

HAZARD MITIGATION ASSISTING & PLANNING FOR COMMUNITY RESILIENCY



Warren County EPR/LEPC Committee

January 29, 2024 Jim Lieberum, Warren County SWCD

WHAT DOES “MITIGATION” MEAN?

Mitigation: “to make less severe”

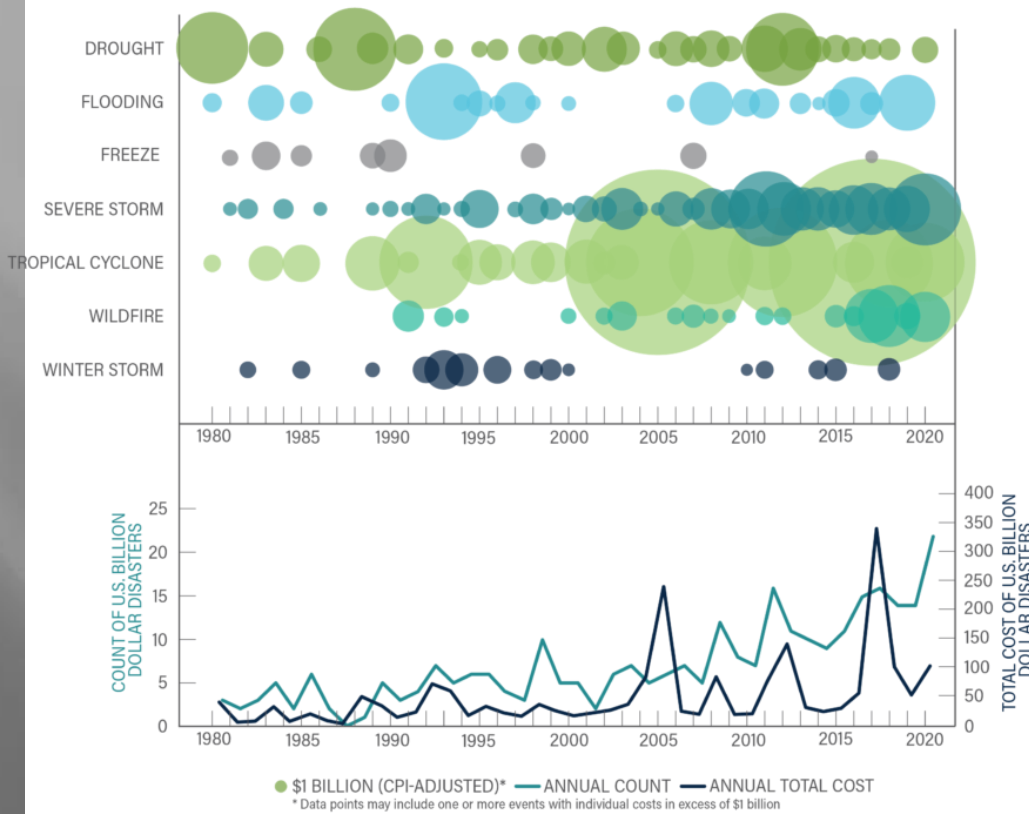
Mitigation Actions are sustained actions taken to reduce or eliminate long-term risk to humans and improved property from hazards.

- ❖ Protect **People, Structures** and **Improved Property**
- ❖ Protect **First Responders** by Reducing the Need to Respond
- ❖ Reduce **Economic Disruption**
- ❖ Reduces **Recovery Time & Costs**
- ❖ Reduces **Personal Heartache** - keeping people in their homes, schools and houses of worship



Costs and Future Savings

COST OF U.S. BILLION DOLLAR DISASTERS BY YEAR



Data Source: National Oceanic and Atmospheric Administration National Center for Environmental Information

