONE & MACBROOM



Property Acquisitions



Spaulding Pond Dam & Fairview Dam

TABLETOP DRILL EXERCISE
AUGUST 27, 2019



Dam Failure Drill

CRS and Resilience – A Great Team!

- CRS maintenance will provide a consistent elevated level of resilience as compared to a non-CRS community
- Financial incentives of lower insurance may increase resilience
- Higher resilience will then lead to higher CRS ratings upon program review

