



GENESEE COUNTY HAZARD MITIGATION PLAN UPDATE
Planning Partnership Risk Assessment Meeting – AGENDA
MEETING DATE/TIME: December 10, 2024 – 4:00 pm – 5:00 pm



Virtual Meeting via Teams

Meeting Link: [click here](#)

Meeting ID: 257 319 474 738

Passcode: wo2qj65E

Dial in by phone

+1 213-357-2812

Phone conference ID: 770 724 055#

- 1. Opening Remarks**
- 2. Project Status** - where we are in the process, public outreach
- 3. Risk Assessment Overview**
 - Results of risk assessment for each hazard
 - Hazards of concern risk ranking
 - How will this information be used in the HMP?
- 4. SWOO**
- 5. Feedback and Input**
- 6. Next Steps**
- 7. Questions**

Somerset County Project Contact

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Genesee County Office of Emergency Management

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Tetra Tech Project Contacts

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Genesee County, NY – Hazard Mitigation Plan 2025 Update
Planning Partnership Risk Assessment Meeting | Meeting Minutes



Purpose of Meeting:	Planning Partnership Risk Assessment Meeting	
Location of Meeting:	Virtual via Teams	
Date of Meeting:	December 10, 2024 @ 4:00 P.M.	
Attendees:	<ul style="list-style-type: none"> • Genesee County Emergency Management Services <ul style="list-style-type: none"> ○ Tim Yaeger, Coordinator ○ Gary Patnode, Deputy Coordinator • Genesee County Planning Department <ul style="list-style-type: none"> ○ Felipe Oltramari, Director • Genesee County Legislature <ul style="list-style-type: none"> ○ Shelly Stein, Chair • Genesee County Department of Social Services and Youth <ul style="list-style-type: none"> ○ Carla Mindler, Commissioner • Genesee County Public Health <ul style="list-style-type: none"> ○ David Bell, Public Health Emergency Preparedness Coordinator • NYS DHSES <ul style="list-style-type: none"> ○ Kevin Clapp, HMP Supervisor ○ Michael Tarasoff, Planning Manager ○ Betsy Parmerter ○ John Wilkinson 	<ul style="list-style-type: none"> • Alexander (T) <ul style="list-style-type: none"> ○ David Miller, Town Supervisor • Batavia (C) <ul style="list-style-type: none"> ○ Rachael Tabelski, City Manager • Batavia (T) <ul style="list-style-type: none"> ○ Gregory Post, Supervisor ○ Raymond Tourt, Highway Superintendent • Elba (T) <ul style="list-style-type: none"> ○ Dan Coughlin, Town Council • Tetra Tech <ul style="list-style-type: none"> ○ Jessica Stokes, Project Manager ○ Emily Vassallo, Lead Planner
Agenda Summary:	The purpose of the meeting was to provide an overview of the hazard mitigation planning process, discuss public and stakeholder outreach efforts, review the risk assessment results, including the hazard ranking, and introduce the SWOO exercise to the Planning Partnership.	
Item No.	Description	Action item(s):
1	Introductions	-
2	Project Status <ul style="list-style-type: none"> • Review Municipal Participation <ul style="list-style-type: none"> ○ Identify outstanding worksheets • Public Outreach and Engagement <ul style="list-style-type: none"> ○ Post links on social media and department/agency websites ○ Stakeholder and neighboring municipalities surveys have been distributed ○ Make efforts to reach out to: <ul style="list-style-type: none"> ▪ General Public ▪ Stakeholders ▪ Neighbors ▪ Socially Vulnerable Populations 	Planning Partnership <ul style="list-style-type: none"> • Post links on social media and department/agency websites • Make efforts to reach out to general public, stakeholders, neighbors, and socially vulnerable populations
3	Risk Assessment Overview <ul style="list-style-type: none"> • Risk is defined as a function of: <ul style="list-style-type: none"> ○ Hazard <ul style="list-style-type: none"> ▪ Source of potential danger or adverse condition ○ Exposure <ul style="list-style-type: none"> ▪ Manmade or natural features that are exposed to the hazard ○ Vulnerability <ul style="list-style-type: none"> ▪ Damage susceptibility of the exposed features ○ Adaptive Capacity (or capability) <ul style="list-style-type: none"> ▪ Plans/policies ▪ Response/recovery ▪ Financial resources 	-



4	Risk Assessment Results <ul style="list-style-type: none"> Provided an overview of the results from the risk assessment for each hazard. Results were a combination of qualitative and quantitative data. 	-
5	Hazard Rankings <ul style="list-style-type: none"> The calculated probability of a hazard occurring based on historical data <i>Impacts to <u>people</u>, <u>property</u>, and the <u>economy</u></i> based on GIS data and analysis of exposure. The degree to which <i><u>climate change</u></i> will affect future occurrences based on best available data. The degree to which existing <i><u>capabilities</u></i> (the ability of your community to respond to the hazard based on ordinances, mitigation strategies and procedures, and readiness) decrease overall risk. Ranking: <ul style="list-style-type: none"> High: Severe Winter Storm, Severe Storm, Utility Interruption, Transportation Accident Medium: Wildfire, Flood, Extreme Temperature, Epidemic, Hazardous Materials, Dam Failure, Drought Low: Terrorism, Civil Unrest, Earthquake Introduced Hazard Ranking Worksheet 	-
6	Strengths, Weaknesses, Obstacles, and Opportunities (SWOO) <ul style="list-style-type: none"> Strengths – what the County and communities do well; things upon which we can capitalize. Weaknesses – what can be done better; what can be strengthened. Obstacles – what stands in the way to implementation to prevent mitigation or response (for example regulatory, geographical, environmental, financial issues). Opportunities - actions or projects to mitigate issues or improve resilience. 	-
7	Next Steps <ul style="list-style-type: none"> Share information about the HMP Update via social media, community groups, and networks Complete SWOO worksheet (optional) Complete hazard ranking worksheet 	-
8	Questions/Discussion <ul style="list-style-type: none"> Gregory Post: No Petroleum pipes were identified on the map. <ul style="list-style-type: none"> Jes Stokes: It is discussed in the profile. 	Tetra Tech Follow up about MSW



TETRA TECH

Genesee County, NY Hazard Mitigation Plan – 2025 Update


**Planning Partnership Risk Assessment
Meeting**

December 10, 2024

While waiting for the meeting to start,
please enter your name, title, and
jurisdiction in the chat!



Today's Agenda

1. Welcome and Introductions
 2. Project Status
 3. Risk Assessment Overview
 4. Feedback and Input
 5. Next Steps
 6. Questions/Wrap Up
- 



Project Status



Municipal Participation Status

- To date, we have not received all municipal worksheets. Your assigned Tetra Tech planner will be sending a summary of information needed.