SMART INVESTING MITIGATION SAVES

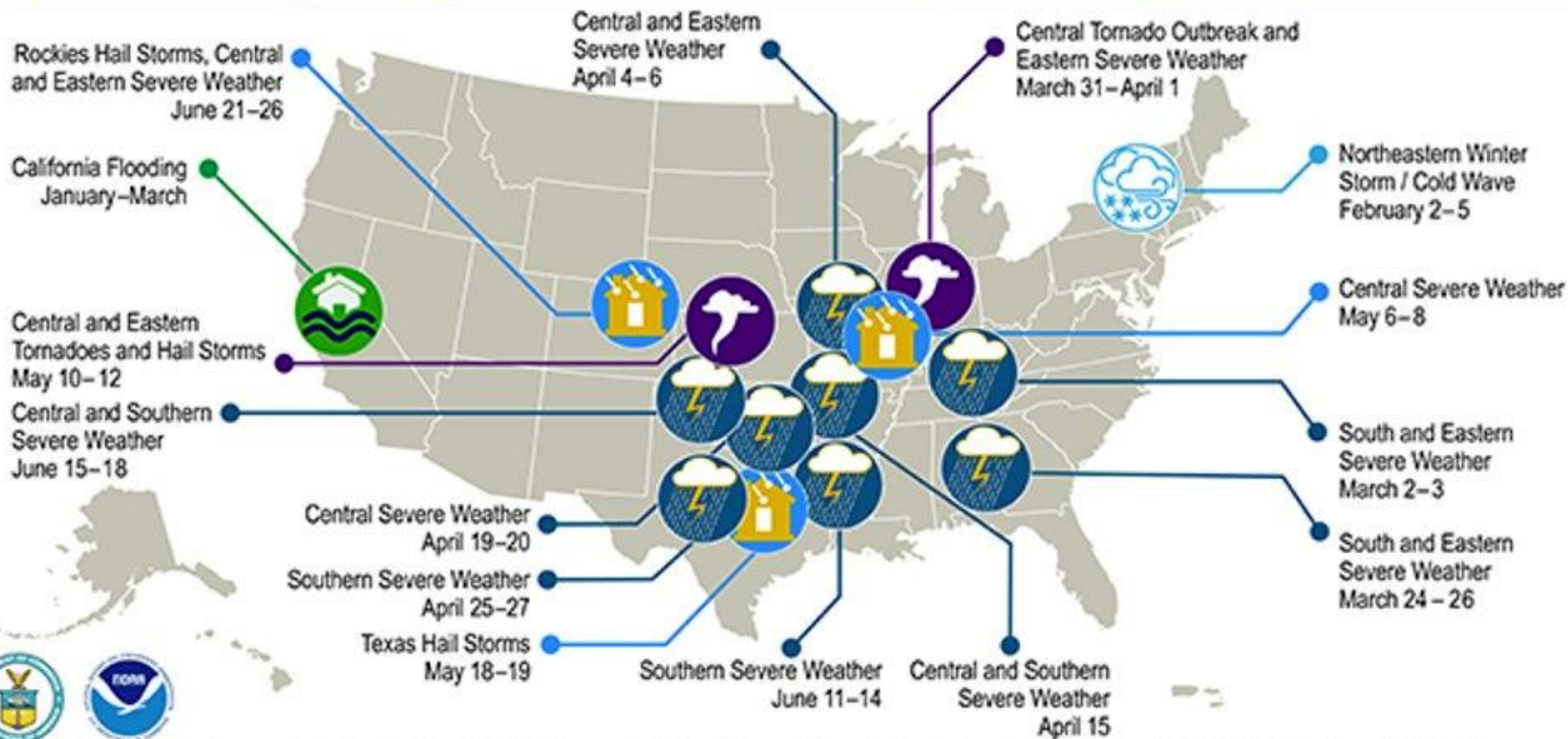


Natural Hazard Mitigation Saves: 2017 Interim Report
nibs.org/mitigationsaves



U.S. 2023 Billion-Dollar Weather and Climate Disasters

 Drought/Heat Wave
  Flooding
  Hail
  Hurricane
  Severe Weather
  Tornado Outbreak
  Wildfire
  Winter Storm/Cold Wave



This map denotes the approximate location for each of the 15 separate billion-dollar weather and climate disasters that impacted the United States through July 2023.

Hazard Mitigation (HM) Plan

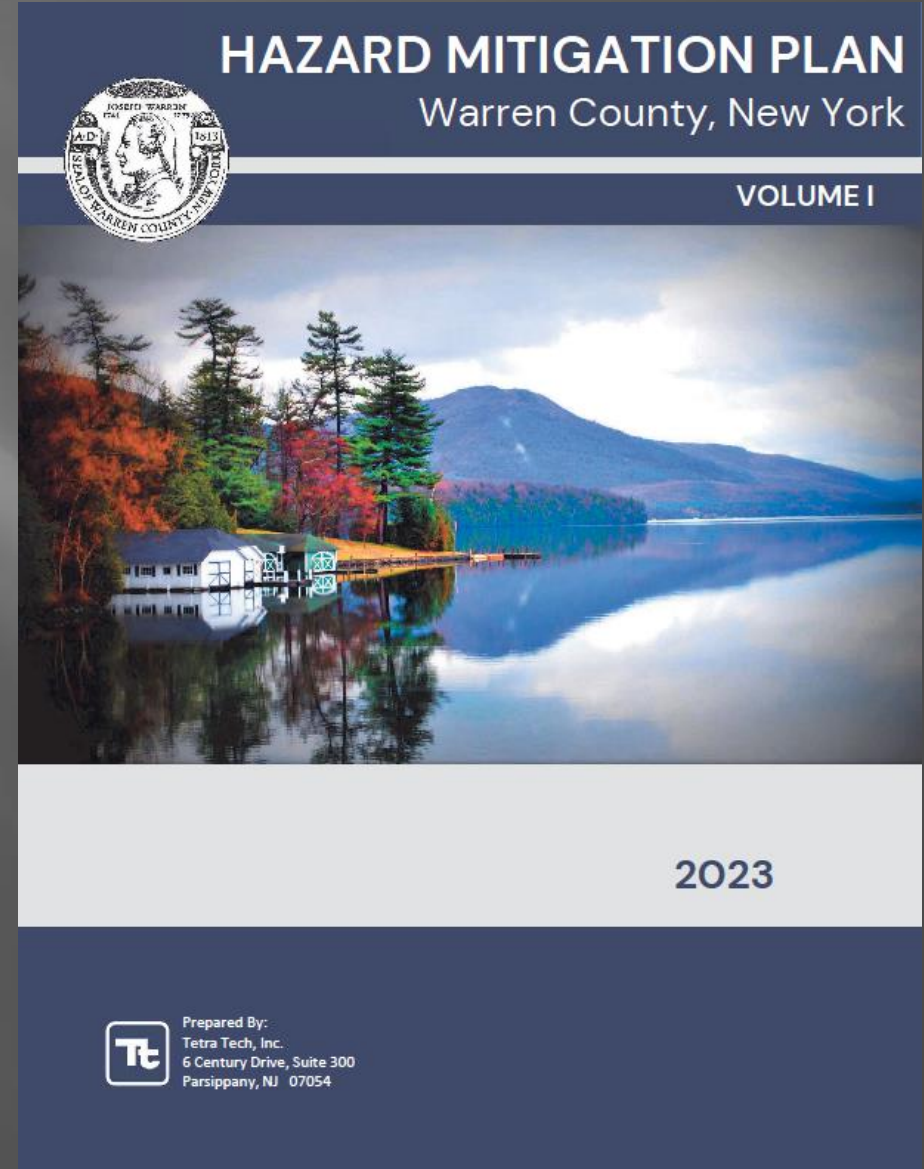
A plan required for every municipality and updated/new every 5 years.

Assists to identify cost-effective actions to risks.

