

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - September 3, 2020

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a shortwave trough over Texas, a ridge over the West and Southeast. At the surface, low pressure is across the Great Lakes, Northeast through the South Plains with high pressure across the West and Rockies. The flow at upper levels is mainly westerly with it light and southerly at the surface. The current dew point temperature is in the lower 70s and lower 80s and the environmental temperature more or less the same with clear skies to broken clouds across our area. For today, the upper-level shortwave trough depends before being cut-off while producing a complex of thunderstorms across the Hill Country along with low-level convergence to the north of the target area. Convection should be initiated around mid to late afternoon and then take a southward direction. The precipitable water values should be around 2.0in that could produce locally heavy rainfall at times with the CAPE values around 1500 J/kg that could lead to wet microbursts. The Storm Prediction Center places much of the target region under a marginal risk for strong to severe storms as this boundary continues to moves south this afternoon into the portions of tonight. Due to an increase in cloud and precipitation coverage, the max temperature will be near the climatological normal for this time of the year. I should also mention that the heat index values for areas across the eastern target areas may be on the high side as the afternoon dew point temperature may not mix out properly with mid to low-level clouds in place overhead. For the rest of tonight, a low chance for precipitation behind the main convection. On Friday, two, split ridges, one over the west and the other over two the east will cause weakness across our area. Another round of scattered showers and thunderstorms are expected during the day as the temperature continues to be on the cool side. An unsettled pattern remains through the weekend with chances for afternoon convection. The highs are progged to be in the upper 80s and middle 90s with the lows in the upper 60s and upper 70s through the end of the forecast period.

LIFTING MECHANISM:

Outflow Boundary, Low-Level Moisture Advection, Upper-Level Impulse

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	4970.48	CAPE (J/Kg)	1973.47
Precipitable Water (inches)	1.83	CINH (J/Kg)	24.29
LCL	810.73	LI (°C)	-6.99
CCL	1240.91	PB	-6.99
CRP ICA	-25.42	Cloud Base Temp (°C)	17.7
Cloud Base (meters)	1712.42		
Warm Cloud Depth (meters)	3258.06		

DISCUSSION:

Conditions for seeding were likely unfavorable before noon where it began to become somewhat favorable after noon. A decent cell developed and moves into the McMullen county.; however, at first, it began pushing into the non-seeding zone of that county. As it began to spread out of the non-seeding zone, 60P was contacted and when available it was launched to go across the McMullen county to possibly seed that cell. 60P was able to firs a couple of dosages of the seeding materials in that cell. From there, 60P was sent to the AT/FR county. However, when 60P arrived at that cell across the AT/FR county was it

was not able to get anything out of it after going around it twice. 60P was then sent to southwestern Frio County as a cell was just south of that county possible trying to make its way into that county. After several rounds, 60P was able to release a few dosages of seeding materials into that cell. 60P returned to base as there were no other seedable cells at the time across the target area. Eventually, 57AA was launched to go across the Bandera county as cells from the north began dropping in over parts of the EAA counties. 57AA successfully seeded a huge cell that was moving across the far northern EAA county such as Bandera. This cell was so huge that it extended all the way from west Uvalde county to east of Bexar county while it was traveling southward. A new cell developed across eastern Medina with much of it across western Bexar county; however, 57AA got caught with strong winds and then the storm that we seeded across Bandera moved over the Uvalde airport; thus, it was unable to launch to target the new cell. 60P was then called out to try and catch the new cell while it lasted. However, the new cell merged with the cell that we already seeded and became the older cell all together way before 60P approached it. Some other cells developed across the Bexar county that were unreachable due to the non-seeding zone. The pilot reported it being a bit rough out there. There were several pop-ups across the southern half of the target area where I had 60P investigate. However, at the time, the cells were weak and non-seedable except for the one that was moving into the non-seeding zone of the McMullen county. 60P was then sent to the Wilson county as a better cell was moving out of the Bexar County and into that county. 60P successfully seeded that cell before returning to base for the evening. Even while 60P was on its way back to the airport, the cells across the southern half of the target area were very weak and non-seedable; thus, ops ended for the evening.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

324	2477	784	3510						
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
18:36	60P	In Air	
19:08	60P	191° @ 38 nm	McMullen
19:08	60P	189° @ 37 nm	McMullen
19:08	60P	189° @ 36 nm	McMullen
19:11	60P	184° @ 34 nm	McMullen
20:13	60P	231° @ 43 nm	Frio
20:14	60P	232° @ 43 nm	Frio
20:15	60P	235° @ 42 nm	Frio
20:16	60P	232° @ 40 nm	Frio
20:44	57AA	In Air	
20:56	57AA	299° @ 75 nm	Bandera
20:57	57AA	299° @ 75 nm	Bandera
20:57	57AA	299° @ 74 nm	Bandera
20:57	57AA	300° @ 74 nm	Bandera
20:58	57AA	299° @ 73 nm	Bandera
20:58	57AA	299° @ 73 nm	Bandera
21:07	60P	Recon	
21:28	57AA	Landed	
22:59	60P	In Air	
23:24	60P	7° @ 12 nm	Bexar
23:25	60P	10° @ 12 nm	Bexar
23:26	60P	16° @ 12 nm	Bexar
23:27	60P	21° @ 14 nm	Bexar

23:52	60P	66° @ 16 nm	Wilson
23:53	60P	66° @ 15 nm	Wilson
23:54	60P	69° @ 16 nm	Wilson
23:55	60P	71° @ 17 nm	Wilson
24:11	60P	Landed	

Seeding operations were conducted in Bandera (10+1H), Bexar (8+0H), Frio (6+1H), McMullen (6+1H), and Wilson (8+0H) Counties. 38 flares plus 3 hygroscopic flares were burned within 4 clouds. This is the 2nd day for seeding in September and the 34th day for seeding during the season.