

WEST TEXAS WEATHER MODIFICATION ASSOCIATION - SAN ANGELO, TEXAS

SEEDING REPORT - July 4, 2017

SYNOPTIC/MESOSCALE CONDITIONS:

The Concho Valley will be on the front side of an upper level ridge today. Therefore, quiet conditions are expected despite an abundantly moist atmosphere. A dryline to the west could complicate things for our western counties later this evening with showers/storms possible in western Crockett and/or Reagan Counties. High-res models paint different pictures with the HRRR blowing up storms across much of the western half of the target area while the WRF keeps convection to the west. With the upper ridge in place, I think it'll be tough for storms to get going. I will run with a dry forecast but let pilots know of possible ops to prevent any surprises.

LIFTING MECHANISM:

Sufficient Surface Heating

THERMODYNAMIC INDICES (12Z KMAF)

Freezing Level (m)	4821	CAPE (J/Kg)	683
Precipitable Water (inches)	1.36	CINH (J/Kg)	256
LCL	1648	LI(°C)	-3.3
CCL	3482	PB	4
MAF ICA	3.48	DRT ICA	-0.08
Cloud Base (meters)	3293	Cloud Base Temp (°C)	7.9
Warm Cloud Depth (meters)	1528		

DISCUSSION:

AN AREA OF STRONG CU BEGAN TO DEVELOP JUST NORTH OF STERLING COUNTY AROUND 20Z. SHOWERS AND STORMS WERE FIRING ALONG A WEAK BOUNDARY WHERE SURFACE HEATING WAS REACHING THE CONVECTIVE TEMP. PILOT WAS CALLED AIRBORNE AT 2015Z TO INVESTIGATE AS RADAR ECHOES BEGAN TO DEVELOP IN STERLING COUNTY. STILL, THE CORE OF ANY CONVECTION REMAINS JUST N OF THE TARGET AREA. PILOT SHOULD BE AIRBORNE AROUND 2040Z AND WILL HEAD TO STERLIGN COUNTY WHERE STATIONARY STORMS HAD DEVELOPED. SAT IMAGERY SHOWS STERLING COUNTY AND COKE COUNTY AS THE ONLY AREAS WITHIN/NEAR THE TARGET AREA OF INTEREST, FOR NOW. PILOT APPROACHED STORM RIGHT AT THE 21Z HOUR AND GOT SOLID INFLOW. INFLOW WAS THERE, BUT SHORT LIVED AND SPOTTY THROUGH THE FIRST 10 MINUTES OF OPERATIONS. WE'LL STAY IN STERLING COUNTY AND STICK WITH THIS CONVECTION UNTIL ITS THROUGH. PILOT CONTINUED SEEDING FROM THE E TO THE NW AND BACK TO THE SE. STORMS WERE EXPANDING IN AREAS HE WAS SEEDING AND WERE MOVING FURTHER SOUTH INTO STERLING CITY. SO FAR, ALL CONVECTION REMAINS NORTH OF 87 BUT THIS WILL LIKELY CHANGE AS WE HEAD INTO THE SECOND HALF OF 21Z. RESPONSE FROM SEEDING WAS LOOKING VERY FAVORABLE. ONE AREA TO THE NE OF STERLIGN COUNTY HAD NO ECHOES, BUT ONCE WE WERE SEEDING AN UPDRAFT IF THAT AREA, STORMS QUICKLY FIRED UP AND FILLED IN. AS OF 2135Z, A SOLID BAND OF SHOWERS AND STORMS WERE ONGOING ALONG AND NORTH OF RT 87 FROM THE SE CORNER OF STERLING TO THE NW CORNER OF THE COUNTY. MEANWHILE, WE'LL HAVE TO KEEP AN EYE ON SOME ISOLATED STORMS THAT MAY BE FIRING UP NEAR CARLSBAD AND JUST SOUTH OF STERLING CITY. SECOND PILOT WAS CALLED AIRBORNE AS FIRST PILOT WAS RUNNING LOW ON FLARES. HE'LL GET AIRBORNE BY 2220Z AND WILL REPLACE THE FIRST PILOT. AT 2206Z, PILOT BEGAN TO REPORT STRONG OUTFLOW COMING OUT OF STORM ON THE WEST END. WE'LL SHOOT TO THE SOUTH WHERE STORMS WERE BUILDING AHEAD OF THE MAIN LINE TOWARDS WATER VALLEY/CARLSBAD. MEANWHILE, WILL HAVE TO KEEP AN EYE ON A POSSIBLE OUTFLOW BOUNDARY FOR MORE DEVELOPMENT. SECOND PILOT RTB'D AT 2215Z WITH SECOND PILOT AIRBORNE AT 2220Z. WE'LL HEAD TO THE NW END OF TOM GREEN COUNTY AND GET ALONG THE LEADING EDGE OF THE MAIN STORM TO THE NW. AT THIS POINT, THE MAIN STORM WAS RAINING VERY HARD OVER STERLING CITY WHERE TEMPS DROPPED

