

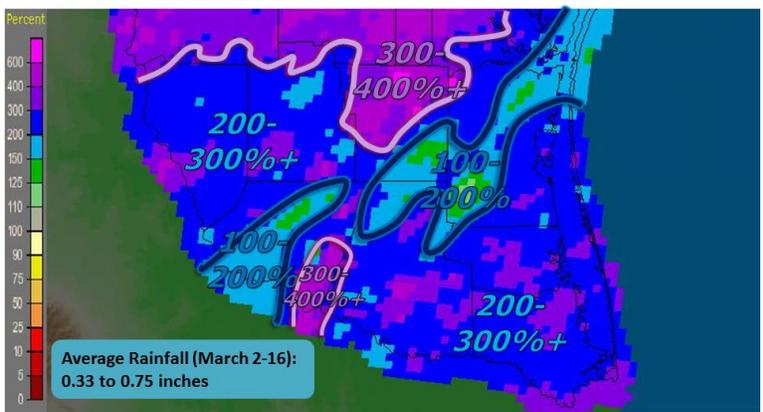
Early March 2014 Rains End Drought, Temporarily For Some, Rainfall “Doubles Up” March Monthly Average

Valley/Ranchlands Fall Below Drought Status for First Time since early December, 2010

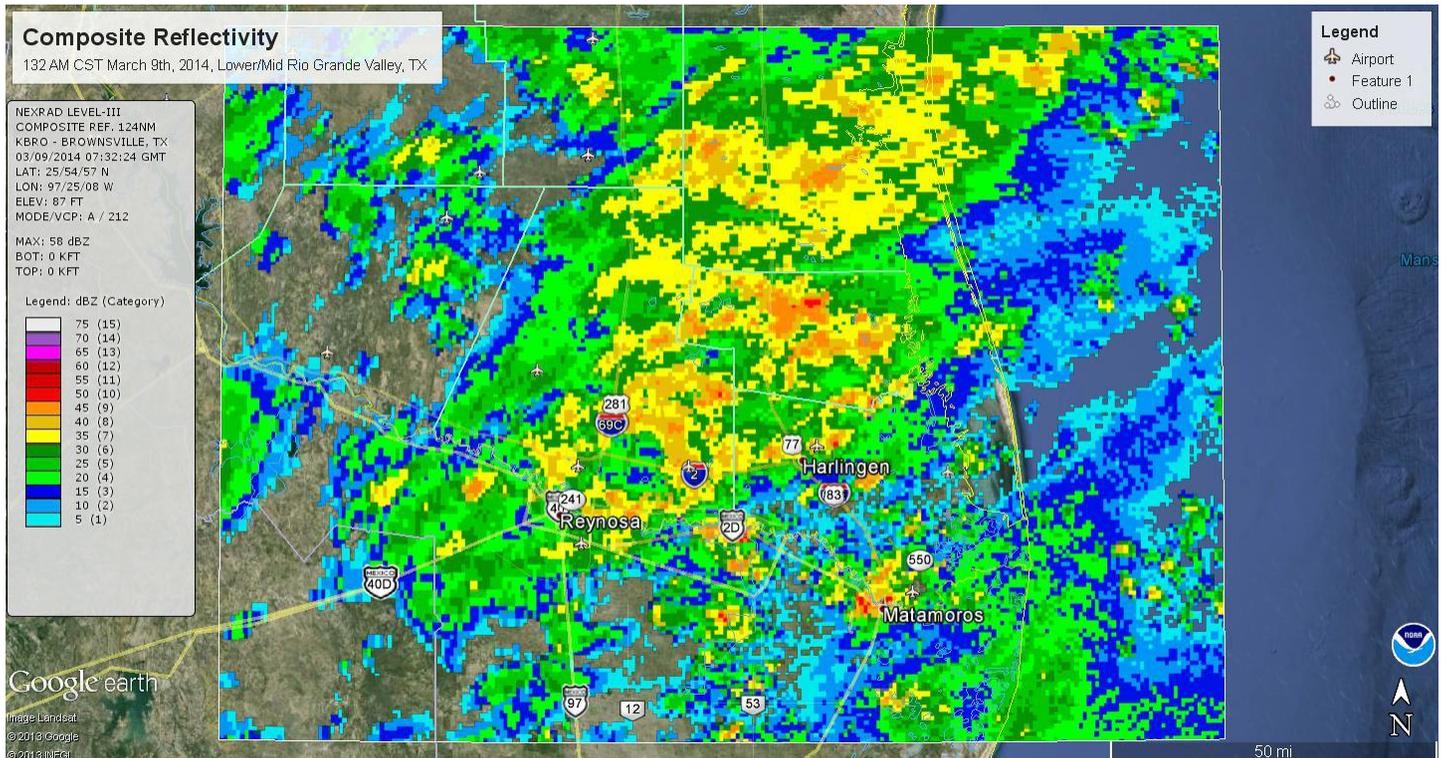
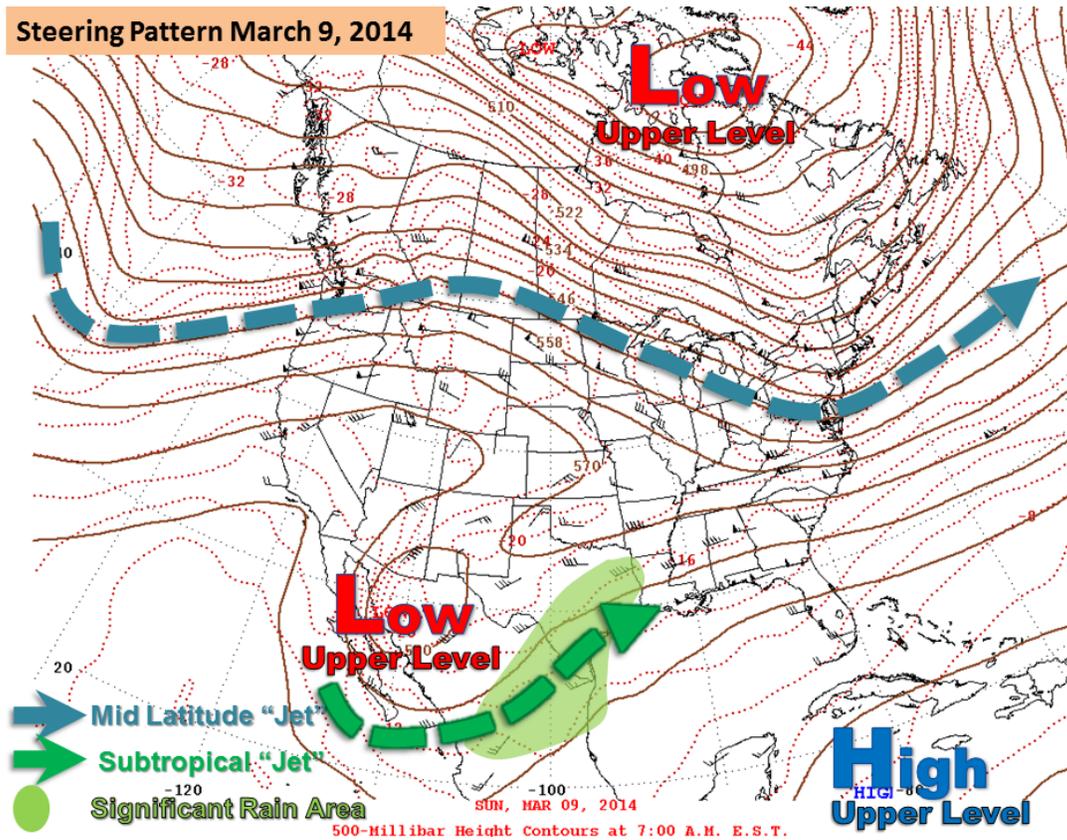
The ‘heartbeat’ of the unusual winter of 2013/14 had one last “pulse” during the second weekend of meteorological spring (March-May), when the eighth instance of 30 degree day to day temperature drops (using Harlingen/Valley Airport as proxy) occurred between the 8th and 9th. Unlike most of the sharp drops since January, the event on March 8th/9th brought the first widespread significant rainfall to the Valley and much of the Deep South Texas ranchlands since [late December 2013](#). The initial burst of heavy rain, followed by pockets of moderate rain later on the 9th and 10th across the Lower Valley, left more than 600% of the weekly average rainfall (March 2-9) in some areas. For the first half of March (March 2-16), rainfall for most of the Rio Grande Valley and a large part of the northern ranchlands was >200% of average. Average for the period ranges from 0.25 to 0.5 inch across the upper Valley and western ranches along the river, to 0.5 to 1 inch across the Lower/Mid Valley through the King Ranch and south Texas Brush Country (right).

