



# Emergency Response and the Operational Environment

**Mid-Atlantic Disaster Recovery Association**

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National Weather Service  
Homeland Security Activities**

# National Weather Service

## Who Are We?

- The Nation's Official Source of Weather Information
- 5,000 employees
- 172 offices
  - 122 Forecast Offices
  - 13 River Forecast Centers
  - 9 Specialized centers
  - 22 Center Weather Service Units
  - 6 Regional HQ






# Problem and Solution

- Problem
  - Emergency Management Team must provide immediate, correct, and coordinated response
  - Response based on
    - nature of incident
    - Available resources
    - Detailed knowledge of environmental conditions
- Solution
  - Close cooperation between on-scene EMT, local meteorologist, and SME





Emergency Management  
Team must provide  
Immediate, Correct,  
and Coordinated  
Response

(AP PHO)

- Optimum response is based on:
  - Nature of the incident
  - Available resources
  - Detailed knowledge of the environmental situation





# Response Phases



## 3 Layers to Response

- Immediate
- Sustaining
- Recovery

- EMT Requirements
  - Time
  - Requirements
    - Source term
    - Environmental/  
Meteorological conditions
    - Community





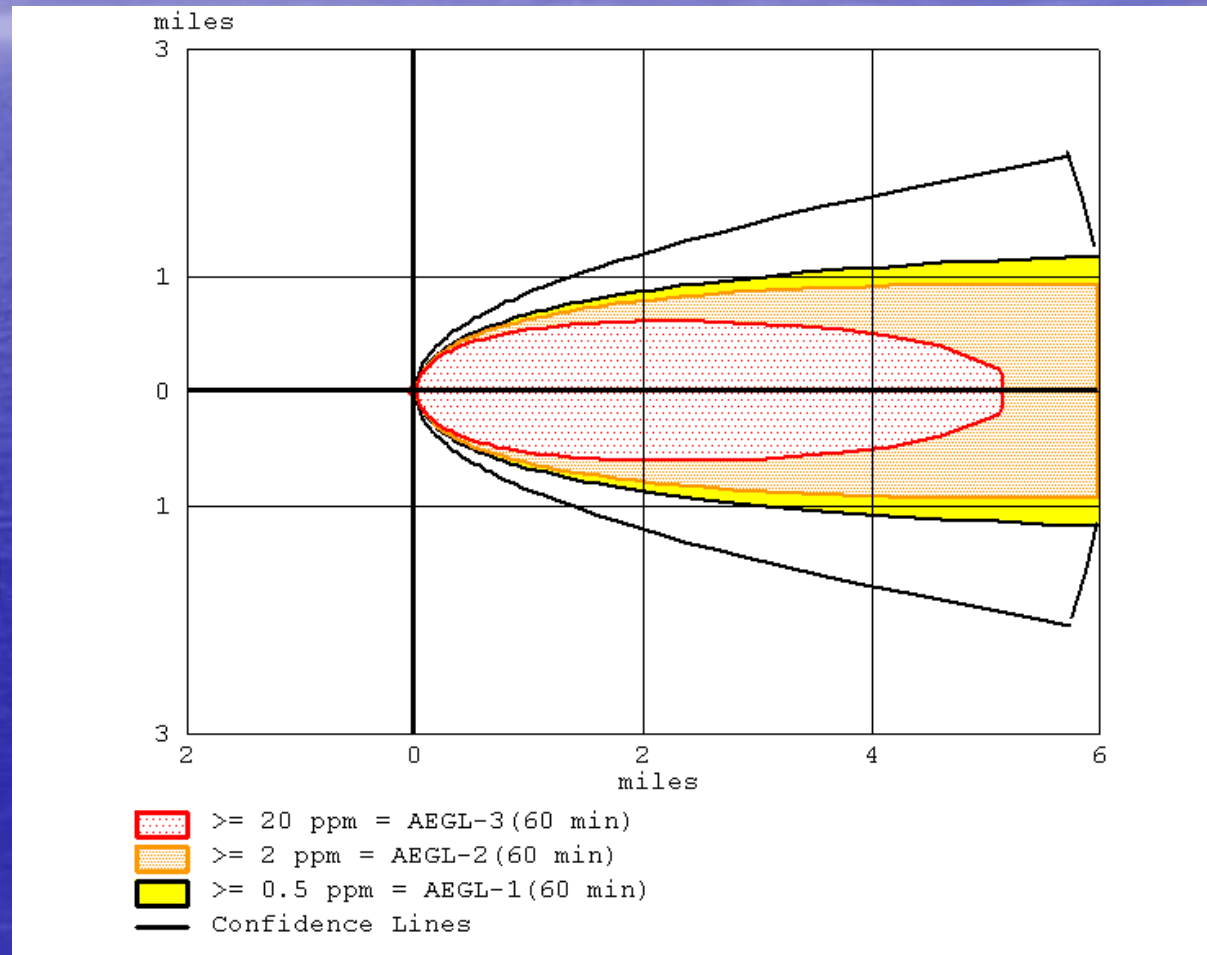
# EMT Requirements

- Safe approach routes
- Incident command post siting
- Use of personal protective equipment
- Deployment of field monitoring teams (sampling plan guidance)
- Evacuation, sheltering-in-place, and relocation
- Potential impacts to and/or contamination of emergency response and health services facilities
- Potential number of casualties requiring hospital or medical treatment
- Areas where agricultural crops may be contaminated (human food and animal feed)



# Initial Response

- Plume Model – CAMEO/ALOHA
- Provides
  - Basic information
  - Available quickly
  - Supports Essential elements of information (EEI)
  - Courses of action (COA)