Provides a roadmap for project and program implementation

Make communities eligible for certain FEMA funds

Approved January 2024



Types of Mitigation Actions



STRUCTURAL PROJECTS

Acquisition
Elevation
Retrofits
Drainage



PLANS and/or REGULATIONS

Zoning Codes
Ordinances
Open Space Plan
NFIP



EDUCATION & OUTREACH

Public Awareness
Outreach
Educational Programs



NATURAL RESOURCE PROTECTION

Stream and Wetland Restoration
Erosion Control

Presidential Disaster Declarations New York State 1954 - March 2023*

* Last Presidential Disaster Declaration in New York State:
DR4694 declared March 16, 2023

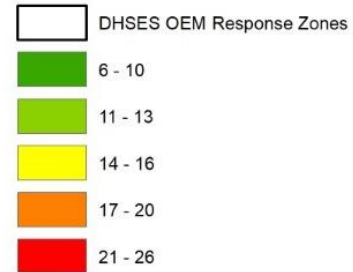


Least: Seneca County - 6

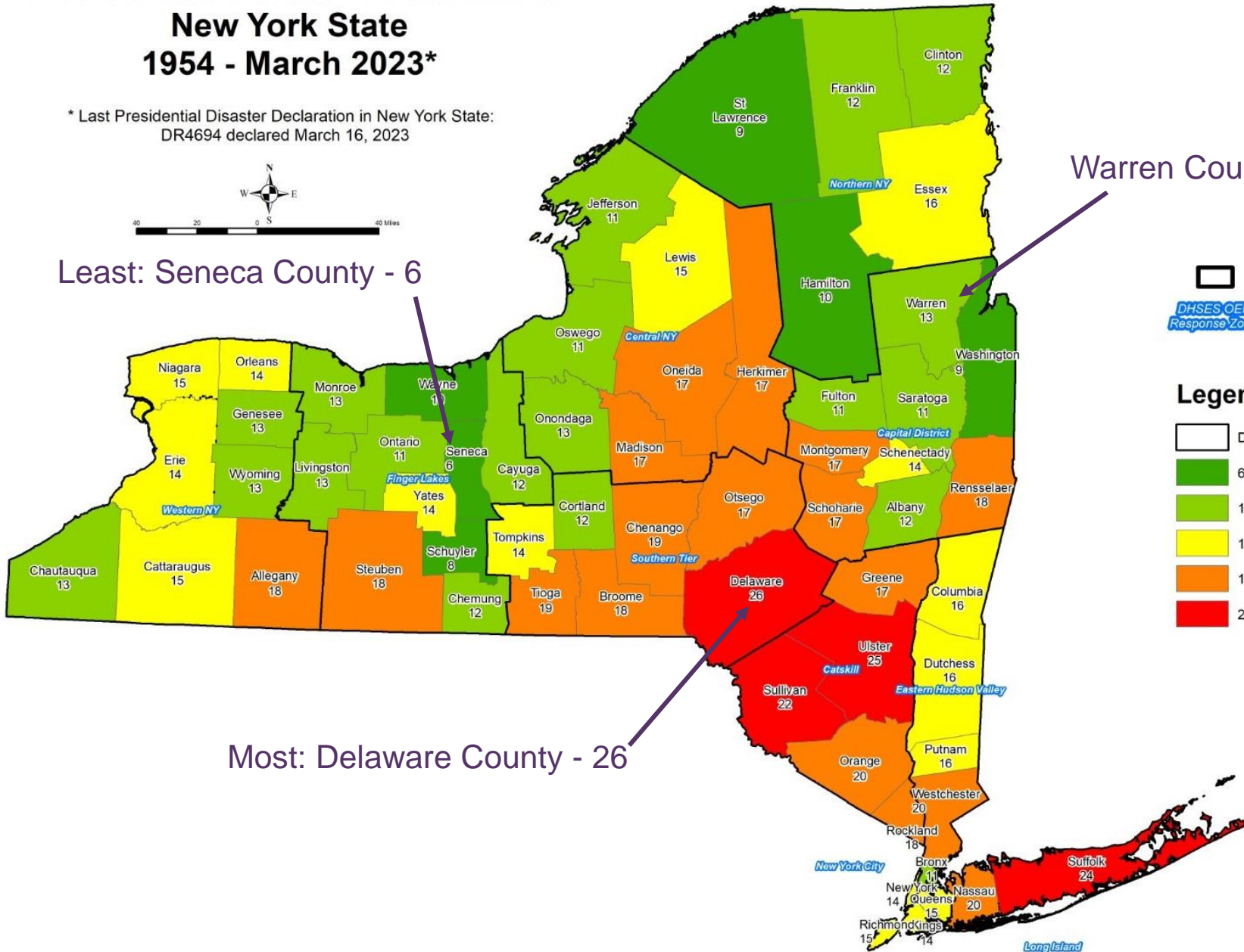
Warren County: 13



Legend



Most: Delaware County - 26



Recognized Natural Hazards/Risks for HMG

1. Flood/ice jams
2. Ice storms
3. Winter storm/Heavy snowfall
4. Severe storms/Hail
5. Infestation
6. Wildfire/Fire
7. Earthquake

Flooding is our number one natural hazard in Warren County and the deadliest in the USA.



Flood/Ice Jam



Ice bound blues



Route 418 in Thurman Station remains closed as water from the Hudson is forced across the road by ice jams. Merry Cantor

Blocked roads a big headache

By David Kibbe

"It was kind of muddy," Brown said. The only other alternative was to get wet. When the jammed-up Hudson and the Schoharie River overflowed last Wednesday, it flooded adjacent roads in Warrensburg, Warrensburg and Llewellyn. The water flowed and froze, leaving the streets and houses of other residents unapproachable in some cases.

Highway officials said it could be several days before some of the roads are reopened. Highway crews had to make do with first-aid work on the other side.

Route 418 toward Warrensburg was finally opened Monday, but other roads in Warren County were still closed by ice and water, police and road crew said.

That state isn't ready that highway departments can do, according to Thurman Supervisor Edwin Fisher.

