

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - August 15, 2019

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a ridge of high pressure centered over the deep Southwest with a trough over the East and the Jetstream to the North. At the surface, low/trough axes across much of the country with a cold and stationary front extending from the East through the middle of Texas into the Rockies. The flow at upper levels is mainly north northeasterly with it light and variable at the surface. The current dew point temperature is in the middle 60s and middle 70s and environmental temperature in the middle to upper 70s and lower 80s with clear skies and broken clouds in our area. For today, there should be an uptick in moisture over much of the area especially this afternoon. The hi-res models are picking up on residual boundaries reigniting a few scattered showers and thunderstorms this afternoon and into the early evening hours. Any storms that form today will have a threat for gusty winds based on model sounding that gave some hints on inverted v soundings with the CAPE values ranging between 1000 and 2000 J/kg. The active weather comes to an end this evening with conditions overnight settling down. The ridge of high pressure gets re-establish over the state once again. The ridge will bring the return of dry and hot conditions to our area Friday through the Sunday. The highs across much of the area should be in the triple digits and afternoon and early evening dew point temperature in the 60s and 70s. The heat index values will be in the triple digits that may cause for a heat advisory to be issued by the National Weather Service each and every single day. The highs are progged to be in the middle to 90s and lower 100s with the lows in the middle to upper 70s through the end of the forecast period.

LIFTING MECHANISM:

Weak Upper Ridge, Warm Moist Air Advection, Surface Trough

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	5039.80	CAPE (J/Kg)	1768.9
Precipitable Water (inches)	2.21	CINH (J/Kg)	59.48
LCL	585.92	LI (°C)	-3.29
CCL	696.51	PB	-3.29
CRP ICA	-20.06	Cloud Base Temp (°C)	25.8
Cloud Base (meters)	1661.16		
Warm Cloud Depth (meters)	3378.64		

DISCUSSION:

The day started off mainly settled but turned a somewhat unsettled in the afternoon hours over the northern half of the target area early to mid-afternoon then by late afternoon over the southern half. A couple of cells developed over the northwestern target zone. 57AA was able to seed a couple of strong young cells. However, there were a few weak non-seedable cells that the aircraft could not reach or had low inflow rates. 57AA was sent to a cell just to the north of Uvalde but it was unseeable. The aircraft was then rerouted to the western or southwestern side of the Uvalde for possible seeding opportunities. However, those cells were weakening and moving away from the southwestern and southern parts of Uvalde County. 57AA was then

directed to go to the eastern side of the Medina County as a more impressive cell developed over the noon-seeding zone of the Bexar County and then began to move out of that county and into the Medina AND Atascosa Counties. Upon arrival, the cell began weakening with very low inflow. After all these disappointments, I decided to have 57AA try seeding cells across the southern Uvalde area with some of them moving away from the county. These cells regain strength and looked seedable and much better than before. However, 57AA had to fly from Bexar/Atascosa to Uvalde County; thus, when the aircraft reached that area, it was able to seed only one cell that actually was leaving the edge of the southwestern Uvalde County. 60P was called out as cells with small area developed. However, there was not much that could have been done as they were weak. The cells were so small in area with low reflectivity that 60P was unable to get to them on time as they were too weak with low cloud tops. 60P return to base as the few cells over to the east dissipated quickly and conditions began to settle. Keep in mind the cells were so weak that I did not allow 60P to even try to investigate a couple of them, so I informed 60P to return to base as active weather began to cease. I also had 60P investigate two cells one across the western McMullen County and the other across the southern Frio County; however, they had weak inflow and low cloud tops; thus, 60P was not able to seed those cells. As conditions settled, 60P headed back to base for the evening.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

334	341	539	339	343				
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
19:00	57AA	In Air	
19:14	57AA	294° @ 61 nm	Uvalde
19:16	57AA	293° @ 59 nm	Uvalde
19:19	57AA	291° @ 56 nm	Uvalde
19:33	57AA	286° @ 51 nm	Medina
19:34	57AA	288° @ 49 nm	Medina
19:35	57AA	287° @ 48 nm	Medina
19:37	57AA	286° @ 47 nm	Medina
20:02	57AA	319° @ 49 nm	Bandera
20:04	57AA	321° @ 49 nm	Bandera
20:07	57AA	319° @ 49 nm	Bandera
20:08	57AA	316° @ 49 nm	Bandera
20:12	57AA	320° @ 49 nm	Bandera
22:04	57AA	263° @ 89 nm	Uvalde
22:05	57AA	263° @ 87 nm	Uvalde
22:08	60P	In Air	
22:12	57AA	261° @ 84 nm	Uvalde
22:14	57AA	262° @ 83 nm	Uvalde
22:16	57AA	261° @ 83 nm	Uvalde
22:17	57AA	262° @ 84 nm	Uvalde
22:39	57AA	Landed	
23:09	60P	Landed	

Seeding operations were conducted in Bandera (10+0H), Medina (8+0H) and Uvalde (18+0H) Counties. 36 flares plus 0 hygroscopic flares were burned within 5 clouds. This is the 4th day for seeding in August and the 24th day for seeding during the season.