

## Storm Data and Unusual Weather Phenomena - October 2015

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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### GULF OF MEXICO

<b>WATERS FROM BAFFIN BAY TO PT MANSFIELD TX EXT FROM 20 TO 60NM COUNTY --- 45.1 ESE S BAFFIN BAY [26.97, -96.69]</b>				
	10/22/15 10:53 CST		0	Marine Thunderstorm Wind (MG 34 kt)
	10/22/15 10:53 CST		0	Source: Buoy

Buoy 42020 reported a thunderstorm wind gust of 34 knots.

<b>WATERS FROM BAFFIN BAY TO PT MANSFIELD TX EXT FROM 20 TO 60NM COUNTY --- 45.1 ESE S BAFFIN BAY [26.97, -96.69]</b>				
	10/22/15 12:41 CST		0	Marine Thunderstorm Wind (MG 38 kt)
	10/22/15 12:58 CST		0	Source: Buoy

Buoy 42020 reported several thunderstorm wind gusts of 34 knots or greater, with a peak gust of 38 knots.

<b>WATERS FROM BAFFIN BAY TO PT MANSFIELD TX EXT FROM 20 TO 60NM COUNTY --- 45.1 ESE S BAFFIN BAY [26.97, -96.69]</b>				
	10/22/15 14:20 CST		0	Marine Thunderstorm Wind (MG 38 kt)
	10/22/15 14:20 CST		0	Source: Buoy

Buoy 42020 reported a thunderstorm wind gusts of 35 knots.

**Tropical moisture combined with a slow moving but broad upper level disturbance to produce scattered to numerous showers and thunderstorms over the lower Texas Gulf of Mexico waters. Some of these thunderstorms produced gusty winds in excess of 34 knots.**

### TEXAS, South

<b>HIDALGO COUNTY --- 1.0 ENE LINDSAY GARDENS [26.29, -98.31], 5.7 N PENITAS [26.31, -98.44]</b>				
	10/13/15 14:15 CST		30K	Thunderstorm Wind (EG 52 kt)
	10/13/15 14:30 CST		0	Source: Emergency Manager

The downburst winds tore the roof and at least one wall from a poorly constructed trailer at a colonia of Pueblo de Palmas, east of La Joya. In Alton, winds downed two trees, one of which fell onto a recreational vehicle. Five to seven power poles were downed or snapped in the same area. At the peak of the storm, nearly 9,000 AEP customers in western Hidalgo County were without power.

**The combination of an unstable air mass, a weak but dissipating front approaching from the north, and some dry air in the mid-levels to produce thunderstorm clusters along and west of U.S. 281/Interstate 60C in Hidalgo County. These storms pulsed up and down as they moved into the colonias of Alton and La Joya. Downburst winds estimated between 40 and 60 mph damaged trees, a poorly constructed trailer, and power poles.**

<b>WILLACY COUNTY --- 5.1 SSW WILLAMAR [26.36, -97.69], 7.9 E SANTA MONICA [26.35, -97.45], 6.5 NNE SAN PERLITA [26.58, -97.60], 3.8 E YTURRIA [26.57, -97.71]</b>				
	10/22/15 16:30 CST		0.50M	Flash Flood (due to Heavy Rain)
	10/23/15 02:15 CST		0	Source: Emergency Manager

More than three hours of torrential rain fell in and near the communities of San Perlita, Willamar, and Santa Monica. As the rain totals increased, the water piled up; FM 1420 was inundated by several inches to more than a foot of water (some flowing), and nearby farms turned into one big lake. Photos and anecdotal evidence suggested two to three feet in the fields during the peak of the storm and probably well into the overnight hours.

<b>WILLACY COUNTY --- RAYMONDVILLE [26.48, -97.78]</b>				
	10/22/15 16:45 CST		10K	Heavy Rain
	10/22/15 21:00 CST		0	Source: Emergency Manager

An estimated 2 to 4 inches of rain fell across Raymondville leading to nuisance and urban flooding that would later reach into a few businesses in town.

**A plume of tropical moisture through the mid levels of the atmosphere combined with a weak upper level disturbance created a slow-moving intense thunderstorm that eased into Willacy County. While over Willacy, mainly along and east of Farm-to-Market Road (FM) 1420 and west of the Laguna Madre, the cell dumped more than three hours of torrential rain in and near the communities of San Perlita, Willamar, and Santa Monica. As the rain totals increased, the water piled up; FM 1420 was inundated by several inches to more than a foot of water (some flowing), and nearby farms turned into one big lake. In Raymondville, heavy rains estimated at 2 to 4 inches fell, with urban flooding that would later reach into a few businesses in town due to additional drainage.**

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<b>HIDALGO COUNTY --- 8.5 WSW PROGRESO [26.05, -98.09], 3.5 S PROGRESO [26.05, -97.97], 4.8 NNW MERCEDES OLD REB ARP [26.23, -97.91], 4.4 SSW ELSA [26.25, -98.02]</b>				

10/24/15 13:00 CST	50M	Flash Flood (due to Heavy Rain)
10/24/15 23:45 CST	0	Source: Emergency Manager

After hours of rainfall the nuisance flooding became a flash flood. Several inches to at least a foot of water rose into homes in the Las Brisas subdivision on the east side of town, with three to five feet of water on neighborhood streets. At least three feet of water submerged vehicles along the frontage roads between the Westgate and Airport Road exits during the peak of the flash flooding. Additional high water closed portions of FM 1015 between Weslaco and Progreso (which also had flash flooding of unknown depth) and FM 493 near Donna. At least 26 separate boat rescues were made in flooded neighborhoods and more than 500 homes were impacted by some level of floodwater.