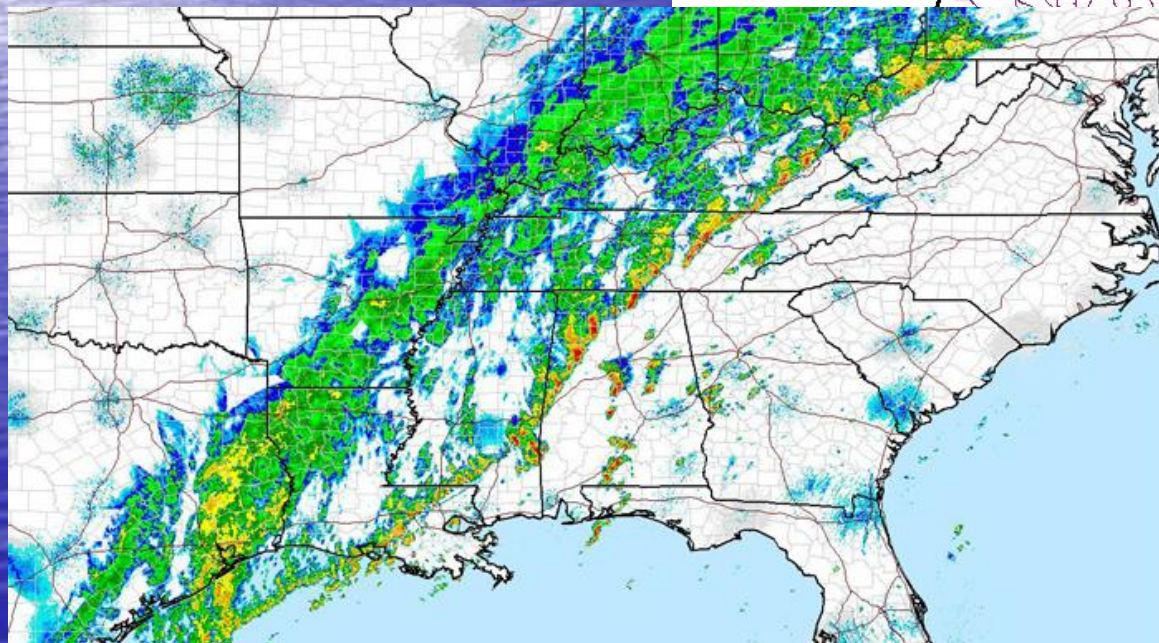
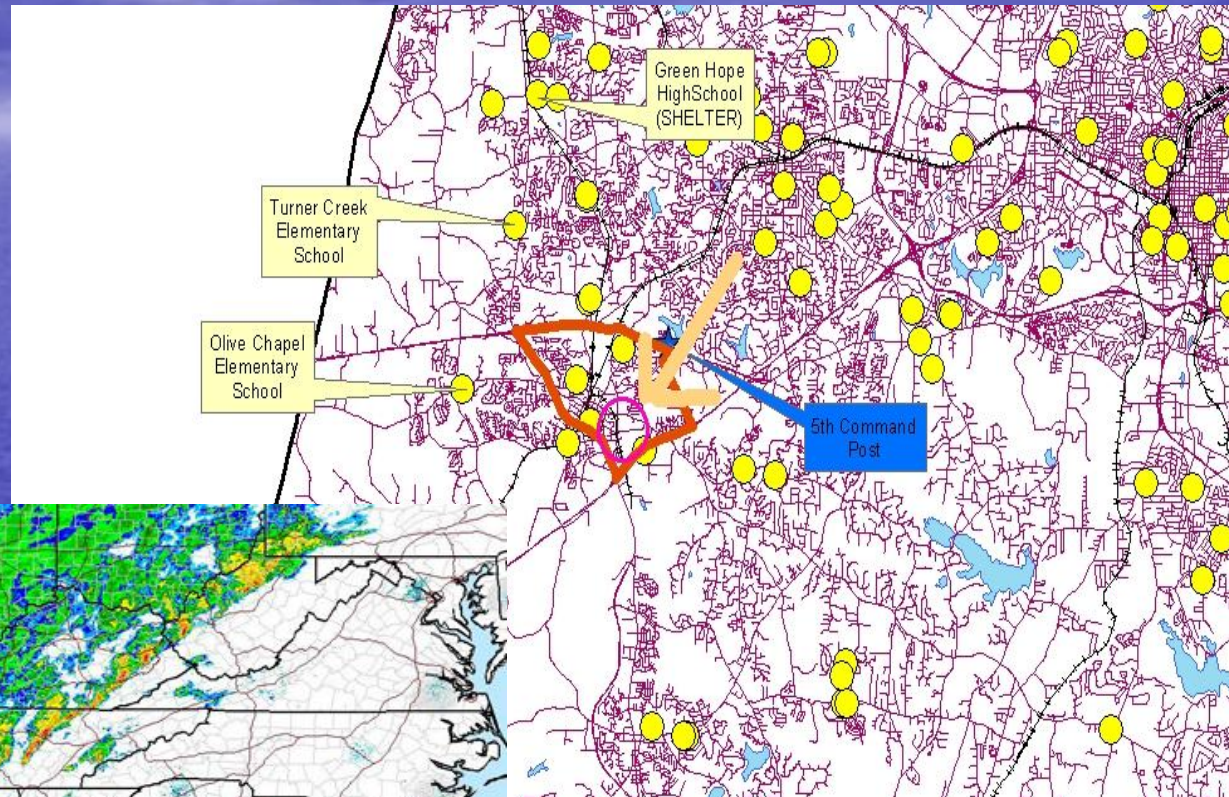
# Response Support

- Sustained response
  - Spot forecast
  - Outlook
  - Timeliness
  - Essential elements of information (EEI)
  - Courses of action (COA)
- Continuing response
  - Time line
  - EEI
  - COA





