

WEST TEXAS WEATHER MODIFICATION ASSOCIATION - SAN ANGELO, TEXAS

SEEDING REPORT - July 25, 2018

SYNOPTIC/MESOSCALE CONDITIONS:

The upper level high still sits just west of our region which is resulting in northerly flow aloft. A few shortwaves embedded in the flow aloft will impact our area today and tomorrow resulting in possible showers and storms. This morning, showers are ongoing across parts of the western Permian Basin which are tracking south southwest into the northern Trans-Pecos. Although these are expected to dissipate, we could see a shower or two along and north of a Pecos to Toyah line. A second shortwave will develop this afternoon across the Concho Valley. The HRRR develops showers and storms across parts of the western Concho Valley, mainly west of a Sterling City to Sonora line. However, the WRF is not picking up on this action. The HRRR typically is over aggressive, however, with the WRF showing this solution yesterday, something seems to be there. I will keep slight rain chances in the forecast for the aforementioned area, but the window is likely to be short.

LIFTING MECHANISM:

Shortwave aloft, intense surface heating.

THERMODYNAMIC INDICES (12Z KMAF)

Freezing Level (m)	4954	-15°C Height (m)	7720
Precipitable Water (inches)	1.40	CAPE (J/Kg)	46
LCL	2651	CINH (J/Kg)	216
CCL	3608	LI(°C)	-1.1
MAF ICA	0.32	PB	1
Cloud Base (meters)	2658	DRT ICA	1.64
Warm Cloud Depth (meters)	2296	Cloud Base Temp (°C)	12.7

DISCUSSION:

16Z analysis showed a cu field developing across the southern half of the target area. HRRR output still shows showers/storms trying to fire by the 19Z hour. Pilot already put on standby and will ready as needed. 12Z MAF sounding showed an atmosphere with mid-level instability and decent moisture profile. PW values of 1.4" should allow storms to produce steady rainfall, despite positive ICA values. Will continue to keep an eye on sat imagery and updated HRRR model output. By 1815Z, storms began to develop in Upton County. Sat imagery showed some potential for development along a line from Big Lake to Rankin at 1840Z. Pilot was called airborne at this time and we'll head west focusing on a line from Big Lake to Sonora and areas west. Pilot got airborne, but storms remained west in Upton County. We did have a few showers in Crockett County, but they were limited vertically. Still, since we are up, we'll investigate those. We approached a few showers but nothing in Crockett County was able to stay organized for too long. Therefore, we decided to push into southern Upton County where the southern half of this storm was threatening the panhandle of Crockett County. We arrived at this cell and started seeding it in Upton County as it pushed into Crockett County. The southern edge of this storm had plenty of inflow so seeding took place aggressively. After an aggressive dosage of flares, we investigated some of the small isolated storms again. However, by 2030Z, it was evident these smaller storms were not going to provide much. We hung around the large storm, storm #386, to see how it responded from our initial seeding. Also, we need to see which direction it is going to move. We'll position our selves to move back on it if needed. Storm began to expand eastward with new convection along the eastern periphery. We'll get back in there and see what it offers. Bases were very ragged, and rain filled. Additionally, storm popped off an outflow boundary. So, we'll get out of the main cell and target any storms

that fire on the outflow boundary to the east. First outflow boundary storm was investigated but no workable bases were found. All downdraft was reported. There are now numerous showers popping up in Reagan County. We'll investigate them all. These storms, as usual with outflow boundary storms, were very short-lived. We investigated several outflow boundary storms but with no luck. Either they were too short-lived or did not provide the bases to work. Meanwhile, initial storm that was seeded was continuing to move south along the Pecos River from near Rankin south to Iraan. This cell is showing signs of dissipating and moving slightly west out of the area. We'll check one more cell near Ozona before bringing pilot back for fuel. All outflow boundary storms, despite looking good on radar, did not provide seedable opportunity. Pilot was called RTB at 2130 but sat/rad will continue to be monitored.

WATCHES/WARNINGS:

None

SEEDED CELL ID'S:

386											
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
1910	24P	In Air	
1959	24P	251° @ 71 nm	Crockett
2000	24P	250° @ 79 nm	Crockett
2002	24P	250° @ 77 nm	Crockett
2003	24P	250° @ 77 nm	Crockett
2005	24P	250° @ 77 nm	Crockett
2008	24P	249° @ 77 nm	Crockett
2009	24P	250° @ 77 nm	Crockett
2013	24P	250° @ 77 nm	Crockett
2015	24P	250° @ 75 nm	Crockett
2130	24P	RTB	

Seeding operations were conducted over Crockett County (18+1H). 18 flares plus 1 hygroscopic flare were burned within 1 cloud. This is the 8th day for seeding in July and the 17th day for seeding during the season.