<b>HIDALGO COUNTY --- 8.4 S ALAMO [26.06, -98.12], 3.1 ESE RETAMPEGO [26.07, -97.87], 3.3 NNW MERCEDES OLD REB ARP [26.22, -97.88], 3.1 SE SAN CARLOS [26.25, -98.04]</b>				
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10/24/15 23:45 CST	0	Flood (due to Heavy Rain)
10/26/15 18:00 CST	0	Source: Emergency Manager

The estimated and measured ten to twelve plus inches of rain that fell in the Weslaco and Progreso area was far too much for drainage systems to handle, and even well after the rainfall stopped, numerous neighborhoods remained flooded and roads remained closed through the 26th. Please see flash flood event for damage estimates.

**Bands of thunderstorms pushed across Hidalgo County as pieces of upper level energy linked up with the remaining moisture of Hurricane Patricia. These bands began dropped rainfall at a one to two inch rate per hour for hours across southeastern Hidalgo County. Nuisance flooding soon became a flash flood, with numerous water rescues from flooded neighborhoods. An estimated and measured ten to twelve plus inches of rain fell in the Weslaco/Progreso area.**

<b>WILLACY COUNTY --- 2.4 ESE SEBASTIAN [26.34, -97.76], 4.1 ESE SANTA MONICA [26.35, -97.52], 6.8 NNE SAN PERLITA [26.58, -97.59], 0.9 NE YTURRIA [26.58, -97.76]</b>				
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10/24/15 16:30 CST	2.50M	Flash Flood (due to Heavy Rain)
10/25/15 00:00 CST	0	Source: Emergency Manager

The heavy rainfall on October 24th led to much of eastern Willacy County being under several feet of water. Water rescues were underway prior to the heaviest rains and continued through the afternoon. Though homes are few and far between (mainly farm houses or workers homes), the majority likely had water inside them by late in the day. Hazardous, high water was found across nearly all of the County east of the expressway (and the larger communities).

<b>WILLACY COUNTY --- 5.4 ESE SEBASTIAN [26.33, -97.71], 5.1 SSE SANTA MONICA [26.31, -97.54], 5.3 W PORT MANSFIELD [26.55, -97.52], 3.5 ESE YTURRIA [26.55, -97.72]</b>				
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10/25/15 00:00 CST	2.50M	Flood (due to Heavy Rain)
10/30/15 08:00 CST	0	Source: Emergency Manager

Hazardous, high water on roadways, in homes, and across cropland continued across nearly all of eastern Willacy County.

**Moisture from Hurricane Patricia, additional lift from the slowly east-moving bands, and the approach of a front/wind shift from the ranchlands combined to produce a two hour period of blinding rains across most of Willacy, with the highest totals once again in the San Perlita-Willamar-Santa Monica area. Radar estimates of 3 to 6 additional inches in about two hours fell over areas inundated just days before. This new rainfall resulted in flash flooding across much of eastern Willacy County.**

<b>WILLACY COUNTY --- 4.5 S WILLAMAR [26.37, -97.67], 3.9 S WILLAMAR [26.37, -97.67]</b>				
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10/30/15 05:36 CST	50K	Tornado (EF1, L: 0.65 mi , W: 25 yd)
10/30/15 05:38 CST	0	Source: NWS Storm Survey

A survey team revealed peak winds ranging from 74 to 86 mph for the Los Coyotes Tornado. The 86 mph winds were measured by a property owner's weather station, whose information was considered viable based on visual evidence of damage and radar depiction of velocity in the core of the circulation, which exceeded 60 knots (70 mph). Damage in Los Coyotes was to a few barns and outbuildings, as well as uprooted and snapped trees. Emergency Management noted seven power poles were leaning or down, but had been repaired by the time to survey was conducted on October 31.

