

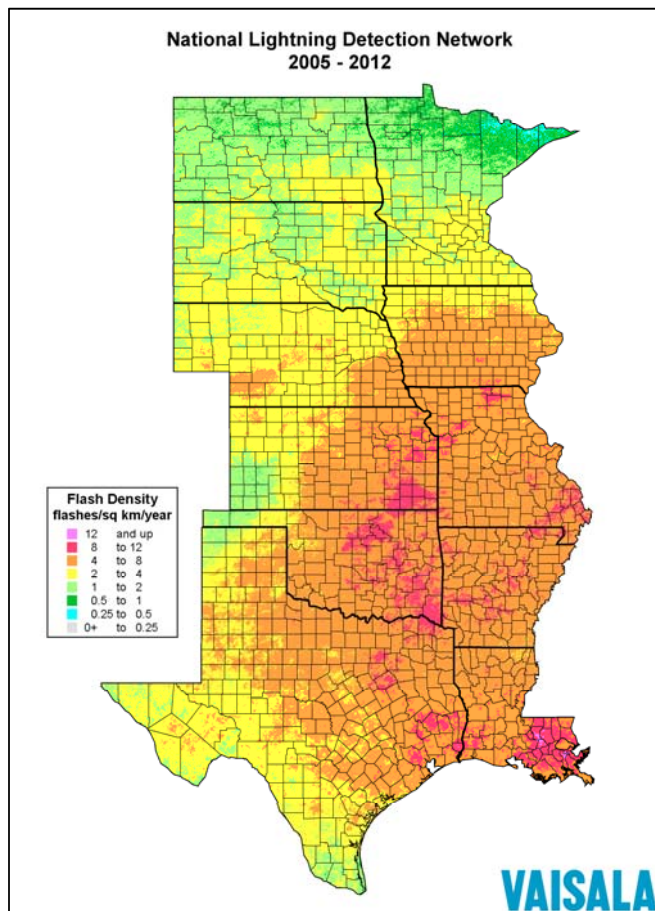
For Immediate Release

June 2013

Central U.S. Lightning Data from National Lightning Detection Network

Lightning frequency

The following map shows cloud-to-ground flash density for eight years in the central states. There is a great deal of detail to be found within this map at 2-kilometer (1.24 mile) resolution. The highest average lightning frequency is in Louisiana around New Orleans. The highest flash density exceeds 12 flashes per square kilometer per year in some of these areas. An additional area of high flash density is in eastern Oklahoma and Kansas where storms that form during the afternoon move east during the evening and grow into squall lines and other large thunderstorm complexes. The least frequent lightning occurs along the northern border of the U.S. where storms are less frequent and less intense. Another area of generally lower lightning frequency in the west indicates the influence of the Rocky Mountains; lower levels of the atmosphere are often too dry to the west for storms to develop. Much of the lightning in the northern and southern regions of this map occurs during the summer months of June, July, and August. However, there is a minimum over Oklahoma and surrounding areas in July and August as a persistent subtropical high often dominates. With regard to time of day, lightning starts in late morning along the Gulf Coast. In contrast, storms over the Plains form in the afternoon to the west, and move eastward to result in nighttime peaks over the eastern portion of this map.



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Lightning fatalities

For the entire U.S., 34 people were killed by lightning per year from 2003 to 2012, for a total of 345 during these ten recent years. The number of flashes and fatalities are shown by state in the following table. An average of ten times as many people are injured sufficiently to require medical attention as the number of fatalities. It is apparent that Texas has a large number of flashes and fatalities. More details on area-weighted flash densities and population-weighted fatality rates are at www.lightningsafety.noaa.gov.

State	Flashes in 2012	Average Flashes 1997 to 2012	Fatalities 2003-2012	Fatality Rank 2003-2012
Arkansas	627,880	799,034	6	20
Iowa	370,899	628,511	3	33
Kansas	556,313	910,740	5	22
Louisiana	899,598	909,274	9	12
Minnesota	366,722	384,869	4	28
Missouri	720,317	1,026,432	11	8
Nebraska	332,287	546,162	1	41
North Dakota	163,647	291,277	0	49
Oklahoma	722,025	1,034,890	4	30
South Dakota	283,100	394,697	2	38
Texas	2,594,152	2,892,486	24	3

Lightning insurance claims

According to the Insurance Information Institute and State Farm Insurance, 186,000 insurance claims were paid for lightning losses in the U.S. in 2011, at an average of \$5112 per claim for a total of about one billion dollars from this source alone – see www.vaisala.com/nldn30. There are substantial additional impacts of lightning in a very wide variety of avoidance and mitigation expenses.

Lightning safety

Safety from lightning involves being inside a large substantial building or a fully-enclosed metal-topped vehicle in the presence of lightning. In the U.S., 99% of lightning deaths in recent years occurred outside of these two safe locations. A simple rule to use for reaching these safe places is “When thunder roars, go indoors.” A substantial expansion on this lightning safety information is located on www.lightningsafety.noaa.gov.