"As far as taking care of the main problem, Marko Means is holding us up on that," he said. "He needs a couple of more days."

See Ice: Back Page



Severe Storm/Hail



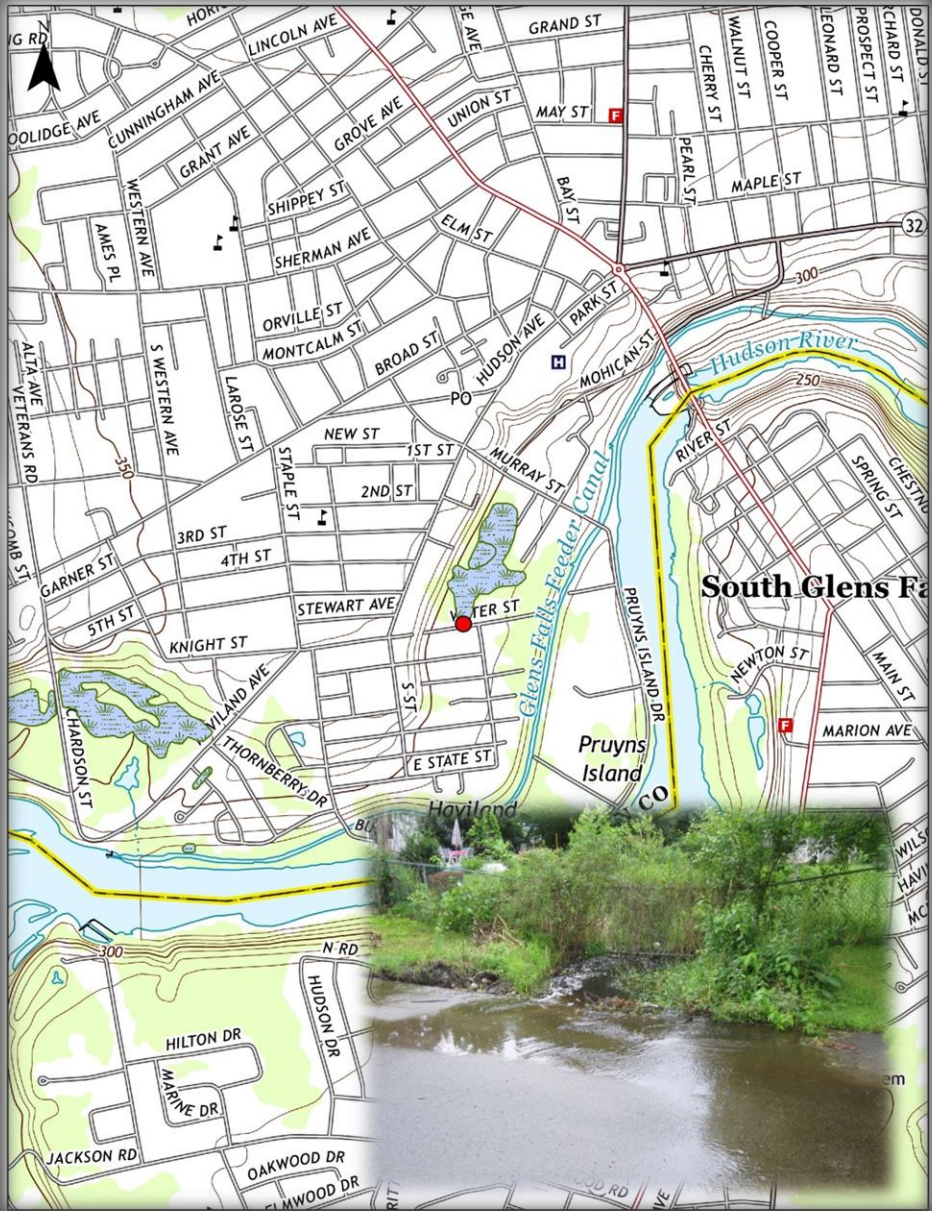
Ice Storms



Winter Storm/Heavy Snowfall



