

Preliminary Measured and Estimated Rainfall for November 4th through 8th (AM) Across Deep S. Texas/Rio Grande Valley. Detailed accumulation shown in table at end of this article.

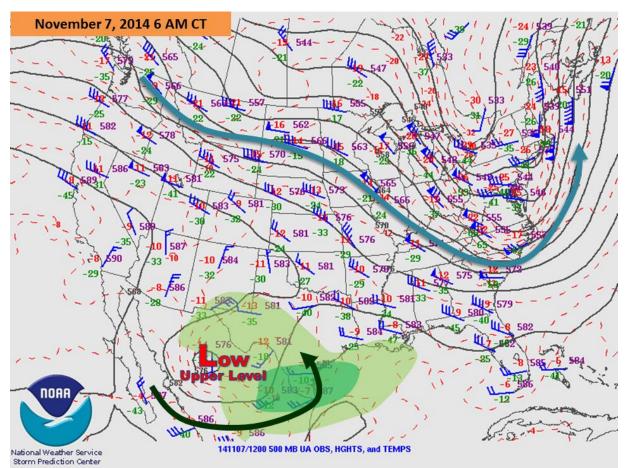
Rain, Glorious Rain!

November Steady Soaker Brings Twice to Three Times Monthly Average

Standing Water in Fields, Green Grass Keep Drought Away

The Story

A slowly developing and slow-moving upper level disturbance (top of next page, explained) brought steady light to moderate rains to the Rio Grande Valley and Deep South Texas Ranchlands, primarily from November 5th through the 7th. From late on the 5th through sunset on the 6th, the season's first "true 'norther" brought the coolest temperatures so far to the region and ended the persistent summer-like warmth and humidity once and for all. Daytime temperatures on the 6th held in the low to mid 60s for most areas; combined with an occasionally stiff north wind and light to moderate rain, long sleeves and rain gear were the order of the day. Overnight on the 6th through the morning of the 7th, a more vigorous "piece" of upper level energy rotated through west and central Texas, and induced surface low pressure just east of the Lower Texas coast. That low focused heavier rains overnight on the 6th through the morning commute on the 7th, with widespread reports of 1 to 2 inches through the period. Winds also picked up, particularly along the coast and over the Laguna Madre and Gulf of Mexico, worsening conditions for boaters. As the upper low finally got a "kick" from an upstream mid latitude energy surge later on the 7th into the 8th, one final burst of moderate rain produced another 0.5 to 1 inch of accumulation across the Rio Grande Valley, while temperatures hung in the 50s to lower 60s. As the upper low weakened and passed through Lower Texas, rain ended. Beautiful sunshine but autumnal temperatures returned for the 8th and 9th and began to dry things out a bit.



Steering pattern at 500 millibars (~18,000 feet) early November 7th during the peak of the heaviest rain in the Rio Grande Valley. Light green shading indicates area of some rain accumulation; brighter green shading shows good rain accumulation; dark green arrow shows main flow and/or lift of warm and humid air, some with a tropical source, and the light blue arrow shows mid latitude flow.

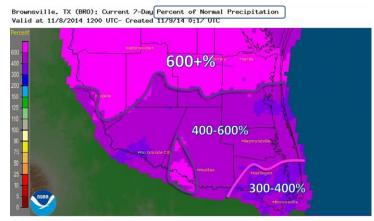
Click <u>here for a loop of the pattern</u> and rain response from November 4th through early November 8th. Note that the remains of Eastern Pacific Hurricane Vance largely missed the Rio Grande Valley, being absorbed quickly by the Sierra Madre. Also, note how the upper level system remained nearly stationary until a stronger mid latitude wave dived southeast from the Pacific northwest into the nation's heartland, "kicking" out the pesky system by the 8th.

The rain fell gently enough to keep impacts to a minimum. Slick roads increased the number of accidents, including an empty school bus which crashed along U.S. 77 north of Harlingen. There was plenty of ponding of water in poor drainage areas and drainage ditches, and empty fields had standing water, but significant property threatening flooding did not occur. Ranchlands in portions of Starr and Jim Hogg County which had seen minimal rain since mid-September received a healthy 1 to 2+ inches; the slow, steady, soaking nature of

the rain will help improve the dry conditions in these areas.

