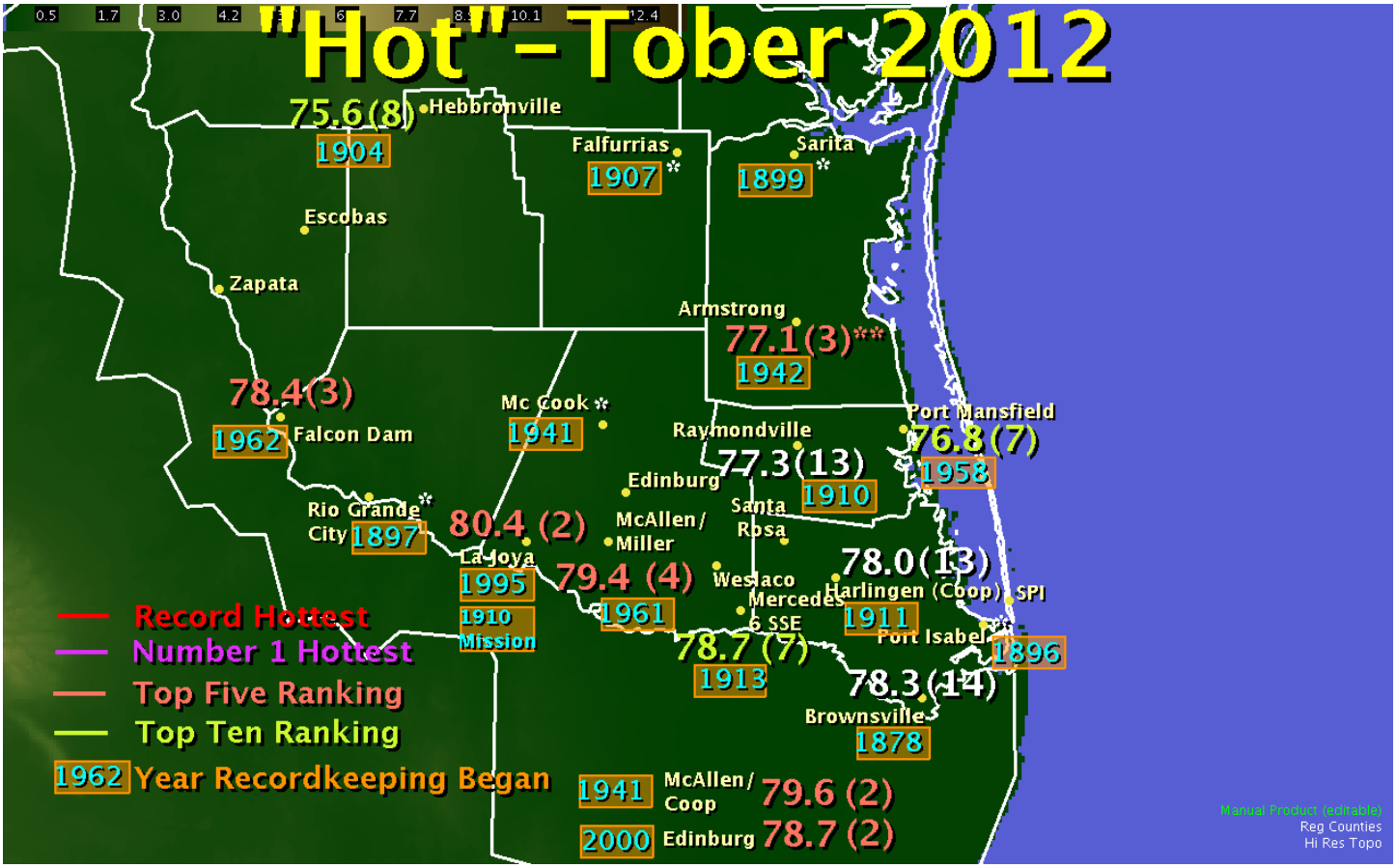


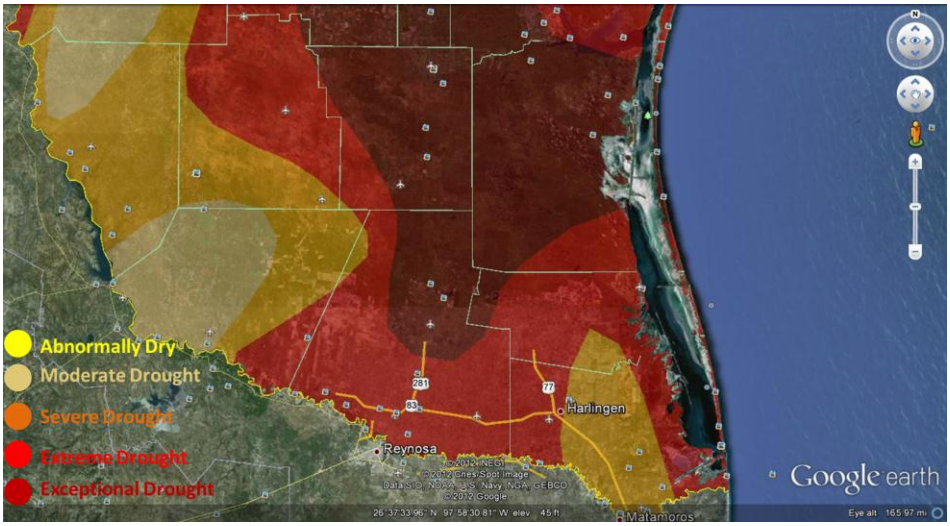
**(white)=Insufficient data available in 2012 to calculate ranking*
***(peach)=Rankings based on about half the years in the sample.*

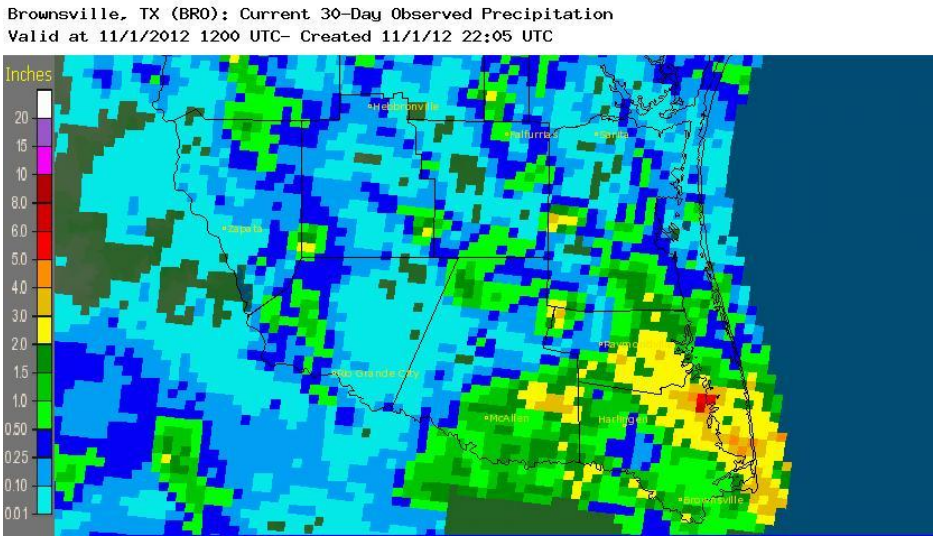
Summer's Heat Holds for most of October 2012

Late Month Cold Front Not Enough to Stop Trend of Top 15 Finishes

After a summer (June-August) of hot and dry weather, when temperatures finished among the top five hottest and rainfall generally among the top 15 driest (with notable exceptions), and a September that followed the trend with most areas among the top 15 hottest and driest on record, October 2012 kept up the beat. Temperatures in all areas finished in the top 15 hottest, with many locations settling among the top 10 hottest. The 2004 benchmark October, when nearly every location in the Rio Grande Valley set its all-time hot record, was not threatened; but a number of locations from the mid Valley through the ranchlands recorded one of the hottest October's since then.

