A Weather-Ready Nation

HAPA Project Report

Volume 3, Issue 9, February 16, 2017

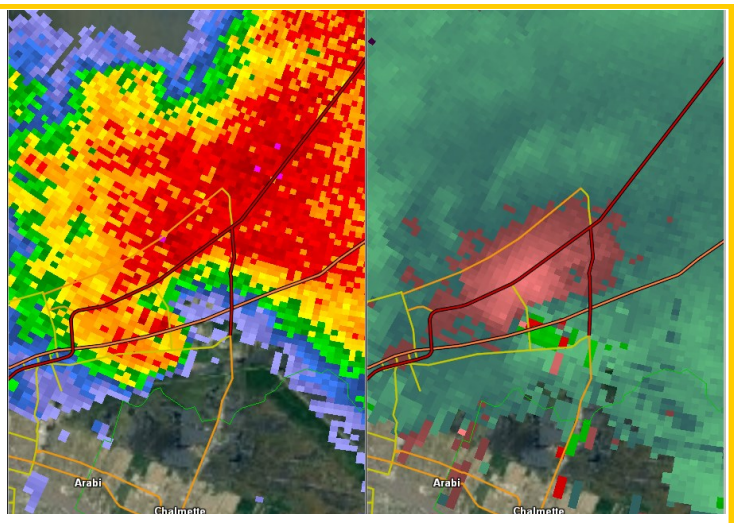
Disclaimer

This is an EXPERIMENTAL project report based on the Hovmoller Analysis and Prognostics Approach (HAPA) conducted at the WFO New Orleans/Baton Rouge Forecast Office (WFO LIX). This report is a means of bringing situational awareness to large scale events and potential impacts that may require decision support or emergency response activities in the foreseeable future. This project is NOT a long range forecast product for day-to-day conditions. HAPA is an interpretative method of integrating established numerical model guidance, climatological and earth systems monitoring and subject matter expertise from various sources to provide an outlook to potential weather hazards in the 8 to 60 day range. The intended audience of this report is media, NWS partners, stakeholders, and the general public. **Users must refer to the latest official NWS forecasts and outlooks for any decision-making activities.**

WFO New Orleans/Baton Rouge, LA

EF-3 Tornado strikes New Orleans East—five other twisters in surrounding area

On February 7th, an unprecedented EF-3 tornado touched down near the Industrial Canal of New Orleans East and moved through a large swath of residential and industrial portions of the city. The NASA Michoud facility was struck. In all, over 650 homes and businesses were damaged or destroyed and 33 people were injured. Most fortunate was that ZERO DEATHS occurred. This is exceptional considering that it occurred during a busy part of the day, with schools in session and traffic on the highways. One elementary school was directly struck, but proper actions by the teachers and staff, who got the warnings with ample lead time, were able to protect the children. There were five other tornadoes that touched down across southeast Louisiana, including a 23 mile long track EF-2 tornado from Killian to Madisonville on the north shore of Lake Pontchartrain. Another EF-3 tornado twisted high voltage transmission towers near Watson, LA. The HAPA technique did show a feature that could have been attributed to this outbreak in hindcast, but was not indicated with any forecast timeline in previous reports. The images to the right show the radar presentation of a 'hook echo' in the reflectivity product as it was about to cross the I-510 corridor, prior to striking the Michoud facility. The red/green image in the upper corner is the Doppler velocities showing the rotation from the hook echo—clearly a tornado indication. The lower image is the downed transmission line towers downed in Watson. The engineering design is suggestive of winds greater than minimal EF-3 (135 mph or greater) to topple these structures, hence the rating.



Outlooks and dates for consideration

Feb 18 [2 days out]: As mentioned in previous report, an upper level disturbance brings rain to the Gulf Coast, but storms should be limited to the immediate coast and over the Gulf of Mexico, mainly during pre-dawn hours of the 18th.

Feb 21 [5 days out]: Strong winds, high tides and heavy rain potential along the gulf coast due to a very strong low pressure system passing through. This is the manifestation of a feature that has been tracked since mid-December, and mentioned in previous reports.

