SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION – Pleasanton, TEXAS

SEEDING REPORT – September 5, 2020

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a shortwave trough over Texas, a longwave trough over the Northeast, a ridge over the West, and Southeast. At the surface, high pressure is across much of the country with low pressure across the far Northeast and the West. The flow at upper levels is mainly variable with it light and variable at the surface. The current dew point temperature is in the lower to upper 70s and the environmental temperature more or less the same with scattered to broken clouds across our area. For today, expect a continuation of showers and thunderstorms across the entire target area due to an outflow moist boundary from Mesoscale Convective Vortex and the upper-level shortwave trough over Texas. Expect non-severe scattered to numerous showers and thunderstorms beginning later this morning. Models are in disagreement with the actual placement of the cells but most areas should see precipitation; however, I do not anticipate widespread coverage and any Mesoscale Convective System. The precipitable water values are forecast to be around 2in and any slow-moving storms could produce heavy downpours and minor flooding. Moderate DCAPE suggests the potential for strong wind gust with the strongest storms. Expect shower sand thunderstorms to decrease tonight as we lose daytime heating and the upper-level trough weakens and drifts southwestward. Another round of showers and thunderstorms are likely on Saturday with moisture in place, daytimes heating, and weak upward forcing from the weakening shortwave trough and moving in afternoon inverted trough. Due to an increase in cloud and precipitation coverage, both the max the min temperature both today and tomorrow will be below to climatological normal for this time of the year. With remnant moisture and the upper-level trough weakening, active weather will begin to decrease. However, with weakness in the mid to upper level, expect additional showers and thunderstorms to occur mainly in the afternoon. Monday should be dry and a shortwave ridge moves in. There may be a stray shower or two near the coast but generally speaking, expect mainly quiet weather at the start of next week. The highs are progged to be in the middle 80s and middle 90s with the lows in the upper 60s and middle 70s through the end of the forecast period.

LIFTING MECHANISM:

Upper-Level Trough, Low-Level Moisture Advection, Sea-Breeze

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	4706.86	CAPE (J/Kg)	669.45
Precipitable Water (inches)	2.27	CINH (J/Kg)	36.44
LCL	813.68	LI(°C)	-2.35
CCL	1207.09	PB	-2.35
CRP ICA	-16.44	Cloud Base Temp (°C)	25.2
Cloud Base (meters)	1133.20		
Warm Cloud Depth (meters)	3573.66		

DISCUSSION:

A few isolated cells developed across parts of the EAA county this afternoon. When seeding started, a seedable cell developed and 57AA was launched across the Medina county to target it. 57AA successfully seeded that cell by releasing

the full dose of seeding materials into that cell. There were a few weaker and smaller non-seedable cells around that 57AA did not bother to target at the time. While 57AA was on its way back to Uvalde airport, the cell that it seeded merged with other smaller cells around it to become the same cell extending over the Bandera, Medina, and Uvalde counties. In other words, the merged cell became one strong large cell. A while after 57AA was called out again to target a cell across the Uvalde county. 57AA was able to seed that cell by firing several dosages of seeding materials into it. Eventually, there were a couple of small pop-us across the entire target area where I had 60P launched to go over the eastern target to try and target whatever that could have been target. 57AA worked on the pop-us across the western target area. There was a good decent cell across the southern McMullen county that I tried to send 60P to target but before 60P could get to it, the cell fully moved into the non-seeding zone of that county. Most of the pop-ups cell out there this afternoon were non-seedable with low tops, VIL, and in some instances low reflectivity. Both 60P and 57AA returned to base after there was nothing else to seed at the time.57AA returned to the skies one last time for the evening to seed a cell located across the eastern Medina and western Bexar county. 57AA successfully seeding that cell by firing the full does of silver iodide into that cell. There were cells over southern Frio county and parts of the Atascosa county that very weak at the time for them to be seeded; thus, 57AA returned to base for the evening. Also, a cell developed east of McMullen county over the Live Oak county then move into the target area thereafter. However, due to the time of the day, overcast skies with some low ceiling, both the pilot and myself decided not to go after it and considered it quits for the evening.

WATCHES/WARNINGS:
N/A

SEEDED CELL ID'S:

1411	2693	2685	2942	1844	2132	2133	2163			

FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
19:58	57AA	In Air	
18:13	57AA	299° @ 56 nm	Medina
18:14	57AA	298° @ 57 nm	Medina
18:14	57AA	298° @ 57 nm	Medina
18:15	57AA	297° @ 57 nm	Medina
18:16	57AA	298° @ 58 nm	Medina
18:58	57AA	Recon	
19:43	57AA	In Air	
19:54	57AA	285° @ 81 nm	Uvalde
19:54	57AA	285° @ 80 nm	Uvalde
19:54	57AA	285° @ 80 nm	Uvalde
19:55	57AA	285° @ 82 nm	Uvalde
19:56	57AA	284° @ 81 nm	Uvalde
20:08	57AA	Reflare	
20:44	60P	In Air	
20:53	60P	68° @ 25 nm	Wilson
20:54	60P	65° @ 25 nm	Wilson
20:55	60P	70° @ 24 nm	Wilson
21:07	60P	59° @ 38 nm	Wilson
21:09	60P	60° @ 36 nm	Wilson
21:09	57AA	In Air	
21:11	60P	62° @ 37 nm	Wilson
21:14	60P	59° @ 36 nm	Wilson
21:23	60P	63° @ 43 nm	Wilson

21:24	**60P**	**65° @ 49 nm**	**Wilson**
21:31	**57AA**	**292° @ 49 nm**	**Medina**
21:32	**57AA**	**290° @ 50 nm**	**Medina**
21:33	**57AA**	**291° @ 50 nm**	**Medina**
21:41	**57AA**	**287° @ 39 nm**	**Medina**
21:50	**57AA**	**289° @ 53 nm**	**Medina**
22:05	**57AA**	**Recon**	
22:08	**60P**	**Landed**	
22;27	**57AA**	**In Air**	
22:51	**57AA**	**315° @ 42 nm**	**Medina**
22:52	**57AA**	**316° @ 42 nm**	**Medina**
22:53	**57AA**	**314° @ 42 nm**	**Medina**
22:54	**57AA**	**315° @ 43 nm**	**Medina**
22:55	**57AA**	**313° @ 43 nm**	**Medina**
23:24	**57AA**	**Landed**	

Seeding operations were conducted in Medina (30+0H), Uvalde (10+0H), and Wilson (18+1H) Counties. 58 flares plus 0 hygroscopic flare were burned within 8 clouds. This is the 4th day for seeding in September and the 36th day for seeding during the season.