Atmospheric Hazard: Snowstorms



Seven-Day Snowfall Totals in the Sierra Nevada Mountain Range (11/7/15-11/14/15)

0.5" 1" 2" 3" 4" 6" 8" 10" 12" 16" 20" 24" 30" 36" 42" 48" 54" 60"

Caption

Snowfall in the Sierra Nevada Mountains begins at around four thousand to five thousand feet in elevation. As altitude increases, an increase in snowfall levels can be observed. Total snowfall levels in the highest elevations received 20 inches of snow over seven days. In a related note, Stanley A. Changnon researched the impact of a 1999 blizzard. The winter storm produced 22 inches of snow in Chicago was estimated to produce damages "between \$0.3 and \$0.4 billion with 73 dead as a result of the storm" (Changnon). The 73 dead include people who lost their lives to vehicle accidents, freezing to death, and heart attacks resulting from overexertion. Winter storms can affect transportation systems, power, damage real estate due to the added weight on rooftops, and force businesses and schools to close.



Seven-Day Snowfall Totals in the California and Nevada Area (11/7/15-11/14/15)

0.5* 1* 2* 3* 4* 6* 8* 10* 12* 16* 20* 24* 30* 36* 42* 48* 54* 60*

Caption

Levels of measured snow are again linked directly to elevation. The Klamath mountains by the northwestern coast received snowfall at upwards of five thousand feet, and certain areas of Nevada and Utah receive snowfall from upwards of five thousand feet in elevation. Altitudes below five thousand feet received little to no snowfall. By correlating altitude and snow levels, it is easier to forecast for a blizzard, resulting in better preparedness for an incoming severe winter storm. In the New Year's blizzard of 1999, Changnon noted that the city of Chicago made major preparations for the storm leading to a more efficient and faster cleaning process. He said "Most Chicago streets had been cleared by January 3, whereas other cities with less advance preparation like Detroit, were still digging out a week after the storm" (Changnon). Forecasting for severe weather and preparation are extremely vital in mitigating the effects of a winter storm, and the United States should practice more of it.



Seven-Day Snowfall Totals in the United States (11/7/15-11/14/15)

Caption

Snowfalls patterns in this map show the correlation between altitude and snowfall once again; however, it should be noted that areas in Nebraska received snowfall, despite the state resting at lower altitudes. This may be attributed to colder temperatures in the fall and winter seasons in relation to its humid continental climate. It is imperative to point out that the areas due east of the Mississippi River received little to no snowfall with the exception of the Great Lakes area. This however, can be attributed to this particular storm cell not travelling due east and instead travelling northeast into Canada. It is worth noting that on this map, the correlation between altitude and snowfall can be more easily recognized in Washington State, where the area is enclosed by vast mountain ranges.

Works Cited

- 1. http://www.wunderground.com/wundermap/%20
- Changnon, S. (n.d.). January 1999 Blizzard. Retrieved November 14, 2015, from http://www.ncdc.noaa.gov/oa/climate/extremes/1999/january/blizzard99.html