

WEST TEXAS WEATHER MODIFICATION ASSOCIATION - SAN ANGELO, TEXAS

SEEDING REPORT - July 5, 2017

SYNOPTIC/MESOSCALE CONDITIONS:

A band of showers and storms continues across southern ends of both target areas. Showers are ongoing from near Christoval extending towards Sonora and southeastern Crockett County. More isolated convection is along I-10 in the Trans-Pecos but these are quickly winding down. These showers and embedded storms will dissipate through the morning allowing for the atmosphere to re-heat and destabilized once again. By peak heating, we should see more shower and storm activity across both target areas. Cool air aloft has been left behind from yesterday's convection, so numerous boundaries remain across the Concho Valley. Storms look to fire up between 3-4PM. I will add likely rain chances to the WTWMA forecast but leave the Trans-Pecos dry this afternoon as both the HRRR and WRF keep the area dry.

LIFTING MECHANISM:

Sufficient Surface Heating

THERMODYNAMIC INDICES (12Z KMAF)

Freezing Level (m)	4794	CAPE (J/Kg)	32
Precipitable Water (inches)	0.94	CINH (J/Kg)	56289
LCL	1490	LI(°C)	2.7
CCL	4237	PB	0
MAF ICA	3.6	DRT ICA	-0.8
Cloud Base (meters)	2477	Cloud Base Temp (°C)	12.26
Warm Cloud Depth (meters)	2317		

DISCUSSION:

POWER OUTAGE OVERNIGHT HAS LEFT TITAN PC IN A BIT OF DISMAY. HOWEVER, GOT THE PC UP AND RUNNING AGAIN AND RECEIVING GOOD DATA. AT 18Z, A FEW STORMS WERE BEGINNING TO DEVELOP ACROSS STERLING COUNTY WHERE NUMEROUS OUTFLOW BOUNDARIES WERE PRESENT. PILOT WAS CALLED AIBORNE AND SHOULD BE UP BY 1830Z. STORMS ARE FIRING MUCH EARLIER THEN EXPECTED, BUT WITH LIMITED CAPPING THIS IS NOT MUCH OF A SURPRISE. MORE DEVELOPMENT IS CERTAINLY EXPECTED, BUT THE EXPECTATION IS THAT MOST STORMS WILL STAY BELOW SEVERE LIMITS. THE CU FIELD IS STRONG ACROSS STERLING AND REAGAN COUNTIES, SO WE SHOULD HAVE PLENTY OF CELLS TO INVESTIGATE. PILOT ARRIVED TO THE STORM WHICH TOOK SHAPE ACROSS STERLIGN COUNTY. IT WAS RAINING WELL, BUT THE BASES WERE NOT VERY WELL DEFINED AND INFLOW WAS NOT ABUNDANT NOR STRONG. THE HOPE IS AS THESE FALL FURTEHR SOUTH INTO A WARMER ATMOSPHERE, WE SHOULD SEE BETTER DBZ GRADIENTS ALONG THE LEADING EDGE. STILL, WE WERE GETTING INFLOW AND DOING WHAT WE COULD AS OF 19Z. PILOT PUSHED FURTHER WEST INTO REAGAN COUNTY AND WAS ABLE TO FIND MORE CONSISTENT INFLOW. HOWEVER, THIS WAS SHORT LIVED SO WE'LL DIVE FURTHER SOUTH INTO IRION COUNTY WHERE ONE CELL DEVELOPED A BIT FURTHER SOUTH THEN THE REST. STILL, ONCE STORMS POP UP AND REACH A CERTAIN INTENSITY, THE BECOME LESS INTENSE AND ACT MORE AS CASUAL SHOWERS. SEEDING DID TAKE PLACE FURTHER SOUTH INTO REAGAN AND IRION COUNTIES AND THEN BACK INTO STERLING COUNTY. CONVECTION WAS BECOMING EMBEDDED, ESPECIALLY NEAR STERLING CITY. HOWEVER, ONE CELL NORTH OF STERLING CITY WAS TAKING SHAPE SO WE'LL HEAD TO THE NORTHERN EDGE OF THE COUNTY TO INVESTIGATE WHILE SEEDED STORMS RESPOND TO OUR EFFORTS. WE WILL TRY TO MAKE QUICK WORK OF THIS CELL IN NORTHERN STERLING AS BETTER DEVELOPMENT SEEMS TO BE TAKING PLACE ALONG AN OUTFLOW BOUNDARY IN REAGAN COUNTY. WE'LL HEAD THERE AS SOON AS WE WRAP UP SEEDING WITH THIS CELL. WE WORKED OUR WAY BACK SOUTH BY THE 20Z HOUR AND WRAPPED AROUND THE FAR SOUTHERN EDGE OF CONVECTION WHICH WAS NOW NEARING BIG LAKE. WE'LL WORK BACK WEST INTO REAGAN COUNTY THROUGH THE HOUR AS CONVECTION NORTH OF THE OUTFLOW BOUNDARY WAS

