

October 8-9, 2018 Eastern Permian Basin Flood Event:

During the weekend of October 6-7, 2018 an upper trough deepened over the Intermountain West with an upper level low forming over the Four Corners region of the US. The upper trough advected a deep layer southwest flow of very moist air (subtropical air mass) over West Texas.

During October 8, 2018 the upper trough moved slowly east bringing an increase in jet dynamics and lift to the area. Thunderstorms developed during the afternoon of October 8th and spread slowly east into the Permian Basin during the late afternoon and continuing through the overnight hours. Due to the subtropical nature of the air mass these thunderstorms were very efficient rain producers. Up to ten inches of rain fell across much of the Permian Basin from October 6th thru October 9th, with the majority of the rain falling on October 8-9. Several roads were flooded including major highways TX 158 and TX 137 just southeast of Midland, TX. These roads will likely be closed for an extended period as the rushing water removed much of the pavement. Several county and rural roads were also flooded and damaged. A high water rescue was successfully completed along TX 158 the morning of October 9th when a car washed 1/4 mile off the road. The individual was rescued from the top of a tree by helicopter.

National Weather Service meteorologists performed a storm survey on October 9, 2018. The survey noted extensive flooding mainly affecting TX Highways 158 (the main highway between Midland and Garden City) and TX 137.

Figure 1 shows the area of the storm survey. Figure 2 shows the 24 hour rainfall total between 7:00 am CDT October 8 thru 7:00 am CDT October 9. Figures 3 and 4 shows the Base Reflectivity images during the heaviest rainfall. Figure 5 shows extensive damage to the roadway on TX 158. Figures 6 and 7 shows a helicopter perspective on flooding on TX 158 and 137. Figures 8-10 shows flooding on TX 158.

