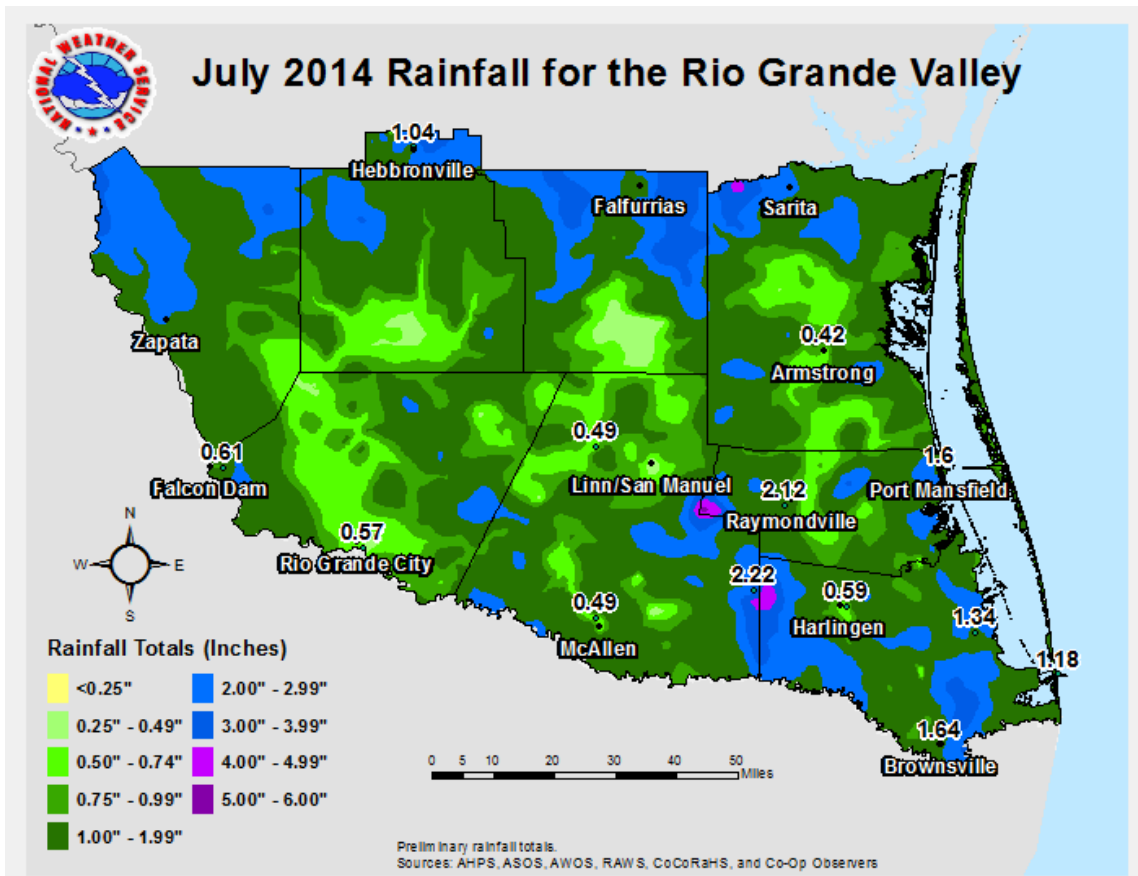
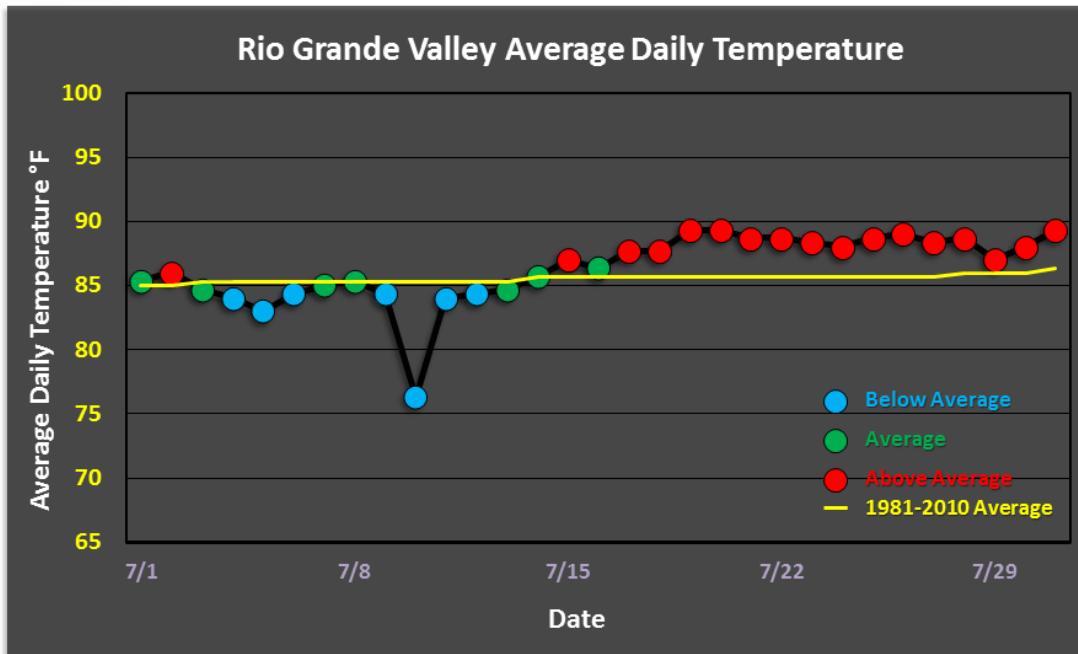