Stat Pack

- The three+ day rain event left well over the monthly average for November. Thus, November 2014 is already above to well above "normal" (based on the 1981-2010 average) in all areas.
- For some, totals were 2 to 3 <u>times</u> the monthly average.
- The seven day rainfall (November 1-7 inclusive) compared to "normal" was 300 to 600 percent (right) For example, typical rainfall is 0.25 to 0.75 inches across the Valley; as the map on the first page shows, event totals were 1.5 to 4 inches.



From November 1 through 7, Inclusive

Location	Nov. 4-8 Rain	November Average	Departure	Percentage Diff
Brownsville/SPI Arpt	2.69	1.85	+0.84	145%
Harlingen/Coop	2.45	1.35	+1.10	181%
McAllen/Coop	1.85	0.95	+0.90	195%
Port Mansfield/Coop	4.32	1.73	+2.59	250%
Edinburg Coop	3.26	1.14	+2.12	286%
Hebbronville Coop	2.33	1.35	+0.98	173%
Weslaco Coop	2.55	1.32	+1.23	193%
Rio Grande City	1.50	1.14	+0.36	132%
South Padre Island	3.00	1.45	+1.55	207%



Standing water early on November 8th around mesquite tree in North Brownsville. Nearby rainfall for the event was around 3 inches (table, below).

Location	County	Rainfall
San Benito 6.3 ENE	Cameron	4.61
Port Mansfield Coop	Willacy	4.32
Rio Hondo 9.4 NE	Cameron	3.98
Rio Hondo 7.9 E	Cameron	3.31
Edinburg Coop	Hidalgo	3.26
Brownsville 12.6 E	Cameron	3.23
Brownsville 6.4 SE	Cameron	3.19
Brownsville 4.1 E	Cameron	3.18
Brownsville 1.5 WNW	Cameron	3.15
Brownsville 1.0 N	Cameron	3.14
Brownsville 2.2 W	Cameron	3.11
Brownsville 2.9 NNE	Cameron	3.07

South Padre Island Coop	Cameron	3.00
Brownsville 3.5 N	Cameron	3.00
Brownsville 1.7 NNE	Cameron	2.92
Los Fresnos 0.3 NE	Cameron	2.90
Laguna Atascosa NWR	Cameron	2.88
Santa Ana NWR	Hidalgo	2.87
Harlingen 2.6 ESE	Cameron	2.87
Brownsville 4.1 ENE	Cameron	2.83
McAllen 2.4 NE	Hidalgo	2.78
Harlingen 3.8 W	Cameron	2.70
Brownsville 6.4 WNW	Cameron	2.55
Harlingen 4.2 W	Cameron	2.55
Weslaco 2 E (Coop)	Hidalgo	2.55
Laguna Vista 0.3 N	Cameron	2.52
Mission 1.9 ENE	Hidalgo	2.48
Harlingen Coop	Cameron	2.45
Mission 4.3 WSW	Hidalgo	2.43
Rancho Viejo 0.7 E	Cameron	2.35
Hebbronville Coop	Jim Hogg	2.33
Harlingen 0.4 N	Cameron	2.31
Rio Grande City 13.8 NNW	Starr	2.25
San Manuel Coop	Hidalgo	2.18
Armstrong Coop	Kenedy	2.16
Falfurrias 0.5 WNW	Brooks	2.09
San Benito 0.6 SSE	Cameron	2.05
Falfurrias 8.9 SSW	Brooks	2.00
Hebbronville/RAWS	Jim Hogg	1.96
Linn/San Manuel NWR	Hidalgo	1.95
McAllen Coop	Hidalgo	1.85
Falfurrias 6.2 E	Brooks	1.82
Linn 8.4 WNW	Hidalgo	1.76
Rio Grande City 17.7 NE	Starr	1.70
Rio Grande City	Starr	1.50
Falcon Lake	Starr	1.49