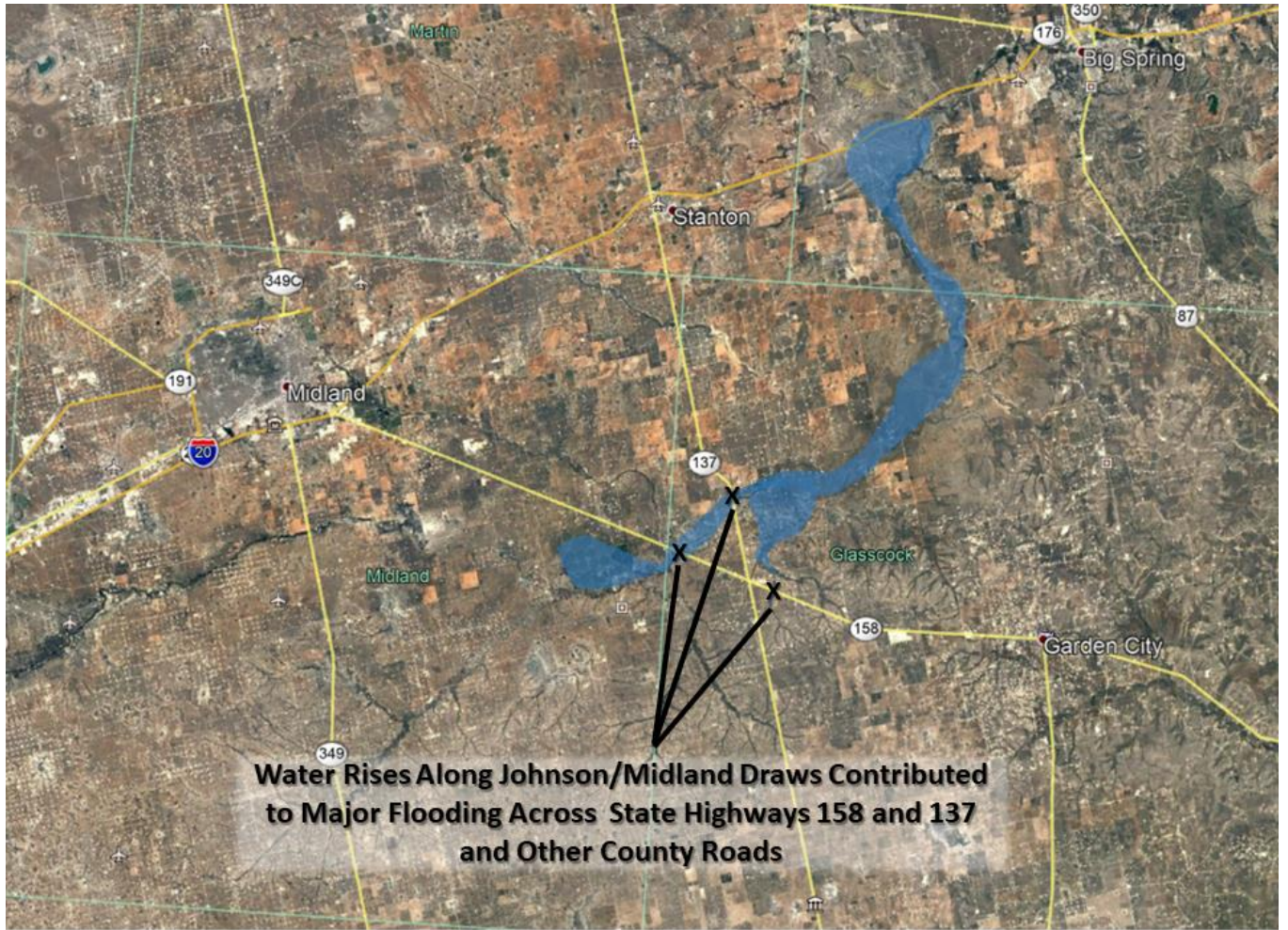


Figure 1 – Map of Storm Survey.

24 Hour Rainfall

As of 7AM CDT October 9th

Weather Forecast Office
Midland/Odessa, TX

Issued October 11, 2018 8:16 PM CT

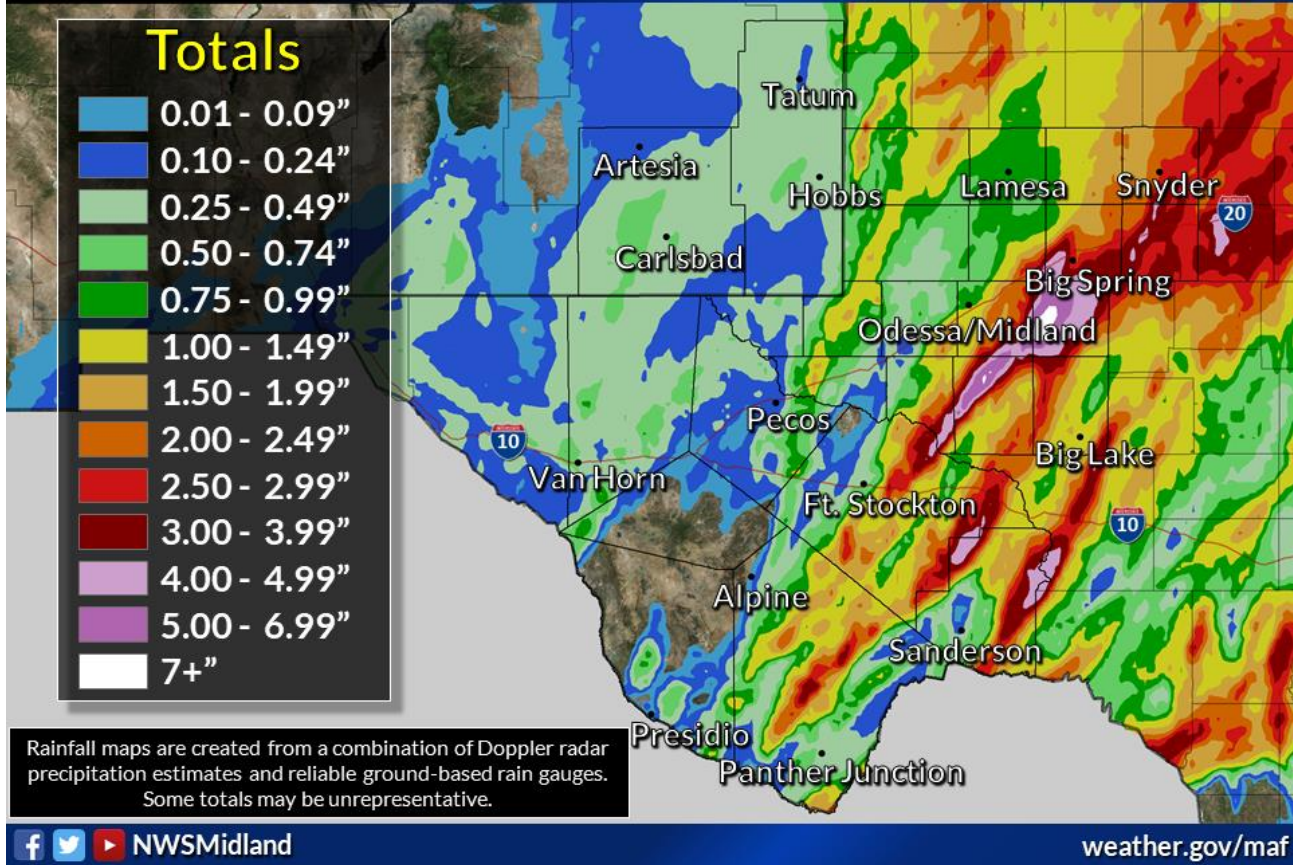


Figure 2 – 24 Hour Rainfall from 7:00 am CDT October 8 thru 7:00 am CDT October 9.

