

Storm Data and Unusual Weather Phenomena - August 2008

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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TEXAS, South

HIDALGO COUNTY --- 0.6 S MOORE AFB [26.44, -98.13]

	08/14/08 15:45 CST	0	Thunderstorm Wind (EG 57 kt)
	08/14/08 15:47 CST	0	Source: AWOS

A strong thunderstorm produced a brief microburst from an outflow which was measured at 57 knots at Edinburg International Airport (KEBG).

Thunderstorms moved across Hidalgo County, producing heavy rain and gusty winds, along with a brief microburst near Edinburg. The Brownsville Doppler Radar indicated rainfall rates up to three inches per hour over portions of eastern and central Hidalgo County.

ZAPATA COUNTY --- 0.6 E ESCOBAS [27.07, -99.01]

	08/17/08 16:16 CST	10K	Lightning
	08/17/08 16:25 CST	0	Source: Law Enforcement

The Zapata County Sheriff's Department received a report of lightning striking a salt water storage tank near Escoba. The storage tank exploded and started a grass fire.

Thunderstorms moved across portions of Zapata County, producing heavy rains and frequent lightning. The Doppler radar at Brownsville indicated rainfall rates of up to three inches per hour over portions of Zapata County.

STARR COUNTY --- ESCOBARES [26.42, -98.97], 1.0 NE GARCENO [26.41, -98.92], 1.0 SE ROSITA [26.39, -98.91], 2.0 SSE ROMA [26.39, -99.01], 0.5 E ROMA [26.42, -99.01]

	08/18/08 08:45 CST	0.50M	Flash Flood (due to Heavy Rain)
	08/18/08 11:59 CST	0	Source: Law Enforcement

Torrential rainfall of at least 8 to 10 inches, but perhaps locally 12 inches, produced significant flash flooding from mid morning through early afternoon of the 18th in a pocket of Starr County along Federal Highway 83, stretching from the east side of Roma through Garceño and Escobares. Initial urban flooding as far east as the Los Lomas colonia near Rio Grande City soon evolved into a flash flood. The Roma Police Department reported one to one and a half feet of water throughout the city, with locally higher amounts, which has been confirmed by a number of home videos.

Major flash flooding developed in these areas when several Arroyos, including the Arroyo Quiote (east of Rosita), Arroyo Los Morenos (near Escobares), and Arroyo Grande temporarily became raging rivers and aggravated the already high water. Starr County Emergency Management officials estimated at least 1100 homes had some degree of flooding ranging from 2 to 3 inches up to 5 feet at the peak of the flooding. A number of these homes were in newer communities near the Arroyo. First responders evacuated 234 or more people from the flooding areas.

Structural damage and repair costs were estimated to be in excess of one million dollars.

ZAPATA COUNTY --- 4.0 NNW FALCON [26.68, -99.10], 2.0 S FALCON [26.60, -99.08]

	08/18/08 09:15 CST	0	Heavy Rain
	08/18/08 12:00 CST	0	Source: Public

Radar data suggested that at least 3 inches of rain fell in southwestern Zapata County, with perhaps 6 inches closer to Falcon Lake, between late morning until just after noon, associated with a northwest extension of the more intense convection from Starr County.

These storms likely resulting in minor flooding of some poor drainage areas. A citizen report of some flooding was received at 1220 CDT from the city of Zapata, along 9th Avenue.

Much heavier rains of more than 8 inches created severe flash flooding just east of Roma, associated with the core of the thunderstorm complex.

STARR COUNTY --- ESCOBARES [26.42, -98.97], 1.0 NE GARCENO [26.41, -98.92], 1.0 SE ROSITA [26.39, -98.91], 2.0 SSE ROMA [26.39, -99.01], 0.5 E ROMA [26.42, -99.01]

	08/18/08 12:00 CST	0.70M	Flood (due to Heavy Rain)
	08/18/08 15:00 CST	0	Source: County Official

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Though the rains tapered off shortly after noon, and sunshine peeked through the clouds during later in the day, floodwaters continued to cover much of Roma, but particularly Escobares and Garceno, as Arroyo Quiote continued to rise and remain in flood for several hours after the rains ended. Farm-to-Market Road 650 was closed due to the high water covering the roadway, and numerous local roads and some major thoroughfares were closed due to flooding.

Federal Highway 83, the primary east-west highway connecting the Upper Rio Grande Valley with the Lower Rio Grande Valley, was closed with up to three feet of water covering portions of the highway into the evening of the 18th. Total structural damage and repair costs were estimated to be in excess of one million dollars from the entire flood episode. At the peak of the flash flooding and areal flooding, an estimated 500 water rescues were undertaken by emergency management personnel.

