

WEST TEXAS WEATHER MODIFICATION ASSOCIATION - SAN ANGELO, TEXAS

SEEDING REPORT - March 28, 2017

SYNOPTIC/MESOSCALE CONDITIONS:

Interesting forecast for the next 24 hours as southwesterly flow aloft has developed ahead of a strong upper level system. Plenty of moisture has advected into our region overnight as dew points in the low to mid 60's have developed across the region. A shortwave embedded in the flow aloft may develop isolated to scattered showers and thunderstorms around noon along and ahead of a dryline. This threat appears to be further north and east of our area, mainly around the Abilene area. Then, additional showers and storms are expected to develop closer to the dryline across our target area, roughly around 5PM. This solution is backed by both the WRF and HRRR models and is consistent with what the WRF has been suggesting the last few days. Still, likely storm chances will be in the forecast today. Depending on the amount or lack of cloud coverage, CAPE values may exceed 2k J/kg with 0-6km bulk shear values favorable for severe storm development such as hail and strong winds.

LIFTING MECHANISM:

Dryline, strong dynamics aloft.

THERMODYNAMIC INDICES (12Z KMAF)

Freezing Level (m)	4103	CAPE (J/Kg)	1379
Precipitable Water (inches)	0.79	CINH (J/Kg)	223
LCL	1253	LI (°C)	-4.7
CCL	1738	PB	5
MAF ICA	5.2	DRT ICA	-1.52
Cloud Base (meters)	2286	Cloud Base Temp (°C)	13
Warm Cloud Depth (meters)	1817		

DISCUSSION:

18Z SAT DATA SHOWS MAINLY OVERCAST SKIES ACROSS THE EASTERN HALF OF THE TARGET AREA. FURTHER WEST, HOWEVER, A LOW LEVEL CU FIELD HAS DEVELOPED HINTING AT SOME ELEVATED INSTABILITY TAKING PLACE. MESO-ANALYSIS HAS THE ATMOSPHERE PRETTY MUCH UNCAPPED WITH CAPE VALUES IN THE 2-3K J/KG RANGE. ALL THAT IS NEEDED, IS BETTER UPPER LEVEL SUPPORT WHICH APPEARS WELL ON ITS WAY PER LATEST WATER VAPOR IMAGERY. ONCE THIS UPPER LEVEL SUPPORT IS HERE, SHOWERS AND STORMS WILL QUICKLY DEVELOP, SOME BEING SEVERE. LATEST RUN OF THE HRRR SUGGESTS INITIATION AROUND 19Z. WILL PUT PILOT ON STANDBY SHORTLY IN HOPES THE HRRR IS CORRECT. STILL, LOW CLOUDS MAY BE AN ISSUE FOR LAUNCH. AT 19Z, THE SPC DID ISSUE A T-STORM WATCH FOR THE ENTIRE TARGET AREA. HOWEVER, CONVECTION REMAINED WEST AND NORTH OF THE AREA, BUT WAS RAPIDLY DEVELOPING. ONE STORM SKIRTED JUST WEST OF CROCKETT COUNTY INTO UPTON COUNTY, WHICH WAS WARNED BY THE MAF OFFICE. AS THIS SLIDES INTO UPTON COUNTY, IT MAY THREATEN THE WESTERN EDGE OF REAGAN COUNTY AT SOME POINT. PILOT IS ALREADY ON STANDBY AND MAY LAUNCH OF THIS STORM IF IT SHOWS ANY MORE EASTWARD MOVEMENT THEN IT HAS ALREADY. FURTHER EAST, A FEW SHOWERS WERE ON AND OFF, BUT ARE TOO FAR AWAY FROM THE SOURCE OF SURFACE CONVERGENCE FOR STRONG DEVELOPMENT. CLOUD COVERAGE STILL WAS VERY PERSISTENT IN SUTTON AND SCHLEICHER COUNTIES. STORM IN UPTON COUNTY STARTED TO BECOME A CONCERN FOR THE TARGET AREA AROUND 2005Z AS IT BEGAN TO SHOW SIGNS OF TURNING RIGHT. I'LL GO AHEAD AND GET THE PILOT TO LAUNCH ON THIS TO SEE IF WE CAN INTERCEPT IT WHILE IT MOVES INTO REAGAN COUNTY. PILOT GOT AIRBORNE JUST AFTER 2020Z AND WILL HEAD WEST TOWARDS REAGAN COUNTY. THE TARGET STORM IS STILL MAKING ITS ENE MOVE INTO REAGAN COUNTY, BUT IS BEGINNING TO SHOW SIGNS OF ROTATION ON THE SOUTHERN EDGE OF THE STORM. WILL HAVE TO WATCH CAREFULLY WHAT THE NWS DECIDES TO DO WITH THIS CELL. WE ARRIVED TO THIS CELL AND BEGAN SEEDIGN IMMEDIATELY. HOWEVER, VERY ROUGH