Infestation



Mass Wasting

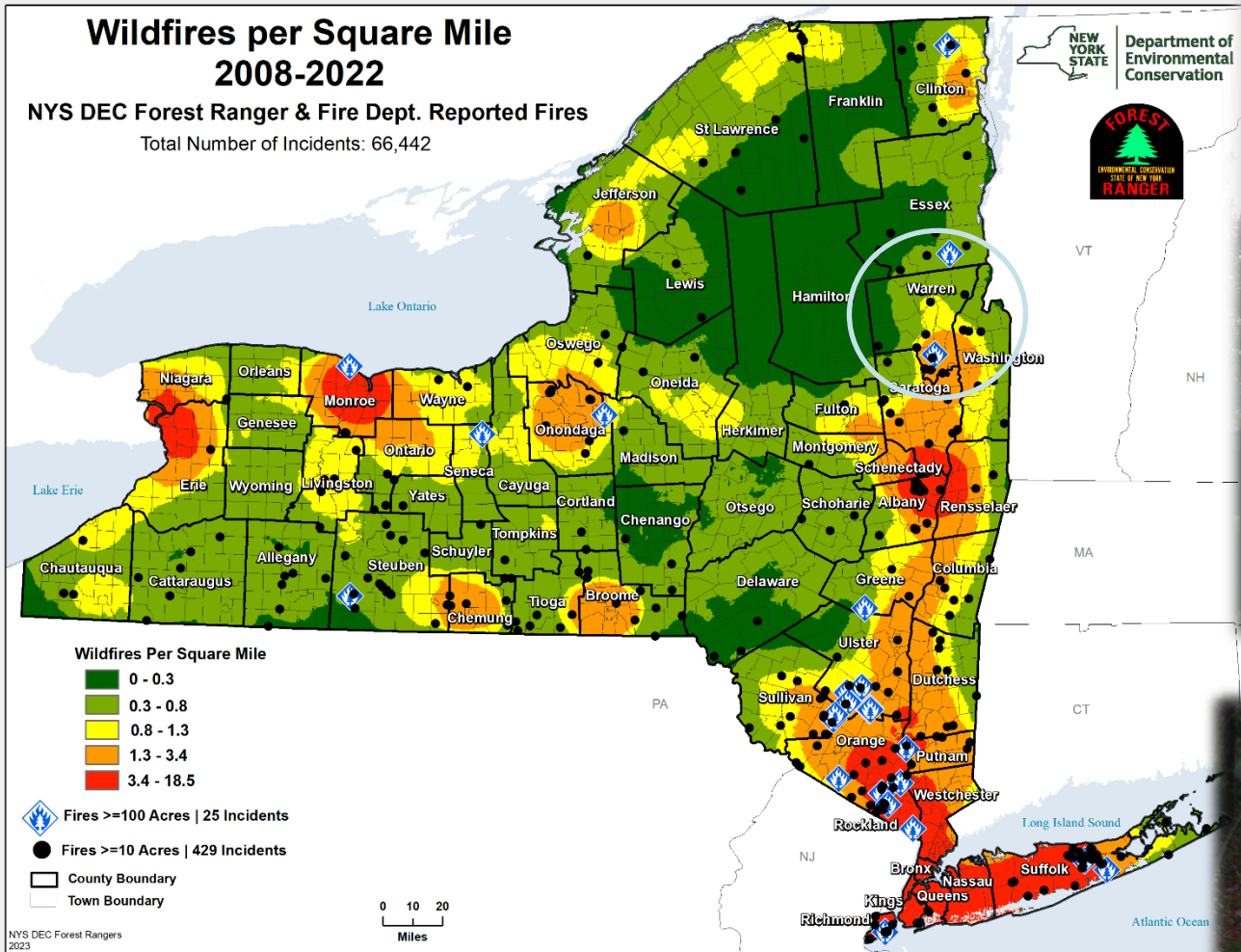


Amy Hirsch, WC OES



Amy Hirsch, WC OES

Wildfire/Fire



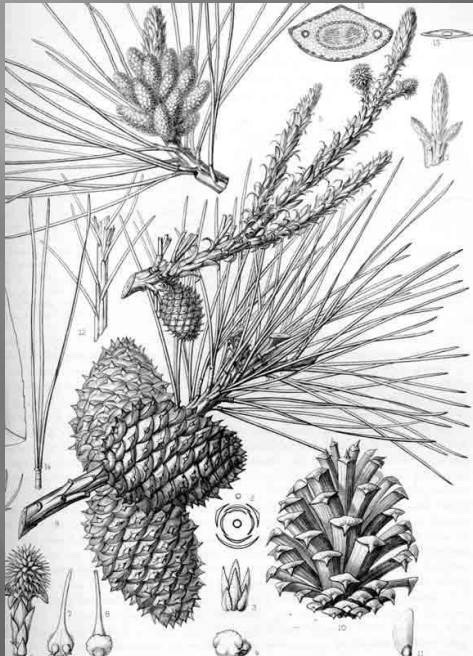
NEW YORK STATE Department of Environmental Conservation



