

GROUP EXERCISE

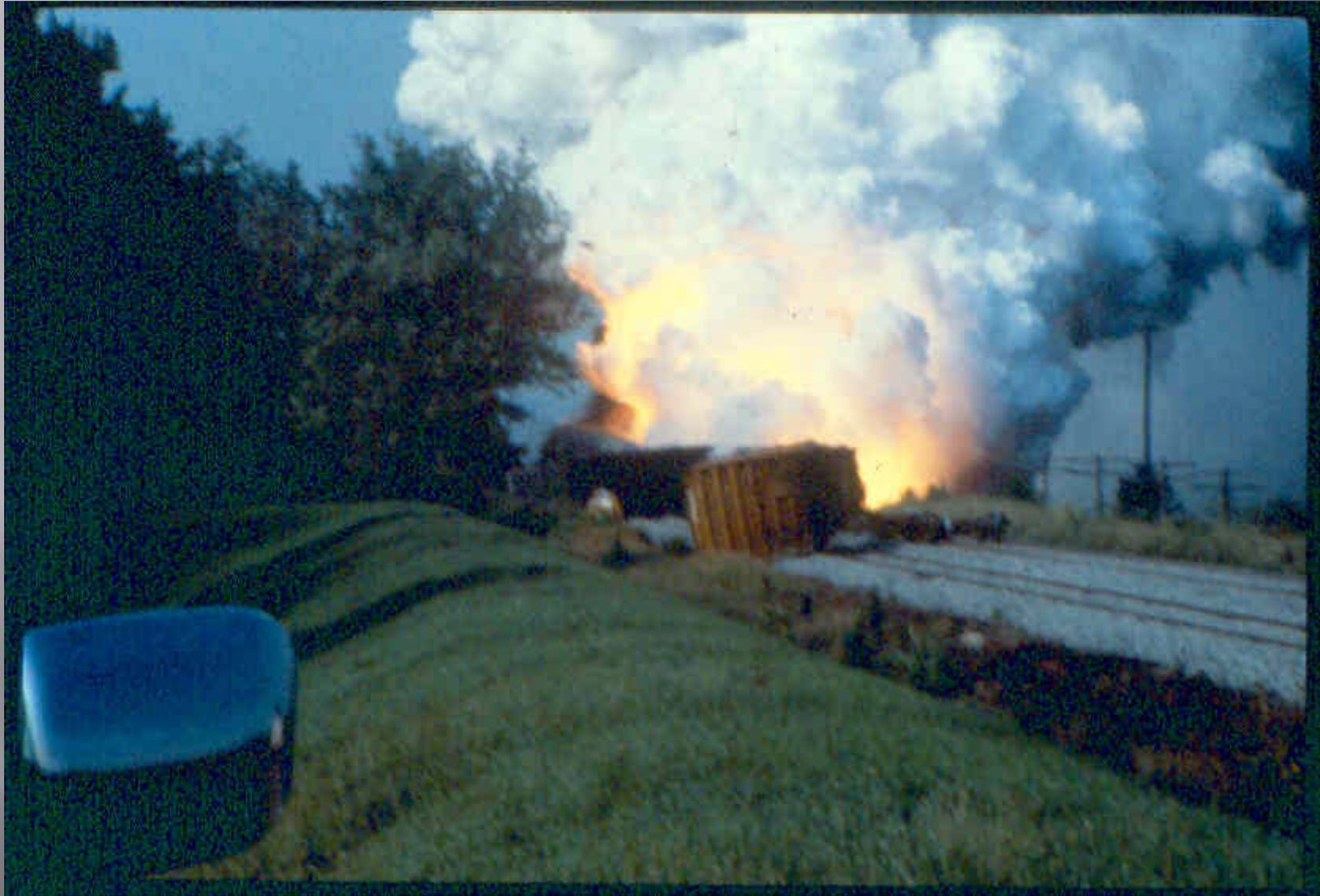
Evacuation Scenario based on the
Miamisburg Trail Derailment

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.