Municipality	Assigned Planner
Town of Alabama	Emily Vassallo
Town of Alexander	Grace Altenburg
Village of Alexander	Grace Altenburg
Village of Attica	Grace Altenburg
City of Batavia	Stacy Umbel
Town of Batavia	Stacy Umbel
Town of Bergen	Emily Vassallo
Village of Bergen	Emily Vassallo
Town of Bethany	Grace Altenburg
Town of Byron	Emily Vassallo

Municipality	Assigned Planner
Village of Corfu	Stacy Umbel
Town of Darien	Grace Altenburg
Town of Elba	Emily Vassallo
Town of Le Roy	Stacy Umbel
Village of Le Roy	Stacy Umbel
Town of Oakfield	Emily Vassallo
Village of Oakfield	Emily Vassallo
Town of Pavilion	Grace Altenburg
Town of Pembroke	Stacy Umbel
Town of Stafford	Stacy Umbel

Public Outreach Strategy

- Public Outreach Toolkit
 - Social media templates and posts
 - Press release templates
 - Printable materials
- Surveys
 - Stakeholders
 - Neighboring communities
 - Public
- County HMP Website
 - <https://www.geneseecountynyhmp.com/>



Risk Assessment Overview





What is Risk?

Risk is defined as a function of :

- Hazard
 - Source of potential danger or adverse condition
- Exposure
 - Manmade or natural features that are exposed to the hazard
- Vulnerability
 - Damage susceptibility of the exposed features
- Adaptive Capacity (or capability)
 - Plans/policies
 - Response/recovery
 - Financial resources





Purpose of Risk Assessment

- To get a better understanding of the risks you face
- Initial results based on available data
- Quantitative data (population/structures exposed, structural damages within hazard zones) used when available
- Qualitative community input (such as unmapped flood areas) integrated to adjust results
- Local community input to adjust relative rankings





Preliminary Risk Assessment Results

Civil Unrest



- Civil unrest can occur anywhere within Genesee County.
- Damage to or disruption of operations at government facilities could profoundly impact Genesee County's population.
- More common to see civil disturbances occur at government facilities, landmarks, prisons, and universities where crowds can easily gather in reference to a common issue or message.
- The severity of civil disturbance coincides with the level of public unrest and outrage. Civil disturbances often arise from protests on political issues, unions, institutional uprisings, or even from large celebrations that become out of control.



Drought



Droughts can affect Genesee County's industries and make day to day tasks more difficult to complete when water usage must be monitored.

Population (2022 ACS) Exposed

60,339

(100%)

The entire County is susceptible

Climate Change Impacts

Short-term seasonal droughts lasting weeks or months could increase, especially in the summer. This is because of precipitation falling in more intense bursts with longer dry spells in between and higher temperatures in the summer causing more water to evaporate. The potential increase of short-term droughts may impact water systems, resulting in water shortages.

Drought Damaged Field



Hazard Types



Meteorological



Hydrological



Agricultural



Socioeconomic

Earthquake



Earthquakes in Genesee County are a low-probability and high-consequence event. An earthquake can have devastating impacts on the County. Ground shaking can lead to the collapse of buildings and bridges and disrupt gas lines, electricity, and phone service.

Residential buildings are the most impacted structure type in terms of incurred damages, followed by commercial buildings.

Population Exposed

11,523

Hazard Types

Surface Faulting

Ground Motion

Liquefaction

Tectonic Deformation

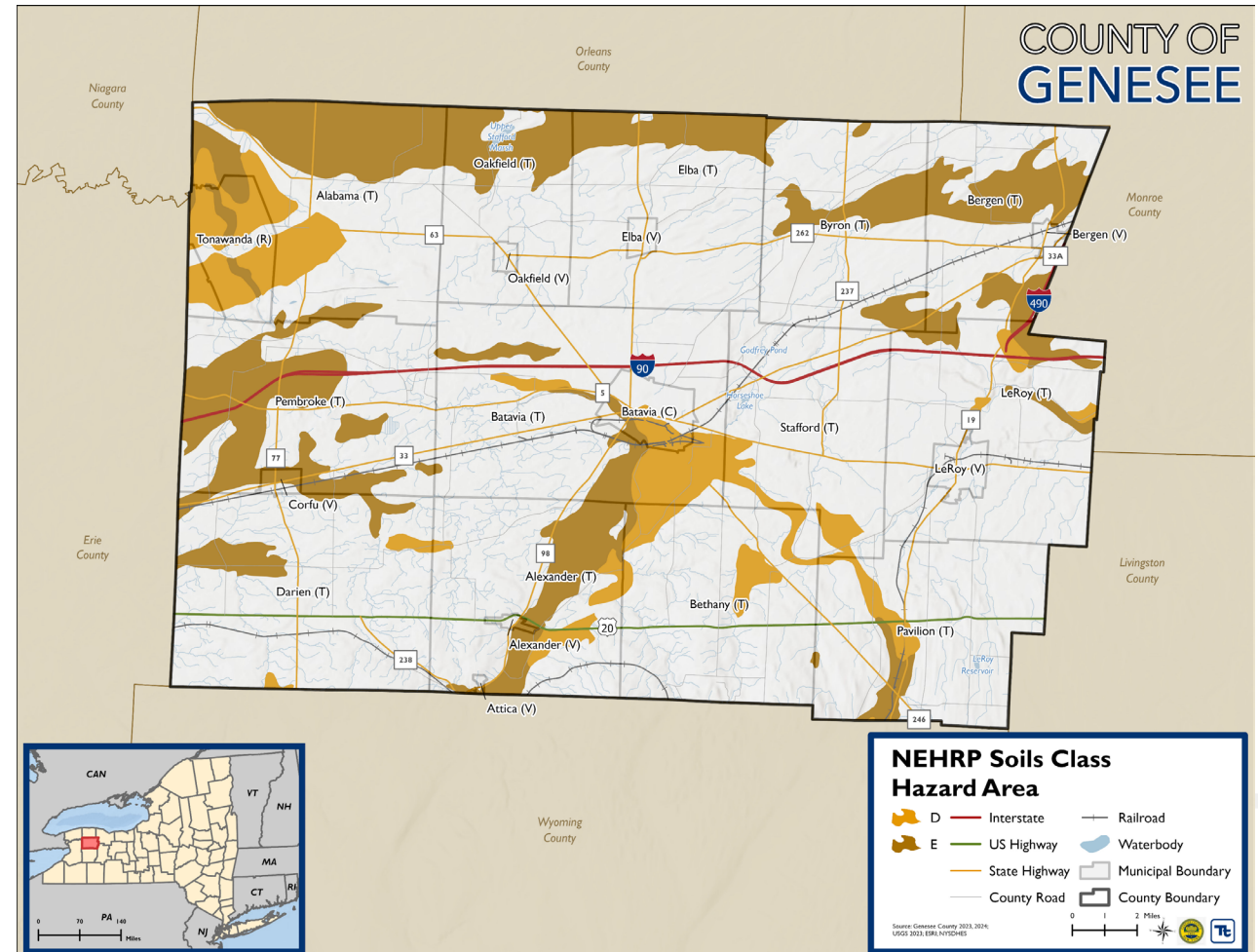
Number of Buildings Exposed

6,235

Building Replacement Cost Value

\$4,382,723,608

NEHRP (D & E) Soils in Genesee County



Epidemics



Epidemics can impact the entirety of Genesee County. Emerging diseases are difficult to contain or treat and present significant challenges to risk communication since the mechanics of transmission, laboratory identification, and effective treatment protocols may be unknown.

