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**NATURAL DISASTER**

Are you and your horse ready?

# Tonight's Discussion

- Definitions of Emergency and Disaster
- 5 Key Areas of Emergency Management
- Understand GC's Natural Hazards Mitigation Plan
- Identify actions to reduce economic losses and human and animal suffering in disasters

# Emergencies:

- **Small-scale, localized incidents**
- **Quickly resolved using local resources**

**Residential fires**

**Livestock barn fires**

**Localized flooding**

**Power outages**

**Storm damage (wind, hail, ice)**

**Droughts**

**Hurricane warning**

**Foreign animal disease**

**Livestock trailer wrecks**

**Localized chemical spills**

## Issues

Temporary accommodations for people and animals

# Disasters:

- Typically large-scale
- Cross geographic, political boundaries
- Requires a level of response
- Response/Recovery, > local community

## Issues

- Long term recovery
- Accommodations for people and animals
- Disease control interventions
- Evacuation failures of animal owners
- Animal rescue attempts
- Carcass disposal

# State of Emergency

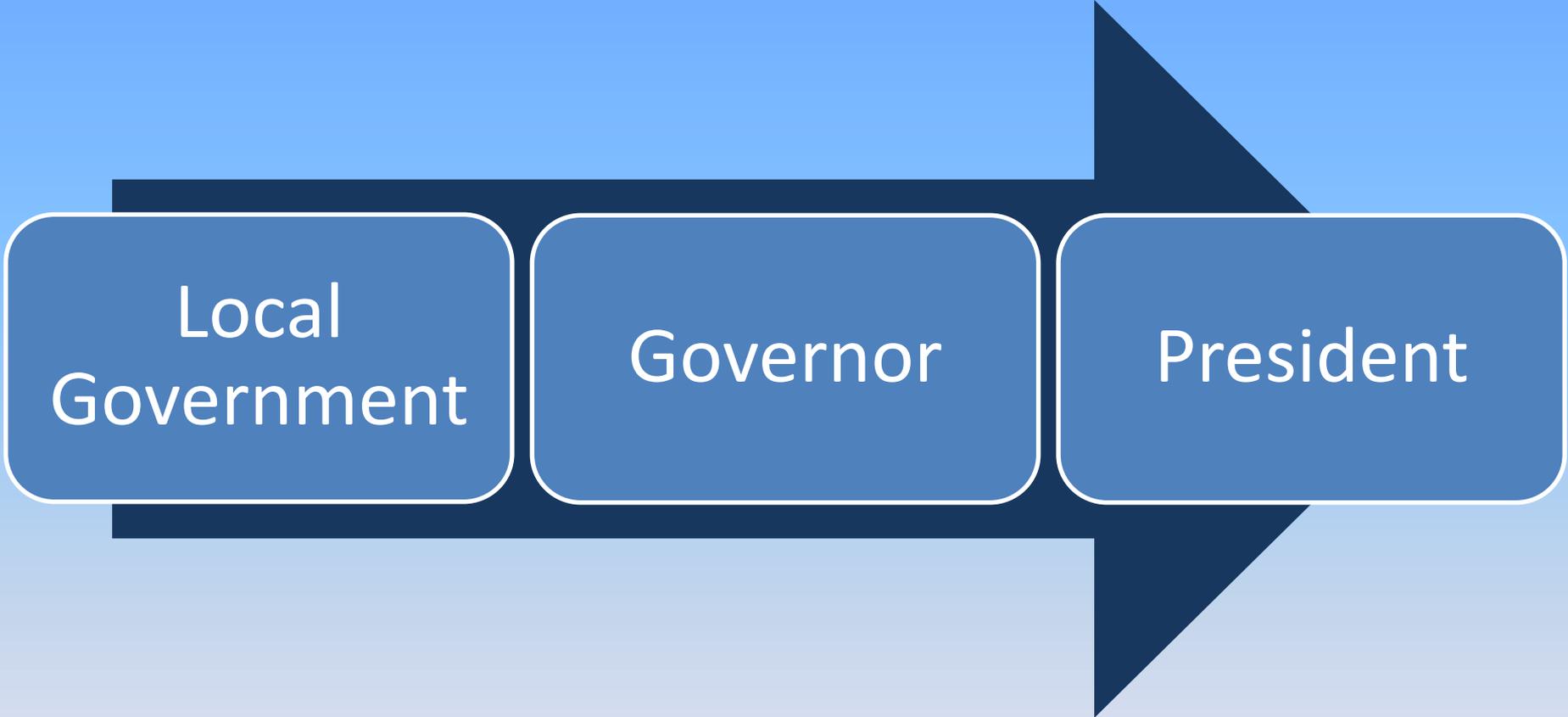
**When public health or the economic stability of a community is threatened and extraordinary measures of control may be needed.**

## **Examples**

Disease outbreak in people (public health)

Animals (economic stability, food security)

