

RESILIENCY

OVERVIEW

In 2020, The South Carolina General Assembly passed an amendment to the South Carolina Local Government Comprehensive Planning Enabling Act of 1994 to require a Resiliency Element to be included in all Comprehensive Plans in South Carolina.

The primary purpose of the Resiliency Element is to aid in the ability of Laurens County to adapt and recover quickly, fairly, and transparently from changing conditions such as recurrent burdens and sudden disasters. Sudden disasters may consist of flooding, high water, and natural hazards.

Primary Hazards

Flooding

According to NOAA, flooding is an overflowing of water onto land that is normally dry. Flooding can be further classified, defined, and forecasted depending on several factors including cause, duration, and extent. Flooding is the most frequent and costly natural hazard in the United States. Flash flooding is a rapid onset event that occurs from short, heavy rainfall, accumulating in areas faster than the ground is able to absorb it. These big rain events are exacerbated by a combination of several factors, including local drainage issues and the amount of impervious surface. According to the Federal Emergency Management Agency (FEMA), flooding poses little risk to Laurens County outside of the riparian corridors and floodplains identified by FEMA.

Severe Thunderstorms, Tornadoes, and Lightning

A thunderstorm is a rainstorm event during which thunder is heard, which is audible due to lightning causing the air to heat and expand rapidly. Therefore, all thunderstorms have lightning. According to the National Weather Service, there are approximately 100,000 thunderstorms that occur in the United States per year and about 25 million lightning flashes a year, killing about 69 people annually. This number reflects the significant decline in fatalities within the past few decades, but lightning continues to remain a top storm-related killer. A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud extending to the ground. Tornadoes may also occur as part of a severe thunderstorm event. Tornadoes may form at any time of the year, but in the United States, the peak of events occurs in the spring and early summer months of March through June, especially during the late afternoon and early evening. According to FEMA, Laurens County is considered “relatively low risk” for both tornadoes and lightning strikes.

Drought

Drought is caused by a lack of precipitation over an extended period of time, often resulting in a water shortage for some activity, sector, or the environment. In contrast to other environmental hazards, droughts develop slowly over a period of weeks, months or years. According to NOAA, drought is the second most costly weather and climate disaster affecting the United States, preceded only by tropical cyclones. Historically, South Carolina has experienced many statewide droughts. They can occur at any time of the year and last for several months to several years. While South Carolina is susceptible to the occasional drought, the City of Laurens, and Laurens County as a whole, have a drought risk of “very low”

according to FEMA. According to the National Integrated Drought Information System (NIDIS), the two are considered moderately to severely wet and the long-term drought indicator poses very little risk.

Hail

Hail can occur year-round and can happen anywhere because it derives from severe thunderstorms. It is a precipitation type, consisting of ice pellets that form when updrafts of thunderstorms carry water droplets up into the freezing level of the atmosphere. Hail can be small and generally pea-sized, but hail can also be larger, capable of damaging property and killing livestock and people. Hail is a relatively low risk to the County.

Winter Storms

Winter storms and winter weather kill dozens of Americans each year, from exposure to cold, from vehicle accidents, from the improper use of heaters, and other winter related incidents. Winter storms are regular occurrences that happen across the country and can take place during spring and fall as well. Many hazards are associated with winter storms and weather including strong winds, extreme cold, coastal flooding, heavy snow and ice storms. Other concerns related to winter weather is power, heat, and communication outages. Most deaths associated with winter weather and storms are indirectly related, such as fatalities from traffic accidents due to icy conditions, or hypothermia from prolonged exposure. For Laurens County, the winter weather risk is “very low” according to FEMA. However, it is not unheard of for a snow storm to happen in the County but the lasting effects of it are generally minimal. The bigger risk for the County is that of an ice storm. FEMA deems Laurens’ risk for an ice storm “relatively high.”

Hazardous Materials

Hazardous material incidents can include the spilling, leaking, pumping, emitting, discharging, escaping, leaching, or disposing into the environment of a hazardous material, but exclude: (1) any release which results in exposure to poisons solely within the workplace with respect to claims which such persons may assert against the employer; (2) emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel or pipeline pumping station engine; (3) release of source, byproduct, or special nuclear material from a nuclear incident; and (4) the normal application of fertilizer. Facilities that store or use hazardous materials are scattered throughout the state, but many are located in coastal counties, where they are also exposed to hurricane winds and rains. However, hazardous materials are frequently transported along I-385 and could create a significant hazard if an accident caused a spill.

Tools and Protective Measures

Laurens County Hazard Mitigation Plan.

In compliance with the Federal Emergency Management Agency's (FEMA) requirements to receive federal disaster funding, Laurens County, jurisdictions and community stakeholders and partners have adopted a Hazard Mitigation Plan that is updated annually, with a full review every five years as required. The purpose of the Hazard Mitigation Plan is to continue guiding hazard mitigation efforts to better protect the people and property in the County from the effects of hazard events.

DHEC’s NPDES Permit Program.

NPDES is a regulatory program created under the Clean Water Act, and it is one of the main driving forces behind the majority of the mandated state and federal regulations. Under the NPDES Permit Program, storm water discharges are considered point sources and operators of these sources are required to receive an NPDES permit before they can discharge storm water runoff. Any construction site of 1 acre or more is required to obtain a storm water permit via the NPDES program from DHEC.

International Building Code Series

The State of South Carolina requires governing local entities to adopt, by ordinance, the state-approved versions of the International Building Code series. Currently the approved Building Code in South Carolina is the 2019 International Building Code (IBC), and the 2009 Energy Code. The International Building Code series provides best practices to protect the public health, safety, and general welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location and maintenance of all buildings, structures, and certain equipment.

RECOMMENDATIONS

The goal of this Comprehensive Plan Review is to introduce the topic of resiliency into Laurens' Comprehensive Planning process. As was outlined earlier in this section, there are several hazards that occur frequently in the Upstate and in Laurens. A limited number of tools and protective measures exist to mitigate these potential hazards. Initial mitigation recommendations are as follows:

- Determine areas that are of the highest risk, evaluate development intensity regulations for these areas, and prioritize projects in these areas.
- Strengthen partnerships with surrounding jurisdictions to combat issues those cross-jurisdictional boundaries.
- Educate the public about their role in building resilience and how to recover.
- Review and consolidate resilience-related efforts detailed in other Elements of this Plan during the next five-year update, which may include, but not be limited to, advanced study and audit of existing facilities and programs.