

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

**SEEDING REPORT - July 23, 2017**

**SYNOPTIC/MESOSCALE CONDITIONS:**

A moist air mass is in place with dew points area wide in the low to mid 60's. With a weakness in the ridge aloft, we should see convective activity take place this afternoon near peak heating. Precipitable water values are high, therefore storms will likely produce heavy rain and may lead to some possible heavy wind events if they can get organized. Limited CINH should mean early development which could inhibit storm lifetime as evaporative cooling takes place across the region.

**LIFTING MECHANISM:**

Sufficient Surface Heating

**THERMODYNAMIC INDICES (12Z KMAF)**

Freezing Level (m)	4782	CAPE (J/Kg)	60
Precipitable Water (inches)	1.54	CINH (J/Kg)	152
LCL	1306	LI(°C)	-0.5
CCL	3114	PB	1
MAF ICA	0.32	DRT ICA	-3.96
Cloud Base (meters)	2473	Cloud Base Temp (°C)	14
Warm Cloud Depth (meters)	2309		

**DISCUSSION:**

A BAND OF HEAVY SHOWERS WAS ONGOING ACROSS REAGAN COUNTY THROUGH 17Z. HOWEVER, SAT IMAGERY BEGAN TO SHOW A CONVECTIVE CU FIELD DEVELOPING AHEAD OF THE SHOWER ACTIVITY IN IRION COUNTY AND PARTS OF TOM GREEN AND SCHLEICHER COUNTY. THEREFORE, A PILOT WAS CALLED AIRBORNE AT 1745Z AND WE'LL HEAD TOWARDS A DEVELOPING STORM BETWEEN MERTZON AND BARNHART. PILOT ARRIVED TO FIRST TARGET AT 1815Z AND WILL FOLLOW THE EASTERN EDGE NORTHWARD. SO FAR, CLOUD BASES WERE AT 8KFT AND A SMOOTH RIDE WAS REPORTED. MEANWHILE, ADDITIONAL ACTIVITY WAS STARTING TO FIRE NOT FAR FROM HIS POSITION. IF WE DON'T GET INFLOW QUICKLY HERE, WE MAY DIVE SOUTH TOWARDS NEWER DEVELOPMENT. WITH PW VALUES SO HIGH, WE MAY STRUGGLE WITH RAIN FILLED BASES. THIS ENDED UP BEING A LARGE CLUSTER OF SHOWERS AND STORMS, WITH SOME AREAS RAINING OUT QUICKLY AND OTHERS REDEVELOPING. WE HUNG AROUND THIS SYSTEM THROUGH THE 18Z HOUR LOOKING FOR INFLOW. WE WERE ABLE TO FIND SOME, BUT IT WAS NOT THE MOST PROMISING SYSTEM WE HAVE BEEN ON. STORM IN IRION COUNTY BLEW OFF AN OUTFLOW BOUNDARY. WE WILL HAVE TO WATCH THE BOUNDARY CLOSELY FOR ANY NEW STORMS THAT MAY DEVELOP. WE SEEDED THE CELL IN IRION COUNTY SUFFICIENTLY AS WE HEAD INTO THE 19Z HOUR. THEREFORE, WE'LL DIVE SOUTH AND INVESTIGATE A FEW OUTFLOW BOUNDARY STORMS BEFORE HEADING SOUTH INTO CROCKETT COUNTY. OUTFLOW BOUNDARY STORMS WERE VERY QUICK TO DISSIPATE, THEREFORE WE'LL HEAD SOUTH TOWARDS THE CROCKETT/SCHLEICHER COUNTY BORDER. THIS CELL WAS SEEDED BEFORE IT BECAME OUTFLOW DOMINATE. WE'LL CONTINUE TO INVESTIGATE FURTHER SOUTH AS WE CONTINUE THROUGH THE 19Z HOUR. CELLS IN CROCKETT COUNTY JUST ARE NOT SEEDABLE AS THEY ARE TOO SHORT LIVED. ALTHOUGH, ONE CELL JUST NNW OF OZONA SEEMS MORE PROMISING. AT 1940Z, WE HEADED THAT WAY. ON TOP OF THAT, MAIN STORM IN IRION BLEW AN OUTFLOW BOUNDARY OFF TO THE NORTH. SOME STORMS WERE FIRING OFF THAT. WE'LL TAKE A LOOK THERE NEXT ASSUMING THOSE STICK TOGETHER LONG THEN THE OUTFLOW THAT DEVELOPED SOUTH OF THIS SYSTEM. WE DID FIND A BATCH OF INFLOW IN THE CELL NNW OF OZONA, BUT IT ALSO BEGAN TO DISSIPATE. WE ARE BEGINNING TO SEE A CLOUD SHEILD THE AREA FROM A LARGE SYSTEM DOWN IN PECOS COUNTY. THIS COULD BE KILLING SOME OF OUR HEATING. AT 1945Z, WE DECIDED TO HEAD BACK TOWARDS THE MAIN SYSTEM AND LOOK AT THESE STORMS MOVING INTO TG COUNTY. THE NORTHERN EDGE OF THIS SYSTEM WAS SEEDED INTO 20Z WITH HOPES OF IT IMPACTING