July 2014: "La Canícula" Pushes Heat

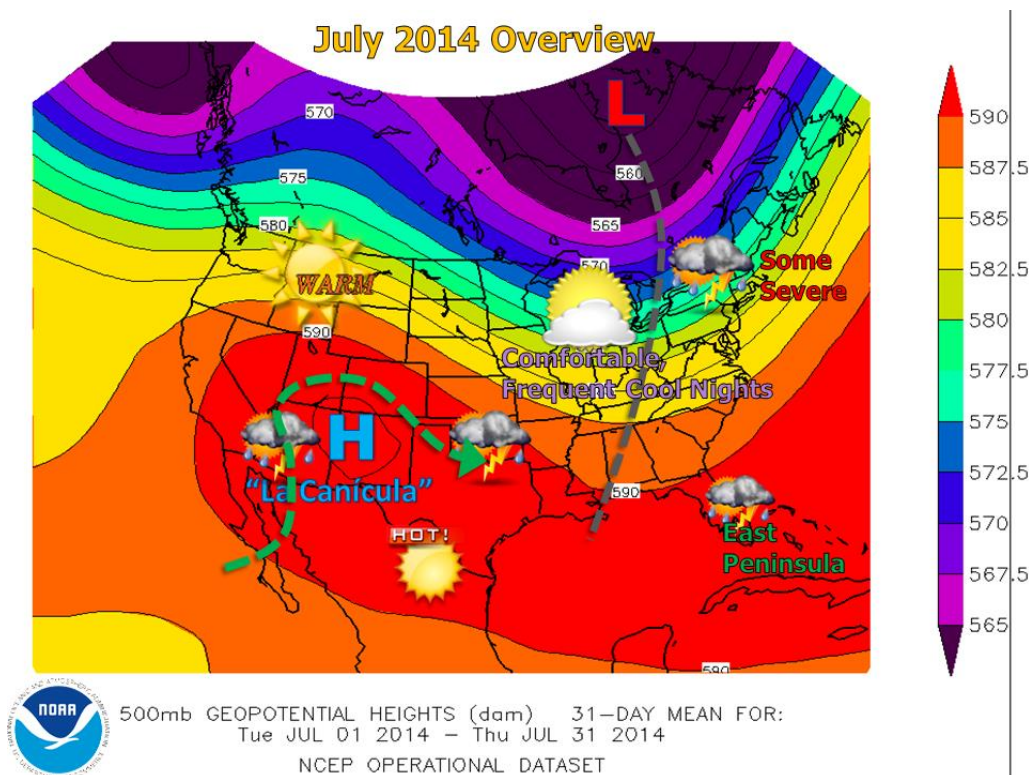


Above: Top – Average daily temperature for July 2014 in the RGV. Note the eventual rise to above average (based on 1981-2010 values) for the last half of the month. **Bottom:** July 2014 rainfall. Totals favored the northern ranchlands from Zapata to Falfurrias and Sarita; pockets of locally heavy rain also fell in the Lower RGV some days, most widespread on July 10th.

