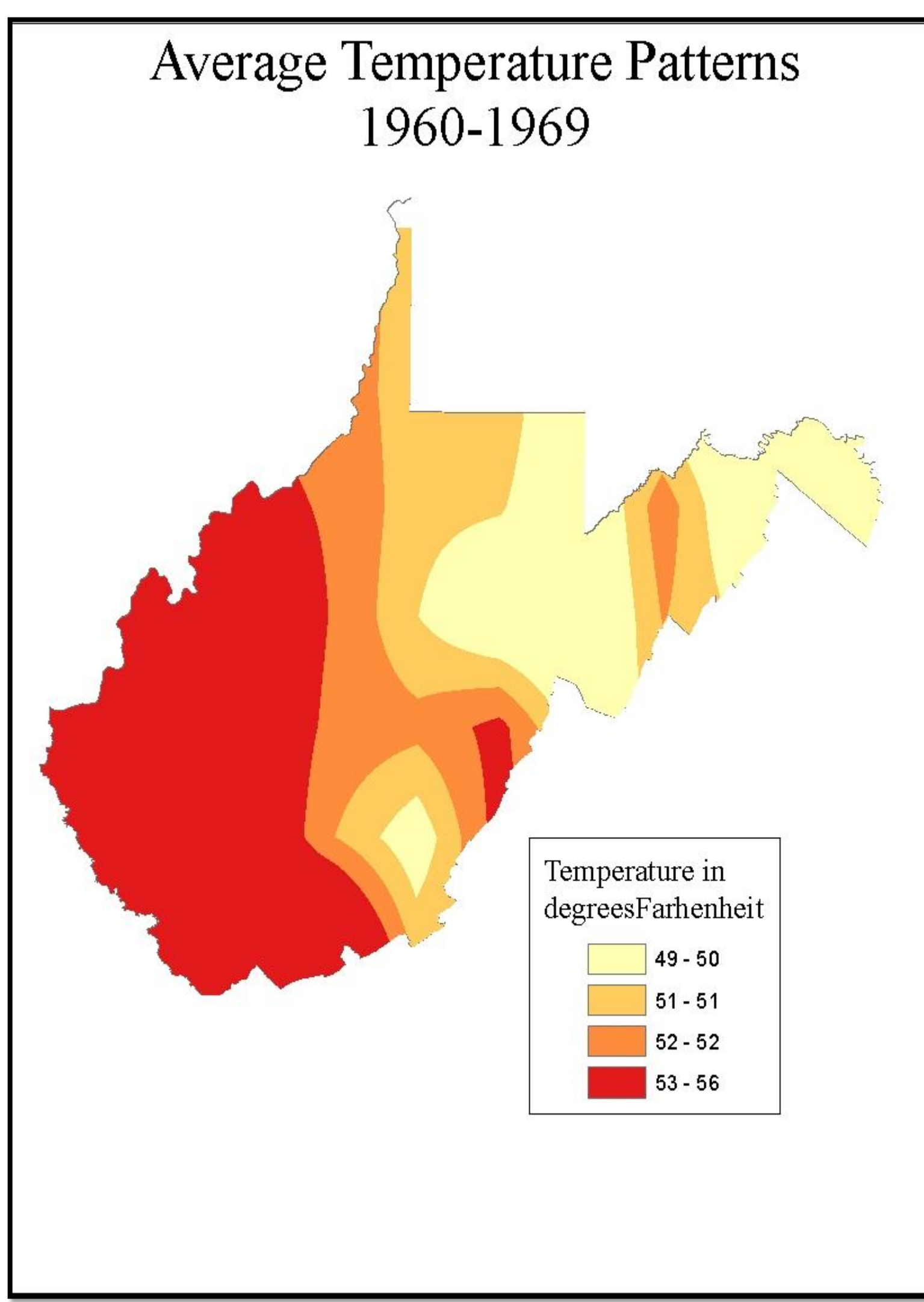
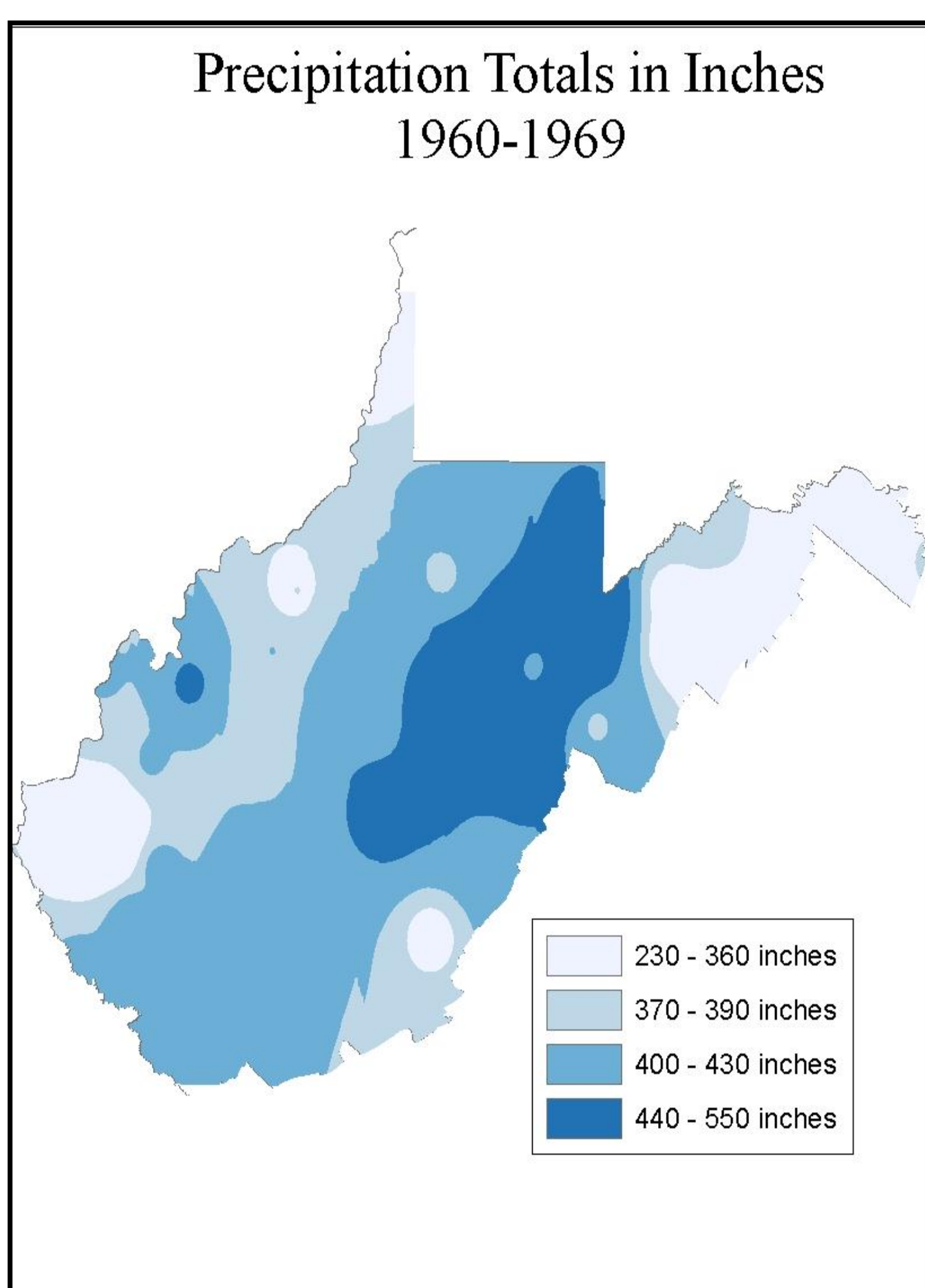
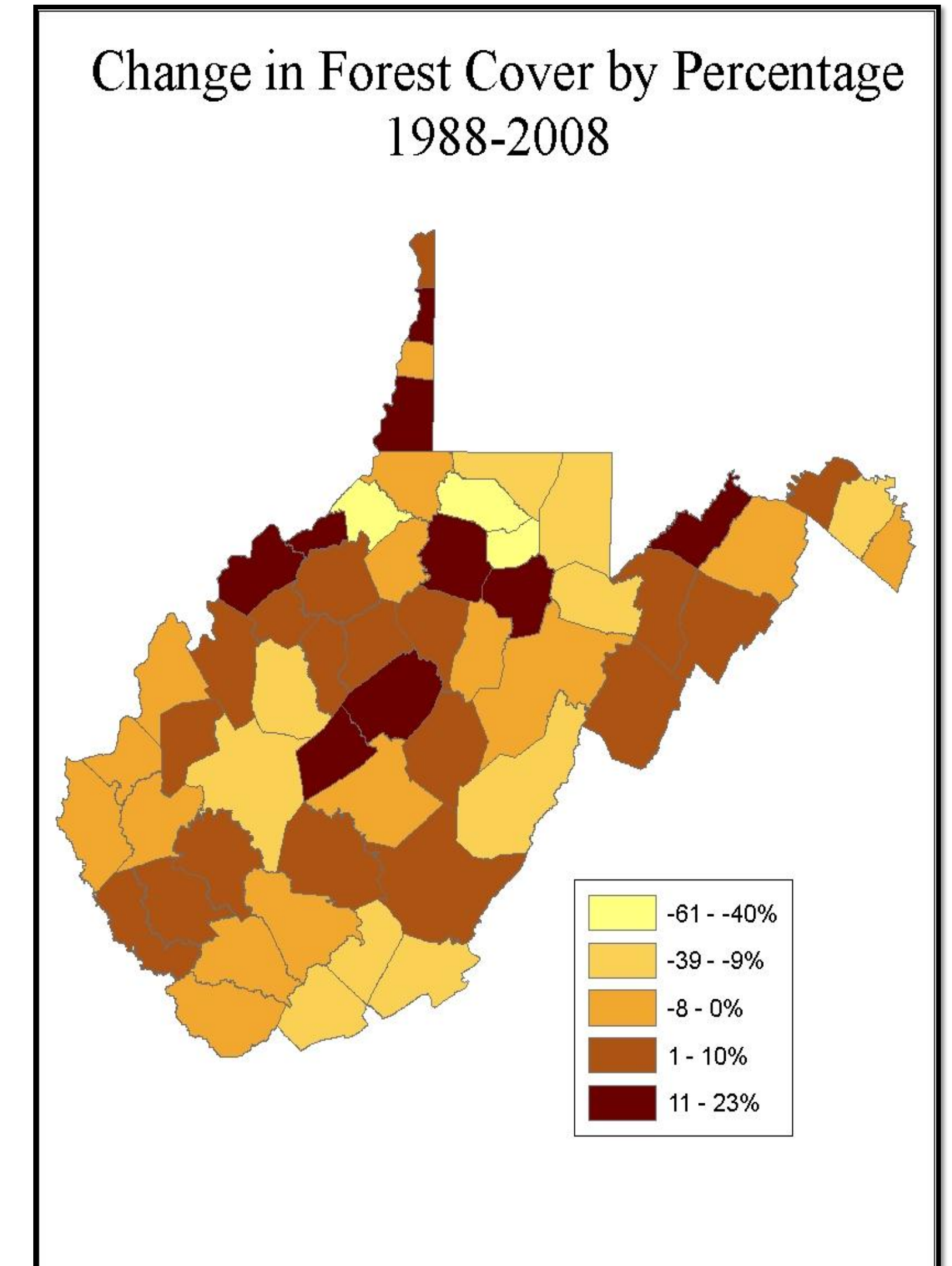
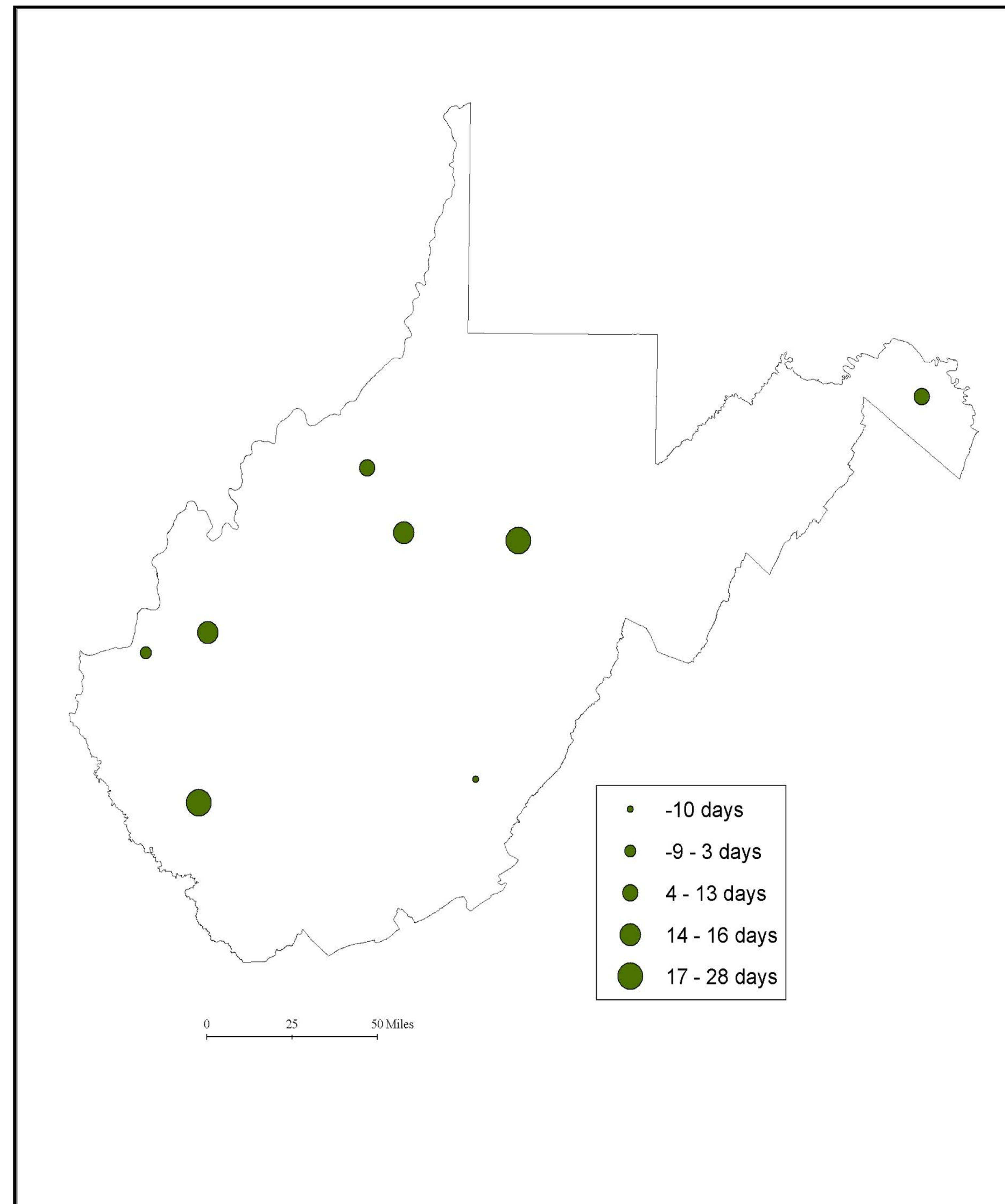
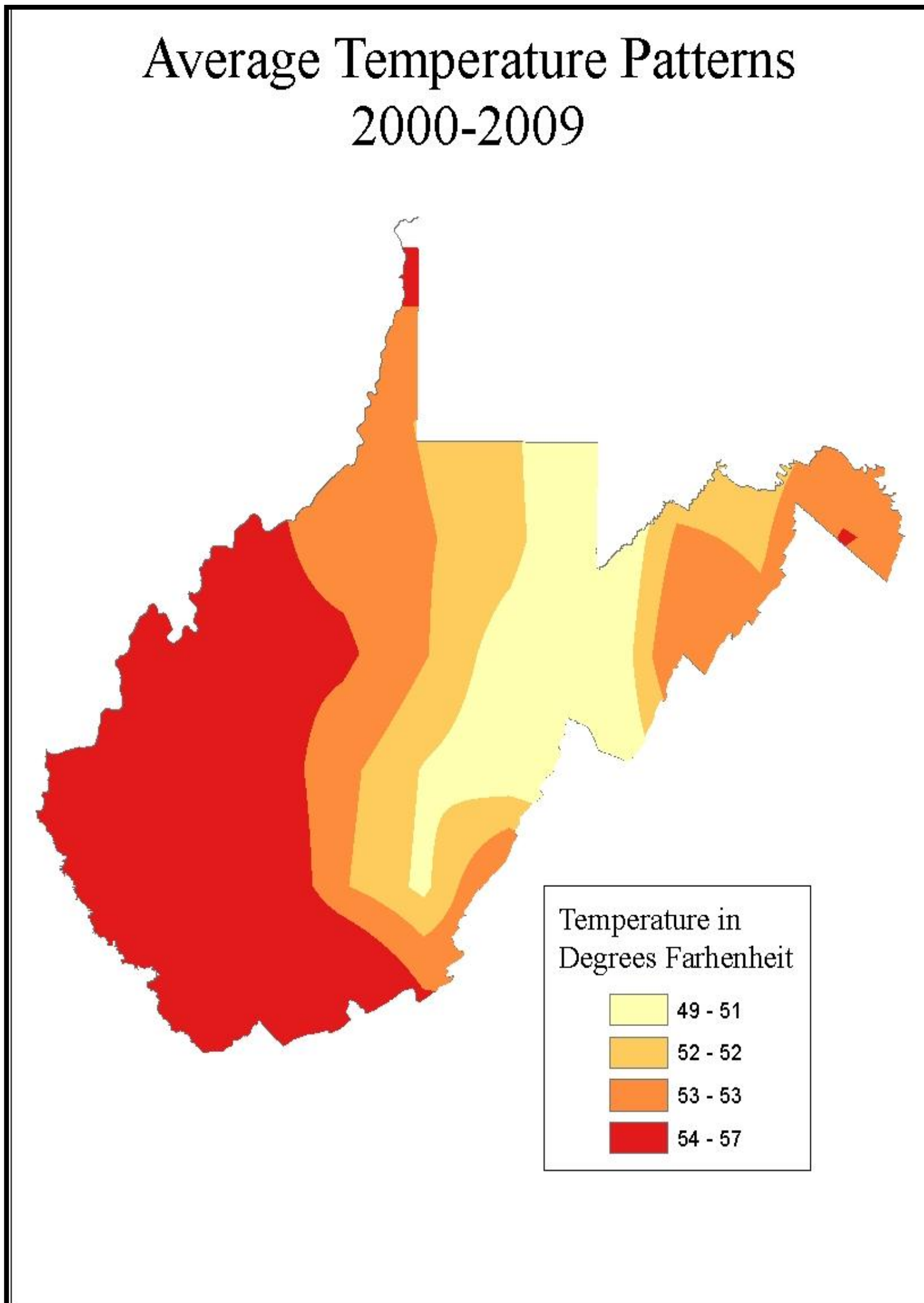


The Average Change in Annual Frost Free Days for the Last 50 Years

Over the last few decades, the growing season has extended significantly. The days between the first frost and the last frost have prolonged for many areas in West Virginia. Some