HIDALGO COUNTY --- (MFE)MILLER INTL ARP [26.17, -98.23], 1.9 ENE MISSION [26.23, -98.29]

08/18/08 16:53 CST	0	Heavy Rain
08/18/08 21:11 CST	0	Source: CoCoRaHS

Developing multi-cellular clusters of intense thunderstorms moved slowly across Hidalgo, Mission, Sharyland, and west McAllen during the early to mid evening of the 18th, dropping copious rainfall in a 3 to 5 hour period, but not producing anything more than nuisance minor flooding as of this writing.

The evening rain dump, combined with moderate to locally heavy amounts during the early morning hours, left up to 8 inches for the calendar day. Daily rainfall totals include a record 5.38 inches at McAllen/Miller International Airport, and between 4.69 and 5.10 near Mission. Of the 5.38 which fell at Miller Airport, 4.46 of it occurred roughly between 6 PM and 10 PM CDT.

A stationary complex of thunderstorms dumped an estimated 8 to 10 inches, with pockets of a foot or more (12 inches) of rainfall, near and just east of Roma between daybreak and noon, producing widespread flash and areal flooding beginning during the mid morning of the 18th, and continuing through mid to late afternoon. The complex was the result of the combination of an upper level disturbance acting on a plume of deep tropical moisture, which enhanced the lifting of this moisture through a low level southeasterly jet streak moving from the Lower Rio Grande Valley northwest into the Rio Grande Plains and Rio Grande Highlands. Conditions began to improve by late afternoon, well after the rains had ended.

Farther east, development of intense thunderstorms in northwestern Tamaulipas province, Mexico, eased north into southern Hidalgo County during the evening, dropping at least 4 to 6 inches in a 3 hour period.

ZAPATA COUNTY --- 4.0 WNW ZAPATA [26.92, -99.29], 1.4 ENE FALCON RES SOUTH [26.64, -99.18], 1.4 ENE FALCON [26.64, -99.06], 3.0 N ZAPATA [26.94, -99.23]

08/22/08 18:37 CST	5K	Flash Flood (due to Heavy Rain)
08/22/08 20:30 CST	0	Source: Fire Department/Rescue

Developing thunderstorms that initially affected Starr County during the late afternoon of the 22nd gradually spread north, generally along Federal Highway 83, helping to develop other torrential rains into western Zapata County. The Zapata fire department reported widespread flooding in the town of Zapata, ongoing at 730 PM CDT. There was likely additional road flooding along portions of Federal Highway 83 between the Falcon Dam area and Zapata, where some of the heavier rains developed, into the mid evening.

STARR COUNTY --- 1.0 SW ROMA [26.41, -99.03], 2.0 SE ROMA [26.40, -99.00], 0.7 N LOS SAENZ [26.41, -99.00], 3.0 NE FALCON HGTS [26.58, -99.10], 0.7 N ROMA ARPT [26.59, -99.13], 0.7 N FALCON HGTS [26.56, -99.13]

08/22/08 19:30 CST	10K	Flash Flood (due to Heavy Rain)
08/22/08 21:45 CST	0	Source: Law Enforcement

Numerous thunderstorms developing in Starr and Zapata County during the late afternoon of the 22nd merged into a relatively small, but intense, complex across extreme western and southwestern Starr County, extending from across the west side of Roma northward toward, but just south, of Falcon Dam. Thankfully for residents living in the east side of Roma, extending into Escobares and Garceño, these torrential rains - estimated to be at least 7 inches or more in a few spots - never stretched east toward previously swollen arroyos from the east side of Roma toward Escobares and Garceno.

While these torrential rains caused widespread street flooding in the western and northwestern portions of Roma (along the northward bend in Highway 83), as reported by law enforcement, no structures were threatened. Lighter rains followed overnight into early Saturday in Starr County, with little additional impact.

The heaviest rains, perhaps nearing 9 inches, fell just across the Rio Grande in Ciudad Aleman, Mexico. No information on impacts to this location was received by the NWS office in Brownsville.

STARR COUNTY --- 0.8 ENE LOS SAENZ [26.41, -98.99]

08/22/08 20:04 CST	1K	Lightning
08/22/08 20:10 CST	0	Source: Law Enforcement

The Roma police department reported the police station was hit by a lightning strike at little after 9 PM CDT, which damaged equipment. The police radios sustained damage.