<b>WILLACY COUNTY --- 2.4 NNW PORFIRIO [26.43, -97.61], 3.6 ENE WILLAMAR [26.46, -97.62]</b>				
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10/30/15 05:50 CST	50K	Tornado (EF0, L: 1.61 mi , W: 25 yd)
10/30/15 05:53 CST	1	Source: NWS Storm Survey

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<p>The survey team estimated peak winds between 70 and 75 mph for the Willamar tornado. Primary damage was a cotton seed container/holder that was lifted from moorings into concrete block. The lack of material in the metal container allowed winds to get underneath and lift; pressures on the minimally anchored columns caused the damage. Other damage included a portion of roof peeled back from a mobile home, where a 12 year old child was injured by flying debris and taken to a local hospital in Harlingen for observation. The tin roof damage revealed poor connections to rotted wood. Minor damage to trees along Farm to Market Road 1420 was also noted.</p>				

**A wave of upper level energy, arriving well ahead of a vigorous trough of surface and high level low pressure, acted on a very unstable airmass that was also conducive to producing rotating thunderstorms during the pre-dawn hours of October 30th to produce a "mini-supercell" thunderstorm in northern Cameron County, which raced northward through Willacy and into Kenedy County. The thunderstorm, spawned a brief tornado around Los Coyotes just after 630 AM, which moved to the north-northwest and quickly dissipated before reaching Raymondville. A second tornado formed to its east, at a Cotton producing facility in Willamar.**

**WILLACY COUNTY --- 5.4 ESE SEBASTIAN [26.33, -97.71], 5.1 SSE SANTA MONICA [26.31, -97.54], 5.3 W PORT MANSFIELD [26.55, -97.52], 3.5 ESE YTURRIA [26.55, -97.72]**

10/30/15 08:00 CST	25K	Flash Flood (due to Heavy Rain)
10/30/15 16:45 CST	0	Source: Emergency Manager

Heavy rainfall raised water levels once again across eastern Willacy County. High water of 1 to 3 feet covered many streets and surrounded more than a dozen buildings, especially in the San Perlita area.

**WILLACY COUNTY --- 5.4 ESE SEBASTIAN [26.33, -97.71], 5.1 SSE SANTA MONICA [26.31, -97.54], 5.3 W PORT MANSFIELD [26.55, -97.52], 3.5 ESE YTURRIA [26.55, -97.72]**

10/30/15 16:45 CST	25K	Flood (due to Heavy Rain)
10/31/15 23:59 CST	0	Source: Emergency Manager

Hazardous high water conditions continued through the end of the month for eastern Willacy County, where high water remained on roadways, across agricultural fields, and in and around residences and businesses.

**An upper level trough slid across the southwestern U.S. and northern Mexico inducing an intensifying surface and low level low pressure trough and increasing southerly flow bringing deep tropical moisture to the area. Thunderstorms developed over northern Mexico and turned into a mesoscale convective system over Brownsville and moved north over Willacy County dropping another two to four inches of rain fell across already saturated grounds. This additional rainfall led to more flash flooding for Willacy County.**

**HIDALGO COUNTY --- 33.0 ESE MERCEDES OLD REB ARP [25.92, -97.42]**

10/30/15 10:30 CST	10K	Lightning
10/30/15 10:30 CST	0	Source: NWS Employee

Lightning struck the KBRO radar dome, damaging circuit boards and rendering the radar inoperable.

**CAMERON COUNTY --- 7.7 SSE (BRO)BROWNSVILLE ARP [25.82, -97.37], 4.6 E (BRO)BROWNSVILLE ARP [25.91, -97.35], 1.1 NE PORT BROWNSVILLE [25.96, -97.41], 1.6 SE EVAN [25.96, -97.49], 2.0 SW VILLA NUEVA [25.93, -97.59]**

10/30/15 11:00 CST	0.10M	Flash Flood (due to Heavy Rain)
10/30/15 19:00 CST	0	Source: Emergency Manager

Heavy and persistent rain fell across the City of Brownsville, mainly from downtown east towards the Port of Brownsville, and including all of the neighborhoods in Southmost, which took the brunt of the heavy rainfall. Four to seven inches of rain fell, with highest totals in the more densely populated sections of town where poor drainage is more of an issue as well. The heaviest rainfall, four to six inches, fell in a two to three hour window and flooding rapidly ensued, transitioning from nuisance to more life-threatening in less than an hour. Within an hour feet of water were inundating some roads and by three hours later up to 5 feet of water covered one of the most prone areas of town – the "Four Corners" area where State Road 4 (International Blvd.) intersects State Road 48 (Boca Chica Blvd./Padre Island Highway). Neighborhood roads in Southmost were inundated with two to three feet of water, and dozens of homes and businesses flooded due to a combination of high water that filtered into homes and vehicles that created waves of water which surged into them. At Brownsville/South Padre Island International Airport, the 6.55 inches of rainfall was reported.

**An upper level trough slid across the southwestern U.S. and northern Mexico inducing an intensifying surface and low level low pressure trough and increasing southerly flow bringing deep tropical moisture to the area. Thunderstorms developed over northern Mexico and turned into a mesoscale convective system over Brownsville. Citywide four to seven inches of rain fell within a two to three hour window causing flash flooding across Brownsville. Many roads were inundated with two to three feet of water and dozens of homes and businesses were flooded. The rainfall was accompanied by excessive, nearly continuous cloud to ground lightning.**