Population (2022 ACS) Exposed

60,339

The entire County is susceptible. As population density increases in the County, so too will the probability of a disease outbreak event to occur.

Vulnerable Populations

- Healthcare providers and first responders have an increased risk of exposure due to their frequent contact with infected populations.
- The elderly and immunocompromised individuals may have increased vulnerability to becoming infected or experience exacerbated impacts depending upon the disease.

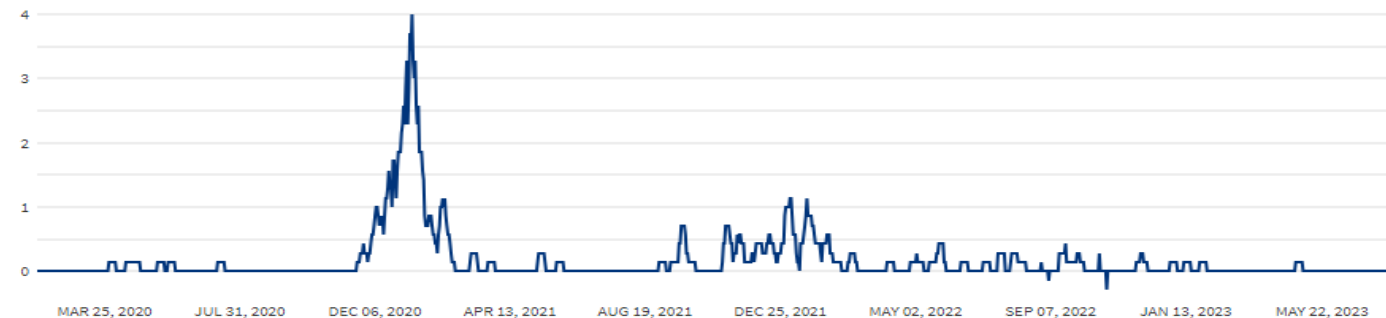
Climate Change Impacts

There has been discussion that rising temperatures will increase the number of mosquitoes that can transmit disease among humans. Furthermore, the increase in projected precipitation may lead to larger areas of pooling water, creating a more favorable environment for mosquito habitats.

COVID-19 Cases Per Day in Genesee County, March 2020 – May 2023



COVID-19 Deaths Per Day in Genesee County, March 2020 – May 2023





Extreme Temperature

Extreme temperature includes both heat and cold events, which affects the entire County including, human health and commercial/agricultural businesses. Extreme temperature events can have primary and secondary effects on infrastructure.

Population (2022 ACS) Exposed

60,339

The entire County is susceptible

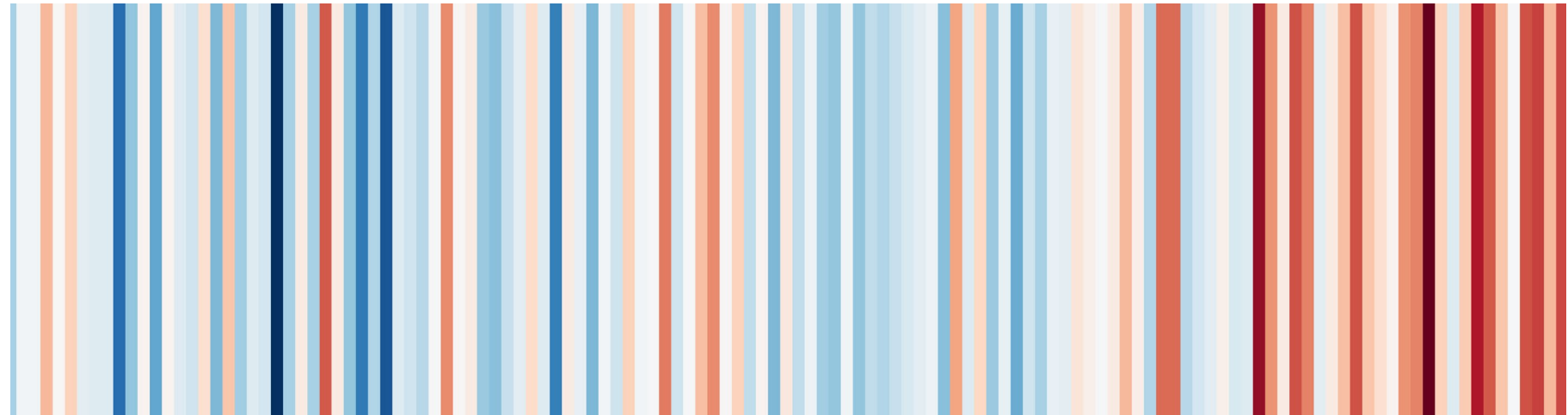
Occurrences Between 2007 and 2024

- Extreme Cold – 3 occurrences
- Cold/Wind Chill – 29 occurrences
- Extreme Heat – 23 occurrences

Climate Change Impacts

Evidence shows that extremely hot days are happening more often, and multiday heat waves are expected to occur more often and last longer in the upcoming decades.

Climate Stripes for Genesee County



Annual temperature in Genesee County (1895-2023) arranged from left to right. Each line shows a given year's temperature or precipitation compared to the 20th-century average. The darker the red or blue, the warmer or cooler the year.

Flood



Floods can happen almost anywhere in County but tend to occur in and around areas near existing bodies of water. Sloped land in the County results in flowing water moving down steeper gradients and being naturally or artificially channelized through valleys and gullies.

