UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL ENVIRONMENTAL SATELLITE DATA
AND INFORMATION SERVICE
NATIONAL CLIMATIC DATE CENTER
151 PATTON AVE ROOM 120
ASHEVILLE NC 28801-5001

23 JULY 2009

MEMORANDUM

From: Karsten Shein, Climate Monitoring Branch, CSMD, NCDC
To: Thomas Karl, Director, NCDC
Subject: SCEC: New all-time 24-hr snow fall record for Texas

On 21 May, 2009, the ad-hoc State Climate Extremes Committee (SCEC) voted unanimously to approve a new all-time 24-hr snow fall record for the state of Texas. As the National Climatic Data Center (NCDC) voting member, I am requesting that the NCDC director, or designated proxy, approve the decision of the SCEC and recognize the 25.0 inches of snow that fell at the Follett, TX Cooperative (COOP) weather observing station on 27-28 March, 2009. A summary of the event and the SCEC deliberation follows.

A heavy snow event occurred between the morning of 27 March and the morning of 28 March, 2009 in Follett, Texas. There is a NOAA National Weather Service (NWS) Cooperative weather observer in Follett (COOP ID: 41-3225) who observed and reported on the event. On the morning observation on 28 March, the observer reported 25.0 inches of snow depth.

The observer indicated that shortly after the 6 AM observation on 27 March, it began to hail, and thereafter, snow began to fall around 7 AM. However, there appeared to be no snow accumulation before approximately 8 AM. The heaviest snow accumulation took place in the overnight hours late on the 27th and early on the 28th. The snow event had completely ended by 8 AM on 28 March, when the observation was made. The observation was taken by averaging the lowest depth in his back yard (14 inches) and the highest depth (36 inches). The observer's back yard was protected by trees, fences and the house, which prevented more significant drifting such as occurred in surrounding open areas due to high wind that accompanied the event. A snow water equivalent (SWE) of 3.17 inches was observed in the observer's rain gauge.

While the 25 inches is a snow depth measurement, the observation from 27 March recorded zero snow depth, indicating that all of the depth came from snow which fell during this event. Furthermore, the 3.17 inches SWE supports a snow amount of at least 25.0 inches (likely the snow fall total was higher, given both the SWE and the acknowledged under catch of snow by a standard rain gauge during a storm accompanied by high winds. Also, while 26 hours had elapsed between the observations of the 27th and 28th, the statement of the observer and corroborating evidence from NWS radar data and neighboring automated weather stations supports a determination that all but a trace of snow likely fell within the 24-hr period between 8 AM on 27 March and 8 AM on 28 March. Thus, while snow fall was not directly reported by the observer on the Follett B-91 observation form, the SCEC felt comfortable estimating the 24-hr snow fall from the measured snow depth, noting that while the snow observation technique was not ideal, neither was it unacceptable, and that it was consistent with the snow fall measurement instructions set forth in NWS Instruction 10-1315 Appendix A.

The ad-hoc SCEC was convened to evaluate this snow fall value, and followed the protocol set forth in NWS Instruction 10-1004 Appendix E. The committee corresponded by E-mail and conducted a teleconference on 20 May, 2009. Based upon the evidence presented and a discussion amongst the SCEC members, the voting members unanimously supported recognizing the validity of a 25.0-inch snow fall value at Follett, TX on 27-28 March, 2009, and after a search of the historical snow fall data for the state, recognizing that the value constitutes the greatest all-time 24-hr snow fall total for Texas. During voting, the NCDC representative recommended that, based on the details surrounding the event, the B-91 for Follett be amended by the observer and NWS Amarillo office to include a remark on the 27th to the effect of "Observation taken at 6 AM. Trace of snow fall observed between 6 AM and 8 AM", to reflect the non-standard observation time (normally a 7 AM observation time), and on the 28th, a remark be appended to the effect of "Observation taken at 8 AM". For the 28 March observation, the B-91 should show a snow depth observation of 25 inches and a snow fall observation of 25.0 inches.

State Climate Extremes Members:

Chris Kimble, NWS WFO Amarillo
Jose Garcia, NWS WFO Amarillo
Victor Murphy, NWS Southern Region Headquarters
Mike Asmus, NWS Southern Region Headquarters
John Nielsen-Gammon, Texas State Climatologist
Kevin Robbins, Southern Regional Climate Center
Karsten Shein, National Climatic Data Center

NCDC Director Approval/Recommendation:

Approved: _____ Disapproved: _____

Director: _____ Date: _____
(*or proxy*)

Recommendation (if any):

File with NCDC/State Climate Extremes Committee