TURBULANCE MADE THE STORM DIFFICULT TO WORK. WE WERE ABLE TO GET 8 AGI FLARES WITHIN THIS CELL BUT HAD TO PULL OFF. WE'LL SEE IF IT'LL CALM DOWN SOME AND WHILE WE DO THAT WE'LL CHECK OUT ANOTHER CELL JUST OFF THE SW THAT MAY BE MERGING WITH THE PREVIOUS CELL AS A SQUALL LINE. THIS SOUTHERN EDGE OF THE SQUALL WAS SEEDED BEFORE EVERYTHING TURNED A MORE LINEAR LINE OF STORMS. WE TRIED FILLING IN THE GAPS WITH A HYGRO AROUND 2130Z. HOPEFULLY THIS DOES ITS JOB. STORM RESPONDED WELL TO HYGRO, BUT WE DID NOT SEE THE MERGE WE WERE THINKING WE COULD GET. STORM BECAME SOMEWHAT OUTFLOW DOMINATE AND EMBEDDED, SO WE WENT BACK TO THE BIGGER STORM THAT WAS NOW MOVING INTO STERLING COUNTY. THE SOUTHERN EDGE OF THIS STORM WAS SEEDED BUT AGAIN WAS VERY ROUGH. THEREFORE, WE HEADED FURTHER EAST AND GOT AHEAD OF THE STORM WHERE CONDITIONS WERE EXPECTED TO BE A BIT BETTER, AND THEY WERE. SEEDING CONTINUED INTO THE 22Z HOUR BUT THE STORM BECAME OUTFLOW DOMINATE AND PILOT COULD NO LONGER FIND INFLOW. HE WAS CALLED RTB AT 2213Z FOR FUEL/FLARES. NO OTHER PILOTS AVAILABLE AT THIS TIME, BUT NONE ARE NEEDED JUST YET.

WATCHES/WARNINGS:

T-STORM WATCH #94 - ENTIRE TARGET AREA

T-STORM WARNING - CROCKETT (FAR WESTERN/GAP FILLER FOR NWS MAF, NO IMPACT FOR CROCKETT)

T-STORM WARNING - REAGAN

T-STORM WARNING - STERLING

SEEDED CELL ID'S:

251								
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
2020	09P	IN AIR	
2059	09P	269° @ 57 nm	REAGAN
2059	09P	271° @ 58 nm	REAGAN
2104	09P	272° @ 59 nm	REAGAN
2107	09P	272° @ 60 nm	REAGAN
2113	09P	269° @ 63 nm	REAGAN
2114	09P	268° @ 64 nm	REAGAN
2118	09P	269° @ 63 nm	REAGAN
2120	09P	270° @ 63 nm	REAGAN
2126	09P	270° @ 63 nm	REAGAN
2128	09P	274° @ 61 nm	REAGAN
2131	09P	275° @ 60 nm	REAGAN
2142	09P	284° @ 52 nm	STERLING
2147	09P	288° @ 47 nm	STERLING
2147	09P	291° @ 46 nm	STERLING
2151	09P	296° @ 47 nm	STERLING
2154	09P	299° @ 47 nm	STERLING
2156	09P	296° @ 46 nm	STERLING
2200	09P	294° @ 46 nm	STERLING
2205	09P	299° @ 45 nm	STERLING
2207	09P	298° @ 45 nm	STERLING
2213	09P	RTB	

Seeding operations were conducted over Reagan (22+1H) and Sterling (18+2H) Counties. 40 flares plus 3 hygroscopic flares were burned within 1 cloud. This is the 2nd day for seeding in March and the 2nd day for seeding during the season.