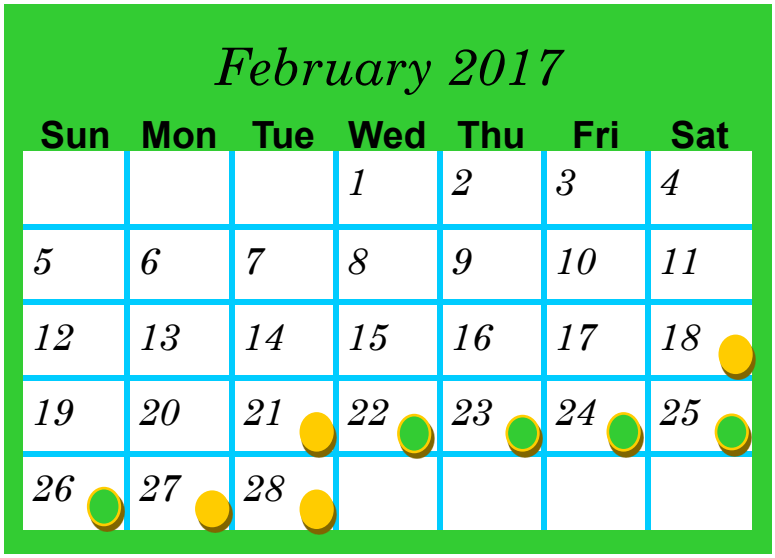
Feb 27 [11 days out]: Lundi Gras may have some rainy and possibly stormy conditions to contend with and could spill over into **Mardi Gras Day [12 days out]:** This is a touchy call in that most of the parading activity could get through between systems, but it appears a disturbance will be approaching the region heading into **Ash Wednesday Mar 01 [13 days out].**

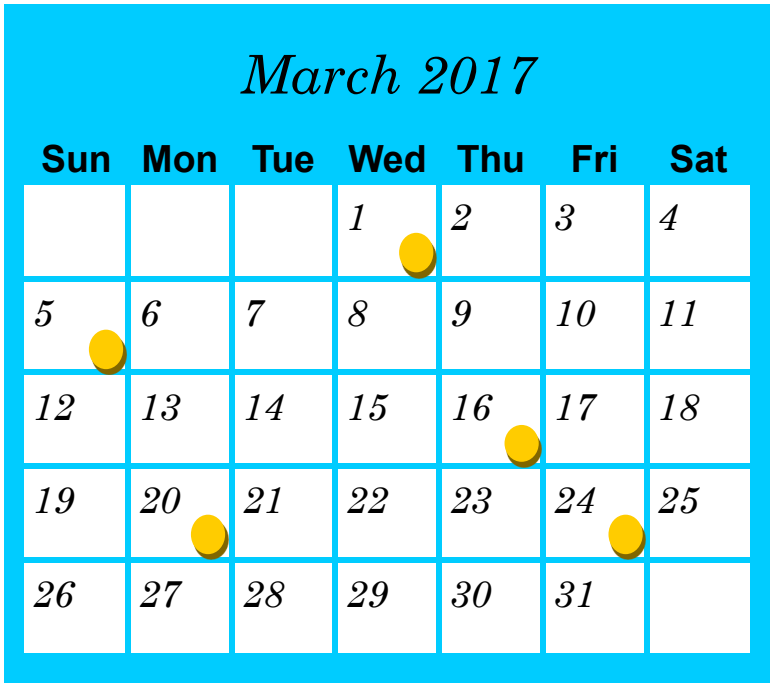
Mar 05 [17 days out]: While this date is being selected, two distinct weather disturbances—one for late on the 4th and the other for early on the 6th could cause some timing issues of any realized impacts. Not all three days would have weather issues, but one of the three between the 4th and the 6th could see some weather.

Mar 16 [28 days out]: Uncertain on what may occur, but something moves through the middle of nation on or around this date.

Mar 20 [32 days out]: It appears some storminess and some coolness is possible for the spring equinox.

Mar 24 [36 days out]: The last report was targeting the 27th, but the latest assessment seems to have adjusted to the 24th. This appears to be a severe weather potential in the southern and central states due to a relatively strong storm system moving through.





A more detailed, technical explanation of these outlooks are available upon request to the e-mail address below.

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Next report is scheduled for March 1, 2017

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