Richland County
Hazard Mitigation Plan

Types of Hazards:

Droughts occur when water levels drop. They can occur anywhere, and they increase the risks of flash floods, wildfires, and landslides. Droughts have resulted in crop damage in Richland County, so it's a good idea to plan ahead in order to avoid or mitigate the damage done to crops by droughts.

Dam failure is characterized by the rapid and uncontrolled release of impounded water. The failure of a large dam can cause substantial flooding downstream and lead to significant loss of life and property. There are three Class I and six Class II dams within Richland County. No dam failures have been recorded in Richland County.

An **earthquake** is a sudden shaking of the ground, sometimes causing great destruction, as a result of movements within the earth's crust or volcanic action. Earthquakes have occurred in Richland County, but are quite rare, with only three having been recorded to date. The strongest of these, which occurred in 1927, caused only light shaking.

Erosion is the gradual wearing away of soil, rock, or other materials caused by flowing water. Flooding along certain rivers in Richland County has eroded the soil around some bridge supports, thereby creating danger of collapse.

Invasive species are any species within Richland County that are not native to the area. These species can cause ecological or economic damage.

Hazardous materials are chemical or radioactive substances which can be dangerous to human health or even deadly if they are released into the environment. Multiple industrial facilities that utilize hazardous materials exist in Richland County, as well as multiple transportation corridors that these substances are shipped along.

A **pandemic** is a widespread outbreak of a disease which poses a serious risk to the general population. The nature of a pandemic and precautionary measures that must be taken in response differ depending on the nature of the disease. The ongoing COVID-19 pandemic has demonstrated the need to take pandemics into consideration as a legitimate hazard that we must plan for in the future.

Severe storms can include hail, damaging winds, and lightning. Rain storms that cause flooding and tornadoes are discussed in other hazards. Wind, lightning, and hail have caused property damage in Richland County in the past, but proper planning can help save money and lives.

Tornadoes usually occur during severe thunderstorms. Richland County has experienced numerous tornadoes throughout its history, so it is important to be prepared for when the next ones occur.

Utility or infrastructure failures are instances in which critical infrastructure (power lines, water lines, bridges, etc.) is either destroyed or fails to work. These failures can occur due to weather events, aging, human error, or other malfunctions. The most recent widespread failure in Richland County was the Northeast Blackout of 2003, which resulted in a complete, region-wide loss of power for one day.

Winter storms can include extreme cold, freezing rain, ice, snow, high winds, or any combination of these conditions. Winter storms have caused damage to many properties in Richland County, but planning in advance can make all the difference.

Flooding is caused by the overflow of inland water. Flash floods occur when rainwater accumulates on impervious surfaces. Floods occur after meteorological events such as substantial precipitation, thunderstorms with heavy rainfall, or rapid snowmelt. According to NOAA flooding has caused an estimated $83,566,000 in property damage and $6,239,000 in crop damage in Richland County since 1950.

Climate change is caused by a higher amount of greenhouse gases in the atmosphere, which trap the sun's rays and raises the earth's temperature. This increase in temperature has a ripple effect because it also raises the sea level and makes natural disasters more frequent and more severe.

A **windstorm** typically involves wind with speeds of at least 34 mph and may or may not be accompanied by precipitation. The high-speed wind may present itself as short gusts or longer sustained winds. The damage created can vary from light to more extreme.

Algal blooms are the result of nutrients from fertilizer runoff entering the water system and causing an excessive growth of algae. More serious effects like blocking sunlight from reaching other organisms, causing a depletion of oxygen levels in the water, and secreting toxins into the water.