

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - July 14, 2019

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a board ridge centered the four corners, Tropical Storm Barry over the northern Gulf of Mexico. At the surface, low/trough axes across the western half of the country with high pressure across the Central Plains and Great Lakes area with a meso-low associated with the aforementioned tropical storm off the coast of Louisiana. The flow at upper levels is light a from the east northeast with it calm to light and variable at the surface. The current dew point temperature is in the upper 60s and environmental temperature in the upper 70s with clear skies to scattered clouds in our area. For today, the upper-level ridge of high pressure will remain over the West with Tropical Storm Barry over Louisiana coast sending a few high clouds our way from it's outer-bands. The flow continues to be light from the and north lowering the dew point temperature slightly with heat index values somewhat a little more comfortable earlier this week. There are still some places with heat index values in the low 100's for this afternoon. Precipitable water values are expected to be around 1.5in across much of the target area with it closer to 2in near the coast; thus, this can lead to some isolated showers and a few thunderstorm activities that will be confined to the coastal region later in the day. With enough moisture and afternoon and evening, heating cell development is possible, especially where there is a high moisture influx. I'm not expecting scattered thunderstorms but an isolated one or two is possible across parts of the target area mainly near the coast and possibly near the Uvalde area as per the ARW model. Both the latest HRRR and the Texas Tech WRF keeps much of our area storm-free including Uvalde with it a little more active near the coast. Overnight, should be quiet; however, can't rule out a shower or thunderstorm with Barry rotating across the Gulf drawing night the Louisiana coast. This storm is expected to make landfall between 12 and 18UTC Saturday leaving us on the western dry side of this system. I expect both Saturday and Sunday to be mainly hot and dry due to subsidence upwind of the meso-low and downwind of the synoptic ridge. If there should be any showers or storms it will be across the eastern zone as moisture wraps around Barry as it lifts northward over parts of the Southern Mississippi Valley. Overnight Sunday into Monday, the flow near the surface returns to southeasterly that will increase the dew point temperature and humidity. The highs are progged to be in the mid to upper 90s with the lows in the lower to upper 70s through the end of the forecast period.

LIFTING MECHANISM:

Weak Outflow Boundaries, Warm Moist Air Advection, Upper-Level Low

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	5205.77	CAPE (J/Kg)	479.79
Precipitable Water (inches)	1.86	CINH (J/Kg)	30.98
LCL	1784.44	LI (°C)	-1.64
CCL	2095.44	PB	-1.64
CRP ICA	21.22	Cloud Base Temp (°C)	20.1
Cloud Base (meters)	1693.72		
Warm Cloud Depth (meters)	3512.05		

DISCUSSION:

Conditions today started off more or less the same as other days. However, today was a little more active with isolated afternoon and evening showers and thunderstorms. Cells developed a little earlier on but were too weak and did not last long enough for the aircraft to reach them. 60p WAS SENT TO Bee County but was not that successful as much of the cells did not have much inflow even though they appeared good on the radar. 60P passed along the eastern side of the Bee County area and visited a couple of cells but were not able to seed them as they were non-seedable. During this time 60P seeded a couple of small cells over the Bee County. As aforementioned the cells were not all that impressive. The cells appear for half an hour or less and then dissipate thereafter. 60P was able to seed a couple more cells later in the day but did not worth the effort as most of them had low inflow and low cloud tops. Many of the cells were popcorn type there scattered around much of the target area. I had 60P seed a handful of cells across the southern parts of the target area for a little while before returning to base leaving the rest up to nature.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

214	116	272	426	525	516				
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
19:06	60P	In Air	
19:34	60P	123° @ 54 nm	Bee
19:35	60P	122° @ 53 nm	Bee
19:36	60P	124° @ 54 nm	Bee
19:56	60P	110° @ 68 nm	Bee
19:57	60P	111° @ 68 nm	Bee
19:58	60P	111° @ 69 nm	Bee
20:23	60P	117° @ 34 nm	Bee
20:24	60P	116° @ 34 nm	Bee
20:25	60P	116° @ 34 nm	Bee
20:26	60P	117° @ 34 nm	Bee
20:31	60P	Recon	
22:22	60P	In Air	
22:55	60P	129° @ 17 nm	Atascosa
22:55	60P	131° @ 17 nm	Atascosa
22:56	60P	126° @ 17 nm	Atascosa
23:04	60P	173° @ 17 nm	Atascosa
23:05	60P	169° @ 17 nm	Atascosa
23:06	60P	175° @ 18 nm	Atascosa
23:19	60P	175° @ 42 nm	McMullen
23:19	60P	172° @ 42 nm	McMullen
23:28	60P	172° @ 42 nm	McMullen
22:28	60P	Landed	

Seeding operations were conducted in Atascosa (12+0H), Bee (20+0H), McMullen (6+0H) Counties. 38 flares plus 0 hygroscopic flares were burned within 6 clouds. This is the 4th day for seeding in July and the 18th day for seeding during the season.