Population Exposed

3,800

In 1% Annual Chance Flood Area

5,057

In 0.2% Annual Chance Flood Area

Land Exposed to Flood
Hazard (acres)

38,861

In 1% Annual Chance Flood Area

39,312

In 0.2% Annual Chance Flood Area

Flood Building Replacement Cost Value

\$1,303,600,253

In 1% Annual Chance Flood Area

\$1,773,285,352

In 0.2% Annual Chance Flood Area

Number of Buildings Exposed

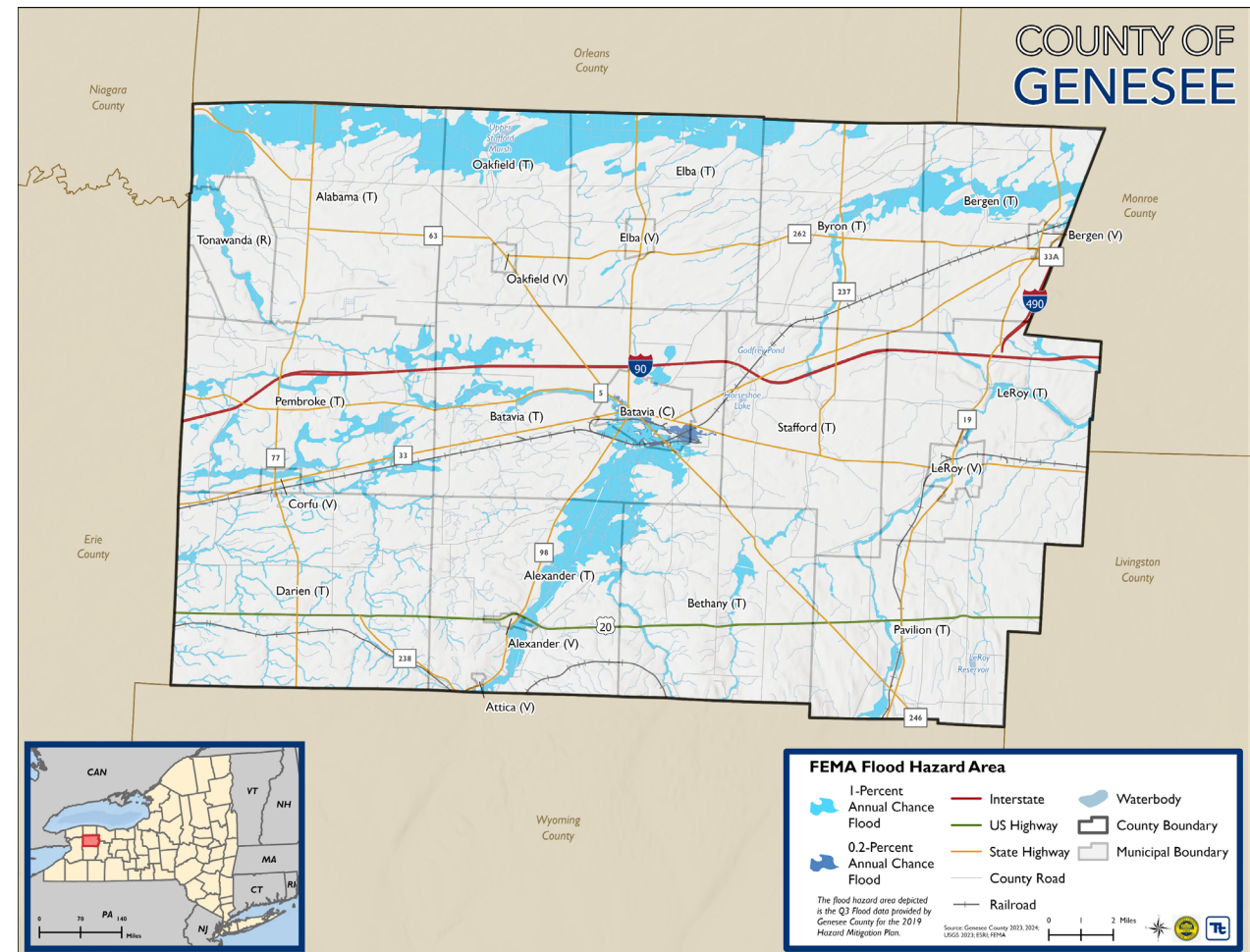
1,774

In 1% Annual Chance Flood Area

2,285

In 0.2% Annual Chance Flood Area

FEMA Flood Hazard Areas



Severe Storm



Severe weather can occur anywhere in the County at any time and have the potential to be life-threatening. It is critical for the community to prepare and be aware of forecasts in their local jurisdictions.

Notable Occurrences

A strong October storm produced 1-3 inches of rain and wind gusts of 61 mph which produced substantial property damage, road closures and power outages. A total of \$575,000 in property damages were reported.

Population (2022 ACS) Exposed

60,339
(100%)