Scenario

- ▣ 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

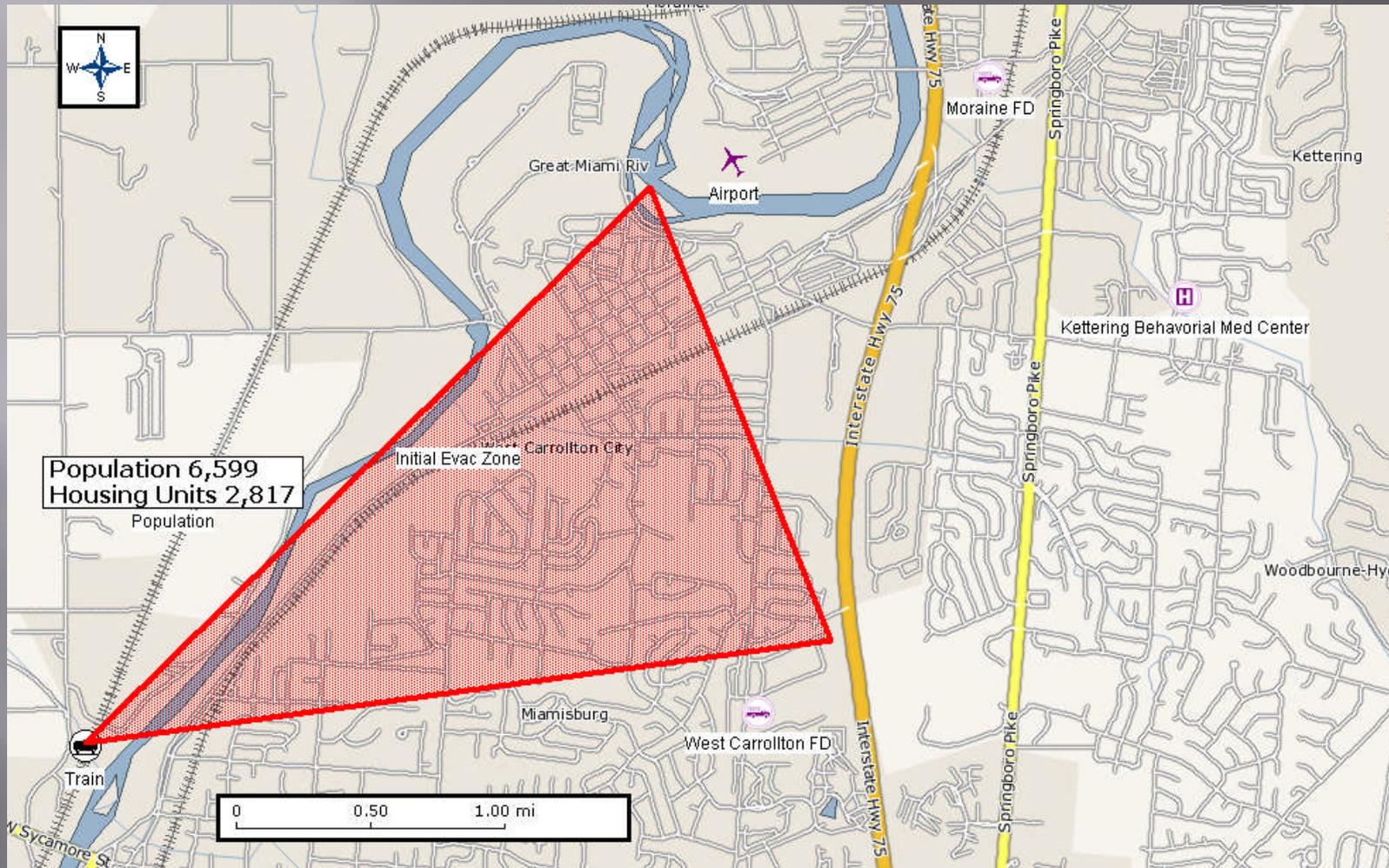


Scenario

- ▣ 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



Summary

- ▣ 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?

Summary

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

Summary

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

Summary

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.