BECOMING HEAVILY EMBEDDED WITH LITTLE TO NO INFLOW. OUR FOCUS WILL REMAIN ON THE FURTHEST SOUTH CONVECTION. THIS AREA WAS HEAVILY SEEDED THROUGH THE FIRST HALF OF 20Z. PILOT REPORTED VERY ROUGH CONDITIONS LIKELY DUE TO AN OUTFLOW BOUNDARY, MAINLY ON THE WEST-SOUTHWEST SIDE OF THE STORM. WE'LL CONTINUE TO WORK THE SOUTHERN EDGE OF THE STORM FROM BIG LAKE TO BARNHART AVOIDING THE ROUGH AIR. STORM CONTINUED TO PROVIDE INFLOW, BUT AN OUTFLOW BOUNDARY MADE THINGS VERY DIFFICULT TO END OUT THE 20Z HOUR. A SECOND PILOT IS GETTING AIRBORNE TO RECOVER THE FIRST PILOT WHO WILL TAKE A QUICK LOOK AT A CELL THAT SEEMS TO BE DEVELOPING AHEAD OR ALONG THE OUTFLOW BOUNDARY SW OF MERTZON. SECOND PILOT WILL TAKE A LOOK AT SOME ISOLATED CELLS TO THE SOUTH AND THEN WORK THE MAIN STORM SYSTEM IS NEEDED. FIRST PILOT STAYED ON THE MAIN STORM AS ANYTHING NORTH OF THE OUTFLOW JUST APPEARED AS INFLOW. STORMS WERE SEEDED IN IRION COUNTY THROUGH 2115Z BEFORE PILOT RAIN OUT OF FLARES. SECOND PILOT WILL FOCUS ON WESTERN EDGE OF CONVECTION FROM BARHART AND WEST FOR NOW. HOWEVER, MUCH LIKE EARLIER, THIS AREA HAD VERY STRONG OUTFLOW WITH VERY ROUGH FLIGHT CONDITIONS. PILOT WILL GIVE IT A SHOT, BUT PULL OFF IF NECESSARY. SEEDING WAS DONE NEAR BARNHART THROUGH 2130Z. WE ARE HEADING OFF WEST NOW AS THE EASTERN HALF OF THIS SYSTEM APPEARS TO BE RANING OUT AND IS HEAVILY EMBEDDED. WE'LL NOW TARGET AREAS FROM SOUTH OF BIG LAKE TO IRAAN BUT KEEP AN EYE ON ISOLATED CONVECTION SOUTH OF THE OUTFLOW BOUNDARY. ADDITIONALLY, WE HAVE TWO OUTFLOW BOUNDARIES LOOKING TO MERGE NEAR THE TG/IR COUNTY BORDER. THIS WILL BE WORTH WATCHING AS WELL. STORMS WERE SEEDED IN CROCKETT COUNTY ALONG THE SOUTHWESTER EDGE OF THE LARGE MAIN SYSTEM. AT 22Z, STORMS WERE BECOMING OUTFLOW DOMINATE WITH A STRONG OUTFLOW BOUNDARY HEADING OFF OF THE STORM. ALSO, STORMS WERE BECOMING EMBEDDED IN THIS AREA MUCH LIKE BACK IN IRION COUNTY. THEREFORE, WE DECIDED TO ATTACK THE ISOLATED CELLS IN SUTTON/SCHLEICHER COUNTY BEFORE RUNNING OUT OF RESOURCES FOR THE NIGHT. STORM #339 WAS SEEDED WEST OF ELDERADO WHICH WAS THE ONLY OF THE ISOLATED STUFF THAT SEEMED TO HAVE PROMISE. WE'LL STICK ON THIS FOR A BIT BEFORE HEADING EITHER NORTH OR SOUTH. THIS CELL APPEARED TO RESPOND WELL TO SEEDING BUT BECAME EMBEDDED SHORTLY AFTER. PILOT THEN SAW THE CELLS TO THE SOUTH AND TURNED THAT WAY AS THE SHELF CLOUDS APPEARED RAIN/VIRGA FREE. THIS AREA DIDN'T PRODUCE MUCH FOR US AS EVERYTHING WAS BECOMING RAIN FILLED. WE DECIDED TO RTB AS PILOT WAS VERY LOW ON FLARES AND CLOUDS WERE GETTING VERY LOW AT HIS ENDING DESTINATION.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

