August 2009 Operations Report

August 1, 2009 - Seeding operations were conducted over Crockett (26), Irion (2), Reagan (16), Schleicher (2), Sutton (14), and Tom Green (1). 61 flares were fired within 8 clouds with multiple cells. A frontal boundary and surface heating produced seedable conditions.

August 2, 2009 - Seeding operations were conducted over Crockett (14) and Reagan (19). 33 flares were fired within 3 clouds with multiple cells. A boundary and surface heating produced seedable conditions.

August 11, 2009 - Seeding operations were conducted over Crockett (17), Irion (9), Reagan (22), Schleicher (9), Sterling (8), and Sutton (10) Counties. 70 flares were fired within 8 clouds with multiple cells. A shortwave and surface heating produced seedable conditions.

August 12, 2009 - Seeding operations were conducted over Crockett (5), Irion (11), Glasscock (2) Reagan (1), Schleicher (12), Sterling (3), Sutton (12), and Tom Green (10) Counties. 56 flares were fired within 14 clouds with multiple cells. Outflow boundaries and surface heating produced seedable conditions.

August 13, 2009 - Seeding operations were conducted over Crockett (4), Irion (1), Reagan (9), Schleicher (4), and Sutton (17) Counties. 35 flares were fired within 5 clouds with multiple cells. Outflow boundaries and surface heating produced seedable conditions.

August 15, 2009 - Seeding operations were conducted over Reagan (22), Sterling (26), and Tom Green (4) Counties. 52 flares were fired within 7 clouds, some with multiple cells. A surface trough and surface heating produced seedable conditions.

August 16, 2009 - Seeding operations were conducted over Glasscock (4) County. 4 flares were fired within 1 cloud with a couple cells. Surface heating produced marginal short-lived clouds.

August 20, 2009 - Seeding operations were conducted over Glasscock (4), Schleicher (8), Sterling (8), and Tom Green (5) Counties. 25 flares were fired within 4 clouds. An approaching front and surface heating produced seedable clouds.

August 21, 2009 - Seeding operations were conducted over Crockett (2) County. 2 flares were fired within 1 small cloud. Remnant frontal boundary and surface heating produced seedable clouds.

August 22, 2009 - Seeding operations were conducted over Crockett (2), Glasscock (2), Irion (8), Reagan (21), Schleicher (2), Sterling (16), and Tom Green (4) Counties. 55 flares were fired within 8 clouds with multiple cells.

August 23, 2009 - Seeding operations were conducted over Schleicher (8) County. 8 flares were fired within 2 small clouds. Surface heating produced marginally seedable clouds.

August 27, 2009 - Seeding operations were conducted over Crockett (36), Irion (20), Reagan (6), Schleicher (5), Sterling (4), Sutton (13), and Tom Green (16) Counties. 100 flares were fired within 10 clouds with multiple cells. Surface heating and a frontal boundary produced thunderstorms across the target.

August 28, 2009 - Seeding operations were conducted over Glasscock (9), Irion (8), Reagan (18), and Sterling (17) Counties. 42 flares were fired within 10 clouds with multiple cells. Surface heating and a shortwave trough produced thunderstorms across the target. This is the thirteenth day for seeding in August and 48th day for seeding during the season.

The month of August contained 13 days of operations

Date	Flares	Counties seeded
1	61	Crockett, Irion, Reagan, Schleicher, Sutton, Tom Green
2	33	Crockett, Reagan
11	70	Crockett, Irion, Reagan, Schleicher, Sterling, Sutton
12	56	Crockett, Irion, Glasscock, Reagan, Schleicher, Sterling, Sutton, Tom Green
13	35	Crockett, Irion, Reagan, Schleicher, Sutton
15	52 +2H	Reagan, Sterling, Tom Green
16	4	Glasscock
20	25 +2H	Glasscock, Schleicher, Sterling, Tom Green
21	2	Crockett
22	55	Crockett, Irion, Glasscock, Reagan, Schleicher, Sterling, Tom Green
23	8	Schleicher
27	100	Crockett, Irion, Reagan, Schleicher, Sterling, Sutton, Tom Green
28	42	Glasscock, Irion, Reagan, Sterling
Total Flares: 543		

August 2009 began as July had left off with a frontal boundary lingering across west-central Texas and a large ridge over the Desert Southwest pushing northwesterly driven shortwaves across the region. The ridge moved over western Texas during the first week of the month and ceased thunderstorm activity over much of the region for the following week. Thunderstorm activity returned to parts of West Texas mid-month while still under a ridge. Surface trough and lingering frontal boundary promoted thunderstorms over a six-day period. The upper ridge strengthened again and persisted over the region through the next several days. While the ridge maintained position of the region, a frontal boundary moved across Northwest Texas and meandered over central Texas allowing for marginal thunderstorms over a four-day period between the 20th and 23rd pushing the seasonal operations to 46 days. A strong ridge returned to the region once again during the last full week with a trough digging into the Texas Panhandle four days later. Seedable conditions were present for two days to end off the month with 13 operational days. The ridge built in again during the last weekend of the month. Four hygroscopic flares were burned within four randomized cases in addition to regular Glaciogenic seeding during two operational seeding days.

Rainfall in August was on the shy side over most of the target area. Most of the months seeded thunderstorms were outside the reach of rain gauges. Mathis Field in San Angelo recorded 1.89 inches and 15.27 for the year. Midland International recorded .03 inches and 10.47 for the year. Abilene recorded 1.25 inches in August and 12.72 inches this year. Monthly departures from normal were: Abilene -1.38, San Angelo -.16, and Midland –1.74. Annual departures from normal were: Abilene –2.68, San Angelo +1.92, and Midland +.98.

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

1.89	Mathis Field
1.25	Abilene
0.04	Junction
0.03	Midland
0.59	Big Spring
0.27	Sonora

Wunderground

1.27	Sterling City
0.59	Mertzon

CocoRahs

0.05	Eldorado
1.35	Knickerbocker
0.15	Ozona (26 SW)
0.00	Iraan
1.03	Garden City
0.48	Sheffield

Utah Mesonet

0.70	Barnhart
1.59	Cox Ranch
0.00	Ozona (15mi SSW)
2.05	Iraan

Other

0.71	San Angelo (7NW)
0.95	St. Lawrence
0.79	Mertzon