The entire County is susceptible

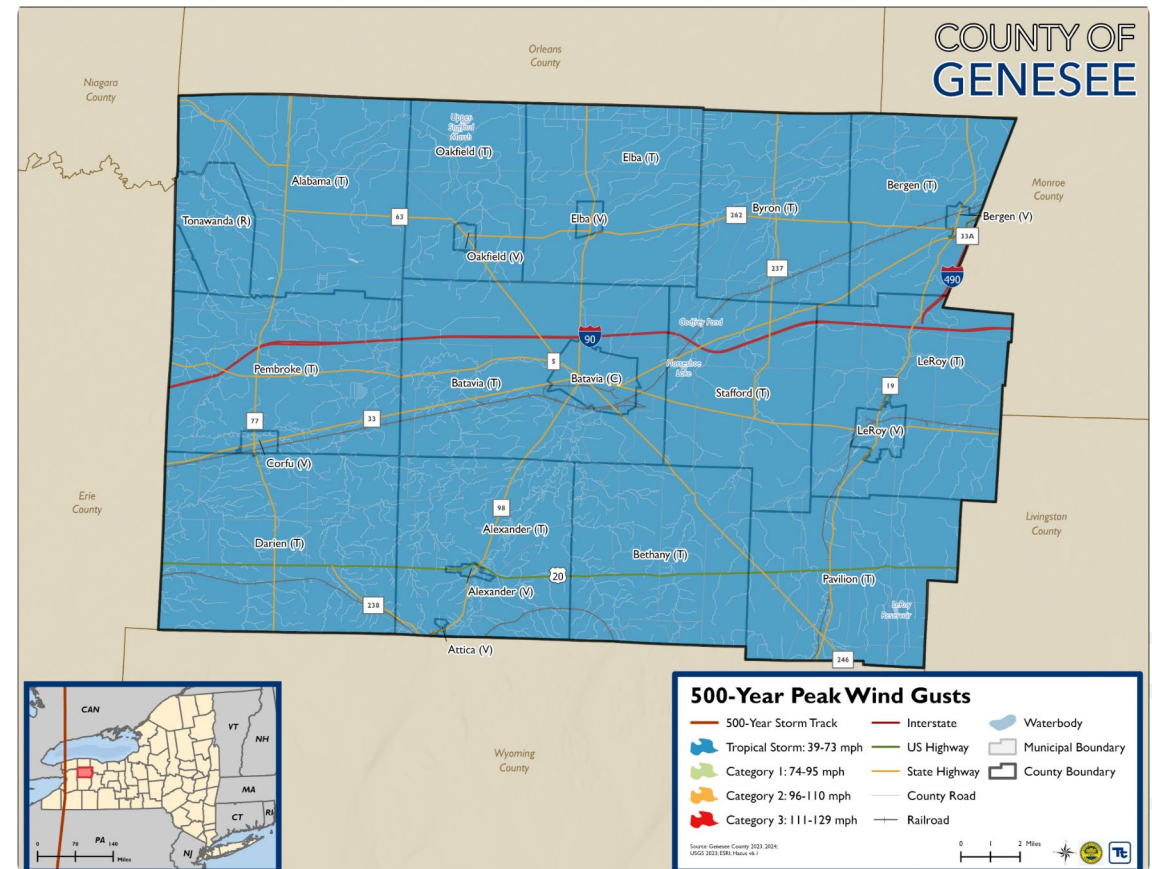
Hazard Types

- High Wind
- Tornado
- Thunderstorm
- Lightning
- Hail
- Hurricanes/Tropical Cyclones

Potential Impacts

- Power Outages
- Traffic Accidents
- Downed Trees
- Property Damage
- Personal Injury / Loss of Life

500-Year Peak Wind Gusts in Genesee County



Severe Winter Storm



Severe winter weather can occur anywhere in the County and have the potential to be life-threatening. It is critical for the community to prepare and be aware of forecasts in their local jurisdictions.

Population (2022 ACS) Exposed

60,339

(100%)

The entire County is susceptible

Snow Removal from Severe Winter Storm Event



Notable Occurrence

A winter storm in November 2022 resulted in \$500,000 in property damages due to a barn collapsing in the Town of Darien due to the weight of the snow.

Hazard Types

- Heavy Snow
- Blizzard
- Ice Storm
 - Sleet
 - Freezing Rain

Climate Change Impacts

As winters continue to warm, ice is projected to become rarer in the upcoming decades, which may lead to more lake-effect snow in the short term due to additional moisture available in the atmosphere to create precipitation. Over the long term, however, more of this is likely to fall as rain.

- [illegible]

Transportation Accident



Transportations accidents can occur anywhere in the County at any time. Transportation accidents are incidents involving highway, air, and rail travel, resulting in death, serious injury, property loss or damage or situations that cause delay or closure.

Population (2022 ACS) Exposed

60,339

The entire County is susceptible

Hazard Types



Vehicular



Aviation



Rail

Transportation Overview

Interstate Highway	64 mi.
County Roads	261.08 mi.
Local Roads	605 mi.
Total miles of roads	1,129 mi.
Rail Freight	65 mi.
Rail Passenger	30 mi.
Civil Use and Seaplane Airports	1
Other airports	6
Total Airports	7
Bridges in fair condition	86
Bridges in good condition	50
Bridges in poor condition	27
Total Bridges	163

2023 Transportation Accidents

2,135

Vehicle

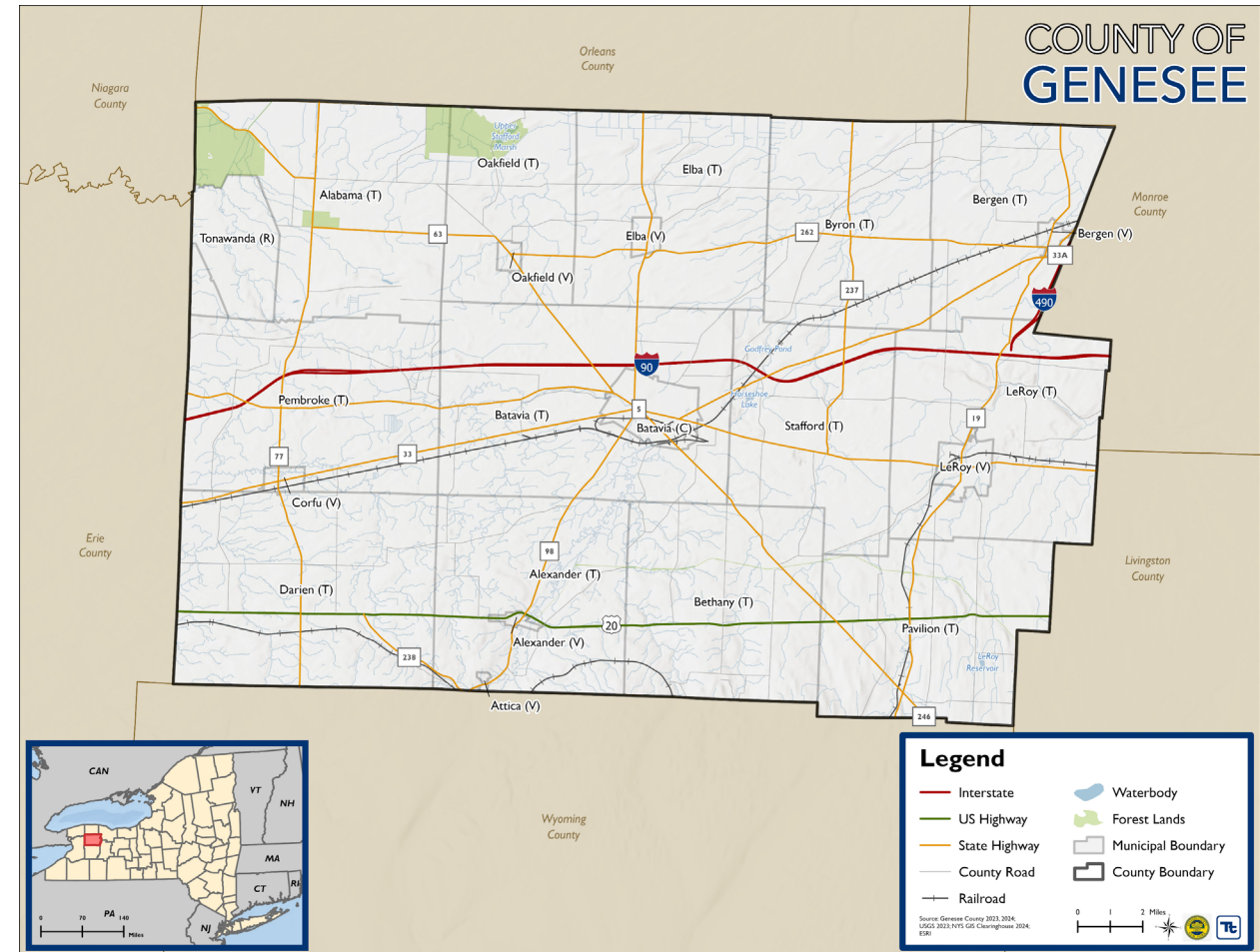
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Aviation

1

Rail

Transportation Routes in Genesee County





Utility Interruption

Utility interruption can occur anywhere in the County and has the potential to be life-threatening. It is critical for the community to prepare and be aware of forecasts in their local jurisdictions which may result in utility interruptions.

