

WEST TEXAS WEATHER MODIFICATION ASSOCIATION - SAN ANGELO, TEXAS

SEEDING REPORT - July 7, 2017

SYNOPTIC/MESOSCALE CONDITIONS:

Upper level ridging remains off to our west which puts us under northerly flow aloft. Additionally, shortwaves wrapping around the ridge have been shoot south into our region over the last several days. This will likely continue today, tomorrow, and Sunday. Just how strong these upper level disturbances will be is unknown, and the answer will greatly impact our rain chances through the weekend. Today, both the HRRR and WRF produce isolated showers and maybe a storm or two across both target areas, with a better threat over the WTWMA.

LIFTING MECHANISM:

Sufficient Surface Heating

THERMODYNAMIC INDICES (12Z KMAF)

Freezing Level (m)	4647	CAPE (J/Kg)	501
Precipitable Water (inches)	1.31	CINH (J/Kg)	83
LCL	1334	LI(°C)	-0.9
CCL	2634	PB	1
MAF ICA	-2.68	DRT ICA	-3.24
Cloud Base (meters)	2465	Cloud Base Temp (°C)	12.5
Warm Cloud Depth (meters)	1882		

DISCUSSION:

FAVORABLE ICA VALUES AND PRECIPITABLE WATER VALUES MAY MEAN IF ANY STORMS DEVELOP WE COULD SEE SOME HEAVY SHOWERS AND T-STORM. BETWEEN 1730 AND 18Z, A STRONG CU FIELD DEVELOPED ACROSS THE AREA BUT LIMITED UPPER LEVEL SUPPORT MAY KEEP THINGS FROM FIRING STILL. HOWEVER, AT 1750Z, ENOUGH WAS SEEN TO WARRANT LAUNCHING A PILOT. HE'LL GET UP AND HEAD FOR ISOLATED CONVECTION WHICH IS STILL TRYING TO GET TOGETHER FROM ROBERT LEE SOUTH TOWARDS MERZTON AND EVEN NEAR BIG LAKE. CONVECTION IS NOT EXPECTED TO BE VERY WIDESPREAD, WITH ONLY ISOLATED T-STORMS LIKELY. HOWEVER, WE'LL SEE WHAT WE HAVE TO WORK WITH. AS PILOT GOT AIRBORNE, WE DECIDED TO SEED IN THE TG/ST COUNTY AREA FROM HIGHWAY 87 IN CARLSBAD NORTHWESTWARD. SAT IMAGERY SHOWED THIS AS THE MOST PROMISING AREA FOR SUSTAINED, LARGER DEVELOPMENT WHILE OTHER CONVECTION WAS MORE ISOLATED AND LIKELY TO DISSIPATE QUICKLY. SEEDING TOOK PLACE IN TOM GREEN AND STERLING COUNTY INTO THE 19Z HOUR ALONG A CLUSTER OF SHOWERS/STORMS. WE'LL STICK ON THIS AREA UNTIL WE SEE SOMETHING MORE PROMISING. THE AREA WE SEEDED IN EASTERN STERLING COUNTY SEEMED TO RESPOND WELL AS SEVERAL CLOUDS LINKED UP TO CREATE A LARGER STORM. WITH STORM #165 SUFFICIENTLY SEEDED, WE DECIDED TO HEAD FURTHER SW TO ANOTHER CELL WHICH WAS SIMILAR TO THE PREVIOUS. MEANWHILE, STORM #165 BEGAN TO SHOW A GREAT REPOSE TO SEEDING AS IT WAS GROWING IN SIZE AND BECOMING MORE EFFICIENTLY IN SEVERAL PARAMETERS INCLUDING PRECIPITATION FLUX. THE SECOND CLUSTER JOINED UP INTO A LARGER STORM AS WELL. STORM #252 WAS HEAVILY SEEDED AND APPEARED TO FAVORABLY RESPOND TO OUR EFFORTS. WE DECIDED TO MOVE TO A 3RD CLUSTER TAKING PLACE IN WESTERN IRION COUNTY AND EASTERN REAGAN COUNTY. HOWEVER, IT APPEARED THE FURTHER SOUTH WE GOT, THE MORE DISPLACED WE BECAME FROM ANY FAVORABLE DYNAMICS ALOFT. STORM LONGEVITY WAS MUCH SHORTER ALONG AND SOUTH OF HIGHWAY 67. WE'LL SEE WHAT WE CAN DO BUT AS OF 20Z, WE BEGAN TO SEE OUTFLOW BOUNDARIES POPPING OFF OF THE TWO MAIN STORMS WE SEEDED. WE'LL WORK THE NORTHERN EDGE OF THE 3RD CLUSTER WHERE DEVELOPMENT WAS MUCH BETTER. HOWEVER, INFLOW WAS VERY HARD TO FIND. WE WERE ONLY ABLE TO FIND A SINGLE BATCH OF INFLOW. OTHER DEVELOPMENT WHETHER NORTH, OR SOUTH, WAS NOT DOING WELL AS OF 2020Z. WE'LL KEEP AN EYE ON RADAR TRENDS BUT OTHER THEN STORM #252, WHICH WE GOT BACK ON, NOTHING IS DOING REAL WELL