Percentage of Average Rainfall March 2-16 2014

Brownsville, TX (BR0): Current 14-Day Percent of Normal Precipitation
Valid at 3/17/2014 1200 UTC - Created 3/17/14 15:48 UTC



Steering Pattern March 9, 2014

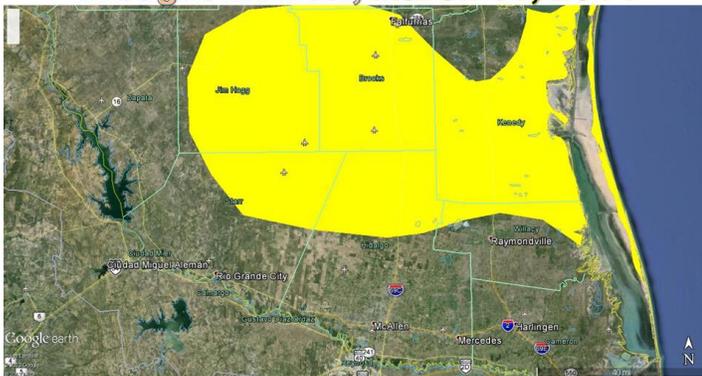


An upper level disturbance dived south from the Rockies into Sonora/Chihuahua States of Mexico late March 8th and early March 9th; energy ejecting from the wave along the subtropical jet lifted ample moisture along and over the cold front (above, top graphic), which produced clusters of locally heavy showers and thunderstorms between midnight and dawn across most of the Rio Grande Valley (above, second graphic). Rainfall amounts varied across the region, but generally ranged from 1 to more than 2 inches across the most populous regions

of the Rio Grande Valley, with additional pocket of very heavy rainfall for the season – estimated to be more than 3 inches – across parts of the King Ranch in Brooks County. In these heavier pockets, the rainfall was at least twice that of the monthly average. For example, a Community Collaborative Rain, Hail, and Snow (CoCoRaHS) observer near McAllen reported 2.37 inches on the 8th and 9th, which is more than 200% of the 1981-2010 average of 1.03 at nearby McAllen/Miller Airport!

The ranchland rains broke the back of the last remnant of the prolonged drought in the Rio Grande Valley and Deep South Texas. D1, or “Moderate”, Drought was given marching orders and left the region with nothing more than “Abnormally Dry” Conditions across much of Brooks, Jim Hogg, and Kenedy County and the northern tier of Hidalgo, Starr, and Willacy. This was the first time in nearly 40 months (3+ years) with no area in Moderate or worse drought.

