

Afternoon Update - Tuesday, April 26

Submitted by kbowley on Tue, 04/26/2011 - 17:55

- [Central Facility](#)

As expected, severe convection has initiated well south and east of the central facility along a developing warm front/leftover outflow boundary. However, this activity is expected to remain to the southeast of the operations area. Meanwhile, convection has developed to in the Texas panhandle, ahead of a shortwave ejecting out of the Rockies. However, this activity is dissipating as it propagates further to the east.

Operations this evening will focus on an expected wide-spread precipitation event in northern Oklahoma. This activity is expected to start as elevated convection and eventually evolve into a wide-spread stratiform event with embedded convective elements overnight.

After this feature moves to the east, the area will be overspread by large scale drying and descent which should bring about an end to operations for the next several days.

Forecasts

Time of Day:

Afternoon

Day 0:

04/25/2011

Forecast for Day 0:

Please note that this forecast will primarily be covering the overnight period which will technically be April 27th.

Primary focus will be on cyclogenesis that is currently underway in the Texas panhandle. This cyclogenesis is happening in response to increasing cyclonic vorticity advection with height, and is being aided by upper-level divergence in association with the poleward exit region of a strong upper-level jet. The cyclone at 850 hPa is forecast to track to the east along a zonally oriented baroclinic zone situated over central Oklahoma. As the circulation interacts with the baroclinic zone precipitation coverage is expected to increase in the region of warm-air advection in the eastern to northwestern quadrant of the cyclone. Initially this precipitation will develop as convection to the west of the operations area (03-06Z) as significant instability is still present above a relatively stable boundary layer. Eventually this should evolve into a widespread stratiform event over northern Oklahoma with embedded convective elements (06-12Z). Eventually as the circulation propagates to the east resulting in an increase in cold-air advection and associated subsidence leading to and end in the precipitation around 15Z.

Day 1:

04/26/2011

Forecast for Day 1:

Please see the above discussion. Large scale subsidence is expected to set in by midday as ridge builds in at the surface and aloft and the area is dominated by cold-air advection. This should be the onset of a relatively quiescent pattern that will signal the end of operations for the next several days.

Day 2:

04/27/2011

Forecast for Day 2:

The area should be dominated by high pressure at the surface and aloft. Moisture will be in

short supply as and the Gulf of Mexico will be completely cut off. Consequently the weather is expected to be quiet.

Extended Outlook:

The next chance for significant weather in the operations area is likely be Saturday although probabilities will still be on the low side. A significant upper-level trough coming out of the Rockies to the north of the operations area will drive a cold front into the region. However, moisture will likely be lacking and the region will be strongly capped limiting the possibility of any significant precipitation.