

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - August 11, 2018

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows two disturbance across near Texas, one across the Southern Mississippi Valley and the other one across the Southern Plains with an amplified ridge West and flatten ridge across the Southeast. At the surface, mainly riding with two front extending across the Southern Plains one north-central Texas and the Kansas. The flow at upper levels is from the north northwest and mainly calm at the surface. The current dew point temperature is in the low 70's and the environmental temperature in the low 70's as well with broken clouds moving through our area. For today, the upper disturbance across the Southern Mississippi Valley exits across the east with a trough to the northern parts of the Southern Plains strengthening slightly and sliding south across parts of Texas. The combination of the exiting low and the incoming one will bring a chance for showers and thunderstorms during the day to day and overnight beginning with the northern counties first parts of the central counties of the target zone mainly overnight. With daytime heating, low level moisture and frontal boundary close to the area, isolated to scattered showers are expected through the end of today with enough left over for overnight. The trough lingers in Saturday bringing another round of precipitation across much of the target zone as the 300mb jet stream will be located across Central Texas. This upper low becomes cut off from the main flow by Saturday evening which will enhance lift that will also bring active conditions to our area overnight Saturday through the end of the period. By Monday the low will begin to eject into an upper level trough across the far north. Unsettled conditions are expected today through the beginning of next week with much needed rainfall for many areas across the south. The forecast calls for the dew point temperature to be in the upper 60's; thus, the heat index value is expected to be on the high side. The feel like temperature will be at least 3 to 5 degrees warmer than the actual temperatures. On Saturday, the dew point temperature is even expected to be higher mainly into the low to mid 70's across much of the target zone with very warm feel like temperatures.

LIFTING MECHANISM:

Upper Level Low, Stationary Front, Inverted Trough

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	5152.75	CAPE (J/Kg)	2139.7
Precipitable Water (inches)	2.08	CINH (J/Kg)	1.14
LCL	676.65	LI(°C)	-4.36
CCL	774.30	PB	-4.36
CRP ICA	-21.90	Cloud Base Temp (°C)	21
Cloud Base (meters)	1437.76		
Warm Cloud Depth (meters)	3714.99		

DISCUSSION:

Today was another active day with both an upper level trough to the north and an inverted trough to south interacting. Associated with the upper level trough was stationary front positioned diagonally from the northeast to the southwest straight through the center of the target zones. Showers and thunderstorms developed in the morning hours with overnight left over across

west. Most of the cells that developed early in the day died very quickly; thus, there was no point at seeding those cells. As the day progressed, cells developed more rapidly, grow to large cells and stood out long enough for an aircraft to seed them. As seedable storms began to spring up, aircraft 160P was first launched across the Bee County as most of the cells were located there. The aircraft was able to do some seeding there, but the cells were still too weak. 160P then headed across to the Atascosa County where it maneuvered from cells to cells for looking for good inflow and successfully performed operations. Aircraft 47P was then launched nearby across the Wilson and Karnes Counties where it too was able to seed a couple cells. After seeding across the Atascosa County, 160P went to the McMullen County where it tried to seed cells, but they were no good. Afterwards, I had 160P go to Karnes County while 47P head to the Atascosa County where cells became vibrant. However, 47P ended up in Frio County where cells were moving to after coming out from over the Atascosa County. After 160P finished with Karnes County, I had it come down again to the McMullen County but still it was unsuccessful in seeding a cell over that county. Aircraft 160P was then instructed to return to base as 47P was handling the remainder of cells that were few. 47P was not far begin in returning to its base after 160P as cells grew to become one. Today was a very successful day as we were able to seed multiple cells over several counties.

WATCHES/WARNINGS:

Hail

SEEDED CELL ID'S:

2466	3075	3071	2698	3393	3361	3661	3531	3759	3717
3566	3956								

FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
19:38	160P	In Air	
19:49	160P	114° @ 51 nm	Bee
19:49	160P	114° @ 51 nm	Bee
19:50	160P	116° @ 51 nm	Bee
19:51	160P	118° @ 51 nm	Bee
20:28	160P	92° @ 10 nm	Atascosa
20:29	160P	81° @ 10 nm	Atascosa
20:38	47P	In Air	
20:59	160P	137° @ 7 nm	Atascosa
21:00	47P	92° @ 40 nm	Karnes
21:00	160P	156° @ 5 nm	Atascosa
21:02	47P	92° @ 39 nm	Karnes
21:05	47P	90° @ 41 nm	Karnes
21:07	47P	89° @ 39 nm	Karnes
21:09	160P	202° @ 14 nm	Atascosa
21:10	160P	208° @ 14 nm	Atascosa
21:11	47P	90° @ 37 nm	Karnes
21:23	160P	210° @ 17 nm	Atascosa
21:25	160P	217° @ 15 nm	Atascosa
21:26	47P	52° @ 26 nm	Wilson
21:29	47P	49° @ 25 nm	Wilson
21:31	47P	47° @ 23 nm	Wilson
21:39	47P	57° @ 33 nm	Wilson
21:40	160P	142° @ 20 nm	Atascosa
21:41	160p	151° @ 20 nm	Atascosa
21:42	160P	144° @ 18 nm	Atascosa
21:42	47P	50° @ 33 nm	Wilson
21:45	47P	49° @ 33 nm	Wilson

21:48	160P	113° @ 18 nm	Atascosa
21:49	160P	116° @ 17 nm	Atascosa
22:00	47P	100° @ 15 nm	Atascosa
22:01	160P	72° @ 30 nm	Karnes
22:01	160P	76° @ 33 nm	Karnes
22:04	47P	106° @ 15 nm	Atascosa
22:23	47P	246° @ 10 nm	Atascosa
22:24	47P	244° @ 8 nm	Atascosa
22:26	47P	242° @ 15 nm	Atascosa
22:30	47P	238° @ 20 nm	Frio
22:31	47P	236° @ 23 nm	Frio
22:34	47P	234° @ 20 nm	Frio
22:43	47P	227° @ 28 nm	Frio
22:44	47P	227° @ 28 nm	Frio
24:48	47P	228° @ 27 nm	Frio
23:18	160P	Landed	
23:59	47P	Landed	

Seeding operations were conducted in Atascosa (36+20H), Bee (8+1H), Frio (12+ 24H), Karnes (14+20H) and Wilson (12+24) Counties. 82 flares plus 89 hygroscopic flares were burned within 12 clouds. This is the 6th day for seeding in August and the 24th day for seeding during the season.