Population (2022 ACS) Exposed

60,339

The entire County is susceptible

Vulnerable Populations

Utility interruptions most severely affect individuals with access and functional needs (such as children, the elderly, and individuals with special medical needs).

Special medical equipment will not function without power.

Climate Change Impacts

New York State has warmed more rapidly than the national average, and winter is warming faster than other seasons. Evidence shows that hot days are happening more often, and multiday heat waves are expected to occur more often and last longer in the upcoming decades which may impact utilities in the County.

Power Restoration



Cascading Impacts



Fires

Temperature-Related Illnesses



Traffic Accidents

Loss of Food, Water, and Medical Resources



Wastewater and Potable Water Utility Interruption

Wildfire



Wildfires can occur at any time of the year but are most likely in Genesee County during a drought, and can occur in fields, grass, and brush as well as in the forest itself. Under dry conditions or droughts, wildfires have the potential to burn forests as well as croplands. Wildfires can have impacts on critical services, utilities, and properties, and may cause injury.

Population Exposed

4,371

WUI Interface Hazard Area

7,875

WUI Intermix Hazard Area

Lifelines Exposed

311

WUI Interface Hazard Area

392

WUI Intermix Hazard Area

Number of Buildings Exposed

3,299

WUI Interface Hazard Area

4,355

WUI Intermix Hazard Area

Building Replacement Cost Value

\$1,501,604,160

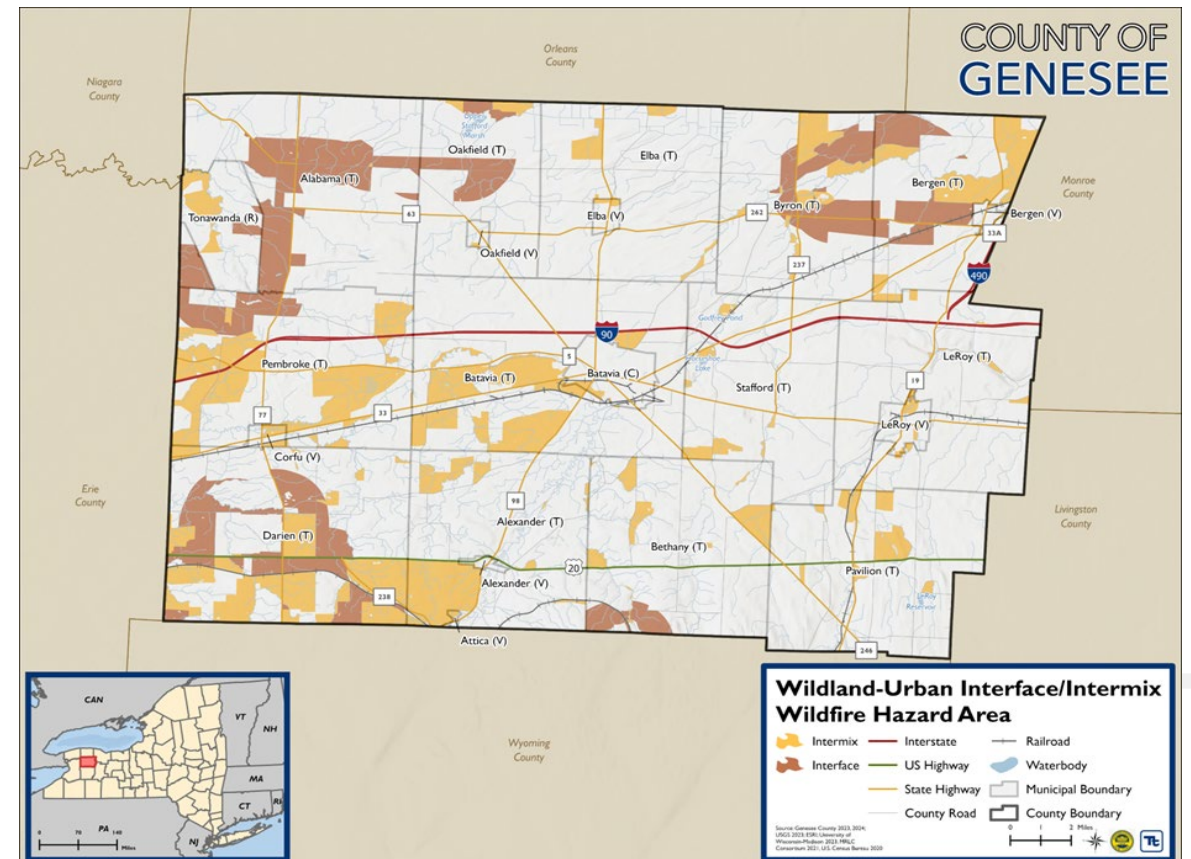
WUI Interface Hazard Area

\$1,805,572,036

WUI Intermix Hazard Area

Climate Change Impacts
Genesee County can expect warmer and drier conditions which may increase the frequency and intensity of wildfires. Higher temperatures are expected to increase the evaporation rates from land and water. These changes have the potential to lead to more frequent and severe droughts, which, in turn, may increase the likelihood of wildfires.

Wildfire Urban Intermix/Interface for Genesee County





Hazard Rankings

Review the calculated hazard rankings and provide your feedback.



