## NEBRASKA SNOWS AND OKLAHOMA'S WOES

By Mark Shafer Climatologist The Oklahoma Climatological Survey 2/16/2004

NORMAN – After the winter season started out on such a balmy note, Oklahoma's fortunes have sure changed. December and January, each 3 degrees or more above normal for the state, have yielded to a consistent cold pattern in February. Part of the explanation is snow cover. While the recent snows in Oklahoma have melted away, locations further to our north have some of the greatest snow depths for this time of year on record.

So how can snow cover in Nebraska affect temperatures in Oklahoma? Snow acts like a layer of insulation, keeping the warmth of the ground from heating air near the surface. Consequently, air that starts out in the polar region gets very little heat added to it on its southward journey. Even the typically warm, southerly winds contribute to February's cold. The southerly winds bring moisture across the region, which falls in the form of – yes, more snow – in Kansas, Nebraska and northern Oklahoma.

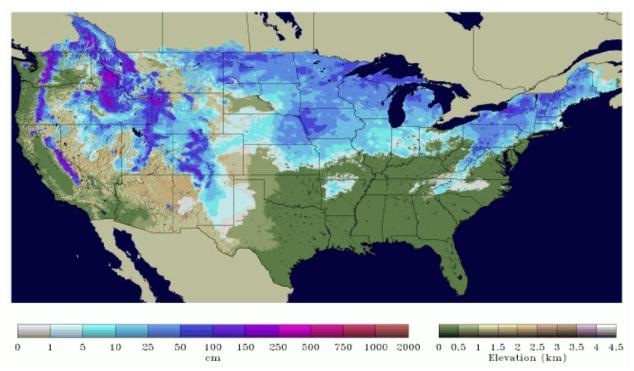
February 2004 is shaping up to be one of the coldest in the past century. The statewide-averaged temperature through the first half of the month stands at 32.4 degrees – nearly seven degrees colder than January. If the cold continues for the duration of the month – not by any means likely – February 2004 would end up among the ten coldest for the state since 1892. However, this is a long way from some of the record-cold Februaries of the past. With the exception of a few places, like north-central Oklahoma that have had substantial snow cover for a few nights, overnight low temperatures have not been near records. In fact, the state's record cold temperature, -27 degrees at Vinita, occurred on February 13, 1905. Even the high temperatures holding to the 20s are no match for some of the years gone by.

The good news is this can't last much longer. As the days get longer and more sunshine fills the skies, the sun's heat will begin to melt this layer of snow.

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Snow Cover map, as of February 12, courtesy National Weather Service National Operational Hydrologic Remote Sensing Center (experimental product).