

WEST TEXAS WEATHER MODIFICATION ASSOCIATION - SAN ANGELO, TEXAS

SEEDING REPORT - May 19, 2023

SYNOPTIC/MESOSCALE CONDITIONS:

An upper-level trough to the west will put the area under southwesterly flow. This will help enhances forcing aloft over a cold front which will sweep through the region later this afternoon and evening. Ahead of this boundary, sufficient surface heating will destabilize the atmosphere allowing for showers and storms to fire up. Latest HRRR suggests storms firing up around 3-4PM this afternoon becoming more widespread across the eastern Trans-Pecos into the Concho Valley. Some storms could be severe.

LIFTING MECHANISM:

Cold Front

THERMODYNAMIC INDICES (12Z KMAF)

Freezing Level (m)	4141	-15°C Height (m)	6600
Precipitable Water (inches)	1.01	CAPE (J/Kg)	366
LCL	1520	CINH (J/Kg)	222
CCL	3458	LI (°C)	-0.5
MAF ICA	2.32	PB	1
Cloud Base (meters)	2855	DRT ICA	0.48
Warm Cloud Depth (meters)	1286	Cloud Base Temp (°C)	11

DISCUSSION:

18Z analysis shows the cold front somewhere along and just south of a Fort Stockton to Big Lake to Sterling City line. CAPE values are over 3k J/Kg but still somewhat capped. With some more heating and sharpening of the cold front, we will see a cu field fire up sometime in the next hour or so. Once cu fires up, pilots will be on standby. Shortly after 19Z, SPC did issue a mesoscale discussion for a possible needed watch. Areas near San Angelo and eastward could see some storms develop rapidly by 4PM, if not sooner. Sat imagery within the target area is still clear, but that could change quickly. At 2120Z, sat imagery was looking more favorable in Irion County and south into Sutton County. We'll go ahead and launch two aircraft to those locations. The first pilot got airborne and reported bases around 8kft, though areas to the south are not looking very convective. The second pilot may have more luck over in Irion County. 09P had success in Irion County seeding a cell that was not yet on TITAN. Meanwhile, 49P had gone far west into Terrell County seeding a cell moving over the Pecos. We upped the dosage there as pilot needed to RTB for another commitment. 09P continued working in the San Angelo/Mertzon area as we neared 23Z. Cells here have split with the north split cell nearing San Angelo. We'll work the back half of this. This cell was seeded as we crossed into 23Z. The anvil was overtaking the entire southern half of the target area killing off heating. Meanwhile, storms to the NW from near Big Spring southwest to Stanton were all severe warned. We'll work this cell at SJT and probably recover the plane for the night.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

725	656								
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
2135	49P	IN AIR	
2135	09P	IN AIR	
2154	09P	285° @ 19 nm	IRION
2157	09P	287° @ 20 nm	IRION
2158	09P	285° @ 19 nm	IRION

2200	09P	282° @ 18 nm	IRION
2203	09P	277° @ 18 nm	IRION
2208	09P	277° @ 18 nm	IRION
2209	09P	275° @ 16 nm	IRION
2220	49P	274° @ 84 nm	CROCKETT
2222	49P	270° @ 84 nm	CROCKETT
2223	09P	270° @ 30 nm	IRION
2223	49P	269° @ 84 nm	CROCKETT
2228	49P	271° @ 79 nm	CROCKETT
2230	49P	275° @ 79 nm	CROCKETT
2235	49P	RTB	
2301	09P	275° @ 10 nm	TOM GREEN
2303	09P	272° @ 10 nm	TOM GREEN
2303	09P	272° @ 10 nm	TOM GREEN
2310		RTB	

Seeding operations were conducted over Crockett (20G+2H), Irion (16G+3H) and Tom Green (10G+1.25H) Counties. 46 glaciogenic flares and 6.25 hygroscopic flares were burned within 2 clouds. This is the 9th day for seeding in May and the 11th day for seeding during the season.