AT THIS TIME. PILOT FOUND INFLOW AHEAD OF THE STORM ON A DISPLACED OUTFLOW BOUNDARY. ALTHOUGH THIS ISN'T THE BEST SCENERIO, WE'LL SEE WHAT WE CAN DO. MEANWHILE, SECOND PILOT WAS CALLED AIRBORNE TO TAKE CARE OF ANY OUTFLOW BOUNDARY STORMS THAT FIRE, MAINLY FROM MERTZON NW INTO REAGAN COUNTY. THE INFLOW DISPLACED FROM THE STORM ACTUALLY ENDED TURNING INTO AN EXTENSION OF THE STORM TO THE SOUTH. PILOT EMPTIED HIS FLARES IN THIS AREA WHICH RESULTED IN HEAVY RAINFALL IN PARTS OF NORTHERN REAGAN COUNTY. WITH HIS RERSOURCES OUT, HE'LL RTB JUST AS SECOND PILOT GETS AIRBORNE. SECOND PILOT WIL HEAD BACK TO THE SOUTHERN OF THE TWO STORM #171 CELLS AND MAKE SURE IT IS SUFFICIENTLY SEEDED. FROM THERE, WE'LL LIKELY TARGET THE ISOLATED CONVECTION SOUTH OF THIS SYSTEM IN SOUTHERN IRION AND PERHAPS REAGAN COUNTIES. STORM #171 HAD NO INFLOW SO WE'LL NOW FOCUS ON NEW STORMS POPPING UP ON THE OUTFLOW BOUNDARY. THESE CELLS, HOWEVER, WERE VERY SHORTLIVED AND PRODUCED VERY LIMITED INFLOW. WE'LL HEAD FURTEHR SOUTH INTO CROCKETT AND SOON SCHLEICHER COUNTIES. WE INVESTIGATED THE FIRST CELL THAT WAS JUST SOUTH OF BARNHART BUT WAS UNABLE TO FIND ANY WORKABLE BASES AND/OR INFLOW. WE'LL BEAD A BIT FUTHER EAST NOW TOWARDS MERTZON. WE DID FIND SOME INFLOW IN STORM #72 WHILE ALL OTHER CONVECTION APPEARED TO BE LEVELING OFF SOME. THERE IS A CELL MOVING INTO SUTTON COUNTY I'LL NEED TO KEEP AN EYE ON, AND WE MAY HEAD THAT WAY SHORTLY SINCE MUCH OF THE CONVECTION NORTH OF HIGHWAY 67 HAS BEEN EFFICIENTLY SEEDED. INFLOW WAS LOST ON STORM #72 SO WE'LL BEGIN OUR TURN TOWARDS SUTTON COUNTY. THESE CELLS HOWEVER WERE FALLING APART RAPIDLY AND WERE MORE CASUAL RAIN SHOWERS THEN ANYTHING. AT THIS POINT, WE'LL RTB AS ALL CONVECTION WAS WINDING DOWN.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

286	173	288	165	252	444	174	171	881	72
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
1845	09P	IN AIR	
1857	09P	326° @ 35 nm	TOM GREEN
1858	09P	329° @ 34 nm	TOM GREEN
1900	09P	328° @ 39 nm	TOM GREEN
1906	09P	324° @ 45 nm	TOM GREEN
1907	09P	320° @ 45 nm	TOM GREEN
1908	09P	318° @ 41 nm	TOM GREEN
1910	09P	315° @ 40 nm	STERLING
1911	09P	317° @ 38 nm	STERLING
1914	09P	316° @ 36 nm	STERLING
1915	09P	314° @ 38 nm	STERLING
1917	09P	313° @ 40 nm	STERLING
1925	09P	295° @ 45 nm	STERLING
1927	09P	289° @ 44 nm	STERLING
1931	09P	286° @ 32 nm	STERLING
1932	09P	283° @ 33 nm	TOM GREEN
1933	09P	285° @ 36 nm	TOM GREEN
1935	09P	283° @ 39 nm	TOM GREEN
1937	09P	285° @ 41 nm	TOM GREEN
1940	09P	281° @ 48 nm	TOM GREEN
1942	09P	284° @ 51 nm	STERLING
1945	09P	280° @ 46 nm	STERLING
2013	09P	271° @ 44 nm	REAGAN
2018	09P	278° @ 41 nm	REAGAN
2022	09P	283° @ 45 nm	REAGAN

2022	09P	284° @ 47 nm	REAGAN
2026	09P	282° @ 48 nm	REAGAN
2028	09P	283° @ 47 nm	REAGAN
2030	09P	283° @ 48 nm	REAGAN
2031	09P	284° @ 47 nm	REAGAN
2033	09P	282° @ 47 nm	REAGAN
2036	09P	284° @ 45 nm	REAGAN
2038	09P	284° @ 45 nm	REAGAN
2040	09P	285° @ 44 nm	REAGAN
2042	09P	289° @ 42 nm	STERLING
2045	09P	RTB	
2045	24P	In Air	
2109	24P	254° @ 38 nm	IRION
2111	24P	252° @ 40 nm	IRION
2113	24P	256° @ 38 nm	IRION
2121	24P	253° @ 43 nm	REAGAN
2148	24P	261° @ 26 nm	IRION
2154	24P	257° @ 25 nm	IRION
2215	24P	RTB	

Seeding operations were conducted over Tom Green (23), Sterling (22+2H), Reagan (26+2H) and Irion (10) Counties. 81 flares plus 4 hygroscopic flares were burned within 10 clouds. This is the 3rd day for seeding in July and the 13th day for seeding during the season.