

Experimental Probabilistic 32 Degree Fahrenheit Guidance

Part 1 – Mission Connection

a. Product Description – This product provides a probability that the temperature at a location will fall below 32 degrees Fahrenheit. This product is derived from the NDFD temperature grid data and the 2-meter temperature grid spread data from the GFS ensemble. In December 2008, a Central Region Science and Operations Officer asked if the HPC could develop a probabilistic guidance tool for forecasting 32 degree Fahrenheit temperatures. This guidance tool can be used internal to NWS or by any member of the environmental information enterprise in assessing potential for damaging freeze conditions

b. Purpose – The probabilistic 32 degree Fahrenheit temperature guidance tool is used by forecasters to estimate forecast confidence and the likelihood of damaging freezes during the spring and fall months (as well as Florida, south Texas and southern California during winter). The guidance tool can be used to assist forecasters in the issuance of freeze warnings and statements at the local forecast office.

c. Audience - The target audience includes NWS forecasters, and others in the environmental information enterprise including the academic community and anyone interested monitoring the potential for damaging freezes.

d. Presentation Format – Six-hour forecasts out through 156 hours are presented in a loop on the HPC webpage at the following URL:

<http://www.hpc.ncep.noaa.gov/prob32/>

e. Feedback Method – Comments may be provided via email or by directly contacting:

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The feedback period will run from March 5, 2010 to November 31, 2010.

Part II – Technical Description

a. Format and Science Basis – The probability of temperatures reaching 32 degrees Fahrenheit or lower is derived from the computed cumulative normal distribution using the 1200 UTC NDFD temperature data and the 2-meter temperature grid spread from the

GFS ensemble (GEFS). A more detailed description of this product can be found on the HPC web site at: <http://www.hpc.ncep.noaa.gov/prob32/about.html>

b. Product Availability – The product is generated once per day at 1400 UTC every day.

c. Additional Information – None.