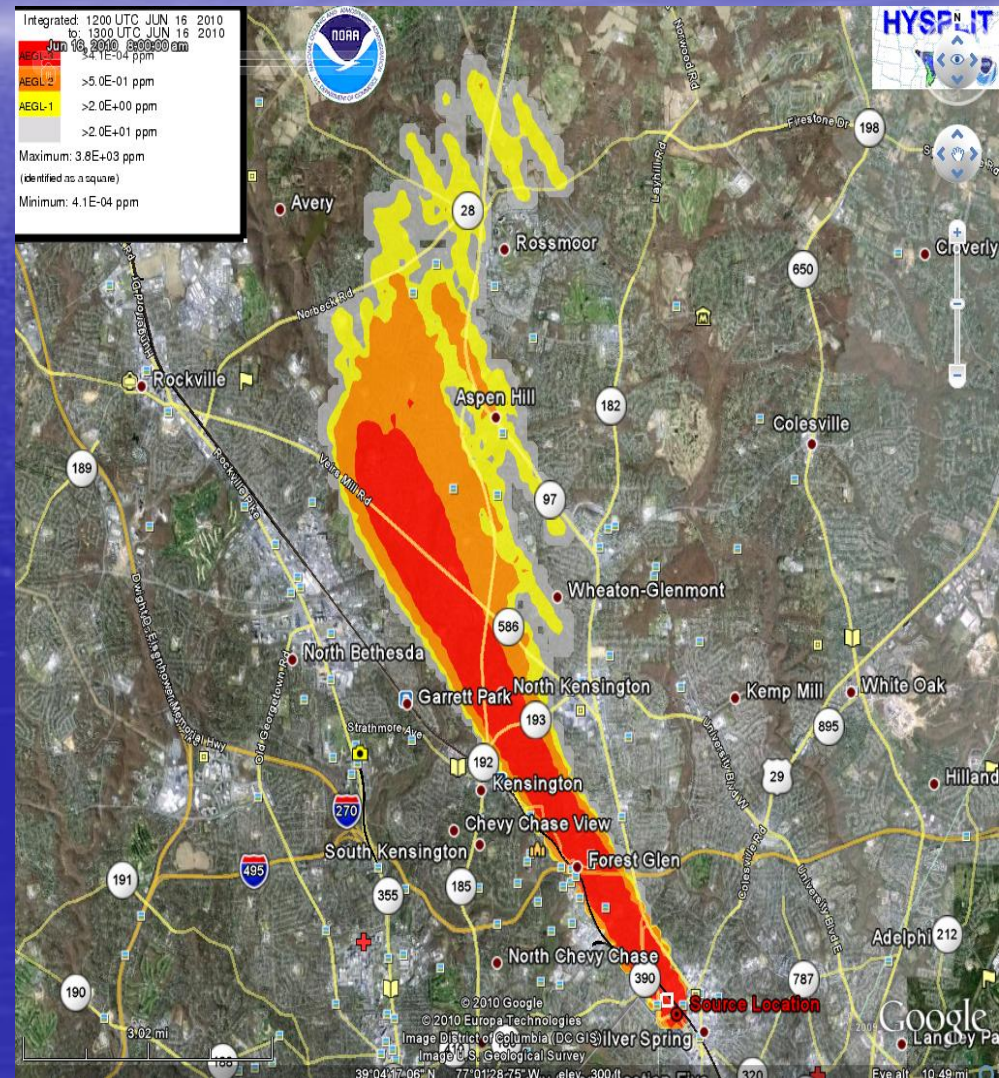
# Contributions to EEI





# Sustaining and Recovery Response

- On-site meteorologist
- Specialized products
- Plume model - HySPLIT
  - Available at least 7 – 10 minutes
  - More detail, based on actual and forecast weather





# Recovery Phase

- Recovery
  - Time line
  - EEI
  - COA
- Areas of Concern
  - Information glut
  - Process paralysis
  - Who's in charge





# Actual example







Questions??