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Another vigorous upper level disturbance dropped southward from western Texas into Northern Mexico, contributing to the development of another complex of strong thunderstorms during the afternoon and evening of August 22nd across already waterlogged southwestern Starr County, extending northward into southern and central Zapata County.

This complex once again dropped torrential rains in the middle Rio Grande Valley/Rio Grande Plains, this time favoring locations from Roma to points north and west, extending Ciudad Aleman, Mexico on the other side of the Rio Grande, and northward along Federal Highway 83 toward Falcon Heights and into Zapata County near the river.

ZAPATA COUNTY --- SAN YGNACIO [27.05, -99.45], 5.0 NW ZAPATA ARPT [26.93, -99.34], 5.0 N ZAPATA ARPT [26.95, -99.28], 2.0 NE SAN YGNACIO [27.07, -99.43]

08/23/08 12:30 CST	1K	Flash Flood (due to Heavy Rain)
08/23/08 13:30 CST	0	Source: Emergency Manager

Water and mud was covering portions of US Highway 83 near and north of San Ygnacio as a result of thunderstorms which produced heavy rainfall in the area during the afternoon. Water was also flowing across the highway during this time, as well.

CAMERON COUNTY --- 2.0 NW LA FERIA [26.17, -97.85], 2.0 NE LA FERIA [26.17, -97.81], 4.0 E SANTA MARIA [26.08, -97.79], 2.0 NNE SANTA MARIA [26.11, -97.84]

08/23/08 15:00 CST	5K	Flash Flood (due to Heavy Rain)
08/23/08 16:30 CST	0	Source: Unknown

Three separate intense thunderstorm cells developed near the Cameron/Hidalgo County line just north of the Rio Grande between 2 PM CDT and 4 PM CDT, each tracking northward and dumping heavy rains over western Cameron County, generally between Santa Maria and La FERIA. Doppler radar estimated 4 to 5 inches of rainfall over prior flooded poor drainage areas from Hurricane Dolly, exactly a month earlier, over and just south of La FERIA. It is likely that additional flooding developed in poor drainage areas affected by the heavy rainfall.

HIDALGO COUNTY --- 2.0 ENE MISSION [26.23, -98.29], 2.0 SE MISSION [26.20, -98.30], 5.0 W MISSION [26.22, -98.40], 6.0 WNW MISSION [26.25, -98.41]

08/23/08 17:15 CST	1K	Flash Flood (due to Heavy Rain)
08/23/08 18:45 CST	0	Source: Emergency Manager

Slow moving thunderstorms with torrential rains affected portions of south central Hidalgo County which had only recently been recovering from floodwaters associated with Hurricane Dolly. In Mission, two feet of water was reported flowing across Inspiration Road; the road had to be barricaded due to the flooding. In nearby San Juan, flood waters of unknown depth closed down Cesar Chavez Road between Sioux and Eldora; however, this situation was likely related to prior events. According to law enforcement, several colonias also dealt with some flooding issues, mainly west of Edinburg.

Persisting impulses of weak upper level energy stretching from the Rio Grande Plains and Rio Grande Highlands into northern Mexico continued to produce scattered to locally numerous thunderstorms during the afternoon hours. While more isolated than on the 22nd, locally heavy rain caused additional flooding in Zapata County, and a separate cell exacerbated poor drainage flooding from Dolly farther east in Hidalgo County.

STARR COUNTY --- 2.0 NE ESCOBARES [26.44, -98.95], EL SAUZ [26.58, -98.87], 7.0 W EL SAUZ [26.58, -98.98], ROMA [26.42, -99.02], 3.0 SE ROMA [26.39, -98.99], 1.0 SSE ESCOBARES [26.41, -98.96]

08/24/08 05:45 CST	25K	Flash Flood (due to Heavy Rain)
08/24/08 08:30 CST	0	Source: Emergency Manager

Torrential rains redeveloped during the pre dawn hours in western Jim Hogg, much of Zapata, and northwest Starr County, early on the 24th. Rainfall estimated to be at least 4 to 6 inches, perhaps more, flowed south out of the El Sauz/San Carlos area and soon reached previously swollen Arroyo Los Morenos, which soon overtopped its banks once again, possibly flooding up to six homes in Escobares.

An additional band of heavy rain likely dropped another 1 to 2 inches or more across water logged neighborhoods in and near Roma, along Federal Highway 83 between 9 and 10 AM CDT, further exacerbating the flood conditions which were already in place.