TO 64°F. THE STORM WAS BEGINNING TO RAIN OUT AND SHOWED POSSIBLE DISSIPATION. STILL, WE SHOULD HAVE OTHER STORMS TO WORK WITH ONE IN THE SE CORNER OF GLASSCOCK AND ANOTHER IN SW STERLING COUNTY. WITH THAT SAID, WE STAYED ON THE MAIN STORM AS INFLOW WAS STILL PRESENT. PERHAPS WE CAN GET THE SOUTHERN EDGE OF THIS SYSTEM KICKSTARTED AGAIN NOW THAT THE OUTFLOW BOUNDARY HAS PUSHED OFF. PILOT LOST INFLOW AROUND 2250Z AND WAS HAVING TROUBLE GETTING CLOSE ENOUGH TO THE STORM FOR SEEDING DUE TO VIRGA. THEREFORE, WE'LL MOVE WEST TOWARDS MORE ISOLATED STUFF IN SW STERLING COUNTY AND THE LARGER STORM IN GLASSCOCK THAT MAY THREATEN STERLING/REAGAN COUNTIES. ALSO, I AM KEEPING AN EYE ON POSSIBLE DEVELOPMENT NEAR SAN ANGELO. PILOT WAS ABLE TO DO SOME SEEDING ON THE STORM IN SW STERLING COUNTY INTO REAGAN COUNTY. HOWEVER, INFLOW WAS SPOTTY AND AN OUTFLOW BOUNDARY POPPED OFF CAUSING A DUST STORM. PILOT REPORTED VERY ROUGH CONDITIONS SO WE PULLED OFF. EVERYTHING ELSE WAS BECOMING HEAVILY EMBEDDED WITH TEMPERATURES DROPPING AREA WIDE INTO THE 70'S. PILOT WILL BEGIN TO RTB BUT WITH CAUTION AS WE COULD HAVE SOME MORE AREAS TO LOOK AT NEAR SAN ANGELO/MERTZON. THESE NEVER DEVELOPED, AND WE DID INVESTIGATE A FEW STORMS ALONG THE OUTFLOW BOUNDARY IN IRION COUNTY. HOWEVER, THESE WERE VERY OUTFLOW DOMINATE RIGHT AWAY AND PILOT WAS ONLY GETTING -300-500 F/MIN READINGS. SO WE'LL GO AHEAD AND RTB.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

885	882	1267						
-----	-----	------	--	--	--	--	--	--

FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
2040	24P	IN AIR	
2059	24P	311° @ 36 nm	STERLING
2106	24P	314° @ 48 nm	STERLING
2108	24P	314° @ 52 nm	STERLING
2110	24P	312° @ 56 nm	STERLING
2111	24P	311° @ 56 nm	STERLING
2113	24P	309° @ 60 nm	STERLING
2116	24P	309° @ 57 nm	STERLING
2117	24P	310° @ 55 nm	STERLING
2118	24P	310° @ 54 nm	STERLING
2122	24P	310° @ 48 nm	STERLING
2123	24P	310° @ 47 nm	STERLING
2124	24P	311° @ 45 nm	STERLING
2128	24P	313° @ 42 nm	STERLING
2129	24P	313° @ 44 nm	STERLING
2132	24P	310° @ 50 nm	STERLING
2133	24P	309° @ 52 nm	STERLING
2136	24P	309° @ 52 nm	STERLING
2138	24P	311° @ 47 nm	STERLING
2140	24P	311° @ 45 nm	STERLING
2144	24P	309° @ 42 nm	STERLING
2145	24P	310° @ 40 nm	STERLING
2147	24P	311° @ 37 nm	STERLING
2150	24P	313° @ 35 nm	STERLING
2152	24P	311° @ 39 nm	STERLING
2159	24P	305° @ 39 nm	STERLING
2203	24P	307° @ 35 nm	STERLING
2209	24P	311° @ 32 nm	STERLING
2215	24P	RTB	
2220	09P	In Air	

2237	09P	283° @ 19 nm	STERLING
2239	09P	286° @ 17 nm	STERLING
2242	09P	274° @ 19 nm	STERLING
2243	09P	265° @ 33 nm	STERLING
2245	09P	265° @ 21 nm	STERLING
2247	09P	310° @ 39 nm	STERLING
2257	09P	310° @ 34 nm	STERLING
2259	09P	310° @ 34 nm	STERLING
2302	09P	283° @ 19 nm	STERLING
2303	09P	286° @ 17 nm	STERLING
2306	09P	274° @ 19 nm	STERLING
2313	09P	265° @ 33 nm	REAGAN
2220	09P	RTB	

Seeding operations were conducted over Sterling (72+4H) and Reagan (3) Counties. 75 flares plus 4 hygroscopic flares were burned within 3 clouds. This is the 1st day for seeding in July and the 11th day for seeding during the season.