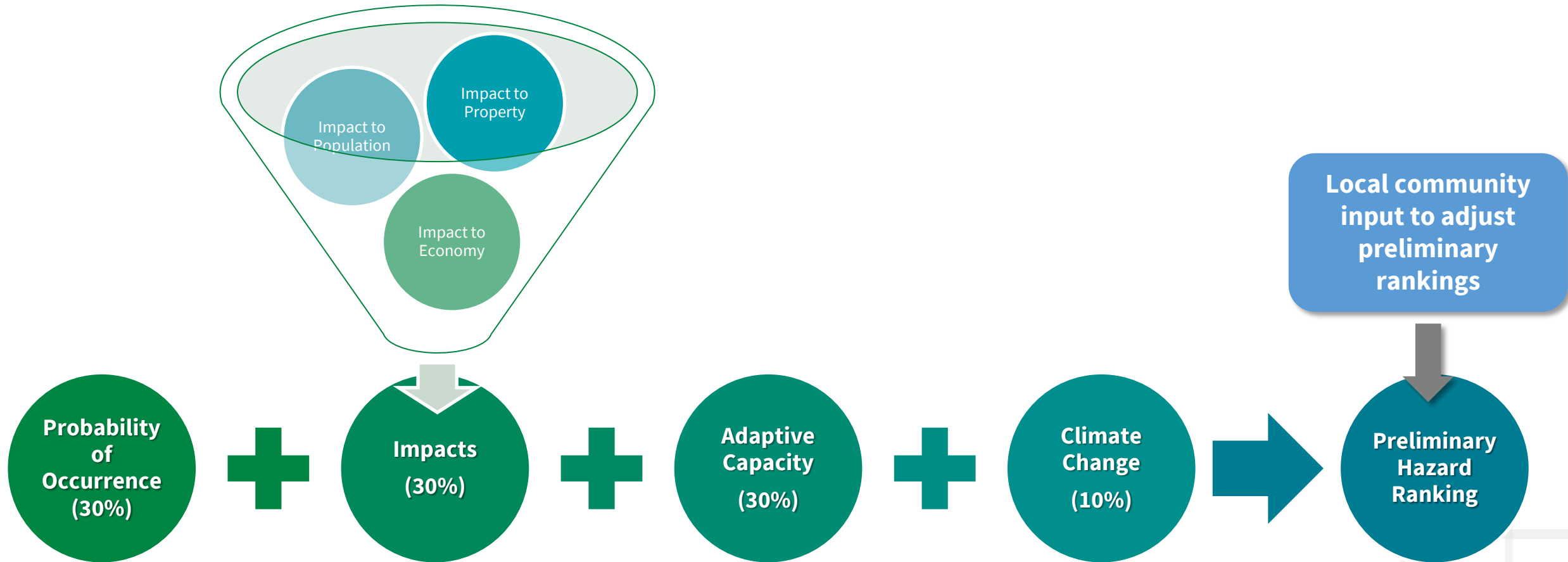
Preliminary Hazard Ranking Methodology

- The calculated probability of a hazard occurring based on historical data
- *Impacts to people, property, and the economy* based on GIS data and analysis of exposure.
- The degree to which climate change will affect future occurrences based on best available data.
- The degree to which existing capabilities (the ability of your community to respond to the hazard based on ordinances, mitigation strategies and procedures, and readiness) decrease overall risk.





Preliminary Hazard Ranking Formula





Preliminary Risk Ranking (County)

High

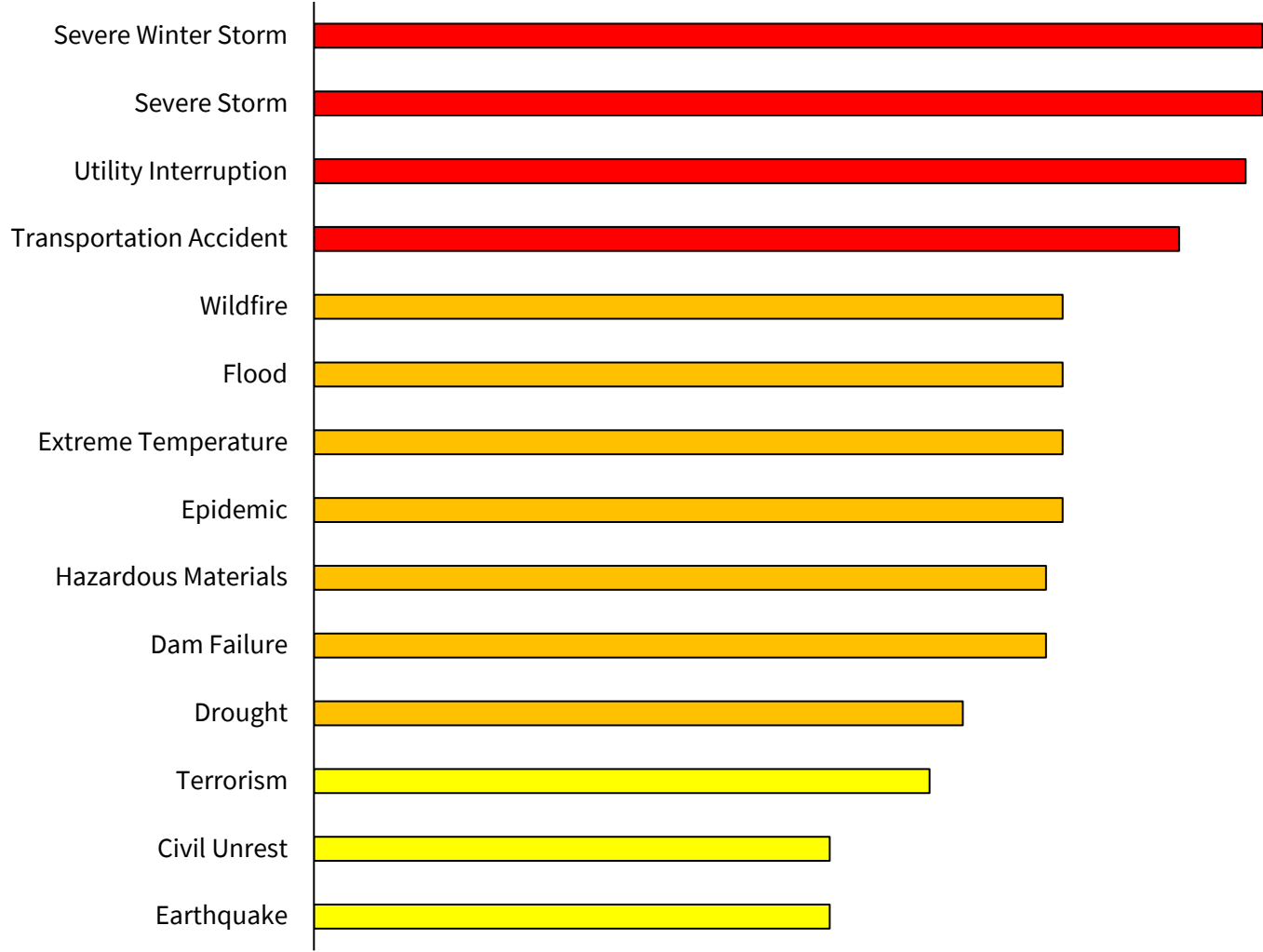
- Severe Winter Storm
- Severe Storm
- Utility Interruption
- Transportation Accident

Medium

- Wildfire
- Flood
- Extreme Temperature
- Epidemic
- Hazardous Materials
- Dam Failure
- Drought

Low

- Terrorism
- Civil Unrest
- Earthquake



Review Preliminary Rankings



Complete this worksheet and return to Stacy Umbel (stacy.umbel@tetratech.com) by Friday, December 20

Municipality: _____
Name/Title of Individual
Completing Worksheet: _____

What is a hazard ranking?