STARR COUNTY --- 6.0 NW ROMA [26.48, -99.09], 2.0 WSW ROMA [26.41, -99.05], 2.0 SE ROMA [26.40, -99.00], 2.0 ESE GARCENO [26.39, -98.90], 3.0 N GARCENO [26.44, -98.93]

08/24/08 15:30 CST	50K	Flash Flood (due to Heavy Rain)
08/24/08 17:59 CST	0	Source: Emergency Manager

Only a few hours after rains had tapered off Starr County, another complex of thunderstorms crept into the already flooded areas of southwestern portions of the area, and an additional 4 inches or more fell in or near areas impacted by the original floods during the evening of the 22nd, causing perhaps up to eight or nine neighborhoods to have a number of road closures, as well as homes having water pushed into them by passing vehicles. After the rains subsided, the event evolved into an area wide flood which continued well into the night, requiring additional water rescues.

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STARR COUNTY --- 6.0 NW ROMA [26.48, -99.09], 2.0 WSW ROMA [26.41, -99.05], 2.0 SE ROMA [26.40, -99.00], 2.0 ESE GARCENO [26.39, -98.90], 3.0 N GARCENO [26.44, -98.93]				
	08/24/08 18:00 CST		0.15M	Flood (due to Heavy Rain)
	08/25/08 12:00 CST		0	Source: Emergency Manager

After the rains had long ended, remaining flood waters around and near the city of Roma continued to remain an issue for many. At least eight residents were rescued from the Las Flores subdivision, and a number of residents in the Robinson subdivision self evacuated as water continued to rise or remain high. Another resident was evacuated off of Ranchito Street from high water in a residence, and a rescue call was received for four children who may have been affected by the flood waters; thankfully, all were found unharmed.

Aircraft video confirmed that high standing water continued well into the 25th in many neighborhoods, particularly those which received the heaviest rains between the 22nd and 24th and were either low lying or had poorly draining streets. Other affected streets were caked with mud. While most of the flooded roads and residences had 2 feet or less of water in them on the 25th, some pockets of 3 feet of water may have remained.

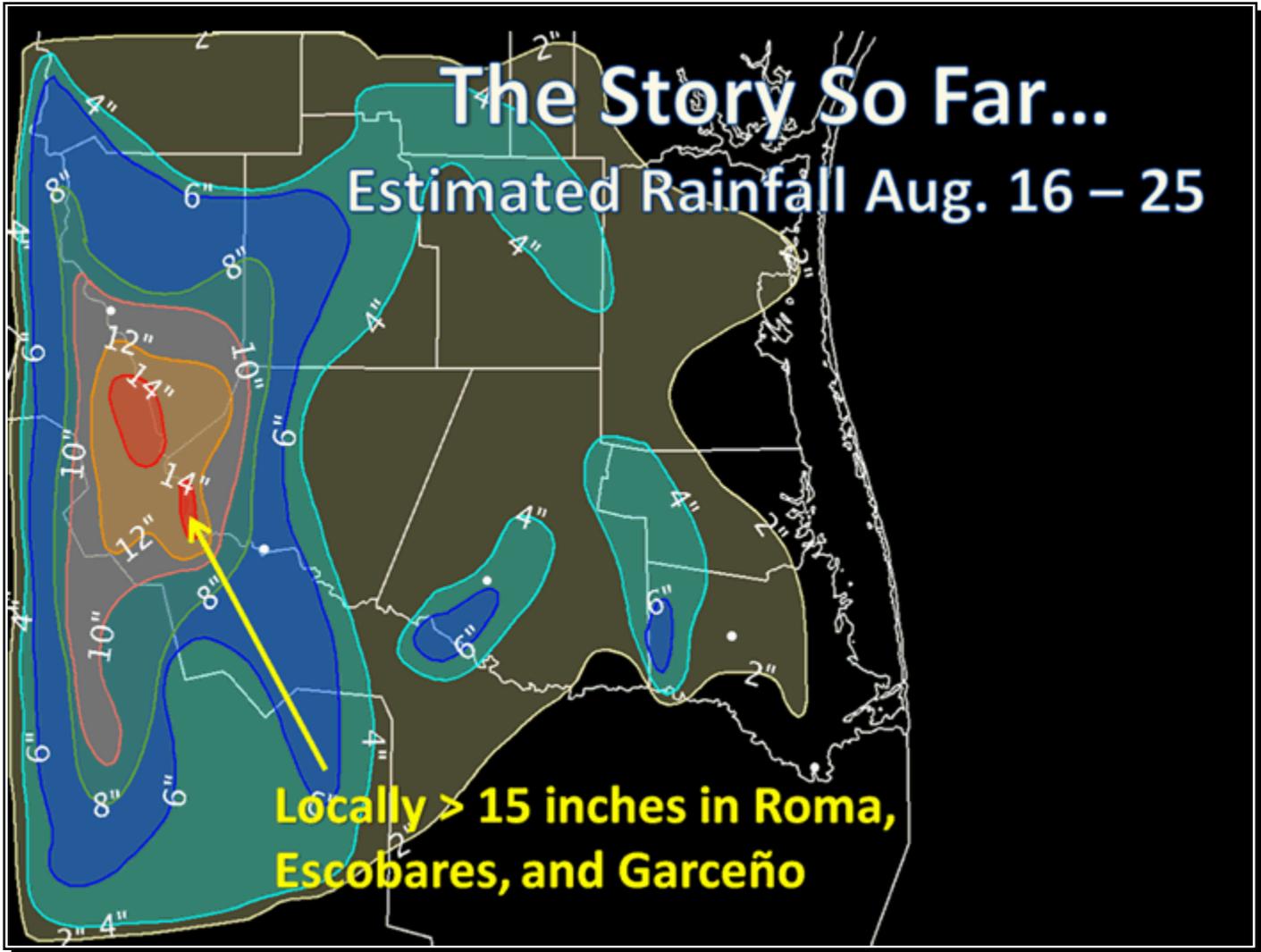
At least 67 residents sought shelter during the night, with several remaining for the next few days as the flood waters gradually receded.

