

October 2011 Operations Report

October 11, 2011 – Seeding operations were conducted over Sterling (12) and Glasscock (2) Counties. 14 flares were burned within 2 small clouds.

The month of October contained 1 day of operations

Date	Flares	Counties seeded
11	14	Sterling, Glasscock
Total Flares: 14		

October held above average rainfall and above average temperatures for San Angelo and Abilene while Midland was below normal rainfall and above average temperature. San Angelo (Mathis Field) received 2.91 inches of rain and was 0.18 inches above normal for October. Abilene received 4.09 inches of rain in October and was 1.1 inches above normal. Midland received 1.46 inches of rainfall putting the rainfall total 0.27 inches below normal. All three sites are below normal for annual precipitation. San Angelo has recorded 7.92 inches, Abilene 14.72 inches and Midland 3.66 inches for year-to-date. Respectively, each site was below normal by 11.34, 7.46 and 13.31 inches for the year.

Although it was a very quiet month in terms of operations, October did provide some relief in terms of overall rainfall. The start of the month was warm and dry as the area sat under a large ridge. A deep upper trough provided favorable dynamics to allow a very potent low pressure system to form over the four corners region. This system pushed into the target area on the morning of October 8th. Plenty of moisture was available from a strong low level jet and couple that with the dynamics aloft San Angelo saw its first wide spread rain event of the winter. San Angelo received 2.91 inches of rain on the 8th while adding another 0.27 inches on the 9th. The total rainfall on the 8th of October was a new daily record. Storm totals for the area ranged from 2.5 – 5 inches which helped keep the 2011 season away from the record books for driest year on record. On the 11th of October a few storms fired up in the northwest counties. Surface convergence and temperatures in the mid-80's near Midland provided enough energy for convective storms. Seeding operations were conducted which resulted in 14 flares being burned in two smaller clouds. A warming trend continued from that point onto the 17th. A high temperature of 97°F was a record high for the day breaking the 93°F mark that was set in 1993. The intense heat didn't last long as a very strong cold front pushed through the area overnight. High temperatures on the 18th only reached 70°F, a 27°F difference within 24 hours. The frontal passage provided very gusty winds. San Angelo recorded a wind speed of 39 mph. This was the system that provided the famous haboob (dust storm) over Lubbock, TX. Another warming trend began from the 20th through the 26th before another potent cold front passed by. This time a 26 degree temperature difference was recorded as high temperatures on the 27th only reached 61°F. The front did provide some rainfall for the area, mainly from San Angelo to Big Lake and areas north. On the morning of the 29th very clear skies and calm winds set up rapid radiational cooling. Temperatures throughout the target area dipped below the freezing mark. San Angelo recorded a low temperature of 31°F as frost was reported in low lying areas. The month ended with a high temperature of 80°F on Halloween day as another large ridge placed itself over West Central Texas.

Monthly rain gauge measurements from nearest locations inside and out of the target area recorded either by the National Weather Service, Weatherbug Sites, Wunderground or Mesowest sites are provided.

NWS

2.91 Mathis Field
4.09 Abilene
3.88 Junction
1.46 Midland
1.88 Big Spring

Utah Mesonet/HADS

2.16 Barnhart
1.14 Sonora

1.77 Cox Ranch
1.80 Ozona (15mi SSW)
2.53 Sterling City
2.00 Christoval

CocoRahs

2.80 Eldorado
2.64 Knickerbocker
1.83 Ozona (26.8 SW)
1.18 Garden City

Wunderground

4.86 Mertzon

Other

2.69 San Angelo (7NW)
1.38 St. Lawrence
2.84 Big Lake
3.13 Wall