Rio Grande Valley/Deep South Texas Drought Monitor, March 11, 2014



● Abnormally Dry

Rio Grande Valley/Deep South Texas Drought Monitor, November 30, 2010

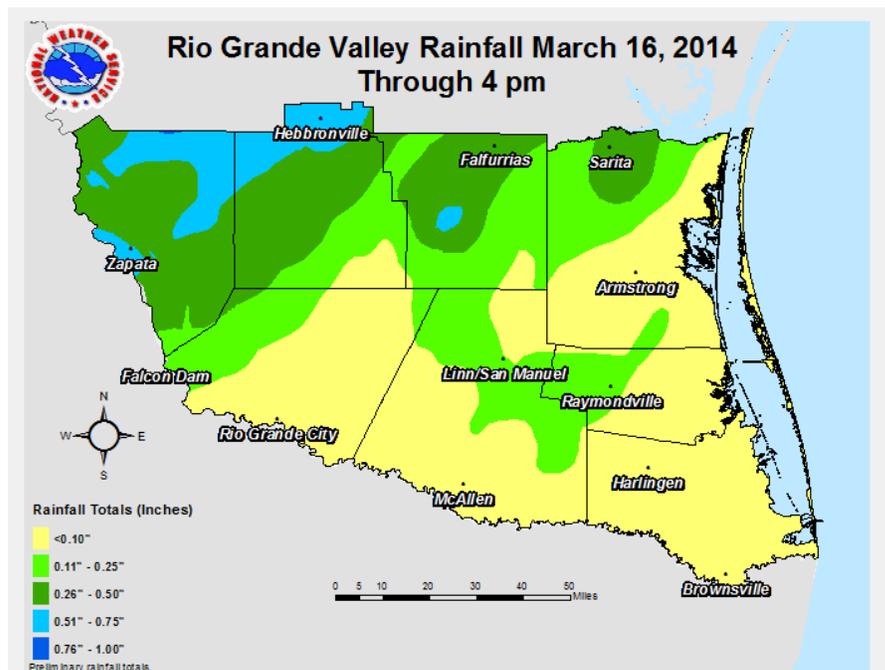


● Abnormally Dry

March 2014: Temperature “Roller Coaster” More Down Than Up

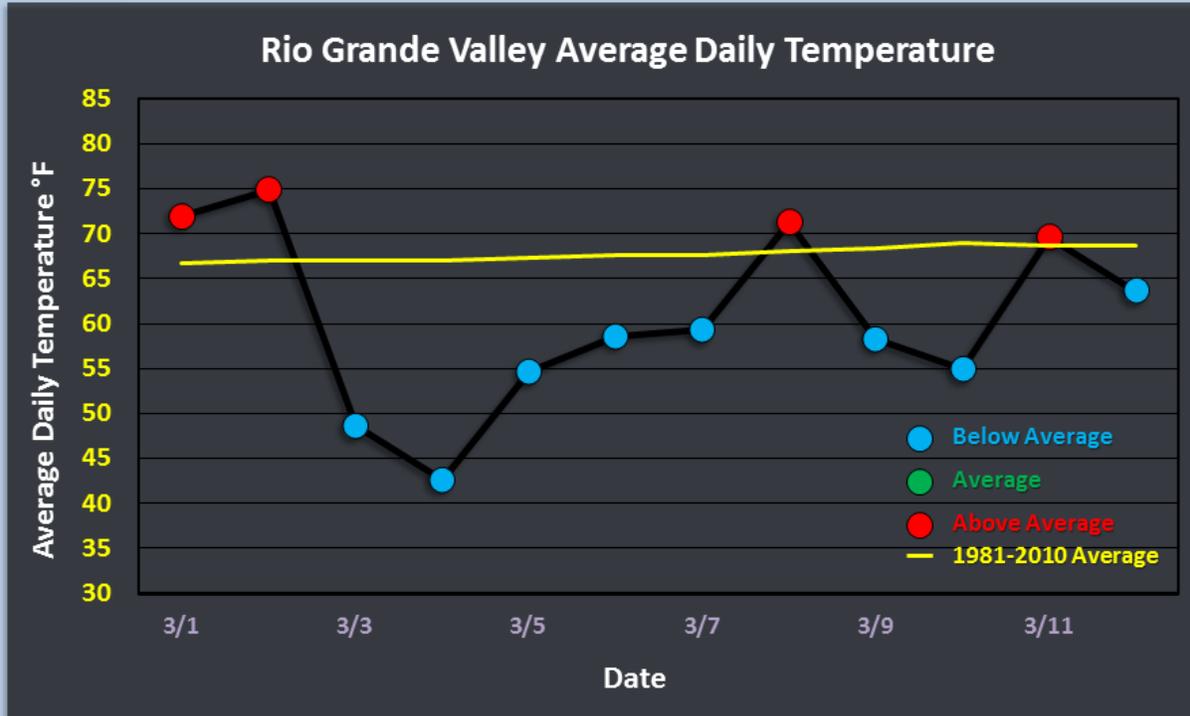
The chances for a rebound to above normal temperatures in March, [after four consecutive months below average to end autumn and begin winter 2013/2014](#) took a big hit after a “lamb-like” start on the 1st; by March 3rd, daytime temperatures struggled to reach 40 degrees. The cool-to-cold weather through the 7th pushed average temperatures for the first full week of the month to nearly 10 degrees below the 1981-2010 average for most of the Valley. A thirty degree cold snap between the 8th and 9th kept the below normal trend going. Dry, cool weather following another front early on the 12th suppressed any return toward “normal”. Additional rainfall for the northern ranchlands/Upper Valley (preliminary map, right) arrived with a vigorous upper level disturbance and another cold front on March 16th. With more than half the month over, Valley temperatures ranged from 5 to 7 degrees below the period average based on 1981-2010 data.

More fronts were expected to limit how much temperatures could recover, and with no sustained warm, humid spell on the horizon, March 2014 was virtually guaranteed to end as the 5th significantly cooler than average month in a row. On the bright side, the combination of cool temperatures and above average rainfall helped plants and crops get a nice start to the growing season. How green was our Valley? Plenty green, indeed, and much better than the [dusty, brown end to March, 2013](#).





March 2014: More "Down" than Up



Above: March, 2014 temperatures through the 12th. Below normal temperatures would continue through the 14th, then return for the 16th and 17th.