The drought, which began October ranging from Severe (D2) to Exceptional (D4) across most of the Rio Grande Valley and Deep South Texas, ended the month nearly where it began – with just a small pocket of improvement in Cameron County, where local rainfall toward the coast improved conditions from Extreme (D3) to Severe (D2) (right). This was little consolation for those needing welcome rainfall which never fell as tropical cyclones remained far away from the Valley. Monthly rainfall varied, favoring the Cameron County coast





(left); many locations finished among the Top 20 driest. Had a band of hail and wind storms not surged across the Lower and Mid Valley on October 18th, followed by locally heavy rains along the Rio Grande near Brownsville on the 19th, most locations would have finished in the Top 10 driest. Unofficially, Brownsville recorded 0.80 inches, 28th driest since 1878; Harlingen/Cooperative recorded 0.21 inches, 8th driest since 1911, and McAllen/Miller recorded 1.39 inches, 20th driest since 1961.

"La Canícula" Rules

The persistent ridge of high pressure that typically settles across northern Mexico from mid to late summer held firm through September, and right through nearly all of October (below) before being nudged into the Pacific near Baja California as a deep trough of atmospheric low pressure covered most of the northern two thirds of the U.S. by the 27th. This ridge kept significant fronts from moving very far south into Texas; until the final weekend, one shallow front briefly dropped temperatures from late on the 7th into the 8th before values recovered from the 9th through the 18th. October 18th was the hottest October day all-time across many locations across the Rio Grande Valley; high temperatures away from the coast soared above 100°F, including a blistering 108°F at La Joya. Temperatures lowered into the upper 80s to lower 90s on the 19th, but quickly recovered back into the 90s in all areas until the 25th. Chilly air surged into the ranchlands on the 26th, dipping temperatures more than 30 degrees colder during the afternoon (mid 90s on the afternoon of the 25th to below 60° at the same time on the 26th); the chill reached the Rio Grande Valley by the 27th with daytime temperatures holding in the 60s for many. The coldest temperatures of the young autumn occurred during the mornings of the 27th and 28th, with lows in the 40s to lower 50s for most areas.

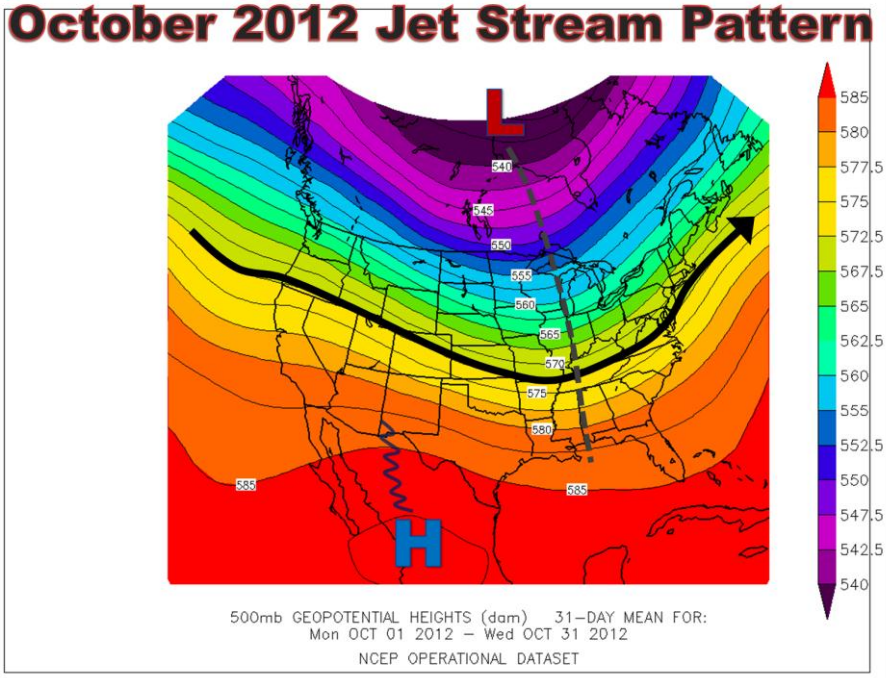


Figure 1. *Mean 500 mb heights for October, 2012, across the U.S. Black curve with arrowhead denotes mean jet stream. Gray dashed line from Canada through the northern Gulf of Mexico indicates mean upper level trough position; zig-zag navy line from the northern Mexico high pressure center indicates mean ridge position.*