# Disaster Declarations

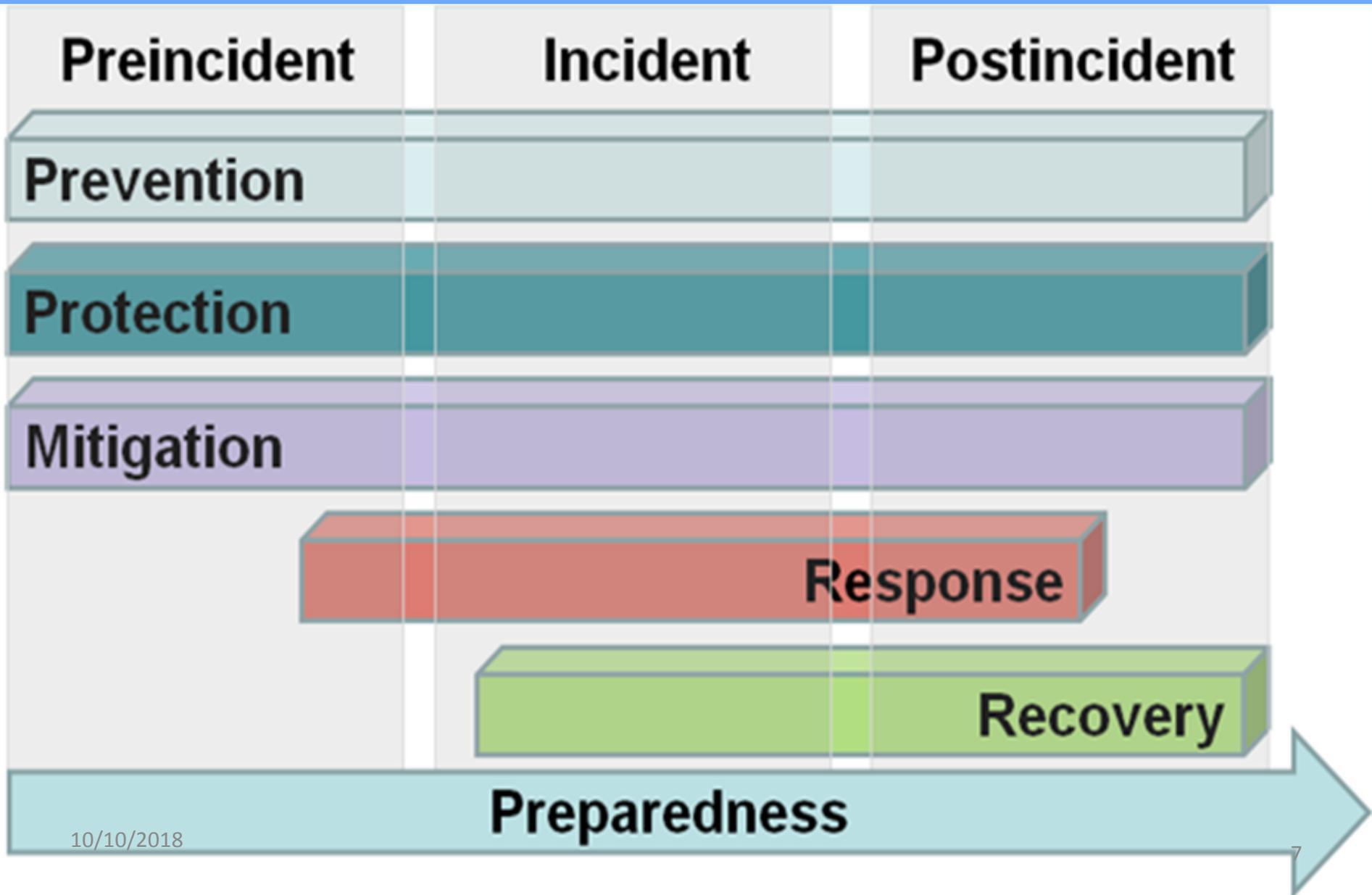


Local  
Government

Governor

President

# Five Key Areas of Emergency Management



# Preparedness

Preincident

## **Develop -**

disaster preparedness plans for what to do, where to go, or who to call for help in a disaster.

## **Create –**

a supply list of items that are useful in a disaster

## **Vulnerabilities -**

do walk arounds identifying possible vulnerabilities

## **Exercise -**

**your plans through drills, tabletop exercises, and full-scale exercises**

Incident

Postincident

**Preparedness**

# Prevention, Protection, Mitigation

Preincident

Incident

Postincident

Prevention

Protection

Mitigation

**Actions to prevent or reduce the cause, impact, and consequences of disasters**

Tying down homes or barns with ground anchors to withstand wind damage

Redirect water and planting vegetation to absorb water

Levees or permanent barriers to control flooding

Reinforcing fencing to prevent animal escapes

10/10/2018

Review insurance policies

# Response

Preincident

**Occurs in the immediate aftermath of an emergency disaster**

Business and other operations do not function normally

**Personal safety and well-being depends on the level of preparedness**

Response

**Response Activities :**

- Implementing disaster response plans
- Conducting search and rescue missions
- Taking actions to protect yourself, your family, your animals, and others