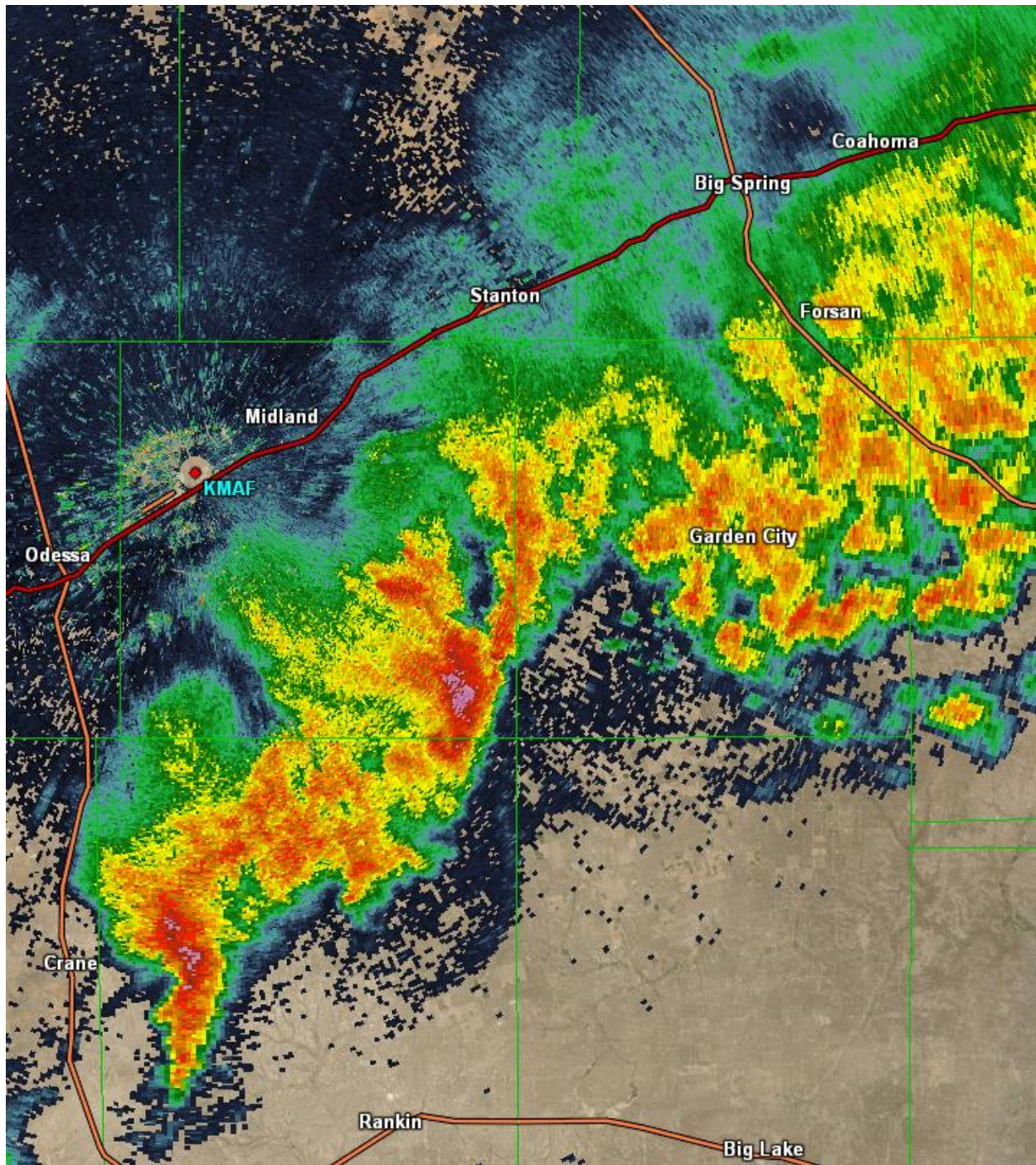


Figure 3 – Base reflectivity imagery at 7:46 pm CDT on October 8, 2018 showing heavy rainfall between Midland and Garden City, TX.