Hazard Ranking is used to understand your community's vulnerabilities to hazards and to prioritize projects and activities for mitigation.

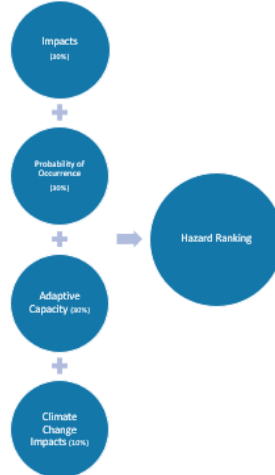
Hazard Ranking is determined by quantitative and qualitative factors including:

1. The calculated probability of a hazard occurring based on historical data.
2. Impacts to people, property, and the economy based on GIS data and analysis of exposure.
3. The degree to which climate change will affect future occurrences based on best available data.
4. Adaptive Capacity, which is the ability your community has to respond to the hazard based on ordinances, mitigation strategies and procedures, and readiness.

What is my hazard ranking?

The following table represent the calculated rankings for the hazards of concern for your community. Please review the calculated rankings and indicate whether or not you want to adjust the ranking. If you are changing the ranking, please provide detail as to why you are changing the ranking. **REMEMBER for every hazard of concern, you need at least one mitigation action.**

Continued on next page.



What are the hazards we need to address?

FEMA requires each participating jurisdiction include at least one mitigation action for each of the hazards of concern. If your jurisdiction does not incur impacts or has determined it does not endure risks from an identified hazard(s), please indicate so. For the Genesee County 2025 Hazard Mitigation Plan update, the hazards of concern are as follows:

Table 1. Hazards of Concern

Hazard	Preliminary Ranking	Agree with preliminary ranking (Y/N)? If No, indicate preferred ranking.	What local information or conditions have resulted in the adjustment in hazard ranking?
Civil Unrest	Low		
Dam Failure	Medium		
Drought	Medium		
Earthquake	Low		
Epidemic	Medium		
Extreme Temperature	Medium		
Flood	Low		
Hazardous Materials	Medium		
Severe Storm	High		
Severe Winter Storm	High		
Terrorism	Low		
Transportation Accident	High		
Utility Interruption	High		
Wildfire	High		



What is Adaptive Capacity?

Adaptive capacity describes a jurisdiction's current ability to protect from or withstand a hazard event.

- **Weak** adaptive capacity means the jurisdiction does not have the capability to effectively respond, which leads to an increase in vulnerability. Examples include weak/outdated/inconsistent plans, policies, codes/ordinances in place; no redundancies; limited to no deployable resources; limited capabilities to respond; long recovery.
- **Moderate** adaptive capacity means minimum requirements are in place; moderate capabilities; mitigation measures are identified but not implemented widespread; jurisdiction can recover but needs outside resources.
- **Strong** adaptive capacity means the jurisdiction does have the capability to effectively respond, plans/policies exceed minimum requirements; deployable resources all of which decreases vulnerability.

Table 2. Adaptive Capacity

Hazard	Preliminary Ranking	What should we indicate for your community's adaptive capacity for each hazard?
Civil Unrest	Moderate	
Dam Failure	Moderate	
Drought	Moderate	
Earthquake	Moderate	
Epidemic	Moderate	
Extreme Temperature	Moderate	
Flood	Moderate	
Hazardous Materials	Moderate	
Severe Storm	Moderate	
Severe Winter Storm	Moderate	
Terrorism	Moderate	
Transportation Accident	Moderate	
Utility Interruption	Moderate	
Wildfire	Moderate	

Note: *Adaptive capacity was assumed Moderate for all hazards.


STRENGTHS, WEAKNESSES, OBSTACLES, AND OPPORTUNITIES (SWOO)



Strengths, Weaknesses, Obstacles, and Opportunities (SWOO)



- The purpose of the SWOO is to identify mitigation strategies and capabilities that will meet the goals and objectives for the Genesee County HMP. The results will be used to develop a catalog of potential mitigation actions for use by the County and all jurisdictions. Look at the following for each hazard of concern:
 - Strengths – what your jurisdiction does well; things upon which can be capitalized on;
 - Weaknesses – what can be done better; what can be strengthened;
 - Obstacles – what stands in the way to implementation to prevent mitigation or response (for example regulatory, geographical, environmental, financial issues); and
 - Opportunities - actions or projects to mitigate issues or improve resilience.
- Return this sheet to Stacy Umbel (Stacy.Umbel@tetrattech.com) at Tetra Tech.



Genesee County | Hazard Mitigation Plan 2025 Update
SWOO

Update this worksheet and return this worksheet to Stacy Umbel at
Stacy.Umbel@tetrattech.com


Name/Title of Individual
Completing Worksheet: _____

Jurisdiction: _____

STRENGTHS, WEAKNESSES, OBSTACLES, AND OPPORTUNITIES (SWOO)
The purpose of the SWOO is to identify mitigation strategies and capabilities that will meet the goals and objectives for the Genesee County Hazard Mitigation Plan. The results will be used to develop a catalog of potential mitigation actions for use by the County and all jurisdictions. The opportunities developed from this process will serve as the basis for our catalog of potential mitigation alternatives. The alternatives will address our risks, meet our planning goals, and fall within our capabilities. We need to look at the following for each hazard of concern:

- **Strengths** – what the County and communities do well; things upon which we can capitalize;
- **Weaknesses** – what can be done better; what can be strengthened;
- **Obstacles** – what stands in the way to implementation to prevent mitigation or response (for example regulatory, geographical, environmental, financial issues); and
- **Opportunities** - actions or projects to mitigate issues or improve resilience.

Civil Unrest
Strengths
Weaknesses
Obstacles
Opportunities

TETRA TECH

1 Genesee County Hazard Mitigation Plan



Next Steps

- Share information about the HMP Update via social media, community groups, and networks
- Complete SWOO exercise
- Complete hazard ranking worksheet





Questions?

Genesee County Project Contact

Timothy Yaeger, Director | Genesee County Office of Emergency Management
(585) 344-0078 | tim.yaeger@geneseeny.gov

Tetra Tech Project Contact

Jessica Stokes, MSEM, NJCEM
(973) 630-8017 | jessica.stokes@tetrattech.com

Thank
You!