# Recovery

Preincident

**Recovery efforts occur concurrently with regular operations and activities**

The recovery period can be prolonged

**Recovery Includes:**

Preventing or reducing stress-related illnesses

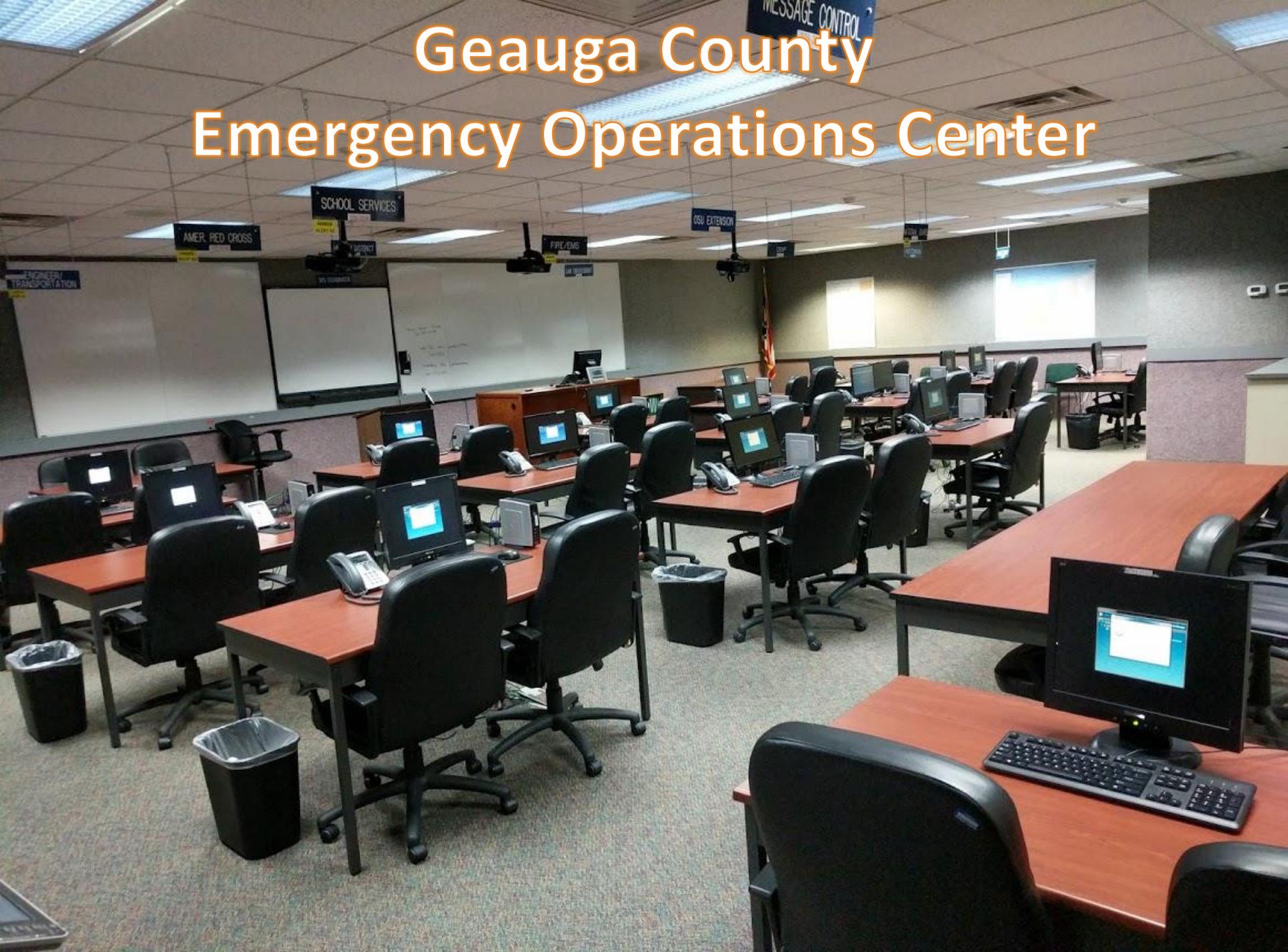
Reducing excessive financial burdens

Rebuild from lessons learned from preceding disasters

Recovery

**Reduce vulnerabilities to future disasters**

# Geauga County Emergency Operations Center



# **GC Natural Hazards Mitigation Plan**

## **GC's Hazards, Risks and Mitigation**

1. Winter Storms and Ice Storms
2. Severe Storms – High Wind, Lightning, and Hail
3. Floods (Flash/25 & 100-year)
4. Tornadoes
5. Wildfires
6. Dams/Dam Safety
7. Droughts
8. Earthquakes

# Geauga County Geography

- The county is ~ 408.29 square miles
- 400.16 square miles, or 98.01% is land
- 8.13 square miles or 1.99% of water
- Geauga County receives the most precipitation of any county in northern Ohio
- Most of the county receives over 42 inches annually in an average year, and some parts exceed 44 inches

