

WEST TEXAS WEATHER MODIFICATION ASSOCIATION - SAN ANGELO, TEXAS

SEEDING REPORT - May 15, 2018

SYNOPTIC/MESOSCALE CONDITIONS:

Upper level pattern will not be as supportive for t-storm development as yesterday. Weak ridging has filled in over the region and should keep at least the first part of the day dry. However, the dryline will remain in place just west of the target area with a warm and moist atmosphere ahead of it. We could see CAPE values climb back into the 3k J/Kg range once again with enhanced mid-level instability due to cool air aloft left behind from yesterday's convection. Despite the abundance of convection yesterday, the HRRR did overplay the scenario a bit. However, the HRRR and WRF are in similar agreement with convection taking place in nearly the same areas today due to the enhanced cool air aloft. Likely storm chances will remain in the forecast for today with the bulk of the activity along and north of a line from San Angelo to Garden City, mainly after 2PM. However, some convection off the mountains could slide over parts of the eastern Trans-Pecos and impact Crockett County.

LIFTING MECHANISM:

Dryline

THERMODYNAMIC INDICES (12Z KMAF)

Freezing Level (m)	4363	-15°C Height (m)	6024
Precipitable Water (inches)	0.73	CAPE (J/Kg)	426
LCL	1296	CINH (J/Kg)	405
CCL	3598	LI(°C)	-5.3
MAF ICA	8.2	PB	5
Cloud Base (meters)	2752	DRT ICA	2.64
Warm Cloud Depth (meters)	1610	Cloud Base Temp (°C)	13

DISCUSSION:

18Z analysis already shows an eroding cap across the region with CAPE values in the 2.5-3.5k J/Kg range. A fair-weather cu field has developed across extreme eastern sections of the target area. Meanwhile, several storms have fired up across Pecos County but have made very little movement over the last hour. The dryline is making eastward progress but is still slow to move. At this point it is near a line from Odessa southwest to Fort Stockton. As this boundary moves further east and additional heating is supplied, storm development will quickly take place. HRRR model still seems fast with storm initiation, suggesting development by 2PM. However, no cu in the areas of concern have developed yet. Still, will put pilots on standby around 2PM or at first sign of cu development where convergence is taking place. At 19Z, a weak outflow boundary was beginning to show itself along a line from Abilene to Robert Lee back north towards Big Spring. I expect this would be the best shot for storm chances, at this point. SPC put out an MD for the area with concerns of developing storms in the next few hours. I'll keep an eye on that outflow boundary and get pilots in order when needed. Finally, at 1948Z, cu began to grow vertically across northern sections of Sterling County. Pilot was called airborne at this time. Additionally, it appears the dryline has pushed into the target area and is now along a line from Sterling City to Iraan. As pilot got airborne, Sterling County is only looking more favorable. However, latest sat imagery was showing shadows far displaced from the clouds. It may be that these are high based. Pilot approached storm with bases just over 9kft. We'll see this cell as well as others moving in from the north. Additionally, we need to keep an eye on storm approaching Crockett County from the west. However, this has been a long-lived cell and is showing signs of falling apart. We'll remain focus on Sterling County, for now. At

2044Z, signs of more development were taking place. Also, the storm near Crockett appears to be heating up again. Second pilot will get airborne as he is available, around 2120Z or so. First pilot was having issues with the flare firing mechanism. He was able to get a few more dosages out but he may have to retreat to SJT and get another airplane. At 2105Z, we did have to RTB. We will swap out planes and get back at it. Second pilot got up at 2120 and we'll head back to Sterling County to finish our job there. Meanwhile, more storms in Irion and Crockett were ongoing. We'll have to be late on these at this point as first pilot switches out aircraft. Second pilot got major inflow on the storm in Sterling County. We put several dosages of flares within the storm, but a hail core still is taking shape over Sterling City. Hopefully this is just smaller hail. Storm was seeded through 21Z before it became outflow dominate. We pushed further south into Irion County and seeded the storm #685. However, it quickly blew out an outflow boundary and had ragged, rain filled bases. Pilot continued investigating while the other aircraft pushed into Crockett County. Overall, many of the storms are ragged and becoming embedded. We'll work with what we have. We had to bring 49P back due to more electronic issues. Therefore, 24P will finish the night off solo. We found plenty of inflow in storm #319 which was seeded before becoming heavily embedded. Pilot was reporting heavily rain filled bases which were getting very, very low in spots. We'll get him further east into the clear so we can recover at Ducote or SJT safely and quickly if needed. At 23Z, nothing on the east edge was seedable due to being too low and very embedded. With Ducote runway being threatened by storms, we'll go ahead and recover 24P and let the storms run their course with the flare total at 47+3H.

WATCHES/WARNINGS:

- T-Storm Warning - STERLING
- T-Storm Warning - CROCKETT
- T-Storm Warning - IRION
- T-Storm Warning - IRION/CROCKETT/SCHLEICHER

SEEDED CELL ID'S:

554	353	685	319							
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
1955	41P	IN AIR	
2035	41P	315° @ 45 nm	STERLING
2037	41P	314° @ 44 nm	STERLING
2041	41P	316° @ 42 nm	STERLING
2042	41P	316° @ 43 nm	STERLING
2054	41P	312° @ 54 nm	STERLING
2105	41P	RTB	
2120	49P	In Air	
2142	49P	312° @ 37 nm	STERLING
2143	49P	310° @ 39 nm	STERLING
2143	49P	310° @ 39 nm	STERLING
2144	49P	304° @ 38 nm	STERLING
2146	49P	306° @ 35 nm	STERLING
2152	49P	307° @ 34 nm	STERLING
2152	49P	307° @ 34 nm	STERLING
2153	49P	311° @ 33 nm	STERLING
2200	49P	298° @ 30 nm	STERLING
2205	24P	In Air	
2211	49P	273° @ 18 nm	IRION
2212	49P	271° @ 17 nm	IRION
2226	49P	245° @ 20 nm	IRION

2230	49P	RTB	
2236	24P	239° @ 29 nm	IRION
2239	24P	338° @ 31 nm	IRION
2242	24P	238° @ 26 nm	IRION
2243	24P	235° @ 25 nm	IRION
2244	24P	235° @ 24 nm	IRION
2246	24P	238° @ 21 nm	IRION
2247	24P	247° @ 20 nm	IRION
2300	24P	RTB	

Seeding operations were conducted over Sterling (26+2H) and Irion (21+1H) Counties. 47 flares plus 3 hygroscopic flares were burned within 4 clouds. This is the 3rd day for seeding in May and the 3rd day for seeding during the season.