

National Aeronautics and  
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# North America Snow Cover *from MODIS*

November 13, 2013

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# North America Snow Cover *from MODIS*

February 13, 2014

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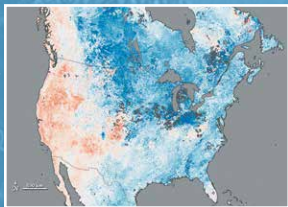
April 13, 2014

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# North America Snow Cover from MODIS

November 13, 2013, and February 13 and April 13, 2014, as derived using data from NASA's Moderate Resolution Imaging Spectroradiometer (MODIS) instruments onboard the Terra and Aqua satellites. Snow cover extent peaked in February when approximately 67% of the contiguous United States was covered with snow—282,000 square miles (~730, 400 square kilometers) (roughly the size of Texas) above the 1981-2010 average. Perhaps the most talked-about city to break its seasonal snowfall record was Detroit, MI, with a total of 7.9 feet (~2.41 meters) of snow measured at Detroit's Metro Airport, topping the previous record of 7.8 feet (~2.37 meters) set in 1880-81. Other major cities such as New York City, NY, Philadelphia, PA, and Chicago, IL, also endured one of their top-ten snowiest winters on record. The extensive snow and prolonged cold temperatures caused many hardships, travel delays, and school and business closings, but was a boon to winter recreation. In May, warm temperatures allowed the winter snow cover to melt rapidly, and the snow-cover extent declined to below average for that month.

## Land Surface Temperature Anomalies



Credit: NASA's Earth Observatory

Land Surface Temperature Anomaly (°C)

≤-18

0

≥18

Data from Earth-observing satellite instruments like MODIS can be used to create global snow-cover maps that allow scientists to monitor daily changes in snow cover at 500-meter (1640-foot) spatial resolution. Accurate snow-cover information is crucial for assessment of water supply and flooding and wildfire potential.

This map, based on data from infrared sensors on MODIS, shows land surface temperature anomalies in North America for January 1–7, 2014. The temperature anomalies were determined by comparison with the 2001–2010 average for the same week each year (or base period). Blue shades represent areas that had cooler-than-average temperatures. Note the anomalously cold temperatures in most of Canada and the eastern half of the United States. Portions of Michigan, Ohio, and Indiana were particularly cold.

For more information, visit:  
[modis-snow-ice.gsfc.nasa.gov](http://modis-snow-ice.gsfc.nasa.gov)