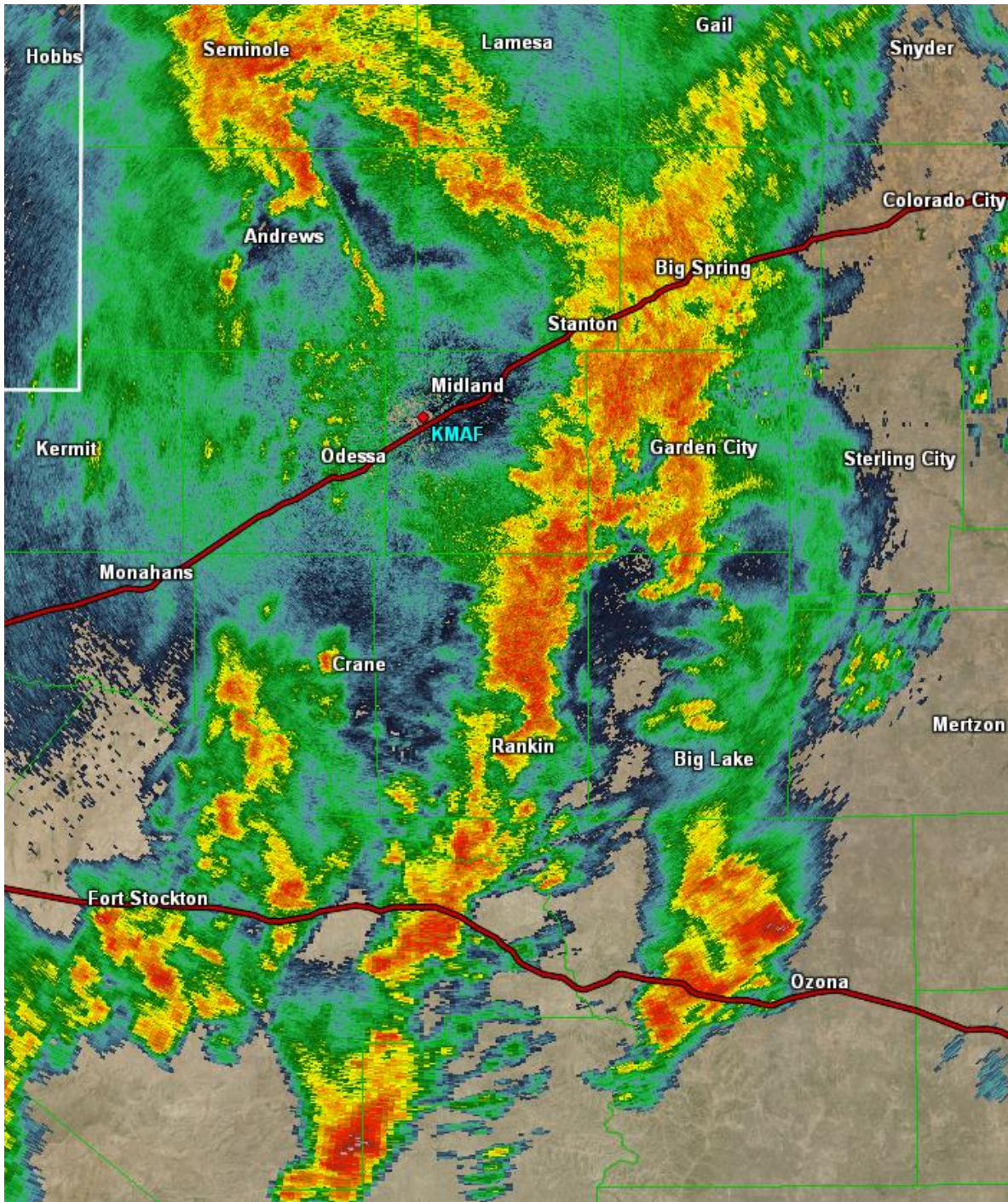


Figure 4 – Base reflectivity imagery at 11:38 pm CDT on October 8, 2018 showing heavy rainfall continuing between Midland and Garden City, TX.



Figure 5 – Major Road Damage between Midland and Garden City, Texas on TX 158.

(Courtesy of Rick Hluchan)



Figure 6 – Helicopter view of Flooding on TX 137 near the Intersection of TX 158.



Figure 7 – Helicopter view of Flooding on TX 158.



Figure 8 – Flooding along TX 158 between Midland and Garden City, Texas.

(Courtesy of Rick Hluchan)



Figure 9 – Flooding along TX 158 between Midland and Garden City, Texas.

(Courtesy of Rick Hluchan)



Figure 10 – Flooding along TX 158 between Midland and Garden City, Texas.

(Courtesy of Rick Hluchan)