

WEST TEXAS WEATHER MODIFICATION ASSOCIATION - SAN ANGELO, TEXAS

SEEDING REPORT - July 30, 2017

SYNOPTIC/MESOSCALE CONDITIONS:

A weak cold front will move south into the Concho Valley this afternoon before washing out near I-10 this evening. Still, any lift can trigger shower/t-storm development near peak heating due to sufficient surface moisture ahead of the boundary as well as strong surface heating. Temperatures are expected to soar into the low 100's with dew points area wide in the low to mid 60's. Latest HRRR and WRF models are not too aggressive, but do suggest thunderstorm development after 2PM today.

LIFTING MECHANISM:

Cold Front, Sufficient Surface Heating, Strong Moisture Advection

THERMODYNAMIC INDICES (12Z KMAF)

Freezing Level (m)	4833	CAPE (J/Kg)	149
Precipitable Water (inches)	1.29	CINH (J/Kg)	191
LCL	1775	LI(°C)	-0.1
CCL	3635	PB	0
MAF ICA	-1.4	DRT ICA	-2.67
Cloud Base (meters)	3098	Cloud Base Temp (°C)	13
Warm Cloud Depth (meters)	1735		

DISCUSSION:

18Z ANALYSIS PUTS THE COLD FRONT JUST NORTH OF A SAN ANGELO TO BIG SPRING LINE. CAPE VALUES PER SPC MESOANALYSIS ARE IN THE 3-4K J/KG RANGE ALONG THIS BOUNDARY WITH DEW POINTS IN THE MID TO UPPER 60'S. A ROBUST CU FIELD HAS ALREADY DEVELOPED ACROSS WESTERN PORTIONS OF THE TARGET AREA, MAINLY CROCKETT AND REAGAN COUNTIES. HOWEVER, THE AREA OF MOST INTEREST WILL BE CLOSER TO THE COLD FRONT IN STERLING COUNTY AND LATER TOM GREEN COUNTY. PILOT IS ON STANDBY AND WILL LAUNCH AS NEEDED. SAT IMAGERY BECAME FAVORABLE BY 1830Z WITH FIRST ECHOES BY 1852Z. WE DECIDED TO LAUNCH NORTHWEST TOWARDS STERLING WHICH SEEMS TO BE THE HOT SPOT DUE TO LOCATION OF THE BOUNDARY. PILOT GOT AIRBORNE AT 19Z AND BY THIS TIME WE STARTED TO SEE GOOD CONVECTION DEVELOPING. WE SHOULD HAVE PLENTY TO WORK WITH ON THE NORTHERN EDGE OF THE TARGET AREA. I WILL HAVE TO KEEP AN EYE FURTHER SOUTH WHERE POSSIBLE SHOWERS/STORMS MAY FORM, BUT BEING THIS FAR DISPLACED FROM THE BOUNDARY SHOULD KEEP THESE SHOWERS MARGINAL. I WILL HAVE A SECOND PILOT ON STANDBY IF NEEDED. FIRST CELL (270) DID NOT PRODUCE ANY INFLOW AND WAS THE MOST MARGINAL OF THE CELLS OUT THERE. WE'LL HEAD FURTHER NORTH AND INVESTIGATE CELL 281 WHICH APPEARED MORE FAVORABLE FOR SEEDING. ONE BATCH OF INFLOW WAS FOUND ON THIS CELL, BUT IT WAS PRETTY SHORT LIVED AND COULD NOT BE FOUND AGAIN. WE'LL ONCE AGAIN MOVE FURTHER NORTH AND EAST AND CHECK OUT THE NEXT CELL. WE FOUND SEVERAL SPOTS OF INFLOW HERE BEFORE IT BECAME OUTFLOW DOMINATE. RADAR IMAGERY WAS SHOWING THESE STORMS BACKING OFF A LOT AS WE CLOSED OUT THE 19Z HOUR. HOWEVER, SAT IMAGERY WAS LOOKING MORE FAVORABLE SOUTH TOWARDS SAN ANGELO AND INTO IRION AND REAGAN COUNTIES. WE'LL BEGIN OUR SOUTHWARD PROGRESSION ALONG THE BOUNDARY. THE LAST AREA WE SEEDED, STORM #249, SEEMED TO RESPOND FAVORABLY TO OUR EFFORTS. THE NORTHERN EDGE OF STERLING COUNTY SHOULD RECEIVE A GOOD AMOUNT OF RAINFALL FROM OUR EFFORTS. WE ARE NOT MOVING TOWARDS CARLSBAD AS OF 20Z. THE CELL IN TG COUNTY NEAR CARLSBAD QUICKLY DISSIPATED. THEREFORE, WE'LL HEAD WHERE THE SAT IMAGERY WAS SUGGESTING THE BEST VERTICAL DEVELOPMENT, WITHIN IRION COUNTY. STILL, VERTICAL DEVELOPMENT AND INFLOW WAS LACKING THROUGH 2030Z. WE AGGRESSIVELY WORKED A CELL THAT HAD GOOD INFLOW, BUT A VERY WEAK RADAR ECHO. IT SEEMED TO WANT TO RESPOND AS OF 2040Z. WE'LL KEEP AN EYE ON THIS WITH 8 FLARES IN IT. STORM NEVER DEVELOPED, AND WE BEGAN TO DIVE FURTHER SOUTH INTO

SCHLEICHER AND SUTTON COUNTIES. OVERALL, EVERYTHING WAS VERY MARGINAL AND HAD VERY LIMITED DEVELOPMENT. BEFORE CALLING IT A DAY, WE'LL CHECK OUT THE CELLS IN SC/SU COUNTIES. NOTHING WAS PROVIDING ANY FAVORABLE INFLOW AS OF 2130Z. WITH FUEL LOW, WE'LL HURRY BACK AND REFUEL. IF NEEDED, WE'LL RELAUNCH OR GET A SECOND PILOT UP. WITH THAT SAID, WE'LL NEED TO SEE MUCH BETTER DEVELOPMENT TO DO SO.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

281	249	N/A						
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
1900	09P	IN AIR	
1938	09P	321° @ 44 nm	STERLING
1945	09P	316° @ 49 nm	STERLING
1946	09P	316° @ 49 nm	STERLING
1947	09P	315° @ 50 nm	STERLING
2035	09P	255° @ 24 nm	IRION
2037	09P	258° @ 24 nm	IRION
2040	09P	254° @ 25 nm	IRION
2041	09P	253° @ 26 nm	IRION
2049	09P	256° @ 35 nm	IRION
2130	09P	RTB	

Seeding operations were conducted in Sterling (8) and Irion (10) Counties. 18 flares were burned within 3 clouds. This is the 8th day for seeding in July and the 18th day for seeding during the season.