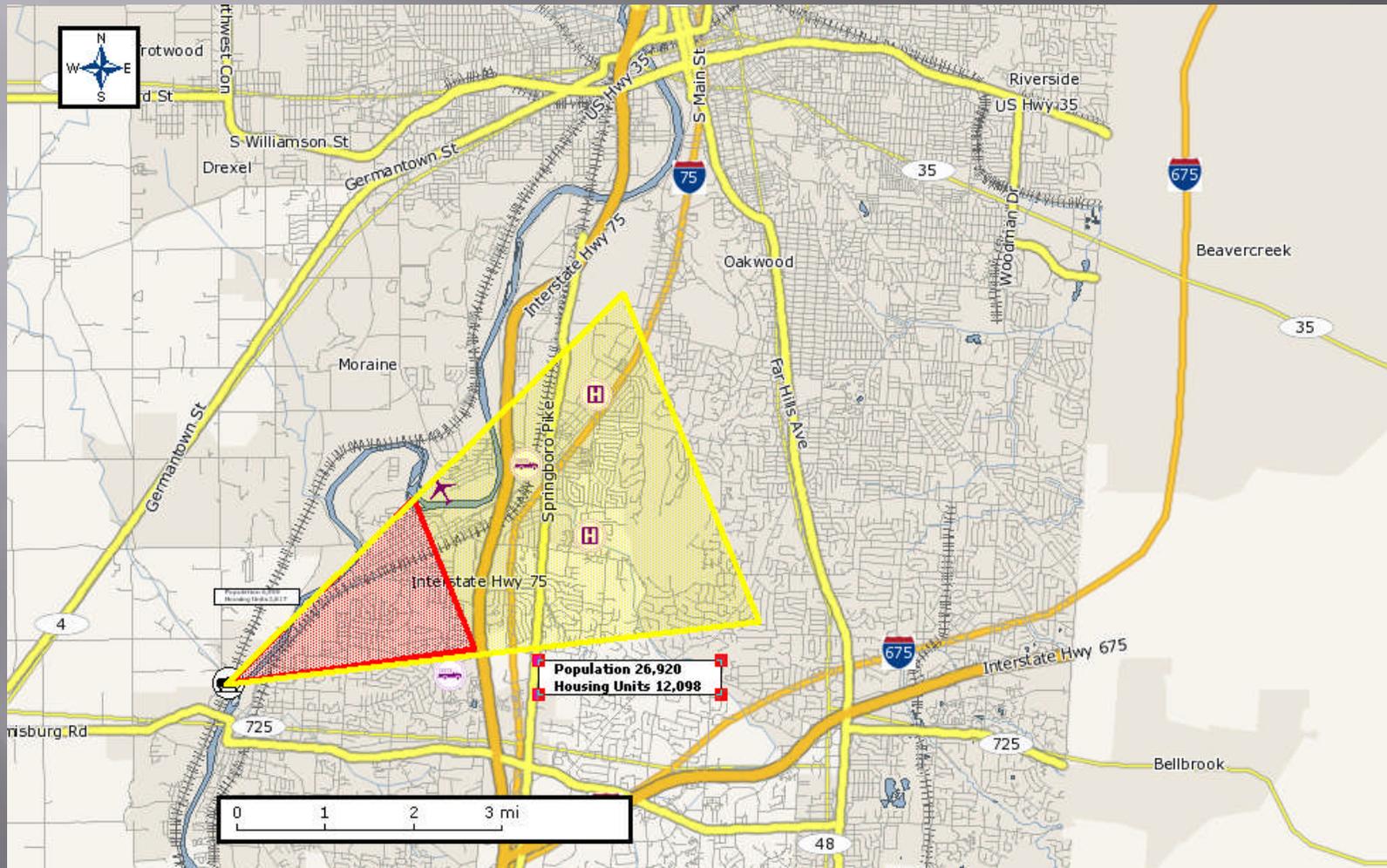


Scenario

- ▣ 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

Summary

With whom will evacuation information be coordinated and released to the public?

