

WEST TEXAS WEATHER MODIFICATION ASSOCIATION - SAN ANGELO, TEXAS

SEEDING REPORT - March 21, 2017

SYNOPTIC/MESOSCALE CONDITIONS:

Upper level ridging continues across the region today through Thursday resulting in warm and dry weather. However, the dryline did develop a few showers/storms across the Permian Basin/Trans-Pecos during the last two days. High pressure across our area should be strong enough to suppress any activity if the dryline makes it as far east as Reagan/Crockett Counties. With that said, the latest HRRR does develop a few weak showers and maybe a storm or two across our far western counties later this afternoon. I will add a very slight chance of storms and put the pilots on standby for today. This forecast will likely continue Wednesday and Thursday but I'll wait and see what the HRRR suggests on each day before adding rain chances. As we head into Thursday night, a strong upper level system will be approaching from the west. This system will bring a cold front and very favorable dynamics aloft for a likely squall line of t-storms. The big issue right now is timing, but both the GFS and ECWMF have been pretty consistent with the boundary moving through very early Friday morning clearing the area before we hit noon. This will be a fast moving system, so rainfall totals won't be too impressive. I expect dry weather for the rest of the day on Friday into and through the weekend.

LIFTING MECHANISM:

Weak Dryline, Sufficient Surface Heating

THERMODYNAMIC INDICES (12Z KMAF)

Freezing Level (m)	4200	CAPE (J/Kg)	71
Precipitable Water (inches)	0.89	CINH (J/Kg)	860
LCL	943	LI(°C)	-1
CCL	3400	PB	1
MAF ICA	10.32	DRT ICA	0.32
Cloud Base (meters)	3856	Cloud Base Temp (°C)	7
Warm Cloud Depth (meters)	344		

DISCUSSION:

A WEAK DRYLINE OFF TO OUR WEST MAY MAKE ITS WAY INTO OUR WESTERN COUNTIES LATER THIS AFTERNOON INTO THE EVENING. STILL, THE ATMOSPHERE IS HEAVILY CAPPED AS OF 18Z BUT WITH VERY IMPRESSIVE HEATING FOR MARCH, WE COULD ERODE THAT CAP BY 21/22Z. PILOT WAS PUT ON STANDBY AT 18Z IN THE EVENT SOMETHING POPS UP. MEANWHILE, THE LATEST HRRR CONTINUES TO SUGGEST VERY ISOLATED STORMS IN REAGAN/CROCKETT COUNTIES WITH POSSIBLY A FEW POP-UP STORMS FURTHER EAST. 21Z ANALYSIS SHOWED AN ERODED CAP ACROSS MUCH OF THE WTWMA TARGET AREA. HOWEVER, CONVERGENCE ALONG THE DRYLINE WAS VERY WEAK AND MORE ISOLATED TOWARDS THE TRANS-PECOS REGION OF PECOS COUNTY. THAT, HOWEVER, COULD LEAD TO DEVELOPMENT THAT SLIDES INTO CROCKETT COUNTY. AT THIS POINT, THIS IS THE BEST BET FOR ANY CHANCES OF OPERATING. WILL CONTINUE TO MONITOR AS THE AFTERNOON GOES ON. A SMALL SHOWER DID DEVELOP SHORTLY AFTER 21Z NEAR BAKERSFIELD IN PECOS COUNTY. THIS CELL IS NOT YET SEEDABLE AND IS NOT WITHIN OUR TARGET AREA, HOWEVER IT IS CLOSE ENOUGH TO KEEP A VERY CLOSE EYE ON. DEPENDING ON THE TREND OVER THE NEXT 8-16 MINUTES, PILOT MAY BE CALLED AIRBORNE TO INVESTIGATE ASSUMING IT MOVES EASTWARD. BEFORE THIS GOT CLOSE ENOUGH FOR A CALL AIRBORNE, IT QUICKLY DISSIPATED BUT DID APPEAR TO BACKBULID A BIT. BY 2130Z, A FEW CU WERE BEGINNING TO POP IN PARTS OF NORTHERN REAGAN/WESTERN STERLING COUNTIES. ALTHOUGH SHADOWS SHOW THAT THESE ARE VERY HIGH AT THIS TIME, WE AT LEAST HAVE SOME MID LEVEL INSTABILITY STARTING TO CAP INTO THE ENERGY. THESE DID FINALLY BEGIN TO DEVELOP INTO SHOWERS WHICH WAS ENOUGH TO WARRANT CALLING PILOT TO AIR AT 2215Z. HE'LL GET OFF BY 2245Z AND WILL HEAD

TO STERLING COUNTY. ONLY ISSUE THIS FAR NORTH THE IS T/TD SPREAD OF NEAR 60°. THIS COULD BE PROBLEMATIC FOR CLOUD BASES/LONGEVITY OF STORMS. PILOT HEADED TO STERLING COUTNY WHERE HE FOUND VERY HIGH BASES. HOWEVER, HE CLIMBED TO 13KFT TO REACH THEM AND BEGAN SEEDING AS INFLOW WAS PRESENT. SEEDING CONTINUED THROUGH THE FIRST PART OF THE 23Z HOUR IN STERLING COUNTY. STORM RESPONDED VERY WELL TO SEEDING BUT BEGAN TO PUSH OFF TO THE EAST. WE'LL HEAD FURTHER NORTH IN STERLING COUNTY BUT RADAR WAS SHOWING THE DRYLINE BEGINNING TO RETREAT.

WATCHES/WARNINGS:

NONE

SEEDED CELL ID'S:

230	213								
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
2240	49P	IN AIR	
2258	49P	304° @ 32 nm	STERLING
2300	49P	300° @ 34 nm	STERLING
2302	49P	303° @ 35 nm	STERLING
2308	49P	299° @ 31 nm	STERLING
2310	49P	302° @ 32 nm	STERLING
2312	49P	302° @ 31 nm	STERLING
2314	49P	302° @ 31 nm	STERLING
2315	49P	302° @ 31 nm	STERLING
2316	49P	308° @ 30 nm	STERLING
2319	49P	308° @ 31 nm	STERLING
2330	49P	313° @ 43 nm	STERLING
2333	49P	313° @ 42 nm	STERLING
2335	49P	318° @ 40 nm	STERLING
2340	49P	RTB	

Seeding operations were conducted over Sterling (26+2H) County. 26 flares plus 2 hygroscopic flares were burned within 2 clouds. This is the 1st day for seeding in March and the 1st day for seeding during the season.