# Winter/Ice Storms

Record Snow Storm, March 4-9, 2008

Snow Storms, January-March 2014

**Historically: 2.3/yr.** Avg. \$161,898 damages/event

**2008 - 2018: 6.2/yr.** Avg. \$228,952 damages/event

**Probability: High**

**Vulnerability: Low**

**Mitigation:** Public awareness; Expedite the clean-up process by coordination and equipment acquisition

# Severe Storms

## State of Emergency Declared April 3, 2005

Over 150,000 people in the region were without power

**Historically: 4.82/yr.**

**2008 - 2018: 9.60/yr.** Avg. \$72,698 damages/event

**Probability: High**

**Vulnerability: Low**

**Mitigation:** Public awareness;

Provide adequate shelters;

Improve the warning system and communications;

Expedite the clean-up process through coordination and equipment acquisition



# Floods

**Historically: 0.40/yr.**

Avg. of \$423,000 in property damages/event

Avg. of \$1,296 in crop damages/event

**2008 - 2018: 0.70/yr.**

Avg. \$701,429 in property damage/event

Avg. \$1,429 in crop damages/event

**Probability: Moderate @ 18%**

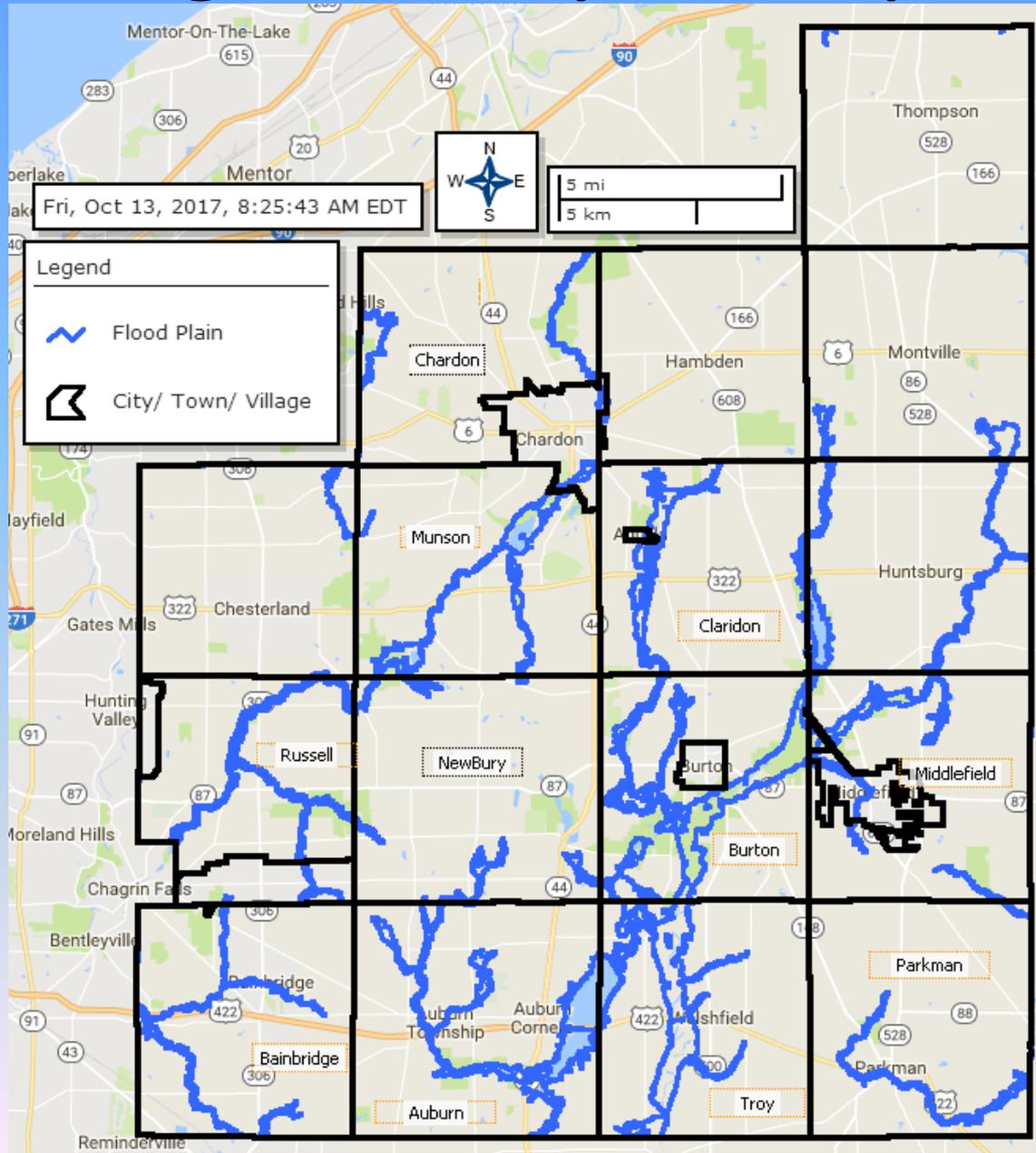
**Vulnerability: High**

25 Yr Flood: 5,706 Structures damaged @ \$1,253,698,000

100 Yr Flood: 5,956 Structures damaged @ \$1,308,611,000

• **Mitigation: Awareness, Flood Insurance**

# Geauga County Floodplains



# Tornadoes/ Wind

**Ohio is in Zone IV, highest wind zone category in US**

**Historically: 33%/yr.**

Avg. \$215,200 in property damages/event.

