

**WEST TEXAS WEATHER MODIFICATION ASSOCIATION - SAN ANGELO, TEXAS**

**SEEDING REPORT - June 19, 2017**

**SYNOPTIC/MESOSCALE CONDITIONS:**

A stationary boundary is draped across the target area this morning and is expected to drift northward through the morning. As heating takes place, the boundary will begin moving southward as a cold front and move into a moisture rich and likely unstable atmosphere. Shower and storms look likely along this boundary but with the best dynamics across the Hill County, development for the WTWMA target area will like be east of a line from Sterling City to Barnhart. I'll go with slight rain chances due to the lack of dynamic forcing aloft.

**LIFTING MECHANISM:**

Sufficient Surface Heating, Cold Front

**THERMODYNAMIC INDICES (12Z KMAF)**

Freezing Level (m)	5161	CAPE (J/Kg)	1431
Precipitable Water (inches)	1.42	CINH (J/Kg)	496
LCL	1212	LI(°C)	-2.7
CCL	1731	PB	4
MAF ICA	-3.52	DRT ICA	-5.96
Cloud Base (meters)	2686	Cloud Base Temp (°C)	18
Warm Cloud Depth (meters)	2475		

**DISCUSSION:**

A STATIONARY BOUNDARY/COLD FRONT HAS BEEN RETROGRADING TO THE NORTH ALL MORNING BUT IS FINALLY BEGINNING ITS SOUTHWARD MOVEMENT BACK INTO THE TARGET AREA. AS IT DOES, IT'LL INTERACT WITH A VERY UNSTABLE ATMOPSHERE WITH CAPE VALUES EXCEEDING 3-4K J/KG. ADDITIONALLY, CONVERGENCE ALONG THE BOUNDARY APPEARS VERY STRONG, SO SHOWERS AND STORMS SHOULD FIRE UP SOMETIME AROUND 19Z. AT 19Z, A FEW STORMS DID BEGIN TO DEVELOP WITHIN COKE COUNTY. ONE LOOKED A BIT BETTER AND WAS THREATENING WESTERN TOM GREEN COUNTY. THEREFORE, PILOT WAS CALLED AIRBORNE TO INVESTIGATE AS WE ANTICIPATE MORE DEVELOPMENT TO TAKE PLACE. ALTHOUGH BEST CHANCES REMAIN EAST, SAT IMAGERY WAS SHOWING SOME INTERESTING CU DEVELOPING FURTHER WEST INTO STERLING COUNTY. INITIAL AREA OF DEVELOPMENT HAD NO RAINSHAFTS AND VERY LIMITED VERTICAL DEVELOPMENT. PILOT SPOTTED A BETTER CLOUD A BIT FURTHER NORTH INTO COKE/STERLING COUNTY. WE'LL CHECK THIS OUT AS OF 20Z. INFLOW WAS FOUND, AND FLARES WERE FIRED. HOWEVER, NOTHING WAS ON RADAR DURING THE TIME OF SEEDING. WE'LL SEE IF ANY OF THIS CAN GET A STORM OR TWO KICKSTARTED IN STERLING COUNTY. UNFORTUNATELY, NOTHING CAME OF THIS, AND SO FAR, NOTHING IS GOING ON. WE'LL HEAD FURTEHR WEST INTO REAGAN COUNTY WHERE LATEST SAT IMAGERY IS SHOWING BETTER DEVELOPMENT. SAT IMAGERY IS CLEAR IN ST/IR/TG COUNTIES, SO WE'LL FOCUS OUR EFFORTS FURTHER WEST. AT THIS POINT, ALL INGREDIENTS ARE IN PLACE FOR STORMS, BUT WE JUST ARE NOT GETTING ANY YET. PILOT FLEW ALONG THE COLD FRONT FROM NEAR STERLING CITY TO BIG LAKE TOWARDS THE PANHANDLE OF CROCKETT COUNTY. WE WERE ABOUT TO GIVE UP, BUT RADAR BEGAN TO PICK UP SOME DECENT DEVELOPMENT JUST SE OF RANKIN. WE'LL GIVE THIS A LOOK. SEEDING TOOK PLACE ON THIS CELL JUST BEFORE 21Z. WITH SEEDING, THE STORM BEGAN TO RAPIDLY DEVELOP WHICH IS INTERESTING COMPARED TO THE OTHER CELLS WE HAVE ATTEMPTED TO WORK. THE MAIN CELL WAS SEEDED THROUGH 2110Z WITH A SECONDARY CELL FORMING OFF TO THE NE. WE'LL TRY TO GET THESE TO MERGE AS IT MOVES S INTO CROCKETT COUNTY. WE WERE ABLE TO GET THE STORMS TO SYNC UP, BUT THEY BECAME MORE RAIN SHOWER THEN CONVECTIVE IN NATURE. BASES WERE LOADED WITH VIRGA AND RAIN, HOWEVER, COMPARED TO OTHER SEEDED DEVELOPMENT WE WERE ACTUALLY ABLE TO GET WATER ON THE GROUND HERE. THESE STORMS WILL SLIDE SOUTH THROUGH THE PANHANDLE OF CROCKETT COUNTY AND POSSIBLY

INTO EASTERN PECOS COUNTY. AS PILOT RAN OUT OF INFLOW, WE DECIDED TO RTB WITH NO MORE DEVELOPMENT OUT THERE AND NO MORE EXPECTED WITHIN THE TARGET AREA.

**WATCHES/WARNINGS:**

NONE

**SEEDED CELL ID'S:**

650	657	UNNAMED						
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**FLIGHT INFORMATION:**

TIME (Z)	Plane	Flare Location	County
1945	49P	IN AIR	
2004	49P	324° @ 35 nm	STERLING
2012	49P	312° @ 37 nm	STERLING
2013	49P	308° @ 37 nm	STERLING
2014	49P	309° @ 36 nm	STERLING
2018	49P	308° @ 37 nm	STERLING
2058	49P	256° @ 73 nm	CROCKETT
2057	49P	254° @ 73 nm	CROCKETT
2102	49P	258° @ 68 nm	CROCKETT
2103	49P	258° @ 68 nm	CROCKETT
2103	49P	258° @ 68 nm	CROCKETT
2106	49P	257° @ 69 nm	CROCKETT
2107	49P	257° @ 67 nm	CROCKETT
2111	49P	255° @ 68 nm	CROCKETT
2115	49P	256° @ 68 nm	CROCKETT
2121	49P	252° @ 66 nm	REAGAN
2121	49P	252° @ 66 nm	REAGAN
2123	49P	252° @ 66 nm	REAGAN
2128	49P	251° @ 65 nm	REAGAN
2129	49P	251° @ 65 nm	REAGAN
2140	49P	RTB	

Seeding operations were conducted over Sterling (10), Crockett (26+1H) and Reagan (8+1H) Counties. 44 flares plus 2 hygroscopic flares were burned within 3 clouds. This is the 4<sup>th</sup> day for seeding in June and the 7<sup>th</sup> day for seeding during the season.