

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - August 22, 2019

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a flat subtropical ridge of high pressure over parts of the South, a shortwave trough over the Pacific West and a with a shortwave over the Rockies and a longwave trough over the Northeastern quadrant of the country. At the surface, low/trough axes across the southwestern half of the country, high pressure across much of the South and front extending across the parts of the South Plains. The flow at upper levels is mainly east southeasterly with it calm to light and variable at the surface. The current dew point temperature is in the upper 60s and middle 70s and environmental temperature in the lower and upper 70s with clear skies to broken clouds in our area. For today, expect a slight increase in the uptick in precipitation due to a weaker subtropical ridge and a weak shear axis. A weak mid-level impulse is expected to traverse north to north-northeastward over the Gulf of Mexico that will aid to sea-breeze event. Expect a slight chance for showers and thunderstorms this afternoon across the coastal plains. A weak impulse will be to our east on Friday that may enhance sea-breeze to the far eastern areas. Slightly above high temperatures and the elevated heat index values continue. An upper-level trough passes over the Central Plains the early have of the weekend that will weaken the ridge much further prompting a better sea-breeze event near the coast. By Sunday subtropical ridge rebuilds of the Southwestern States in Texas. However, will still maintain a slight chance for afternoon showers and thunderstorms along a sea-breeze near the coast due to some downwind of ridge. Overall, active weather will be near the coast through Sunday with the possibility of one or two thunderstorms making their way near the I-37 and I-35 corridor. The highs are progged to be in the upper 90s and possibly lower 100s with the lows in the lower to middle 70s through the end of the forecast period.

LIFTING MECHANISM:

Warm Moist Air Advection, Inverted Trough, Sea-Breeze

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	4972.14	CAPE (J/Kg)	2328.8
Precipitable Water (inches)	2.17	CINH (J/Kg)	68.25
LCL	649.66	LI (°C)	-6.45
CCL	795.34	PB	-6.45
CRP ICA	-25.49	Cloud Base Temp (°C)	25.9
Cloud Base (meters)	1701.80		
Warm Cloud Depth (meters)	3270.34		

DISCUSSION:

The day started off mainly quiet with a couple passing clouds in the morning but and early afternoon with a few spotty areas of light showers due to a sea-breeze event. The weak convective shower was over the Bee and Karnes Counties earlier in the day with but became more convective by strengthening in later in the afternoon due to daytime heating. As cells began to develop, 57AA was launched across the McMullen County and Atascosa Counties for possible seeding opportunities. However, 57AA was only successful with McMullen as much of the cells grew a bit and within a couple of minutes the

tops decreased drastically. The cells were too weak for seeding even across the Karnes and Wilson Counties. 57AA attempted to seed a few cells across those counties but they were non-seedable. After that, 57AA went back to the Atascosa County where is was able to seed a cell but not with the full dosages of seeding materials. 57AA then headed back to McMullen and Frio Counties but the had proven to be futile. All of the cells weak too weak for the aircraft to have seeded them. Since much of the cells had died or were non-seedable, 57AA returned to base after an unsuccessful afternoon/evening with no intentions of returning to the air for more seeding possibilities.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

491	545								
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
22:05	57AA	In Air	
22:38	57AA	160° @ 20 nm	McMullen
22:39	57AA	159° @ 19 nm	McMullen
22:40	57AA	164° @ 18 nm	McMullen
22:42	57AA	166° @ 18 nm	McMullen
22:45	57AA	168° @ 18 nm	McMullen
23:13	57AA	131° @ 5 nm	Atascosa
01:25	57AA	Landed	

Seeding operations were conducted in Atascosa (2+0H) and McMullen (10+0H) Counties. 12 flares plus 0 hygroscopic flares were burned within 2 clouds. This is the 5th day for seeding in August and the 25th day for seeding during the season.