CAM Hazards Threat Area Forecast Help Document
By DVD

1. Why create a Hazards Threat Area Forecast map? - The goal behind the creation of the map is to give forecasters a quick look at different kinds of hazards that may occur via a single map. If a hazard appears, then it does **not** automatically mean that a watch or warning **is** necessary, but it **does** mean that further investigation by the forecaster is needed, and a watch or warning **may** be necessary at some point. In addition, just because no hazards may appear does **not** mean there isn't a threat. CAMs are just another tool, and each individual CAM is only a single model. It is best to consider many models, including ensemble guidance. Don't let this, SuperBlend, NBM, Forecast Builder, etc. become your meteorological cancer!

2. How are the different threat areas defined?
    a. Fog
        i. Visibility < 0.25 miles
    b. 3inqpf
        i. Model run total QPF > 3"
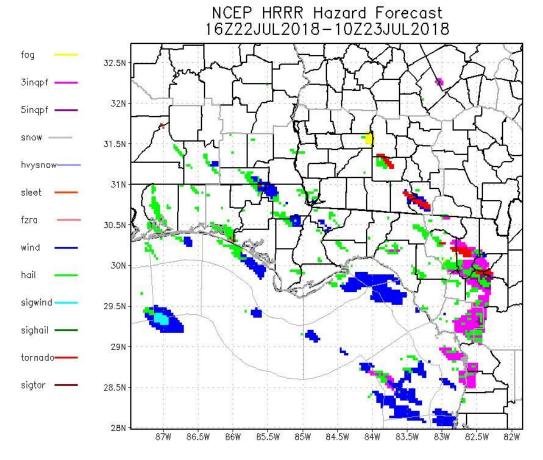   c. 5inqpf
        i. Model run total QPF > 5"
    d. Snow
        i. New snow depth on ground > 0.1"
    e. Hvysnow
        i. New snow depth on ground > 2"
    f. Sleet
        i. Categorical p-type of sleet WITH QPF > 0.01"
    g. Fzra
        i. Categorical p-type of freezing rain WITH QPF > 0.01"
    h. Wind (could be convective OR non-convective)
        i. Max sustained wind > 34.9 knots OR
        ii. Gust > 49.9 knots
    i. Hail
        i. Max updraft velocity > 18 m/s WITH 0-6 km shear > 35 knots
    j. Sigwind (could be convective OR non-convective)
        i. Max sustained wind > 54.9 knots OR
        ii. Gust > 64.9 knots
    k. Sighail
        i. Max updraft velocity > 25 m/s WITH 0-6 km shear > 40 knots
    l. Tornado
        i. Max Updraft Helicity > 80 m2/s2
    m. Sigtor
        i. Max Updraft Helicity > 150 m2/s2

3. How does the map display the hazards when two or more hazards overlap with each other? - The map uses the following layer order to decide what to display.

a. Fog (bottom layer, covered up by anything else)
b. 3inqpf (covers up fog, covered up by anything else)
c. 5inqpf (covers up 3inqpf and fog, covered up by anything else)
d. Snow
e. Hvysnow
f. Sleet
g. Fzra
h. Wind
i. Hail
j. Sigwind
k. Sighail
l. Tornado (covers up everything except sigtor)
m. Sigtor (always displayed on top)

NCEP HRRR Hazard Forecast
16Z22JUL2018—10Z23JUL2018

fog
3inqpf
5inqpf
snow
hvysnow
sleet
fzra
wind
hail
sigwind
sighail
tornado
sigtor

GrADS: COLA/IGES

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