

TRANS-PECOS WEATHER MODIFICATION ASSOCIATION - PECOS, TEXAS

SEEDING REPORT - May 23, 2023

SYNOPTIC/MESOSCALE CONDITIONS:

Southwesterly flow aloft remains across the region today with shortwave activity expected to become more active later this afternoon. Heating will destabilize the atmosphere once again while a dryline remains in place across the Permian Basin into the Trans-Pecos region. Cool air aloft remaining from yesterday's convection could enhance instability, however drier air has moved in across the lower layers which may lift bases a bit over western parts of the target area. Later this evening, much of the isolated convection could develop into a large MCS which will then impact areas across the Rolling Plains and northern Concho Valley.

LIFTING MECHANISM:

Dryline/Upper-Level Dynamics

THERMODYNAMIC INDICES (12Z KMAF)

Freezing Level (m)	4219	-15°C Height (m)	6300
Precipitable Water (inches)	0.86	CAPE (J/Kg)	232
LCL	1010	CINH (J/Kg)	429
CCL	3585	LI (°C)	-1.8
MAF ICA	4.04	PB	2
Cloud Base (meters)		DRT ICA	-0.8
Warm Cloud Depth (meters)		Cloud Base Temp (°C)	

DISCUSSION:

By 19Z, clouds over the Davis Mountains were pushing over the adjacent plains. However, convective temperatures have yet to be reached so they are quickly dissipating. As we get more heating, we should see better development. At 1945Z, sat imagery did show some better development west of Fort Stockton near I-10 and east of Fort Stockton. The pilot launched but the concern is how high bases may be with dew point depressions of 50° plus. Meanwhile, by 2030Z, as the pilot approached the cell, storms were quickly raining themselves out, likely due to the dry air layer. We'll still work aggressively here but bases are 12kft+. First cell was seeded just after 2030Z where strong inflows were observed. The radar was not looking good, but we'll give the clouds a chance to take to the material and see what happens. Now, we'll head ESE of Fort Stockton for a second cluster of clouds. Though this area also was marginal, it was certainly better than cloud #167. Seeding was quick here due to the pilot being so high. We got another dosage of 9G and 1H here so we'll head back west towards Toyah where new development was ongoing. However, if we don't see much of a response at these heights, we may be forced to stand down. With that said, by 21Z, the first area seeded, cell 167, went away and reappeared as cell 199. Second cell also began to grow larger and a bit more intense. Perhaps seeding is indeed working here. We'll put a proper dosage in the cell near Toyah/Pecos upon arrival. We worked this cell into 2115Z again above 13kft. But much like other convection, it is very high based and raining itself out. We'll RTB now with a lack of sustainable targets, but keep an eye on things for the rest of the evening.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

167	168	200									
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
2000	26P	IN AIR	
2032	26P	145° @ 27 nm	PECOS
2034	26P	150° @ 25 nm	PECOS
2034	26P	147° @ 27 nm	PECOS
2036	26P	148° @ 25 nm	PECOS
2038	26P	147° @ 25 nm	PECOS
2046	26P	124° @ 53 nm	PECOS
2047	26P	122° @ 56 nm	PECOS
2049	26P	120° @ 59 nm	PECOS
2051	26P	119° @ 59 nm	PECOS
2054	26P	121° @ 56 nm	PECOS
2109	26P	255° @ 15 nm	REEVES
2110	26P	255° @ 15 nm	REEVES
2112	26P	263° @ 14 nm	REEVES
2113	26P	263° @ 15 nm	REEVES
2120	26P	RTB	

Seeding operations were conducted over Pecos (19G+2H) and Reeves (8G) Counties. 27 glaciogenic flares and 2 hygroscopic flares were burned within 3 clouds. This is the 4th day for seeding in May and the 4th day for seeding during the season.