Two September tornados in Middlefield

August 24, 2011 - EF1 West of Chesterland

July 12, 1992

May 28, 1995 - F2 in Middlefield

**2008 - 2018: 39%/yr.**

**Probability: Moderate**

**Vulnerability: Moderate**

**Mitigation:**



# Geauga County Tornado Path

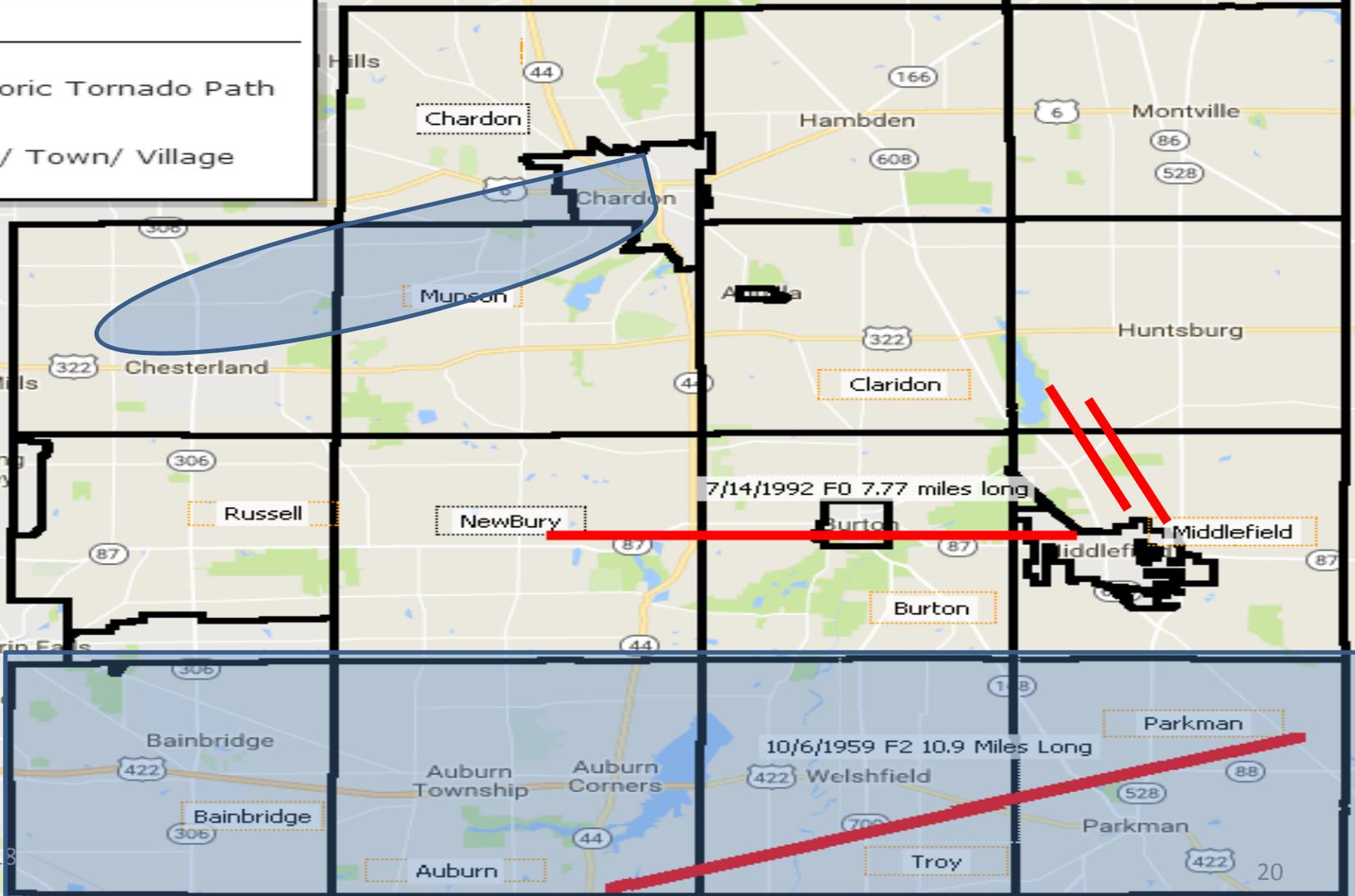
Fri, Oct 13, 2017, 8:38:42 AM EDT



**Legend**

- Historic Tornado Path
- City/ Town/ Village

6/22/1985 F2 2.87 miles long



7/14/1992 F0 7.77 miles long

10/6/1959 F2 10.9 Miles Long

10/10/2018

# Wildfires

~13% of GC have heavily wooded or forested areas

~95 wildfires in Geauga County since 2005

13 of the fires were caused by Acts of Nature

**Probability: Low @ 1.44/yr.**

**Vulnerability: Low**

**Mitigation:** Increase awareness & prevention



# Dam Failure

**Geauga County currently has 122 active dams**

Class I Dam – 8

Class II Dam – 11

Class III Dams – 13

Class IV Dams – 24

