

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - May 14, 2019

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a low across parts of central Texas with a ridge of high pressure over the four corners. At the surface, high pressure is located across much of the country with low/trough axis along the mountains of Mexico. The flow at upper levels is west southwesterly with it calm to light and variable at the surface. The current dew point temperature is in the low to mid 60's and environmental temperature in the low to mid 60's with a few to broken clouds in our area. For today, the upper level low continues on through central Texas in an eastward direction while weakening. Due to the location of the low and orographic lifting, expect couple storms to develop across the Hill Country. With lingering residual moisture at low levels near the coast will produce showers and possibly thunderstorms as the day progresses. The precipitable water values are progged to be around 1.5in, which is significant for some precipitation developments. Do not expect a total wash out as I anticipate hit or miss showers across northern and southern counties of the target area. Some thunderstorms may be strong due to moderate CAPE. Expect heavy downpours at times especially if the storms are slowly moving. Active weather is expected to decrease around sunset as we loose heat energy. Residual moisture boundary lingers onto Wednesday and with day time heating, expect showers and thunderstorms near the coast. High pressure begins to build in on Wednesday with a zonal flow patten aloft across south Texas. Thursday through Friday, the upper ridge takes a toll on our weather drying us out on both days. I'm not expecting much in the way of active weather but can't rule out an isolated shower or thunderstorm by then. This ridge begins to break down late Friday ahead of an upper level trough that will bring the return of significant showers and thunderstorms to our area overnight Friday. The highs are forecast to be in the 80's with the lows in the mid to upper 60's and low 70's through the end of the period.

LIFTING MECHANISM:

Upper Level Dynamics, Low Pressure, Sea-breeze

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	3954.15	CAPE (J/Kg)	808.83
Precipitable Water (inches)	1.52	CINH (J/Kg)	40.22
LCL	789.14	LI (°C)	-5.15
CCL	1234.64	PB	-5.15
CRP ICA	-18.26	Cloud Base Temp (°C)	18
Cloud Base (meters)	1615.44		
Warm Cloud Depth (meters)	2338.71		

DISCUSSION:

Cloudy conditions this morning led to partly sunny skies this afternoon. Low pressure centered across central Texas brought showers and thunderstorms in the morning and afternoon hours to areas north the Hill Country. A couple storms crept into the to southern region of the Hill Country during the early afternoon hours. However, the cells that developed were due to orographic lifting. With daytime heating and marginal instability, weak cells multiplied and moved across the Bandera County. 57AA was launched across that county when cells began to hold out long enough for the aircraft to reach them. Almost all of the cells were weak and gone within half an hour time. It was able to seed only two cells with only with a few dosages of seeding

materials. While 57AA was over the Bandera County, a strong cell developed across the Bee County due to an on-shore sea-breeze event. 57AA was sent way down to the Bee County but when it arrived there it was non-seedable due to extremely low ceiling. The aircraft was unable to reach that long-lived thunderstorm across the Bee County. Also, there were pop-up weak cells around the area with unfavorable inflow, thus; 57AA was unable to seed the rest of the cells. It returned to base after cells looked as though they were unable to multiply and conditions began settle.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

749	813								
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
19:48	57AA	In Air	
20:06	57AA	328° @ 49 nm	Bandera
20:31	57AA	308° @ 70 nm	Bandera
20:39	57AA	305° @ 72 nm	Bandera
22:36	57AA	Landed	

Seeding operations were conducted in Bandera (6+0H) County. 6 flares plus 0 hygroscopic flares were burned within 1 cloud. This is the 4th day for seeding in May and the 4th day for seeding during the season.