Hot, Relatively Dry July 2014 Lives Up to Billing

Expected Hotter, Drier than Average Summer (Jun-Aug) Takes Hold in RGV

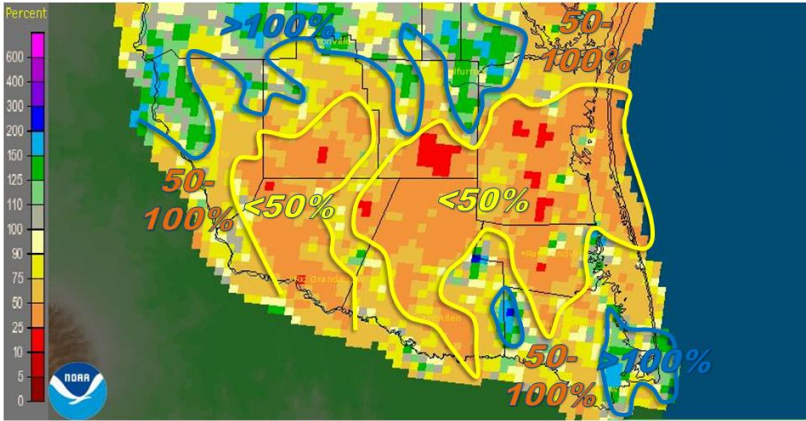
The prolonged cool period - seven straight months from November 2013 to May 2014 - that had forecasters scratching their heads and asking why the [above normal forecast for much of the southern US](#) failed to materialize, was finally put to bet in July. By the end of May, confidence increased in the arrival of El Niño conditions by mid to late summer as index values briefly pushed to the edge of a “weak” event ([0.5°C above average in the east central tropical North Pacific Ocean](#)). Comparable spring transitions this century from the neutral phase of an El Niño/Southern Oscillation (ENSO) to a summer El Niño preceded a hotter and drier than average summer; such was the [forecast provided for the June-August 2014](#) period in late May. Through July, the temperature and precipitation forecasts were a mixed bag across all of Texas, as locations in central, north, and east Texas saw somewhat above normal rainfall and below normal temperatures. The Rio Grande Valley was passed over by the heavier rains, and the pattern of “[La Canícula](#)” that amplified in late July (below) helped build the heat after a relatively “cool” start. By month’s end, the average temperature at Brownsville was 84.8°F (1981-2010 normal: 84.9°F); Harlingen/Coop was 85.9°(vs. 85.0°), and McAllen/Miller was 87.7°(vs. 86.7°). This was 0.1°F below, 0.9°F above, and 1° above average, respectively.



Above: Mean atmospheric flow at ~18-20 thousand feet for July 2014 across North America. The location and axis of the ridge centered over New Mexico blocked the door to most significant rainfall for the Rio Grande Valley. Moisture from an early arriving North American Monsoon (dashed green arrow) helped give parts of Arizona, Colorado, and New Mexico welcome rains during the latter half of the month; remnant moisture linked up with the strong jet stream behind the eastern U.S. trough (dashed gray arrow) to produce bouts of showers and storms in north and east Texas.

July rainfall was a mixed story across the Rio Grande Valley and Deep South Texas. For the Rio Grande Valley, scattered showers and storms arrived just in time (July 10th) to drop a welcome 0.5 to 1.5” and hold drought conditions in check, with moderate to severe conditions in Hidalgo and Starr County and no drought to abnormally dry conditions in Cameron and Willacy County. The lack of significant widespread rainfall thereafter, combined with the late July “dip” in daily rainfall amounts, only allowed a minor expansion of the moderate and severe drought area, with abnormally dry conditions returning to Cameron County. Short-cut grasses showed the greatest impact of the hot dry finish to July, with longer grasses and brush also beginning to show their thirst.

Brownsville, TX (BRO): July, 2014 Monthly Percent of Normal Precipitation
Valid at 8/1/2014 1200 UTC- Created 8/3/14 23:57 UTC



July 2014: The "Dry's" Had It

Above: Left - Estimated rainfall percent of the 1981-2010 normal, showing most areas below the monthly average, which ranges from 1.5 to 2.5 inches. Right - Photo of short cut grass in Brownsville that quickly turned brown in the late July heat.