**Historically: 0/yr.**

**2008 - 2018: 0/yr.**

**Probability: Low. >1%**

**Vulnerability:**

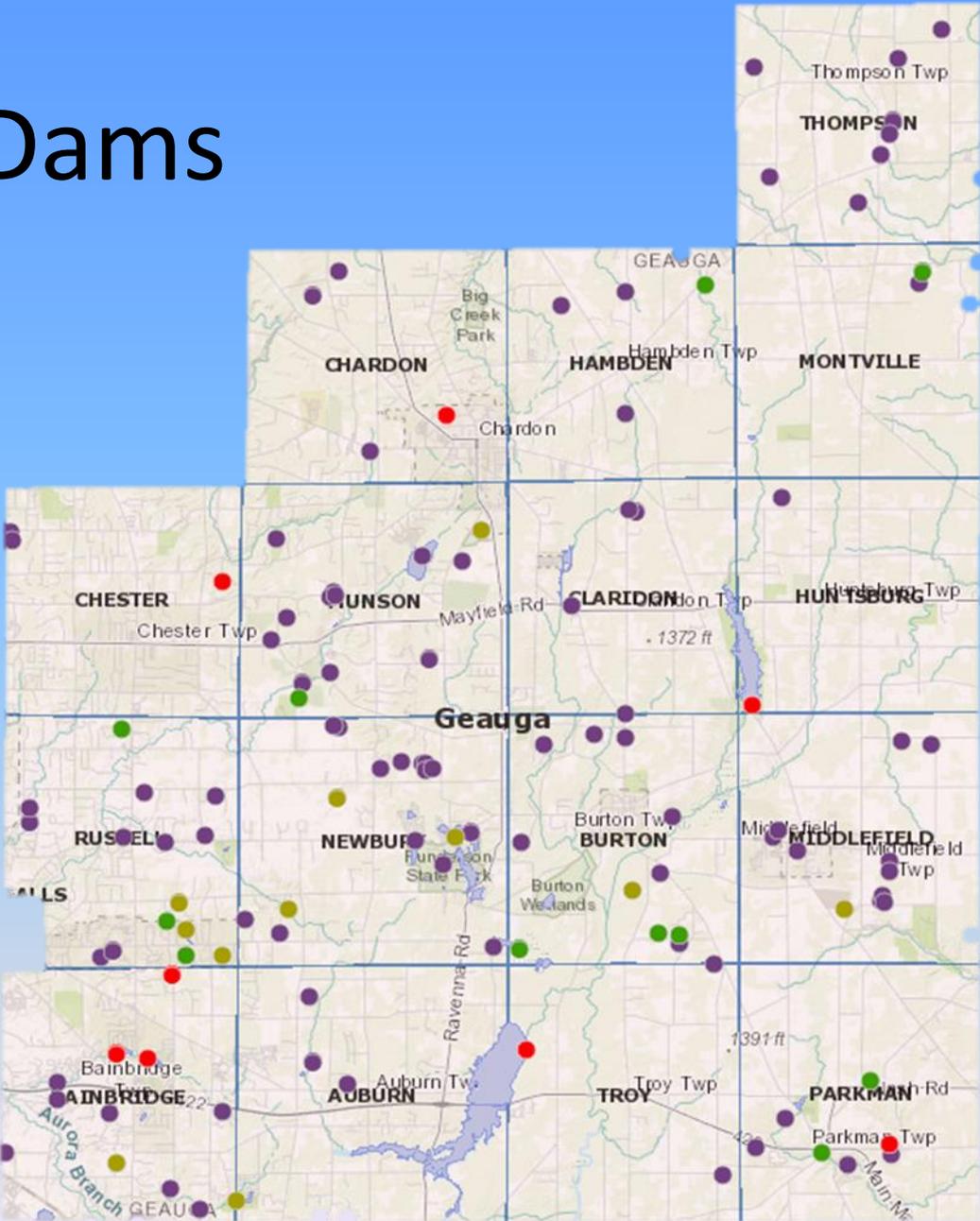
Class I failure severe

Class II failure moderate

**Mitigation:**

# GC's Dams

- Class I Dams
- Class II Dams
- Class III Dams
- Other Dams



## Class I and II Dams within Geauga County

Location	Name
<b>Class I Dam</b>	
Huntsburg	East Branch Reservoir Dam
Chardon	Locey Pond Dam
Auburn	Bridge Creek Dam
Bainbridge	Lake-in-the-Woods Dam
Bainbridge	Lake Lucerne Dam
Bainbridge	Tanglewood Lake Dam
Chester	Shadow Hill Lake Dam
Montville	Mont-Mere Lake Dam
<b>Class II Dam</b>	
Russell	Lake Louise Dam
Parkman	Shangi-La Ski Club Lake Dam
Burton	Burton Lake Dam
Burton	Giel Lake Dam
Parkman	Brown Lake Dam
Burton	Harvey Lake Dam
Munson	Fowlers Mill Golf Course Upground
Russell	Hidden Lakes Dam
Russell	Bellwood Lake Dam
Hambden	Kittredge Arboretum Lake Dam
Montville	Bella Luna Lake Dam No. 1

