

TORNADOS AND OTHER SEVERE WEATHER

Essential Elements of Information – (EEI)

EEI contain Situational Awareness information on People, Systems, and Services Providers that is critical to acquire in the first and perhaps second operational periods. Specific elements stated here may not apply in every event. Additional elements must be generated as the event evolves through Recovery.

Impact of Event or Scenario

Unlike Hurricanes and tropical storms that develop relatively slowly over a period of days with a degree of path and intensity predictability, the predictability of tornados and other severe weather is a matter of hours or minutes. A tornado provides no opportunity for mass evacuation and shelter-in-place is the only option. The primary differences between this EEI and the Hurricane and Tropical Storm EEI is that there is no time for preparedness (pre-landfall) activities and the impacted areas of operations will likely be smaller.

Tornado damage is due to intensely focused winds generally over along a narrow path (although tornados exceeding a mile in width have been reported) over a relatively short period of time. These intense winds can severely damage buildings and infrastructure and power transmission lines. Collapsing buildings and flying debris can cause high numbers of injuries and deaths along the tornados path.

Severe weather consisting of high winds, heavy rain, multiple lightning strikes, and damaging hail may accompany a tornado or occur in its absence. High winds can cause infrastructure damage and power outages due to falling tree limbs.

Heavy rain can cause flash flooding. Flooding can occur in Florida from storms passing to the north of us through Georgia that result in swollen rivers that empty into the Gulf. County areas bordering these rivers are prone to flooding.

Lightning strikes can cause power outages and start brush fires (See Wildfire EEI) and occasionally injuries and deaths. Large hail can damage infrastructure and also lead to power outages.

Flooding and power outages will impact people, health and medical systems, and service providers reducing or closing access to these services. (See discussion below) Power outages also cause a rise in carbon monoxide deaths for the use of generators and grills in enclosed spaces.

After the storm passes, flooded areas can cause environmental health issues due to flooded drinking water wells and flooded underground sewage treatment

systems increasing potential for outbreaks of enteric diseases. Flooded areas may cause the migration of a variety of species poisonous snakes, alligators, and dangerous mammals into nearby communities. Areas with prolonged standing water and un-maintained swimming pools can provide breeding areas for mosquitoes and increase the risk for arboviral disease outbreaks. Areas with uncollected garbage can foster intrusion of rats and other opportunistic animals such as raccoons which may be infected with rabies.

People

People include vulnerable populations, the general population, and responders. Vulnerable populations may be classified as static or transitory.

Static populations consist of people who have medically complex conditions, those who are functionally disabled, frail elderly, and children who are two years old or younger. Post storm evacuation of persons in this category who must leave damaged homes can exacerbate medical conditions and cause stress and behavioral health issues. Loss of power for air conditioning can quickly cause heat stress issues among frail elderly.

Transitory populations are those who have chronic medical conditions, seniors in high-rise buildings, and children older than two years old. Power outages will cause immediate issues for persons who are dependent on electricity for oxygen generation and other medical devices. Prolonged power outages with loss of air conditioning and elevators can degrade the health of seniors in seniors in high rise buildings who otherwise would not need additional care.

Populations in both categories are vulnerable to enteric and arbo-viral diseases that may spread when recovery operations are prolonged. Behavioral health issues may also require monitoring and treatment over time.

Depending on the area impacted, there may be large numbers of transient vulnerable populations (tourists) that will require post-event assistance.

Systems

Systems include healthcare, medical care, infrastructure, transportation, and communications. Wind damage, flooding, and power loss will reduce or negate the effectiveness of key systems when they are most needed for tornado and severe storm recovery.

Service Providers

Service providers are those who provide health and medical care and support services. Damaged and flooded facilities, power loss, and road debris will reduce or negate the ability of service providers to serve affected populations.

Essential Elements of Information

People Information

- Areas evacuated due to damaged buildings and infrastructure
- General and Special Needs Shelter locations and opening times
- Special Needs Shelter population updates
- Ad hoc (“Gypsy”) shelter assessments
- Injury Reports
- Verified Mortality reports
- Vulnerable population status
- Responder health and safety issues
- Epidemiology reports
- Carbon monoxide related injuries and deaths
- Current rumors
- Risk communications

Systems Information

- Deployment of RERAs
- Deployment of logistics staging areas
- Federal ESF 8 assets deployments
- School closures
- Evacuation routes out of impacted areas
- Infrastructure damage assessments
- Flooding reports
- Areas of power outages and anticipated returns to service
- Strike team deployments (Epi, Env. Health, SpNS, Behavioral Health)
- Oxygen resupply
- Vector and Vermin Control status
- Drinking water system status/Boil water notices
- Agency for Persons with Disability (APD) assessment of sheltering status
- Children’s Medical Services (CMS) assessment of sheltering status
- Mental health assessment of sheltering status
- Information on coping/stress reduction/psychological first aid

Service Providers

- Hospital status reports
- Hospital bed status
- Health care and medical facility status reports (including dialysis centers, cancer treatment center, and hospice)
- CHD status
- APD assessment of all facilities and clients

- CMS assessment of all patients
- Pharmacy Status
- Dialysis Center assessments
- Non-evacuated health care facilities status
- Regional Disaster Behavioral Health Assessment Teams deployed – number and location