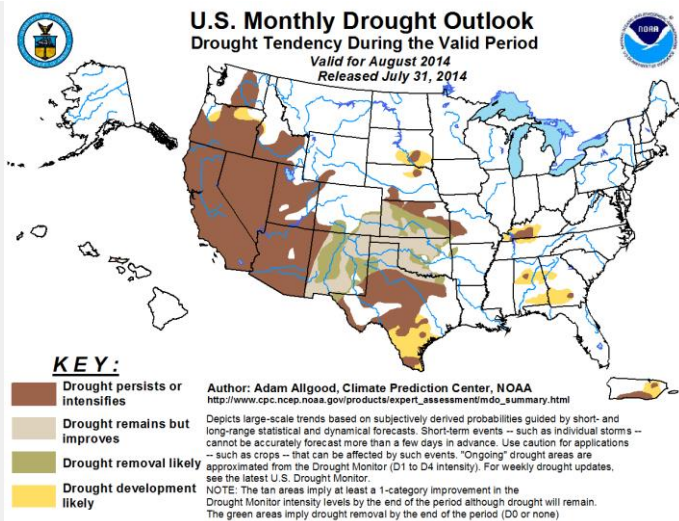
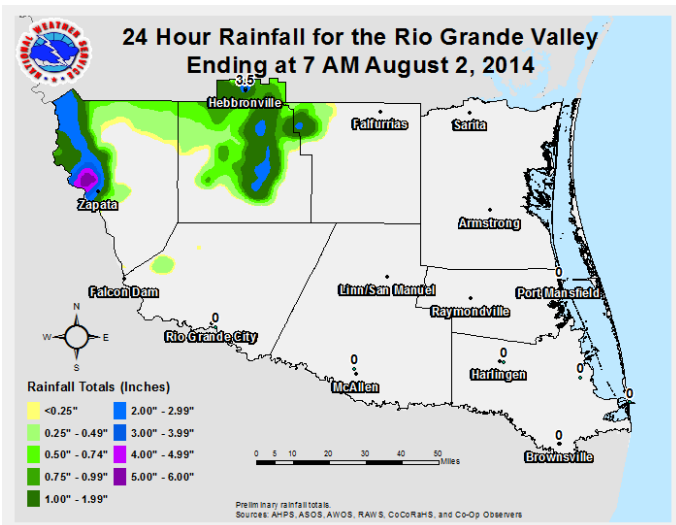
The cities and small towns that serve the South Texas Brush Country ranchlands (Zapata, Hebbronville, and Falfurrias) were spared the worsening drought in July. Events that dropped several inches of rain across portions of Duval and Webb County had just enough oomph to reach these towns, and keep drought conditions at bay for the tail end of July.

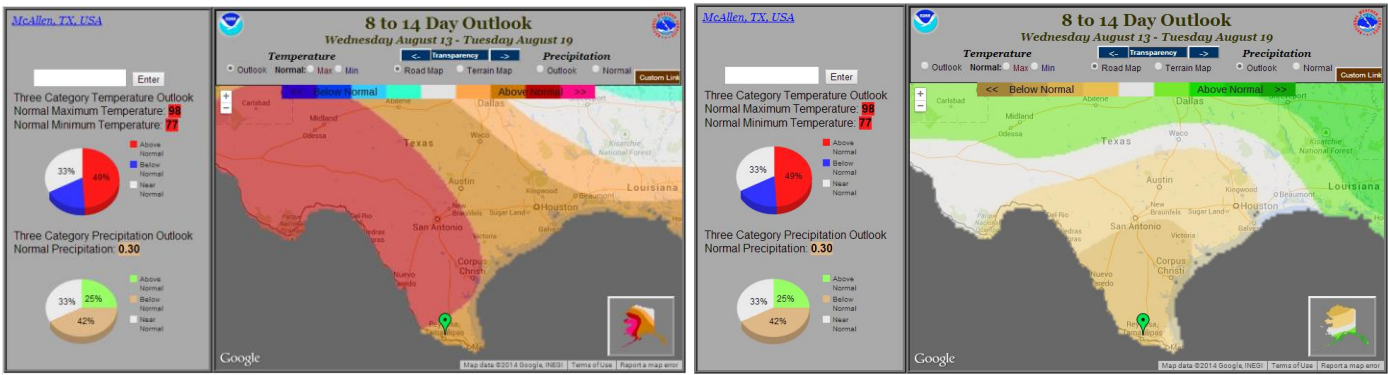
August: More of the Same?

The beat continued through the first five days of August. Hopes for some good rains across the Rio Grande Valley on the 2nd and 3rd were dashed when energy dissipated along with a rare early August Texas cold (in name only) front; with no feed of deep tropical moisture into the system, the pockets of rain were quickly absorbed into the drying soil. Once again, the "winners" were some locations between Zapata and Laredo along US 83, as well as ranchlands in Jim Hogg and Brooks County (below, left).

Otherwise, the heat went on. In fact, as of August 5th, McAllen/Miller Airport had reached the century mark (100°F or higher) on eighteen consecutive days; this number was expected to continue to rise with little or no rainfall and no appreciable change in the "La Canícula" pattern through at least mid-month. There was an increased likelihood that the streak would ultimately replace the current #2 value (24 straight in August 2011 and July 1998), but fall well short of the #1 period (July 12 through August 29, 2009) – 49 straight days!

Meanwhile, drought was likely to develop or worsen across the entire region (right).





Above: Left – Forecast temperature departure from average, mid August 2014. Right: Same as left, for precipitation. Pie chart data are for McAllen (green balloon on state map).

Heat is On in McAllen

Number of Consecutive 100°F Days
McAllen Miller Airport, as of August 5 2014