Continuing impulses of energy rotating around the larger upper level disturbance just wouldn't let go on August 24th, and one final round of torrential rains affected the western Lower Rio Grande Valley beginning in the overnight and pre dawn hours in western Jim Hogg, much of Zapata, and northwest Starr County, tapered off briefly during the mid to late morning, but, unfortunately, returned during the late afternoon and evening. The combination of initial rainfall near the "head" of several arroyos in northwest and central Starr County, which flowed southward toward previously flooded areas of Roma, with the later rains which pounded the west side of Roma, caused a resurgence of flooding in all of these areas once again.

Damage assessment teams from the Red Cross had found nearly 1000 (981) homes to be impacted by the flooding for the entire week long event, with 30 homes sustaining major damage. Damages for this particular event (August 24th) were estimated based on somewhat lesser impacts than from the episode on August 17th. As the week progressed, additional isolated to scattered showers and thunderstorms affected the same areas, but caused little additional impact. The last areal coverage of thunderstorms was affecting Starr County during the evening of the 29th, and dry air gradually filtered across the area for the Labor Day Holiday Weekend.

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Estimated and Observed rainfall, August 16th-25th, for the Lower Rio Grande Valley of Deep South Texas.

WILLACY COUNTY --- 1.5 NE SEBASTIAN [26.37, -97.78]

08/26/08 15:19 CST	2K	Tornado (EF0, L: 0.10 mi , W: 25 yd)
08/26/08 15:19 CST	0	Source: Emergency Manager

Emergency management officials reported a brief touchdown of a small tornado in western Willacy County, likely between Sebastian and Lyford. The tornado produced some damage, but details were not known.

Showers and thunderstorms, developing and moving north along a differential heating boundary across western Cameron and Willacy County, likely encountered additional lift from the Gulf Coast sea breeze, leading to rapid intensification of a small cluster of storms as it moved from western Cameron into western Willacy County during the mid afternoon.

CAMERON COUNTY --- 1.1 N LA FERIA [26.17, -97.83], 0.8 N LA FERIA [26.16, -97.83], 0.9 NNE LA FERIA [26.16, -97.82], 1.1 NNE LA FERIA [26.17, -97.82]

08/27/08 14:17 CST	1K	Flash Flood (due to Heavy Rain)
08/27/08 15:00 CST	0	Source: Law Enforcement

Torrential rainfall estimated by radar to be at least 4 inches over a two hour period, combined with continued poor drainage from Hurricane Dolly back in late July, compounded by additional rains since around the 17th of August, produce an urban flood which quickly became a marginal flash flood, with waters rising to at least one to one and a half feet on Canal Street generally between 6th and 9th Street in La Feria, between 1515 and 1615 CDT. Structural or road damage details were not available as of this writing.

A weak upper level disturbance kicked off more scattered showers and thunderstorms over portions of the more populated Lower Rio Grande Valley. A slow moving intense thunderstorm moved over La Feria, an area prone to additional flooding due to residual high

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water more than a month after Hurricane Dolly, with the additional heavy rains leading to a brief, local flash flood.