

**SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS**

**SEEDING REPORT - May 5, 2020**

**SYNOPTIC/MESOSCALE CONDITIONS:**

Upper air analysis shows a shortwave trough over parts of the Central Plains and Midwest with a few impulses over the Southeast and a ridge over the Intermountain West. Surface analysis shows a low centered across northeast Mexico and another one across the Kentucky/Tennessee area across high pressure across the Rockies. The flow at upper levels is north northwesterly with it south southeasterly at the surface. The current dew point temperature is in the lower to middle 70s and the environmental temperature more or less the same with broken clouds to overcast skies across our area. For today, expect clouds to hover over the area today a cold front associated with an upper-level shortwave pushes south today. The front is expected to arrive across the Bandera County between 11 a.m. and 12 p.m. before it slides down to the McMullen and Bee counties between 5 and 6 p.m. Both the HRRR and ARW suggest little to no precipitation with convection at least for the northern half of the target as the ahead and behind the frontal passage. However, late this afternoon as the boundary approaches near the coast, a few showers and thunderstorms could be expected. The Storm Prediction Center has a marginal risk for severe storms to areas east of the target area along the coast. Gusty winds are expected behind the front by late afternoon. Overnight, the winds should cease with showers and thunderstorms possible along the coastal plains. Active weather overnight will be confined towards the coast with much of the target region clearing by then. The lows by Wednesday morning will be near or at the normal for this time of the year. Wednesday is forecast to be a quiet and pleasant day with comfortable feel-like temperatures. Wednesday night temperature will be on the cool side with some radiational cooling as the flow near the surface begins to shift to east southeasterly. The return of the southeasterly flow and gulf moisture is expected on Thursday with increasing cloud coverage. Another but a stronger cold front arrives during the day Friday that will bring a better chance for a decent amount of precipitation by the evening hours. I'm not expecting much in the way of precipitation during the day as there is expected to be a cap inversion in place for much of the day. However, the front will stall across south-central Texas by Friday evening while tapping into some strong moisture. The overnight temperature should be the lowest of the week. The highs are progged to be in the lower 80s and lower 90s with the lows in the middle 50s and lower 70s through the end of the forecast period.

**LIFTING MECHANISM:**

Short-wave trough, Cool Air Aloft, Cold Front

**THERMODYNAMIC INDICES (12Z KCRP)**

Freezing Level (m)	4541.8	CAPE (J/Kg)	1894.6
Precipitable Water (inches)	1.09	CINH (J/Kg)	0.13
LCL	587.92	LI (°C)	-4.00
CCL	642.25	PB	-4.00
CRP ICA	-18.28	Cloud Base Temp (°C)	19.4
Cloud Base (meters)	853.44		
Warm Cloud Depth (meters)	3688.36		

**DISCUSSION:**

Mainly quiet for much of the day as a cold front sided south across the target areas. By late afternoon a couple of cells developed along the frontal boundary near the coastal prairies. As storms began to fire up across the Live Oak County and the county east of the Bee county at first, 47P was called out to investigate them for possible seeding. When 47P arrived, part of the cells began to move in across the eastern and western side of the Bee county. The pilot was able to release a couple of the seeding materials in them, first to the cell to the west and then the one to the east. After seeding those cells, 47P was directed to go to a cell across southern McMullen county where it released some seeding materials in that cell. I did have the pilot go back to Bee county as the cells that it was seeding continued to survive and push south southeastward. However, when 47P got there, it was unable to add anymore silver as there was not enough inflow and whit no good cloud support. 47P headed back to base thereafter for the rest of the evening.

**WATCHES/WARNINGS:**

N/A

**SEEDED CELL ID'S:**

172	169						
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**FLIGHT INFORMATION:**

TIME (Z)	Plane	Flare Location	County
23:56	47P	In Air	
00:14	47P	130° @ 46 nm	Bee
00:15	47P	131° @ 47 nm	Bee
00:17	47P	131° @ 48 nm	Bee
00:25	47P	118° @ 48 nm	Bee
00:26	47P	118° @ 49 nm	Bee
00:28	47P	120° @ 48 nm	Bee
00:48	47P	171° @ 46 nm	McMullen
00:49	47P	171° @ 47 nm	McMullen
00:50	47P	172° @ 47 nm	McMullen
01:29	47P	Landed	

Seeding operations were conducted in Bee (12+0H), and McMullen (6+0H) Counties. 18 flares plus 0 hygroscopic flares were burned within 2 clouds. This is the 1<sup>st</sup> day for seeding in May and the 2<sup>nd</sup> day for seeding during the season.