contributing factors for more frost free days in a year include: the increases and decreases in forestation, release of carbon dioxide by burning fossil fuels into the atmosphere, surface air temperature and precipitation. There are places throughout West Virginia that have increased in forest cover since the 1960s. Areas with more forest cover are darker with a lower albedo and can absorb sunlight which can increase the air temperature. The earth's concentration of carbon dioxide has increased from 280 ppm in 1750 to 367 ppm in 1999. The greenhouse effect occurs when gasses get trapped in the ozone layer (these gases trap long wave radiation that keep the earth warm). The increase in concentration of green house gases can warm the earth at an increasing rate. In 2006, West Virginia was second in the leading five coal-producing states. In addition to, West Virginia has increased production since 1960. Temperature is the dominate control over the number of frost free days in a year. Since 1977, the earth on average has increased .7 degrees Celsius. The average annual temperature for the 2000s has increased for many areas across the state with respect to the 1960s. Temperature and precipitation are usually uniform because if you increase the temperature you increase the potential for moisture. Furthermore, snow will melt quicker if you increase the temperature along with precipitation. Snow has a high albedo and helps keep temperatures low by reflecting the sunlight. If there is less snow on the ground, then the temperature for a particular region can increase.



Note: Since the temperature increased in the 2000s, the temperature ranges are different when comparing both maps.



Note: Since precipitation increased in the 2000s, the ranges are different when comparing both maps.

