

1. **Hail storm:** Typically, hail is a cascading effect of a thunderstorm event. A hailstorm is an outgrowth of a severe thunderstorm in which balls or irregularly shaped lumps of ice fall with the rain. Extreme temperature changes from the ground upward into the jet stream produce strong updraft winds that cause hail formation. Hailstorms are usually considered “severe” when hail is larger than 1” and accompanied by winds greater than 58 miles per hour. The severity of hail events range based on the size of hail, winds, and structures in the path of a hailstorm. Storms that produce high winds in addition to hail are most damaging and can result in numerous broken windows and damaged siding. Hailstorms can cause extensive property damage affecting both urban and rural landscapes. These can cause damage to crops, livestock, and wildlife and can cause extensive damage to buildings, including roofs, windows, and outside walls. Vehicles can be total losses. When hail breaks windows, water damage from accompanying rains can also be significant.

Hail storm climatological values for the period 1981-2010 have been used for the preparation of these maps. Since it is a part of weather phenomena, we are producing two types of district maps in our Vulnerability Atlas for this event, viz. monthly and annual climatology of frequencies of the event for each district. In addition, the Normalized Vulnerability Index is being calculated for each district as per the formula mentioned in equation 1. Total twenty-six maps are presented.