GROUP EXERCISE

Evacuation Scenario based on the Miamisburg Trail Derailment
Exercise Instructions

- Working as a team, review the scenario and scenario map.
- Brainstorm answers to the questions assigned to your group within the allotted time.
- Record your answers on chart paper. Brief bullet points are recommended.
- Choose a spokesperson and be ready to briefly present your answers when called on.
- There will be three segments to this exercise.
July 8th at 4:25 P.M. 15 cars of a southbound freight train have derailed on the outskirts of Miamisburg.

Derailing on a bridge, several cars were extensively damaged, lost product, and resulted in a fire;

- Newsprint
- Molten sulfur (13,000 gallons)
- Yellow phosphorus (12,000 gallons)
- Tallow
Product has been released into the Bear Creek. Unified Incident Command has been established and determined that the intense phosphorus fire could only be controlled by large volumes of water – this will take several hours to implement. It has been recommended that select areas of Miamisburg, West Carrollton, and Moraine be evacuated.
Estimated Path of Toxic Cloud

Population 6,599
Housing Units 2,817
Based upon the vulnerability zone identified:

- Groups 1&2: What sort of resources and tools would you use to define the population at risk?
- Groups 3&4: What factors might influence where evacuees go?
- Groups 5&6: What traffic/transportation components would you put into effect to ensure a controlled and rational evacuation?
What sort of resources and tools would you use to define the population at risk?

- **Mathematical models:**
  - Hazards – United States (HAZUS)
  - Sea, Lake, Overland Surges from Hurricanes (SLOSH)
  - National Flood Insurance Program Maps
  - Computer Aided Management of Emergency Operations (CAMEO Suite)

- **Demographic data:**
  - U.S. Census
  - Community development projects
  - Regulatory agencies
  - Civic groups
  - Outreach Programs
What factors might influence where evacuees go?

- Population characteristics
  - Residents
  - Tourists
  - Migrant Workers
  - Homeless, etc.
- Length of forewarning
- Anticipated length of evacuation
- Socioeconomic level
- Urbanization
- Community preparedness
What **traffic/transportation** components would you put into effect to ensure a controlled and rational evacuation?

- Determine evacuation routes
- Implement contra-flow plans
- Signage and barricades
- Remedies for disabled vehicles, vehicle accidents, refueling, etc.
- Suspension of tolls
Scenario

- Water suppression has been effective and by 8:30 P.M. smoke is no longer visible from the phosphorus tank car.
- Shortly after midnight an evaluation team assesses the tank car and determines that approximately 4,000 gallons of the product remain inside the vessel.
- July 9th, at approximately 6:00 P.M. a structure supporting the phosphorus tank car shifts causing product to escape and the fire intensifies.
A large smoke plume has been carried east at 6 mph over Miamisburg.
A temperature inversion has developed causing the cloud to remain close to the ground.
A second evacuation has been initiated with shelters being established as far as Dayton.
Estimated Path of Toxic Cloud
Summary

- Based upon the vulnerability zone identified:
  - Groups 1&2: What information is to be conveyed to the public about the evacuation?
  - Groups 3&4: With whom will evacuation information be coordinated and released to the public?
  - Groups 5&6: What information will be tracked as evacuation operations are implemented and monitored?
Summary

What information is to be conveyed to the public about the evacuation?

- Nature of the hazard
- Evacuation routes
- Info about pick-up points, reception centers, emergency shelters
- Risks of sheltering-in-place
- Info about domestic animals
- Anticipated length of evacuation (if known)
- What to put in an evacuation go-kit
- Where to obtain additional information
With whom will evacuation information be coordinated and released to the public?

- Varies depending on the nature of the incident
- Examples include:
  - Public Safety forces
  - Elected Officials
  - Agencies that have authority to evacuate their own populations
  - Media outlets
What information will be tracked as evacuation operations are implemented and monitored?

- Where and when evacuation warnings have been issued (or canceled)
- Number evacuated
- Number remaining in risk area
- Number of evacuees sheltered
- Names/locations of individuals evacuated from institutional settings
- Homes/businesses warned but refusing to evacuate
Based upon the information obtained so far:

- Groups 1&2: Identify the resources required to provide effective perimeter control measures.
- Groups 3&4: What are alternatives to public sheltering and how might these alternatives be implemented?
- Groups 5&6: 63% of U.S. households report owning a pet. What factors should be considered for an evacuation of this size?
Identify the resources required to provide effective perimeter control measures.

- Public works may assist in signage and barricading
- Private security may patrol neighborhoods as a deterrent to looting or unsafe reentry
- Law enforcement to establish control points to restrict access
What are alternatives to public sheltering and how might these alternatives be implemented?

- Receptions centers to allow friends and families to pick up evacuees
- Entities responsible for the incident may acquire hotel rooms to accommodate evacuees
- Functional needs populations may be evacuated to similar places in nearby jurisdictions where needs can be met
63% of U.S. households report owning a pet. What factors should be considered for an evacuation of this size?

- Pets Act definition of “household pet”: dog, cat, bird, rabbit, rodent, or turtle
- Accommodation for service animals to stay with owners
- Resources to shelter and feed animals
  - Friends/Family
  - Veterinarians
  - Humane Society/Animal rescue groups/4H Clubs
  - Commercial kennels
  - Pet stores and department stores
  - Pet-friendly hotels/motels
- Length of evacuation
  - Could limited reentry be permitted for the care of animals left behind?
- Mechanisms for reuniting pets with pet owners