# Droughts

No occurrences since 2004

In 1999, a drought caused  
>\$2 million in crop damage

**Historically: 5 events**

**Probability: Low, < 1%**

**Vulnerability: Low**

**Mitigation:** Equipment to aid in supplying water;  
Administrative controls to limit potential property  
damage; Alternate water supply; Educate general  
public of the hazards associated with drought



# Earthquakes

## Historically:

8 earthquakes reported in the last 76 years

**June 2003**, Near Painesville, Minor 3.4 (minor)

The Perry Nuclear Power Plant considered it an Unusual Event

**September 1998**, Sharon PA, Moderate 5.2

**Probability: Low at 11.27%**

Simulated 5.2 quake in City of Chardon

**Vulnerability: High**

**Mitigation:** Awareness; Critical facilities and emergency services; Controls for earthquakes design

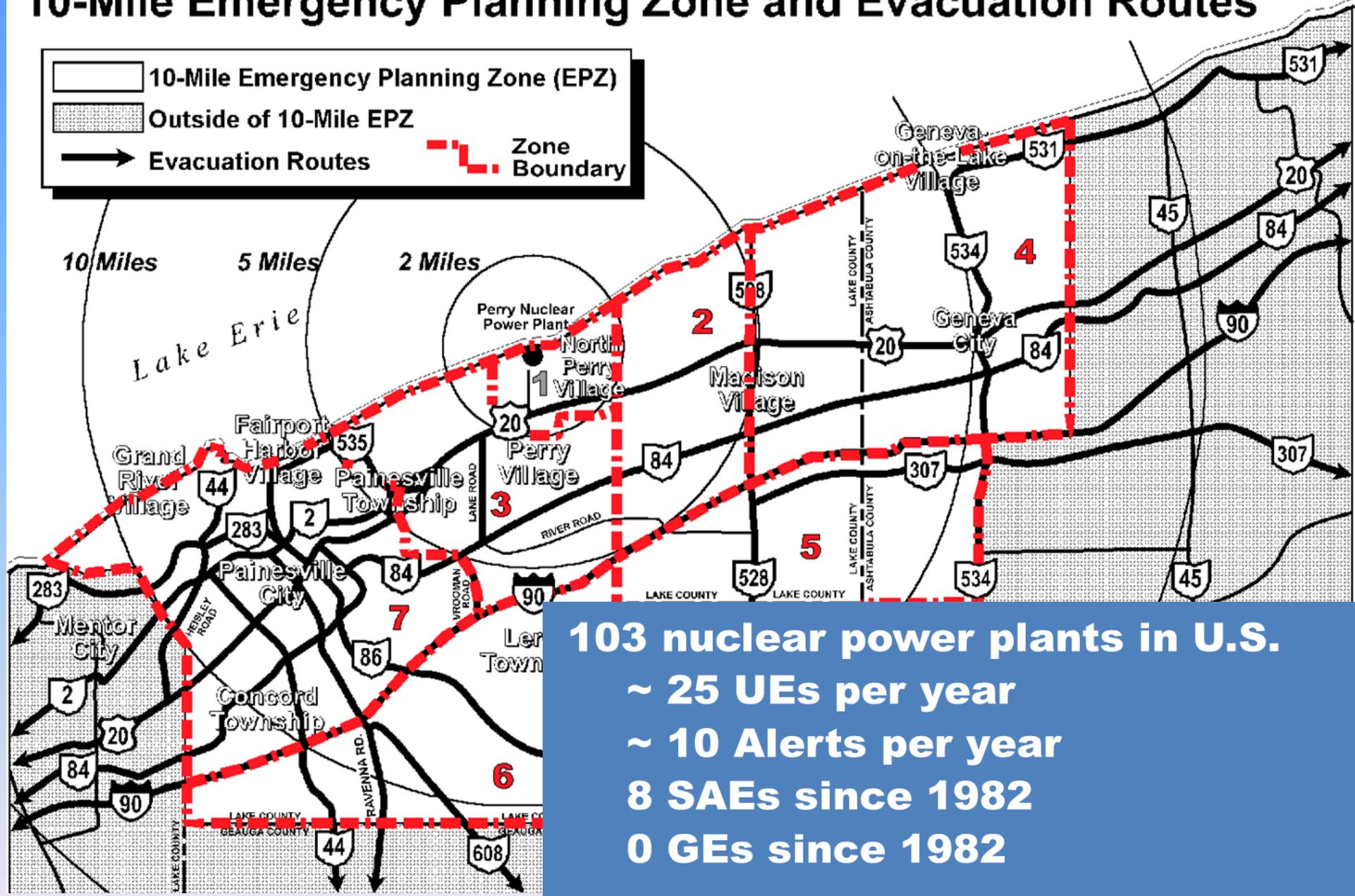
# PNPP



# 10-Mile Emergency Planning Zone and Evacuation Routes

Legend:

