

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - July 22, 2019

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a ridge centered over the Four Corners and a positively tilted trough over the far northeast with its base extending all the way across the Ohio Valley. At the surface, high pressure is across much of the country with lows associated with a cold front stretching all the way from the Northeast through the Southern Rockies. The flow at upper levels is east northeasterly with it calm to light and variable at the surface. The current dew point temperature is in the lower 70s and environmental temperature in the upper 70s and lower 80s with clear to scattered clouds in our area. For today, expected another warm/hot and humid day with much of the areas remaining dry except for near the coast. A cold front across the north will gradually progress southward today. The front is not expected to impact daytime temperatures as it will still be to the north of the target zone. There is going to be an uptick in moisture that will aid in the development of showers and thunderstorms along the coastal plains. An unusual cold front is expected to drop south over the target area overnight into Tuesday bringing not only cooler temperatures but showers and thunderstorms along with it. Overnight, much of the activity will be towards the Hill Country. On Tuesday, expect scattered showers and convection along the passage of the cold front. The cold front is expected to push south overnight Tuesday and then likely stall across the middle of the Texas coast. Much of the area should be dry on Wednesday as drier air is forecast to filter in behind this front. Any precipitation will be mainly during the morning hours south of Highway 90. Drier low-level air will remain in place through Thursday night; thus, leading to a dry forecast. The highs are progged to be in the lower to upper 90s with the lows in the lower 60s and lower 70s through the end of the forecast period.

LIFTING MECHANISM:

Cold Front, Warm Moist Air Advection, Sea-Breeze

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	4690.22	CAPE (J/Kg)	1846.7
Precipitable Water (inches)	1.84	CINH (J/Kg)	60.77
LCL	837.50	LI (°C)	-5.10
CCL	1334.80	PB	-5.10
CRP ICA	-21.17	Cloud Base Temp (°C)	24.8
Cloud Base (meters)	1456.01		
Warm Cloud Depth (meters)	3334.21		

DISCUSSION:

Today started off quiet but with low-level moisture moving in from the coast, sufficient heating, front to the north and weakness in the upper level, storms developed first over the Bee County and then over McMullen, Karnes and Atascosa Counties. Much of the thunderstorms very over the southern parts of the Bee County. 49P was not able to seed due to issues with the aircraft. Also, 60P pilot was unavailable due to personal reasons; thus, 57AA was launched from Uvalde to seed cells over the Bee and eastern counties. The onshore flow early on aided in the development of a sea-breeze event late in the day. A couple of cells developed over the Bee County that were seedable. However, due to the distance, 57AA had to travel to reach them, either the

cells died, newer cells developed nearly outside of the target area and or they retreated towards the coast instead of moving over the Bee County. After, trying to seed over the Bee County, a couple of cells developed over the Atascosa and Karnes Counties. 57AA was able to seed those cells that were strong. There were a few others over the McMullen and Wilson/Karnes County that were non-seedable. 57AA then landed at Pleasanton airport to refuel before heading back for possible additional seeding opportunities. The aircraft attempted to seed a cell coming in from the east over the eastern side of the Wilson County after refueling but it was unsuccessful because the cell had weakened drastically with low dbz and cloud tops. The aircraft headed back to Uvalde for the rest of the evening with no intent to return to the air as conditions settled.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

171	185	412	517						
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
19:14	57AA	In Air	
20:19	57AA	113° @ 65 nm	Bee
20:54	57AA	28.17N, 97.60W	Bee
21:00	57AA	28.17N, 99.60W	Bee
21:32	57AA	162° @ 21 nm	McMullen
21:34	57AA	164° @ 20 nm	McMullen
21:36	57AA	162° @ 21 nm	McMullen
21:38	57AA	166° @ 20 nm	McMullen
21:39	57AA	165° @ 21 nm	McMullen
21:52	57AA	120° @ 17 nm	Atascosa
21:57	57AA	92° @ 16 nm	Wilson
22:02	57AA	81° @ 18 nm	Wilson
22:06	57AA	90° @ 16 nm	Wilson
22:08	57AA	79° @ 17 nm	Wilson
22:20	57AA	Refueled	
22:56	57AA	In Air	
24:26	57AA	Landed	

Seeding operations were conducted in Atascosa (2+0H), Bee (6+0H), McMullen (10+0H) and Wilson (8+0H) Counties. 26 flares plus 0 hygroscopic flares were burned within 4 clouds. This is the 6th day for seeding in July and the 20th day for seeding during the season.