

Vulnerability Assessment Process

The Springfield-Greene County Office of Emergency Management Staff met and reviewed the hazard profiles to determine how vulnerable the county and its jurisdictions are to natural and man-made disasters. Vulnerabilities are based upon how much a facility is worth. This value is calculated by adding the value of a structure to the value of the contents within the structure. For example, the total approximate value for a fire station would be the cost of the station plus the cost of the fire trucks and equipment.

Each municipality was given a set of vulnerability percentages for all of the hazards. The planning committee instructed the school districts and fire districts that unless their jurisdiction was identified separately, to use the same percentage as their governing municipality, unless they felt that there was a hazard that would be more likely to affect their jurisdiction than the city itself (example: a creek running behind a school may increase the percentage for that school, but not necessarily the entire city). Thus, the City of Fair Grove has a set of percentages that are applicable to their fire district and school district while Pleasant View Fire District had listed percentages because they are in unincorporated Greene County and do not fall within the boundaries of any other jurisdiction.

For natural disasters, the staff calculated the vulnerability percentages based upon how frequent the disasters occur in Greene County, as well the severity of the disasters. The number includes how much a hazard typically destroys in a jurisdiction (e.g. they lost 25 percent of their property; a quarter of the city facilities were destroyed). Due to the frequency in which Greene County experiences natural disasters, and the experience the Office of Emergency Management has in assessing damage from those disasters, staff members discussed and agreed on vulnerability percentages that coincide with that data. There are three natural hazards that frequently affect the area: flooding, thunderstorms/tornadoes and winter storms. These hazards were given high percentages because of the amount of damage they could cause to a larger population. For example, a tornado may track through a large portion of the county causing widespread damage to homes and businesses. However, Greene County may experience an extreme heat event where it is a hazard, but it does not cause a great deal of property damage. The natural hazard percentages are based upon a strong foundation of historical data, which yields a greater accuracy in estimating how much damage the hazards may cause.

It should be noted that vulnerability percentages correspond to the risk assessments compiled in the hazard profiles. If a jurisdiction has a slightly higher risk for a hazard, it is noted in the damage estimates found in this section. While a jurisdiction may have a slightly higher risk, it is still very close to the other jurisdictions in Greene County.

Man-made hazards proved to be a little more difficult in estimating how vulnerable the local infrastructure is because of a lack of historical data. Most of the events that relate to the man-made hazard categories happened outside of the state and in some cases, the country. Thus, the estimates were based upon how likely a mode of attack may be (e.g. biological vs. technological) as well as how severe an attack would be to the community. A biological attack was rated very high because of the ease in which an attack would be executed. An agriculture attack greatly contributed to this rating. Missouri is one of the nation's largest contributors of cattle, and an attack would devastate the local economy, burden crop production and potentially cause a famine.

Chemical hazards, on the other hand, are rated high because of the volume of reportable quantities of chemicals in Greene County. While the severity of a chemical spill may not be as devastating as a biological attack, it is far more likely based upon how many facilities house chemicals.