09.08.2008



<https://nystateparks.blog/tag/pitch-pine/>

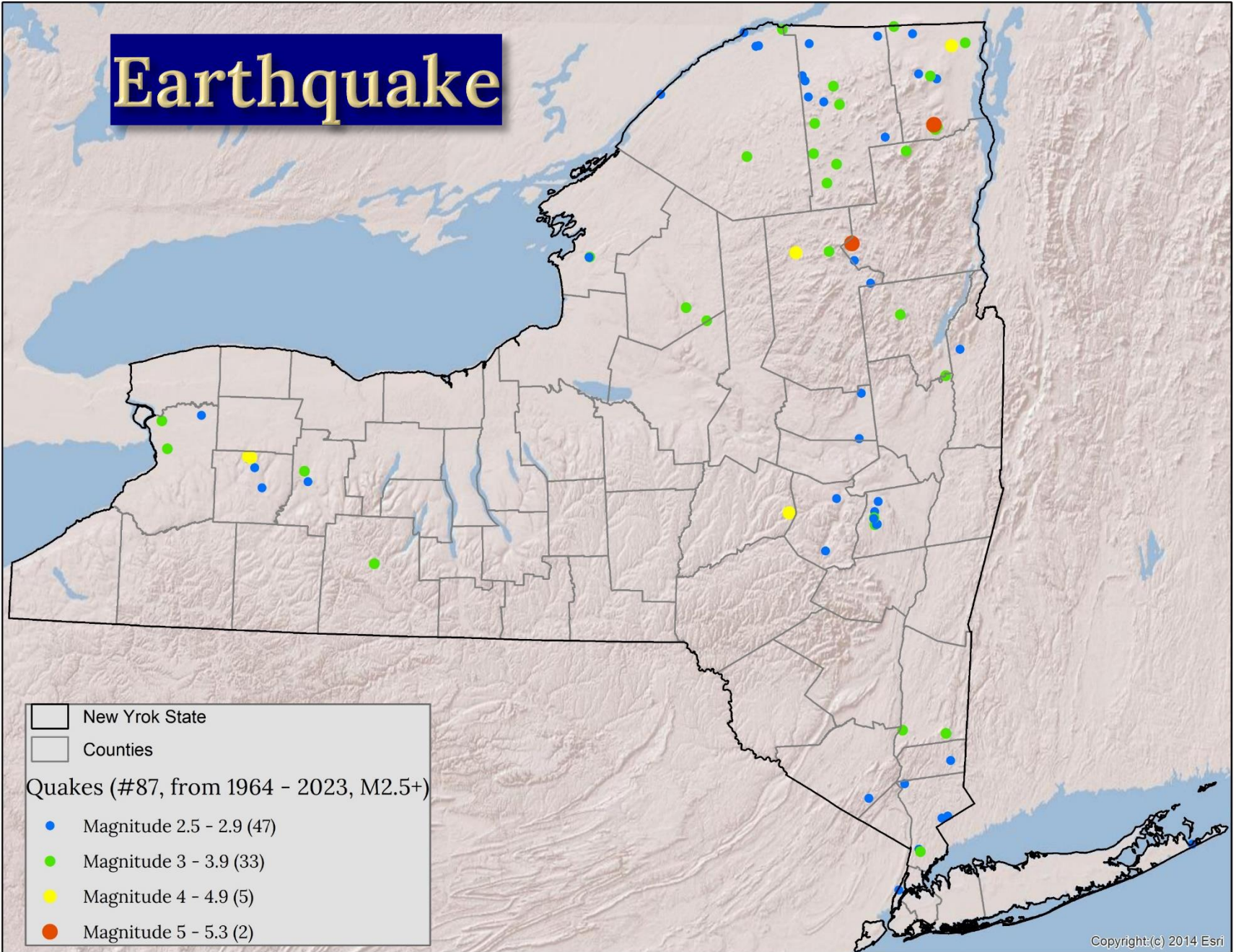


https://www.conifers.org/pi/Pinus_rigida.php



https://www.srs.fs.usda.gov/pubs/misc/ag_654/volume_1/pinus/rigida.htm

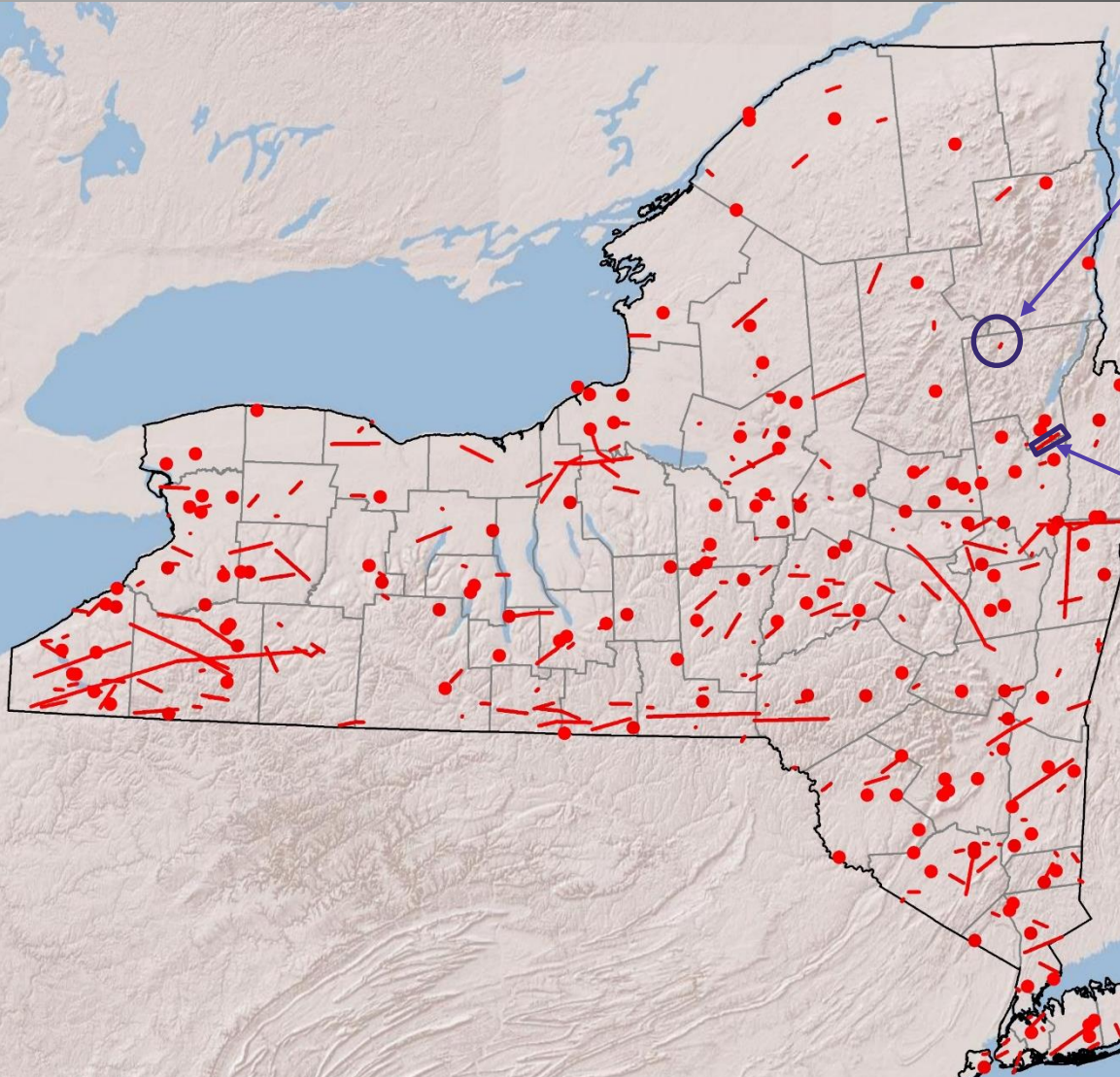
Earthquake



Tornado



Amy Hirsch, WC OES



THE SUNDAY
POST STAR
Est. 1904

The ultimate summer list of American beaches
LOOK INSIDE better
Muzzle Mr. Met? Mascots wonder why they are banned from MLB

PARTLY SUNNY 62 + 39 FORECAST.AZ | SUNDAY, MAY 31, 2020 | POSTSTAR.COM | 2009 Pulitzer Prize Winner

Tornado confirmed in region

NWS: Category EF1 tornado traveled nearly 9 miles; began in Lake Leno

When the National Weather Service confirmed Saturday that a low-level EF1 tornado traveled nearly 9 miles through the region, it was a rare event. The EF1 tornado touched down at 1:12 p.m. near the Hudson River...

