

WEST TEXAS WEATHER MODIFICATION ASSOCIATION - SAN ANGELO, TEXAS

SEEDING REPORT - July 8, 2018

SYNOPTIC/MESOSCALE CONDITIONS:

A tropical atmosphere remains in place over both the Trans-Pecos and Concho Valley as easterly upper level winds continue. Dew points this morning are well into the 60's across the Trans-Pecos with some 70's being recorded within the Concho Valley. This will provide plenty of fuel for shower and thunderstorm activity once again this afternoon around peak heating. Instability will not be allowed to increase much due to limited capping. Therefore, showers will develop first and then a few of the showers will have the ability to develop into thunderstorms over regions that don't get as much early cloud coverage. High-res models have had a very difficult time handling this system. I'll stick with a persistent forecast and assume that today will be much like yesterday, although coverage should be less.

LIFTING MECHANISM:

Strong Moisture Advection

THERMODYNAMIC INDICES (12Z KMAF)

Freezing Level (m)	4562	-15°C Height (m)	7330
Precipitable Water (inches)	1.58	CAPE (J/Kg)	193
LCL	1203	CINH (J/Kg)	91
CCL	2670	LI(°C)	-1.3
MAF ICA	-2.68	PB	1
Cloud Base (meters)	1834	DRT ICA	-6.96
Warm Cloud Depth (meters)	2728	Cloud Base Temp (°C)	14

DISCUSSION:

Widely scattered showers fired up at 17Z all across the target area. However, little to no vertical depth was recorded with all cores below the freezing level. However, a storm or two in Irion County did show promise with vertical growth. Therefore, we launched to investigate. Precipitable water values are very high, and with no cap in place, showers will organize with little burst of energy, not like our typical day where capping holds the energy in a bit allowing storms to fire up quickly. We'll see what we have here today, but skies are already becoming overcast and temperatures will struggle to surpass 90F. Pilot got into our first target in central Irion County. Bases were low, 5kft, but inflow was quickly found. We then found a sweet spot where we put several flares and a hygroscopic flare in. The storm then blew up on us with dbz up to 69 and vil into the triple digits. This cell seems to be responding well to our seeding. We'll move further west, same cell, but different area, to try to get the western side to develop. The western edge was seeded well and did seem to respond some. Storms are now pretty widespread within Reagan and Irion Counties. We worked our way to southern Sterling county and quickly seeded a cell there which also seemed to respond. Next, we'll head back to central Irion County where the initial storm continued to back build towards Mertzon. We'll work the east of this before moving on. It seems, shower/storm activity south of highway 67 is having trouble organize. This is the area that is furthest displaced from the upper level shortwave, however, outflow boundaries are trying to make their way down there. If so, that could provide the support needed for more development. Cells to the south never developed off of the outflow. So, we continued seeding in Irion County into the 19Z hour. At this time, storms became heavily embedded as cloud coverage across the region was becoming overcast. We'll RTB to re-flare and see if we get any breaks in the skies for more development. Additionally, SJT radar went down. We'll have to see if that gets fixed as we'll have some dead spots due to lack of coverage. Plane was re-flared and fueled and ready to go by 2015Z.

We'll relaunch although showers/storms were very marginal. We'll look at convection in Schleicher, Sutton and Crockett counties and likely head back towards Tom Green County where more storms were moving in from the east. Storms were seeded in Schleicher and Tom Green Counties through the 20Z hour and into the 21Z hour. We then dove southwest into Irion County where a very large storm was seeded through 2130Z. We'll stick on this storm for a bit and then head back north where new storms were firing west of San Angelo. This cell was seeded, and we went back to the Irion County storm and re-seeded that. Before we wrap up, we'll get back into Schleicher County and work an area just north of Eldorado. We were able to find a small spot of inflow, so pilot worked that area until 2210Z. However, storm was becoming heavily embedded and bases were lowering. At this point, all other convection has dwindled so we'll get ahead and RTB.

WATCHES/WARNINGS:

None

SEEDED CELL ID'S:

1428	881	1575	2139	1959	1731	1954				
------	-----	------	------	------	------	------	--	--	--	--

FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
1740	24P	In Air	
1758	24P	254° @ 26 nm	Irion
1759	24P	255° @ 27 nm	Irion
1801	24P	256° @ 30 nm	Irion
1801	24P	256° @ 30 nm	Irion
1804	24P	260° @ 26 nm	Irion
1817	24P	260° @ 45 nm	Reagan
1818	24P	261° @ 46 nm	Reagan
1820	24P	260° @ 47 nm	Reagan
1821	24P	260° @ 47 nm	Reagan
1834	24P	286° @ 30 nm	Tom Green
1835	24P	287° @ 32 nm	Sterling
1836	24P	286° @ 33 nm	Sterling
1837	24P	286° @ 34 nm	Sterling
1848	24P	263° @ 22 nm	Irion
1848	24P	264° @ 20 nm	Irion
1849	24P	264° @ 19 nm	Irion
1852	24P	268° @ 20 nm	Irion
1853	24P	267° @ 21 nm	Irion
1902	24P	279° @ 18 nm	Irion
1904	24P	284° @ 17 nm	Irion
1906	24P	276° @ 19 nm	Irion
1915	24P	RTB	
2030	24P	In Air	
2040	24P	198° @ 23 nm	Schleicher
2041	24P	203° @ 25 nm	Schleicher
2046	24P	203° @ 27 nm	Schleicher
2046	24P	204° @ 26 nm	Schleicher
2053	24P	187° @ 15 nm	Tom Green
2055	24P	178° @ 15 nm	Tom Green
2057	24P	176° @ 12 nm	Tom Green
2058	24P	187° @ 13 nm	Tom Green
2107	24P	287° @ 03 nm	Tom Green
2108	24P	308° @ 04 nm	Tom Green
2112	24P	320° @ 06 nm	Tom Green
2112	24P	313° @ 06 nm	Tom Green

2121	24P	219° @ 16 nm	Tom Green
2121	24P	221° @ 17 nm	Irion
2122	24P	225° @ 17 nm	Irion
2126	24P	236° @ 19 nm	Irion
2127	24P	232° @ 17 nm	Irion
2129	24P	224° @ 15 nm	Irion
2129	24P	223° @ 15 nm	Irion
2138	24P	290° @ 09 nm	Tom Green
2141	24P	304° @ 11 nm	Tom Green
2142	24P	297° @ 09 nm	Tom Green
2150	24P	232° @ 12 nm	Irion
2150	24P	232° @ 12 nm	Irion
2151	24P	233° @ 47 nm	Irion
2204	24P	203° @ 23 nm	Schleicher
2205	24P	202° @ 24 nm	Schleicher
2206	24P	202° @ 24 nm	Schleicher
2220	24P	RTB	

Seeding operations were conducted over Irion (52+2H), Schleicher (16), Tom Green (28), Sterling (6) and Reagan (8) Counties. 110 flares plus 2 hygroscopic flares were burned within 7 clouds. This is the 6th day for seeding in July and the 15th day for seeding during the season.