- 10-Mile Emergency Planning Zone (EPZ)
- Outside of 10-Mile EPZ
- Evacuation Routes
- Zone Boundary



**103 nuclear power plants in U.S.**  
**~ 25 UEs per year**  
**~ 10 Alerts per year**  
**8 SAEs since 1982**  
**0 GEs since 1982**

# Planning for Disasters

- Develop and practice an **evacuation plan**
- Have **directions** to your home near your telephone
- Identify **alternate sources of food and water**
- Consider backup **generators** and a good source of fuel
- Keep vehicles well maintained and full of gas
- Keep emergency **cash** on hand
- If not evacuating, **Shelter In Place options**
- Assess the stability and **safety** of barns/structures
- Remove dead trees, and minimize debris
- Clear away brush around structures
- Keep a list of your animals near your evac supplies
- **Note** animals' locations and favorite **hiding spots**

# Identification

- Microchip
- Tattoo
- Halter tag
- Neck collars
- Leg band
- Brand
- Mane clip
- Luggage tag braided into tail or mane
- Clipper-shaved information in the animal's hair
- Consider non-toxic non-water-soluble spray paint or markers to write on the animal's side
- Permanent marker to mark hooves



# Evacuation Networking

## Where're You Going?

- Veterinary/Land grant colleges
- Racetracks
- Show grounds
- Pastures
- Stables
- Fairgrounds
- Equestrian centers
- Livestock corrals
- Stockyards/Auction
- Other boarding facilities

## How You're Getting There?

- Neighbors
- Local haulers
- Farmers
- Producers
- Other transportation providers



# Go Kit

- 7-10 day supply of feed, supplements, & water
- Bandanas (to use as blindfolds)
- Flashlight, Radio & Batteries
- Blankets
- **Copies of veterinary records & proof of ownership**
- Cotton halter
- Duct tape
- **Emergency contact list**
- First aid kit
- Fly spray
- Grooming brushes
- Heavy gloves (leather)
- Hoof knife, nippers, pick & rasp



- Knife (sharp, all-purpose)
- Leg wraps and leg quilts
- Maps/Alternate evacuation routes/GPS
- Nose leads
- Paper towels
- Plastic trash cans with lids for water
- Portable livestock panels
- Rope or lariat
- Shovel
- Tarpaulins
- Trash bags
- Twitch
- Water buckets
- Whip/prods
- Wire cutters



- Geauga County Special Needs Register
- American Red Cross Pillow Case
- American Red Smoke Detector Program
- Communication Plan
- FEMA Student Identification (SID)
- Houses of Worship

# Self Help Guides/Courses

## American Veterinary Medical Association

### Emergency Preparedness and Response

[https://ebusiness.avma.org/files/productdownloads/emerg\\_prep\\_resp\\_guide.pdf](https://ebusiness.avma.org/files/productdownloads/emerg_prep_resp_guide.pdf)

### Large Animals and Livestock in Disasters

<https://www.avma.org/public/EmergencyCare/Pages/Large-Animals-and-Livestock-in-Disasters.aspx>

## Humane Society - Disaster Preparedness for Farm Animals

[http://www.humanesociety.org/issues/animal\\_rescue/tips/disaster\\_preparedness\\_for\\_livestock.html](http://www.humanesociety.org/issues/animal_rescue/tips/disaster_preparedness_for_livestock.html)

## Emergency Management Institute – Animals in Disasters

<https://training.fema.gov/emiweb/downloads/is10comp.pdf>

## Ohio Department of Agriculture

[http://www.agri.ohio.gov/public\\_docs/Ag%20Radiological%20Brochure.pdf](http://www.agri.ohio.gov/public_docs/Ag%20Radiological%20Brochure.pdf)

## Ohio Dam Safety Program

<https://gis.ohiodnr.gov/MapView/?config=ohiodams>

## Petfinder- Horse Disaster Shopping List

<https://www.petfinder.com/pet-care/horse-care/disaster-preparedness-horses/>

## AQHA – Barn Fires

<https://www.aqha.com/daily/health/2016/health-archive/disaster-preparedness-for-horses/>

## AAEP – Horse Owner Resources

<https://aaep.org/guidelines/emergency-and-disaster-preparedness>

## Humane Society- Disaster Preparedness for Horses

[http://www.humanesociety.org/assets/pdfs/disaster/disaster\\_preparedness\\_horses.pdf](http://www.humanesociety.org/assets/pdfs/disaster/disaster_preparedness_horses.pdf)

## Horse Fund- Preparedness for Horses

<http://www.horsefund.org/resources/Disaster%20Preparedness%20for%20Horses.pdf>

## Palos Verdes Peninsula Horsemen's Association

[http://pvpha.org/wp-content/uploads/2016/02/What\\_to\\_do\\_in\\_case\\_of\\_Emergency.pdf](http://pvpha.org/wp-content/uploads/2016/02/What_to_do_in_case_of_Emergency.pdf)



# NATURAL DISASTER

Q & A

Are You and Your Horse Ready  
for Emergency Evacuation?