

3.2.1: Identifying Assets and Assessing Vulnerability

44 CFR 201.4(c)(5)(i)(ii) – The State risk assessment shall include the following elements:

An overview and analysis of the State's vulnerability to the hazards described in this paragraph (c)(2), based on estimates provided in local risk assessments as well as the State risk assessment. The State shall describe vulnerability in terms of the jurisdictions most threatened by the identified hazards, and most vulnerable to damage and loss associated with hazard events. State-owned critical or operated facilities located in the identified hazard areas shall also be addressed.

The third step of the risk assessment process is identifying assets throughout the state projected to be impacted by each hazard type. Assets include state-owned structures or critical facilities such as hospitals, schools, and public infrastructure. An inventory of existing assets within the state was generated and mapped on a regional basis (Appendix 7.3.2-D-1 through D-14) to show their locations, and to determine the level of vulnerability to each hazard type.

State-Owned Facilities - The Mississippi Department of Finance and Administration (MDFA) was tasked with compiling a comprehensive list of state-owned facilities as defined by mitigation action 15 (Inventory of State-Owned Facilities) in the 2007 and 2010 plans. Funding was provided and the project was completed in 2016. Although the project is complete, this plan update also utilized the best available data provided by HAZUS results, version 4.1 for Hurricanes and Earthquakes. The HAZUS model for floods was run under version 4.2 because of a model update that was released in the middle of this planning process. This data is provided in Appendix 7.3.2-E and 7.3.2-F and includes an estimated number of facilities and the estimated replacement values. Most of the data provided includes accurate physical locations for all properties. However, it should be noted that the MDFA data has not been updated since 2016.

The state of Mississippi developed the following definitions for Critical Facilities and Critical Infrastructure, with guidance from FEMA publication 386-2 and 42 U.S.C. 5195c. These definitions intend to aid in the assessment of the vulnerability and operational necessity of facilities and systems within the state during the occurrence of a hazard event.

A Critical Facility is defined as any structure providing or housing critical services necessary to ensure the health and welfare of the population following a natural or man-made hazard event, including any facilities designated by local governments in their Hazard Mitigation Plan. Types of critical facilities are presented in detail in Appendix 7.3.2-A.

Critical Infrastructure is defined as systems so vital to the state of Mississippi that the incapacity of those systems would have a debilitating impact on security, economics, public health, safety, or any combination of those factors, including any infrastructure designated by local governments in their Hazard Mitigation Plan. Types of critical infrastructure are presented in detail in Appendix 7.3.2-B.

One component of assets, identified as Key Assets, is not identified and included in this plan. A Key Asset is defined as any system (private or publicly owned), whether physical or virtual, that provides the state critical services and/or historic significance, whose destruction could cause large-scale injury, death, or destruction of property and/or profoundly damage our state's prestige and confidence. Some of these key assets are also identified as critical facilities. Since the state has moved towards an all-hazards approach and man-made hazards are included, key assets are necessary as these facilities could be prone to man-made events that may cause adverse impacts to the state and local communities. Appendix 7.3.2-C provides the types of key assets that were identified for planning purposes.

These definitions were utilized to determine data collection criteria. All information included in the assessments of this plan is based on the best available data. These critical facilities, which were documented for this report, included all facilities listed as critical in existing local Hazard Mitigation Plans within the state. Under the definition, available data was also collected for facilities that, in the event of a disaster: provide shelter and/or resources for displaced individuals, provide safe and reliable production or treatment of essential services, provide essential communication between emergency personnel and the general public, provide crucial public safety, serve as a central facility that houses officials providing leadership and guidance for essential community operations, provide primary health care, accommodate inter-modal transportation providing evacuation and/or distribution of supplies.

Assessing Vulnerabilities - An asset is determined to be vulnerable if it is susceptible to damage from a hazard. Vulnerability depends on an asset's construction, contents, and the economic value of its functions. A vulnerability analysis can also predict the extent of injury and damage resulting from a hazard event of a certain intensity in an area. The vulnerability assessment identifies the effects of hazards by estimating the relative exposure of the population, land development, and infrastructure to hazardous conditions, with particular attention paid to critical and state-owned facilities. This includes consideration of the indirect effects of hazards, which can be much more widespread and more damaging than the direct effects. For example, the loss of commerce due to road closures for an amount of time could significantly outweigh the cost of repairing the road. The assessment helps set mitigation priorities by allowing the state and its local jurisdictions to focus attention on areas most likely to be damaged or most likely to require an early emergency response during a hazard event.