0	27	20	396	487	339				
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
1835	24P	IN AIR	
1859	24P	303° @ 35 nm	STERLING
1900	24P	302° @ 34 nm	STERLING
1904	24P	293° @ 39 nm	STERLING
1908	24P	286° @ 45 nm	REAGAN
1910	24P	284° @ 45 nm	REAGAN
1913	24P	280° @ 41 nm	REAGAN
1914	24P	279° @ 40 nm	REAGAN
1918	24P	277° @ 38 nm	IRION
1919	24P	278° @ 36 nm	IRION
1922	24P	283° @ 38 nm	STERLING
1923	24P	286° @ 40 nm	STERLING
1937	24P	317° @ 45 nm	STERLING
1942	24P	316° @ 44 nm	STERLING
1956	24P	284° @ 32 nm	IRION
1957	24P	297° @ 33 nm	IRION

2004	24P	265° @ 36 nm	IRION
2008	24P	259° @ 39 nm	REAGAN
2009	24P	258° @ 41 nm	REAGAN
2013	24P	259° @ 48 nm	REAGAN
2015	24P	261° @ 51 nm	REAGAN
2028	24P	253° @ 46 nm	REAGAN
2032	24P	252° @ 44 nm	REAGAN
2035	24P	253° @ 50 nm	REAGAN
2039	24P	251° @ 49 nm	REAGAN
2041	24P	251° @ 50 nm	REAGAN
2055	09P	In Air	
2101	24P	243° @ 23 nm	IRION
2102	24P	248° @ 21 nm	IRION
2106	24P	245° @ 22 nm	IRION
2109	24P	255° @ 20 nm	IRION
2110	09P	221° @ 26 nm	SCHLEICHER
2111	09P	216° @ 28 nm	SCHLEICHER
2112	24P	254° @ 20 nm	IRION
2113	09P	219° @ 29 nm	SCHLEICHER
2114	24P	246° @ 20 nm	IRION
2215	24P	RTB	
2120	09P	333° @ 34 nm	CROCKETT
2121	09P	233° @ 34 nm	CROCKETT
2123	09P	233° @ 37 nm	CROCKETT
2125	09P	232° @ 38 nm	CROCKETT
2127	09P	234° @ 34 nm	IRION
2132	09P	237° @ 35 nm	IRION
2133	09P	236° @ 37 nm	CROCKETT
2145	09P	236° @ 53 nm	CROCKETT
2147	09P	239° @ 56 nm	CROCKETT
2148	09P	239° @ 56 nm	CROCKETT
2153	09P	238° @ 61 nm	CROCKETT
2157	09P	236° @ 62 nm	CROCKETT
2159	09P	233° @ 61 nm	CROCKETT
2215	09P	202° @ 37 nm	SCHLEICHER
2218	09P	196° @ 36 nm	SCHLEICHER
2219	09P	194° @ 36 nm	SCHLEICHER
2221	09P	192° @ 36 nm	SCHLEICHER
2226	09P	188° @ 38 nm	SCHLEICHER
2228	09P	186° @ 40 nm	SUTTON
2231	09P	190° @ 41 nm	SUTTON
2235	09P	RTB	

Seeding operations were conducted over Sterling (14), Reagan (20+3H), Irion (26), Schleicher (16), Crockett (22+2H) and Sutton (4) Counties. 102 flares plus 5 hygroscopic flares were burned within 6 clouds. This is the 2nd day for seeding in July and the 12th day for seeding during the season.