

**TRANS-PECOS WEATHER MODIFICATION ASSOCIATION - BARSTOW/PECOS, TEXAS**

**SEEDING REPORT - September 19, 2018**

**SYNOPTIC/MESOSCALE CONDITIONS:**

Southwesterly flow aloft is taking a bit longer to develop across Far West Texas however a series of shortwaves moving in from the south may be enough to support showers and storms later this afternoon. CAPE values nearing 1k J/Kg coupled with deep low-level moisture will interact with the shortwaves aloft to fire showers and storms, mainly over the higher terrain. Latest HRRR and WRF models show the convection firing up around 3PM local time. Storms should be confined to near the higher terrain areas where the mountains will provide surface lift, but we could still see isolated development along and west of a Pecos to Balmorhea line.

**LIFTING MECHANISM:**

Sufficient Surface Heating, Upper Level Dynamics, Terrain

**THERMODYNAMIC INDICES (12Z KMAF)**

Freezing Level (m)	5013	-15°C Height (m)	7700
Precipitable Water (inches)	1.35	CAPE (J/Kg)	239
LCL	1085	CINH (J/Kg)	198
CCL	2896	LI(°C)	-3.6
MAF ICA	-0.52	PB	4
Cloud Base (meters)	2580	DRT ICA	-
Warm Cloud Depth (meters)	2433	Cloud Base Temp (°C)	13.8

**DISCUSSION:**

With temperatures in the upper 80's at PEQ, conditions began to grow unstable with plenty of fuel available for shower/storm development. Dew points at 18Z were 64° and the afternoon cu field was beginning to grow. CAPE values are now in the 500-1k J/Kg range with sufficient surface convergence taking place. Latest sat imagery shows an area of towering cu trying to develop along the base of the Davis Mountains but flattening out as they got over the adjacent plains. For now, not much is taking place, but this will certainly be an area of interest over the next several hours. Latest HRRR is backing off a bit with convective development, but still hints at potential between the 20Z and 00Z hour. With that said, area of towering cu began to become even more interesting. We'll go ahead and launch with aircraft expected to be up by 1850Z. Furthermore, storms are starting to fire over the higher terrain which may move over the adjacent plains. We'll investigate those as well. Before pilot launched, storms dissipated. So, we waited a little bit longer. At 20Z, cu was firing up much more efficiently to the south. So, we will launch on these. The first storm seeded was near Valley Farm. This cell was on a downward trend, but after several rounds of flares, it began to respond very favorably by 2030Z. We'll try to move a bit further south and investigate other areas and see if we can get a similar response. This area was not as favorable, but we pushed west and seeded a line of showers/storms from central Reeves County into Culberson County. Response was favorable, but the western half of this system was becoming highly embedded. Therefore, we stayed on the eastern edge near Toyah where a more isolated cell was seeded as we moved into the 21Z hour.

**WATCHES/WARNINGS:**

N/A

**SEEDED CELL ID'S:**

99	96	105	212							
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**FLIGHT INFORMATION:**

TIME (Z)	Plane	Flare Location	County
2000	26P	IN AIR	

2020	26P	205° @ 15 nm	REEVES
2021	26P	205° @ 15 nm	REEVES
2023	26P	205° @ 15 nm	REEVES
2024	26P	205° @ 14 nm	REEVES
2025	26P	205° @ 16 nm	REEVES
2040	26P	230° @ 23 nm	REEVES
2046	26P	257° @ 23 nm	REEVES
2050	26P	258° @ 33 nm	REEVES
2051	26P	258° @ 33 nm	REEVES
2055	26P	269° @ 23 nm	CULBERSON
2056	26P	269° @ 23 nm	CULBERSON
2057	26P	269° @ 33 nm	CULBERSON
2101	26P	272° @ 33 nm	REEVES
2111	26P	279° @ 23 nm	REEVES
2114	26P	282° @ 23 nm	REEVES
2115	26P	282° @ 33 nm	REEVES
2119	26P	285° @ 33 nm	REEVES
2121	26P	285° @ 23 nm	REEVES
2125	26P	RTB	

Seeding operations were conducted over Reeves (30) and Culberson (6) Counties. 36 flares were burned within 4 clouds. This is the 1<sup>st</sup> day for seeding in September and the 10<sup>th</sup> day for seeding during the season.