The tornado then continued southwest and crossed the border of East TN, where it continued to the nearby community of Murrells Run. The EF1 tornado touched down at 1:12 p.m. near the Hudson River...

As the EF1 tornado passed through Murrells Run, it caused damage to trees and structures. The tornado then traveled southwest and crossed the border of East TN, where it continued to the nearby community of Murrells Run. The EF1 tornado touched down at 1:12 p.m. near the Hudson River...

Warren County Public Works
Photo by STEVEN, Page 13

FLIP YOUR
Caravan calls for

Warren County Annex



- Specific projects and goals for County resiliency
- Reviews existing community capacity and identifies areas for improvement.
- Many data sheets and maps that provide info for specific hazards and events that have impacted the town

| | Jurisdiction has this? (Yes/No) | Citation and Date (code chapter or name of plan, date of enactment or plan adoption) | Authority (local, county, state, federal) | Individual / Department / Agency Responsible |
|---|---------------------------------|--|---|--|
| available resources during an emergency, provide for the utilization and coordination of local government, state and federal programs to assist disaster victims, and to prioritize the response to the needs of the elderly, disabled, low income, and other groups which may be inordinately affected, and provide for the utilization and coordination of state and federal programs for recovery from a disaster with attention to the development of mitigative programs. | | | | |
| The Plan includes annexes for hazardous material response, hazardous weather, and mass care. | | | | |
| Continuity of Operations Plan | Yes | Warren County Continuity of Operations Plan (COOP) | Local, County | Office of Emergency Services |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> A Continuity of Operations (COOP) Plan presents the threats, hazards, and vulnerabilities that an agency is subject to during daily operations. A COOP Plan also establishes what the mission essential functions (MEF) are for the County as well as for each department or agency. MEFs are the limited set of government functions that must be continued throughout or resumed rapidly after a disruption of normal activities. Critical tasks are those actions that are necessary to maintain or restore Warren County's MEFs. | | | | |
| The ability for Warren County to maintain its critical services to County residents during emergencies is vital. To that end, effective planning is the key to ensuring a timely response and sustainment of critical services. In order to achieve that goal, Warren County identified MEFs and resources to ensure that those functions can be continued throughout or resumed rapidly after a disruption of normal activities. The Warren County COOP Plan ensures county-level MEFs that are crucial for providing basic services necessary to the health and safety of the people within Warren County are supported. | | | | |
| Substantial Damage Response Plan | No | - | - | - |
| Threat & Hazard Identification & Risk Assessment (THIRA) | No | - | - | - |
| Post-Disaster Recovery Plan | No | - | - | - |
| Public Health Plan | No | - | - | - |
| Other | Yes | Warren County Excessive Heat Plan 2022 | County | Warren County Emergency Services |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose of this Annex is to guide County agencies and Operational Area jurisdictions during an Excessive Heat Event. This Annex identifies resources, actions and critical issues regarding a weather event, including monitoring, public information, and congregate care and/or shelter. This Annex should be used in conjunction with the Warren County Comprehensive Emergency Management Plan (CEMP) and follow the Emergency Operations Center (EOC) guidelines whenever needed. | | | | |
| This Annex is intended to provide a written plan to assist Warren County agencies with managing information and responding to an Excessive Heat Event. As with all emergency plans, these guidelines will provide relevant agencies and decision makers with flexible tools, options and considerations as the situation dictates and evolves. | | | | |



