

WEST TEXAS WEATHER MODIFICATION ASSOCIATION - SAN ANGELO, TEXAS

SEEDING REPORT - August 6, 2017

SYNOPTIC/MESOSCALE CONDITIONS:

A cold front will approach our northern counties later this evening resulting in isolated to widely scattered showers and thunderstorms. CAPE values ahead of this boundary will approach 2K J/Kg which will be partially capped through the afternoon. This should keep energy in check until the boundary comes through later this evening. Due to that, storms should rapidly fire when the boundary moves into the untapped energy and/or heating breaks the cap allowing for a few pre-frontal storms ahead of the boundary. The latest HRRR does show several storms firing around 2PM as the boundary tightens up along a line from Robert Lee to Sterling City. Likely rain chances will be added with a mention of possible severe weather.

LIFTING MECHANISM:

Cold Front

THERMODYNAMIC INDICES (12Z KMAF)

Freezing Level (m)	4793	CAPE (J/Kg)	386
Precipitable Water (inches)	1.39	CINH (J/Kg)	334
LCL	1312	LI(°C)	-2.9
CCL	3528	PB	3
MAF ICA	0.76	DRT ICA	1.93
Cloud Base (meters)	2801	Cloud Base Temp (°C)	13
Warm Cloud Depth (meters)	1992		

DISCUSSION:

18Z ANALYSIS KEEPS THE COLD FRONT OVER THE BIG COUNTRY STILL NORTH OF I-20. THIS BOUNDARY IS MOVING A BIT SLOWER THEN EXPECTED SO FAR, BUT SHOULD PICK UP SPEED OVER THE NEXT COUPLE OF HOURS. CAPE VALUES ARE ALREADY NEAR 2K J/KG ACROSS THE AREA BUT REMAINS PARTIALLY CAPPED. ABUNDANT MOISTURE IS IN PLACE, SO STORMS SHOULD HAVE PLENTY OF FUEL WHEN THEY DECIDE TO FIRE. LATEST HRRR KEEPS THE 19Z-20Z TIMEFRAME BEST FOR INITIATION, BUT PLACEMENT OF THE BOUNDARY COULD MEAN CLOSER TO 21Z. PILOT WILL BE ON STANDBY SHORTLY. VIS SAT REMAINS CLEAR AT THIS TIME. 19Z ANALYSIS SHOWED A BETTER ROBUST CU FIELD DEVELOPING. WITH SHOWERS NOW DEVELOPING IN STERLING COUNTY, PILOT WAS CALLED AIROBORNE AND SHOULD BE UP BY 1945Z. ALTHOUGH WE'LL TARGET THESE INITIAL CELLS, THESE ARE NOT THE MAIN TARGETS FOR THE DAY. THE EXPECTATION IS THAT BY 2030Z, WE'LL HAVE MUCH MORE WIDESPREAD AND STRONGER DEVELOPMENT. AS PILOT GOT AIBORNE AND HEADED NORTHWEST, STORMS REALLY BAPAN TO DEVELOP WELL AND INCREASE IN BOTH SIZE AND INTENSITY. WE'LL GO AS FAR EAST AS WE CAN WITHIN THE TARGET AREA AND THEN WORK OUR WAY WEST ALONG THE BOUNDARY. THE FIRST CELL WAS SEEDED AS IT ENGULFED MUCH OF THE CONVECTION AROUND IT. PILOT HAD GOOD INFLOW FOR A BIT, BUT LOST IT BY 2020Z. PILOT CONTINUED TO SEED IN STERLING COUNTY ON SEVERAL STORMS WITHIN THE LARGER SYSTEM. HOWEVER, IT BECAME OUTFLOW DOMINATE NAD LOST MOVEMENT. THEREFORE, WE'LL DIVE FURTHER SE TOWARDS SE STERLING COUNTY/IRION COUNTY. HOWEVER, WE WILL KEEP A CLOSE EYE ON THE MAIN SYSTEM IN COKE COUNTY WHICH MAY BE STARTING TO DIVE SOUTH TOWARDS SAN ANGELO. THESE CELLS HOWEVER WERE VERY SMALL RAIN SHOWERS WITH NO INFLOW. WE'LL STICK WITH THE BIG STUFF AND HEAD BACK EAST INTO NORTHERN TOM GREEN COUNTY. WE APPROACHED THIS STORM JUST AFTER 21Z. PILOT REPORTED A GREEN TINT TO THE CLOUD AND RADAR WAS SHOWING POSSIBLE HAIL NE OF GRAPE CREEK. WE'LL GET TO WORK ON A HAIL SUPPRESSION CASE. UNFORTUNATELY, INFLOW WAS HARD TO FIND DUE TO THE STORM BECOMING MOSTLY OUTFLOW DOMINATE. WE'LL KEEP WORKING TOWARDS FINDING INFLOW AS OF 2110Z. PILOT DID BEGAN TO FIND GOOD INFLOW AND WE SEEDED IT QUICKLY WITH SEVERAL GLACIGENIC FLARES AND A HYGRO. DBZ BEGAN TO FALL

