

**WEST TEXAS WEATHER MODIFICATION ASSOCIATION - SAN ANGELO, TEXAS**

**SEEDING REPORT - April 22, 2023**

**SYNOPTIC/MESOSCALE CONDITIONS:**

An upper-level trough has dropped a cold front south across the Big Country region of Texas. Ahead of this boundary, a sharp dryline is expected to develop across the eastern Permian Basin tracking into the Concho Valley later this afternoon. CAPE values in excess of 1,500 J/Kg will be expected ahead of the boundary along with steep lapse rates. The main struggle will be whether the CAP can be eroded enough for development to take place. The CAP is weaker today than previous days, and with the boundary coming through we should see storms fire up where instability is best, likely just east of the target area. Still, the latest HRRR and WRF models suggest some storms back building into the area later this evening.

**LIFTING MECHANISM:**

Dryline/Cold Front

**THERMODYNAMIC INDICES (12Z KMAF)**

Freezing Level (m)	3721	-15°C Height (m)	6100
Precipitable Water (inches)	0.24	CAPE (J/Kg)	54
LCL	3916	CINH (J/Kg)	66,000
CCL	7353	LI (°C)	10.6
MAF ICA	-12.4	PB	0
Cloud Base (meters)	2853	DRT ICA	-3.24
Warm Cloud Depth (meters)	868	Cloud Base Temp (°C)	10

**DISCUSSION:**

Dryline remains just west of SJT with a cold front just north which can be seen on radar. As of 20Z, the boundary was just south of Robert Lee and has initiated convection just south of Bronte with more development further southeast towards Eden. So far, the model trend is to keep the bulk of this development north and east of the area until after 22Z where it begins to back build into eastern Tom Green and Schleicher Counties. Pilots and Met are on standby watching sat/rad ready to launch as needed. 21Z updated continues to show the severe storm just SE of Ballinger with more convection NW and SE of it. For now, the target area remains clear via radar but satellite imagery for parts of Tom Green and Sterling Counties is keeping things interesting. Will continue to watch. Storms finally showed to back build over the airport around 2215Z. Launched two pilots to handle this development as it looks to expand both south and east. 09P is going to investigate a cell just north of downtown San Angelo. The second pilot is looking at a cell along the TG/IR county line. The first cell fell apart as it never grew into anything worthwhile. We'll dive south back towards central TG County and investigate a cell just on our eastern border. We'll collect data, but likely not seed it since it is already east of 277. The cell did back build enough west of 277 to warrant some seeding. Meanwhile, 49P was doing well near IR/TG county line but by a little after 23Z both cells were non-seedable for different reasons (out of TA, dissipated). We'll dive south of the cold front where agitated cu could fire up any moment. 49P found a new cell firing just east of Mertzon within Tom Green County. This will be our next target. 09P hung south of the boundary waiting for the next cell to fire up. 49P meanwhile was aggressively seeding the cell just east of Mertzon with success. At 2330Z, radar was hinting at further back building between Mertzon and Barnhart. 09P will head that way and investigate while 49P wraps up seeding on cell #155. This cell began to fall apart around 2345Z as it appeared the boundary was mixing out in parts. We'll stick on it for a bit longer and see if anything else fires

up. HRRR does show a lull in activity from 00Z until 02Z before firing up storms as a second shortwave passes by. We may RTB as a result.

**WATCHES/WARNINGS:**

T-STORM WATCH / IRION, TOM GREEN, STERLING, SCHLEICHER, SUTTON

**SEEDED CELL ID'S:**

124	94	155	168	197						
-----	----	-----	-----	-----	--	--	--	--	--	--

**FLIGHT INFORMATION:**

TIME (Z)	Plane	Flare Location	County
2230	09P	IN AIR	
2235	49P	IN AIR	
2249	49P	265° @ 16 nm	IRION
2255	49P	264° @ 11 nm	IRION
2256	09P	040° @ 04 nm	TOM GREEN
2257	49P	272° @ 06 nm	TOM GREEN
2259	09P	062° @ 03 nm	TOM GREEN
2300	49P	290° @ 09 nm	TOM GREEN
2300	09P	084° @ 04 nm	TOM GREEN
2301	49P	291° @ 10 nm	TOM GREEN
2304	49P	304° @ 09 nm	TOM GREEN
2313	49P	227° @ 10 nm	TOM GREEN
2316	49P	232° @ 14 nm	IRION
2320	49P	226° @ 13 nm	IRION
2321	49P	214° @ 12 nm	TOM GREEN
2324	49P	200° @ 11 nm	TOM GREEN
2325	49P	189° @ 10 nm	TOM GREEN
2327	49P	202° @ 09 nm	TOM GREEN
2342	09P	239° @ 26 nm	IRION
2344	09P	237° @ 25 nm	IRION
2345	49P	RTB	
2346	09P	232° @ 22 nm	IRION
2348	09P	RTB	

Seeding operations were conducted over Irion (13G+1H) and Tom Green (22G+3H) County. 35 glaciogenic flares and 4 hygroscopic flares were burned within 5 clouds. This is the 2<sup>nd</sup> day for seeding in April and the 2<sup>nd</sup> day for seeding during the season.