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

Prevention
Protection
Mitigation
Response
Recovery
Preparedness
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
### Prevention, Protection, Mitigation

<table>
<thead>
<tr>
<th>Preincident</th>
<th>Incident</th>
<th>Postincident</th>
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<tbody>
<tr>
<td><strong>Prevention</strong></td>
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<tr>
<td><strong>Protection</strong></td>
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<tr>
<td><strong>Mitigation</strong></td>
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</table>

**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
- Review insurance policies
**Response**

**Preincident**

Occurs in the immediate aftermath of an emergency disaster

Business and other operations do not function normally

**Incident**

**Postincident**

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

**Response Activities**:

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

10/10/2018
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
- 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
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

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

Large Animals and Livestock in Disasters

Humane Society - Disaster Preparedness for Farm Animals
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

Ohio Dam Safety Program
https://gis.ohiodnr.gov/MapViewer/?config=ohiodams

Petfinder- Horse Disaster Shopping List

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

Horse Fund- Preparedness for Horses

Palos Verdes Peninsular Horsemen’s Association
Q & A

Are You and Your Horse Ready for Emergency Evacuation?