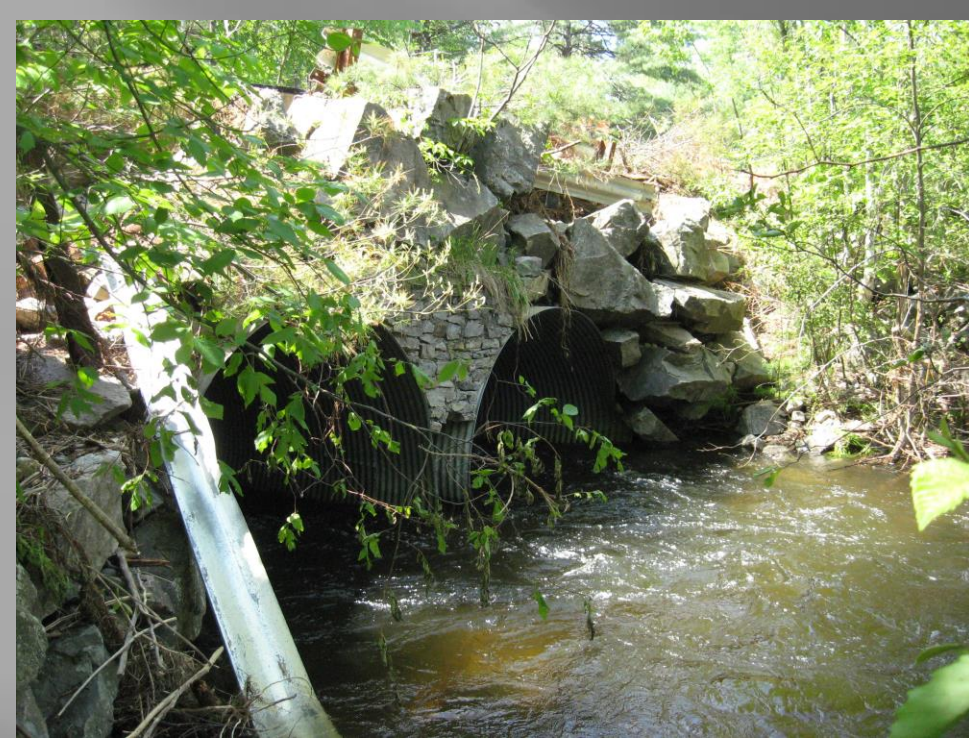
Section 9. Jurisdictional Annexes

| Project # | Project | Hazard(s) Addressed | Brief Summary of the Original Problem | Responsible Party | Status (In Progress, Ongoing, No Progress, Complete) | Evaluation of Success (if project status is <u>complete</u>) | | Next Steps |
|-----------|---|--|---------------------------------------|--|--|---|--------------------------------------|--|
| | | | | | | Cost | Damages Avoided; Evidence of Success | |
| | vegetative debris, and the overall management of that debris. This plan shall consider the debris management challenges presented by the 500-year event | | | | | | | <ol style="list-style-type: none"> 1. Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why. |
| WC-10 | Develop County COOP/COG Plan: A County COOP/COG plan will have provisions in place for notification, what facilities/services must be continuous, which ones must be available when, alternate locations. Municipalities would need to develop their own COOP plans | Severe Storm; Severe Winter Storm; Infestation | | WCOES, WCDPW; A/GFTC; all municipalities | Completed July 2017 and updated annually. | Cost | | <ol style="list-style-type: none"> 1. Discontinue. 2. 3. Complete. |
| WC-11 | County-Wide Housing Location/Relocation Planning Initiative for Disaster Displaced Residents and Structures: Warren County Office of Emergency Services to develop and implement a program to work with all Warren County municipalities to identify sites within the community suitable for relocation of houses out of the floodplain, or building new houses | All Hazards | | Warren County Office of Emergency Services | No progress | Cost | | <ol style="list-style-type: none"> 1. Continue in HMP 2023 2. WCOES will develop a Plan for Displaced Residents, once approved and appendix will be added to this plan 3. |
| | | | | | | Level of Protection | | |
| | | | | | | Damages Avoided; Evidence of Success | | |



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|-----------|---|---------------------|---------------------------------------|--|--|---|--|---|
| | | | | | | | | |
| | or modify their local codes. The County can and will encourage local municipalities to review their codes to determine if there are any mitigations measures that can be included in any amendments. | | | | | | | <ol style="list-style-type: none"> Project to be included in 2023 HMP or Discontinue If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). If discontinue, explain why. |
| WC-14 | Review and update County and municipal plans to integrate goals, objectives, and activities from this HMP which are not found in existing regulatory documents, as appropriate. | All Hazards | | WCDPCD | No Progress | Cost | | <ol style="list-style-type: none"> Include in 2023 HMP |
| | | | | | | Level of Protection | | |
| | | | | | | Damages Avoided; Evidence of Success | | |
| WC-15 | Continue to enhance and maintain the critical facility database developed during, and as a critical part of, this hazard mitigation plan update process. Continue to leverage this database to identify vulnerable critical facilities in support of mitigation action WC-18 and -19 below. | All Hazards | | WCDPCD | Ongoing Capability | Cost | | <ol style="list-style-type: none"> Discontinue Ongoing capability |
| | | | | | | Level of Protection | | |
| | | | | | | Damages Avoided; Evidence of Success | | |
| WC-16 | County Stormwater Management/MS4: Complete county-wide mapping for stormwater management and MS4 compliance. Continue | Flood, Severe Storm | | Warren County Soil and Water Conservation District (WC SWCD) | Ongoing capability | Cost | | <ol style="list-style-type: none"> Discontinue Ongoing capability |
| | | | | | | Level of Protection | | |
| | | | | | | Damages Avoided; | | |



[2023 Archives](#)

[2022 Archives](#)

[2021 Archives](#)

[2020 Archives](#)

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Warren County Creates New Website To Report Storm Damage



Aug 3, 2022

Warren County creates new website to report s

[Warren County Office of Emergency Services](#) has unveiled a new online tool to allow residents to report storm damage they spot in their neighborhoods or elsewhere in Warren County.

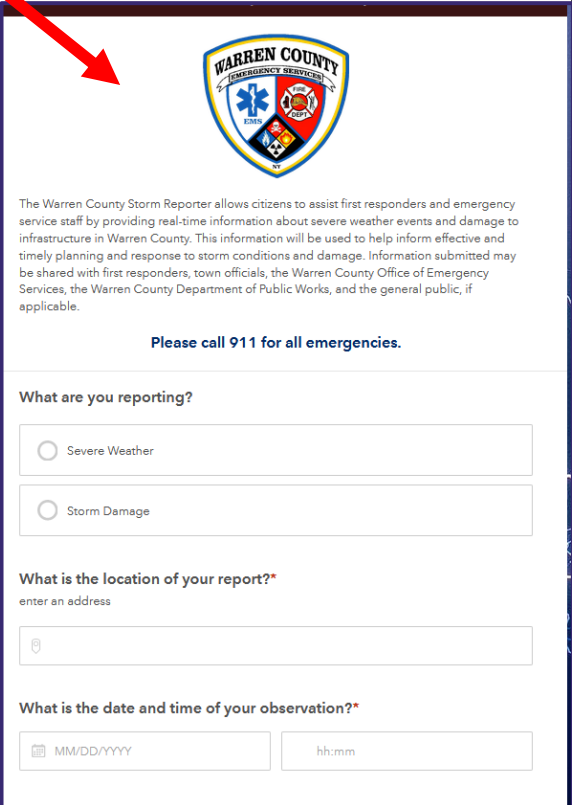
Developed in conjunction with [Warren County Planning & Community Development](#), the [Warren County Storm Reporter](#) easily allows residents and visitors to let county personnel know of damage they encounter during storms.

The information that is received through the application will be compiled by Office of Emergency Services, first responders, public works departments and state or federal agencies as needed.

This information will be particularly useful for documentation when county and local agencies respond to storm damage.

This new website is not for use in reporting emergency situations, as residents should continue to call 911 for urgent storm-related issues, such as injuries, fires, downed electrical lines and flooding that endanger lives or property.

Said Ann Marie Mason, Warren County Director of Emergency Services: "We believe this website will help us record storm damage to pass on to our local partners as well as state and federal agencies in order that the best possible repair make repairs is sought. We thank our colleagues at Warren County Planning & Community Development for their assistance in creating this tool."





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