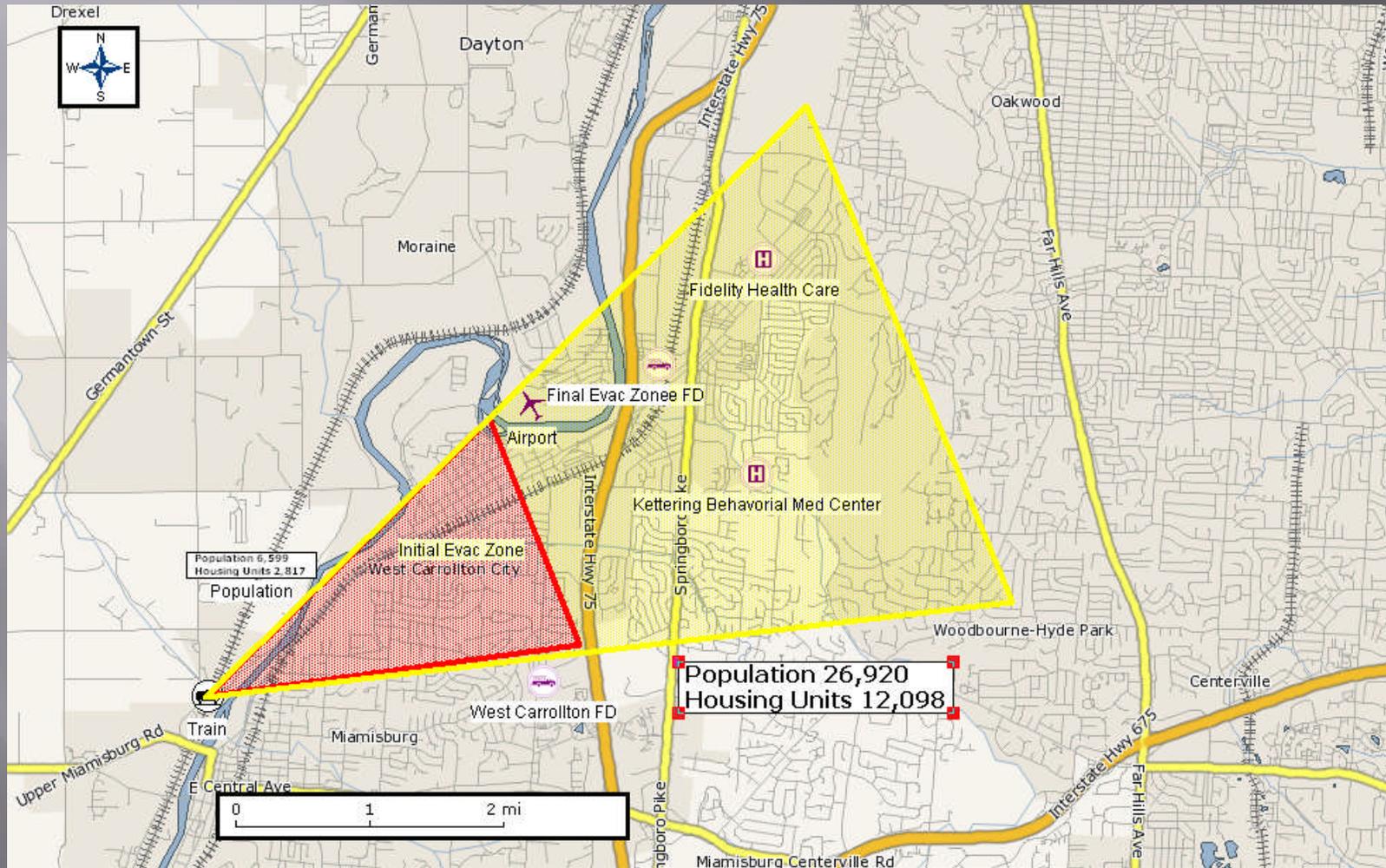
- ▣ Varies depending on the nature of the incident
- ▣ Examples include:
 - Public Safety forces
 - Elected Officials
 - Agencies that have authority to evacuate their own populations
 - Media outlets

Summary

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

Estimated Path of Toxic Cloud





Summary

- ▣ 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?

Summary

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

Summary

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

Summary

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