THE CITY OF SAN ANGELO. ANOTHER CELL DEVELOPED OFF THIS ONE. WE'LL TAKE A QUICK LOOK BUT ACTIVITY IS BEGINNING TO NEAR THE EASTERN EDGE OF OUR TARGET AREA. THIS QUICKLY DISSIPATED AS DID THE REST OF THE SYSTEM. THERE WERE MORE SHOWERS ACROSS THE REGION, MAINLY IN CROCKETT, SCHLEICHER AND SUTTON COUNTIES. RIGHT NOW, STORMS ARE SHORT-LIVED BUT A SECOND PILOT WILL BE CALLED TO INVESTIGATE THESE IF THEY STICK AROUND LONG ENOUGH. FIRST PILOT RTB'D AT 2030Z AS HE WAS LOW ON FUEL/FLARES. WE LAUNCHED A SECOND PILOT AT 2115Z TO TAKE A LOOK AT SOME CONVECTION ON SCHLEICHER AND SUTTON COUNTIES. ALTHOUGH MARGINAL, SOME OF THIS COULD BE SEEDABLE SO WE'LL HEAD SOUTH ALONG A LEADING EDGE OF A SYSTEM MOVING WEST INTO OUR AREA. ALSO, MORE CELLS ARE ALL OVER THE PLACE WEST OF THIS SYTEM INTO CROCKETT COUNTY, BUT THESE ARE MARGINAL AS WELL AS SMALL AND SHORT-LIVED. WE'LL GIVE IT ALL A LOOK. PILOT ARRIVE TO THE STORMS MOVING INTO SCHLEICHER COUNTY. HE REPORTED HEAVILY EMBEDDED CONDITIONS WITH RAIN FILLED BASES, VIRGA AND LIGHT RAIN AHEAD OF THE SYSTEM. THESE CONDITIONS ARE NOT IDEAL. WE'LL INVESTIGATE FURTHER. AS WE HEADED FURTHER SOUTH, CONDITIONS IMPROVED SOME AND WE DID FIND SOME INFLOW. WE SEEDED THIS STORM UNTIL JUST BEFORE 22Z. AT THIS POINT, IT BECAME VERY ROUGH WITH A LOT OF OUTFLOW BLOWING OFF IT. WE'LL HEAD INTO SUTTON COUNTY NOW AND FOCUS ON MORE ISOLATED CONVECTION FROM NOW ON. MEANWHILE, AT 2210Z, A FLOOD WARNING WAS ISSUED FOR THE EASTERN HALVES OF SUTTON AND SCHLEICHER COUNTIES. WE'LL AVOID THIS AREA FOR THE REST OF THE EVENING. PILOT HAS NOW INVESTIGATED THREE ISOLATED CELLS FROM NEAR SONORA WEST INTO CROCKETT COUNTY. ALL THREE HAD VERY HIGH BASES AS THEY STORMS WERE RAINING OUT AND DISSIPATING. WE'LL CONTINUE TO INVESTIGATE, BUT WITH SKIES OVERCAST AND THE LOSS OF HEATING, OUR PRIMARY FUEL, THIS COULD END OUR NIGHT.

**WATCHES/WARNINGS:**

N/A

**SEEDED CELL ID'S:**

1926	2029	1955	2475	1889				
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**FLIGHT INFORMATION:**

TIME (Z)	Plane	Flare Location	County
1800	24P	IN AIR	
1822	24P	253° @ 27 nm	IRION
1826	24P	248° @ 26 nm	IRION
1829	24P	240° @ 26 nm	IRION
1834	24P	225° @ 23 nm	IRION
1837	24P	216° @ 24 nm	SCHLEICHER
1843	24P	233° @ 27 nm	IRION
1847	24P	229° @ 24 nm	IRION
1850	24P	228° @ 24 nm	IRION
1853	24P	238° @ 22 nm	IRION
1855	24P	241° @ 23 nm	IRION
1857	24P	237° @ 21 nm	IRION
1914	24P	213° @ 34 nm	SCHLEICHER
1917	24P	214° @ 36 nm	CROCKETT
1941	24P	224° @ 54 nm	CROCKETT
2006	24P	303° @ 13 nm	TOM GREEN
2011	24P	311° @ 12 nm	TOM GREEN
2012	24P	308° @ 13 nm	TOM GREEN
2018	24P	311° @ 14 nm	TOM GREEN
2019	24P	310° @ 13 nm	TOM GREEN
2030	24P	RTB	
2115	09P	In Air	
2136	09P	148° @ 27 nm	SCHLEICHER
2138	09P	153° @ 30 nm	SCHLEICHER
2140	09P	156° @ 31 nm	SCHLEICHER

2142	09P	152° @ 30 nm	SCHLEICHER
2146	09P	156° @ 30 nm	SCHLEICHER
2149	09P	164° @ 33 nm	SCHLEICHER
2215	09P	RTB	

Seeding operations were conducted Crockett (4), Schleicher (17+1H), Irion (20) and Tom Green (10) Counties. 51 flares plus 1 hygroscopic flare was burned within 5 clouds. This is the 6<sup>th</sup> day for seeding in July and the 16<sup>th</sup> day for seeding during the season.