BELOW 70 AND STORM SHOWED SIGNS OF FLATTENING OUT. WE'LL DIVE SOUTH AGAIN AND STAY ON THE SOUTH SIDE OF THE STORM WHERE IT CONTINUES TO BUILD. SECOND PILOT HAS BEEN CALLED AIROBORNE AND SHOULD BE UP AROUND 22Z. THE OUTFLOW BOUNDARY STORMS RAPIDLY DEVELOP, BUT DISSIPATE JUST AS FAST. MEANWHILE, MAIN SYSTEM WAS ALSO SHRINKING IN SIZE AND INTENSITY. MAY BE BEST TO WORK BACK WEST AGAIN TOWARDS WESTERN TG COUNTY. CELL 603 WAS SEEDED ON THE EAST SIDE BY THE FIRST PILOT. MEANWHILE, THE SECOND PILOT GOT AIRBORNE AND BEGAN SEEDING THE WEST SIDE. BOTH PILOTS REPORTED PLENTY OF LIGHTNING WITH TODAY'S ACTIVITY. FIRST PILOT RECOVERED AT 2215Z WHILE SECOND PILOT REMAINED IN IRION COUNTY. WE'LL CONTINUE TO SEED THIS STORM AS IT HAS A THREAT OF HAIL IT IN, UNLIKE THE REAGAN COUNTY STORM. RADAR WAS SHOWING THAT SOME OF THE CELLS WERE BEGINNING TO DISSIPATE DUE TO EXTENSIVE CLOUD COVERAGE. HOWEVER, THE STORM IN IRION COUNTY REMAINED VERY STRONG. WE'LL STICK ON THIS CELL. SECOND PILOT CONTINUED TO WORK STORM #602 BUT AT 2230Z REPORTED VERY ROUGH CONDITIONS DUE TO A SECOND STRONG OUTFLOW BOUNDARY. WITH DEVELOPMENT SPREADING EAST TOWARDS DUCOTE, WE MAY RECOVER SECOND PILOT WITH MUCH OF THE ACTIVITY EITHER WINDING DOWN OR BECOMING OUTFLOW DOMINATE. WE WENT AHEAD AND CALLED SECOND PILOT HOME DUE TO VERY ROUGH CONDITIONS AND STORMS THREATENING DUCOTE.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

321	153	738	932	602				
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
1945	09P	IN AIR	
1959	09P	316° @ 22 nm	TOM GREEN
2005	09P	319° @ 29 nm	STERLING
2008	09P	317° @ 29 nm	STERLING
2009	09P	318° @ 29 nm	STERLING
2011	09P	314° @ 30 nm	STERLING
2022	09P	318° @ 29 nm	STERLING
2031	09P	302° @ 37 nm	STERLING
2037	09P	310° @ 40 nm	STERLING
2039	09P	310° @ 38 nm	STERLING
2041	09P	310° @ 38 nm	STERLING
2044	09P	311° @ 37 nm	STERLING
2059	09P	298° @ 26 nm	STERLING
2111	09P	337° @ 14 nm	TOM GREEN
2113	09P	342° @ 14 nm	TOM GREEN
2114	09P	345° @ 15 nm	TOM GREEN
2118	09P	307° @ 07 nm	TOM GREEN
2145	24P	In Air	
2147	09P	282° @ 21 nm	IRION
2148	09P	283° @ 20 nm	IRION
2150	09P	284° @ 19 nm	IRION
2152	09P	285° @ 18 nm	IRION
2159	09P	291° @ 11 nm	TOM GREEN
2201	09P	291° @ 11 nm	TOM GREEN
2202	24P	268° @ 24 nm	IRION
2205	09P	283° @ 08 nm	TOM GREEN
2205	24P	264° @ 28 nm	IRION
2206	24P	267° @ 29 nm	IRION
2208	24P	269° @ 31 nm	IRION
2209	24P	269° @ 32 nm	IRION
2209	09P	286° @ 11 nm	TOM GREEN

2215	24P	256° @ 26 nm	IRION
2215	09P	RTB	
2216	24P	253° @ 26 nm	IRION
2217	24P	254° @ 25 nm	IRION
2222	24P	249° @ 25 nm	IRION
2223	24P	248° @ 27 nm	IRION
2228	24P	245° @ 24 nm	IRION
2235	24P	RTB	

Seeding operations were conducted in Tom Green (18+1H), Irion (30) and Sterling (24) Counties. 72 flares plus 1 hygroscopic flare was burned within 5 clouds. This is the 2nd day for seeding in August and the 21st day for seeding during the season.