SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION – Pleasanton, TEXAS

SEEDING REPORT – August 12, 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:

Cut off Low, Stationary Front, Low Level Moisture

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	4945.33	CAPE (J/Kg)	1910.3
Precipitable Water (inches)	2.13	CINH (J/Kg)	8.30
LCL	737.95	LI(°C)	-4.20
CCL	952.19	PB	-4.20
CRP ICA	-20.62	Cloud Base Temp (°C)	23.8
Cloud Base (meters)	1153.76		
Warm Cloud Depth (meters)	3791.57		

DISCUSSION:

Active weather continued today as an upper level cut off low was located across parts of the South Plains. Showers and thunderstorms occurred early in the morning mainly along the western counties of the target zone with a few pop-up cells that developed by mid-morning and early afternoon across the Atascosa, parts of Karnes and Wilson Counties. As cells began to develop and stood out long enough for an aircraft to get to them, 47P was launched first

across the Karnes County where it seeded a cell but was unable to give the full dosages as the cell did not look that impressive looking at it on my end. After that, 47P went to the northwestern edge of the Atascosa County and much of the Medina County where it seeded several cells as the afternoon matured. Also, worth mentioning that the stationary frontal boundary was located more west of the Uvalde County. Cells fired up greatly across the Medina and parts of the Uvalde and Frio Counties where 47P was actively seeded. 160P had a flat; thus, was not able to be in the air hours earlier to help 47P out. Even though this had taken place 47P still did an excellent job by hitting as many cells as possible with seeding materials. Final 160P was able to join 47P but on its way to the Medina County it was ordered to fly over the southern part of the Bexar County and northern Atascosa County as there was a cell that looked a bit weak but was worth investigating. However, by the time 160P reached to the cell it was just too weak and dying. When 160P ended up over Medina County it seeded a couple cells over the southern and central areas. While 160P seeded across the Medina County 47P was seeding cells across the Uvalde County as they were coming in from counties south of it. 47P then headed to the Frio County where it was also able to perform operations while 160P remained to the north across the Medina County. 160P was then instructed to go to the McMullen County as cells started to pick up over that area. While 47P headed back to base, cells also started to develop across the Atascosa County where it too seeded a few cells but did not give the cells the full dosages of seeding materials as they were fairly good. Those cells that both 160P and 47P seeded across the McMullen and Atascosa Counties grew over time and lasted a while as they pushed northward. After a day of successful seeding and no newer cells developed within reach both aircrafts returned to base with 47p first and then 160P.

WATCHES/WARNINGS:
Hail

SEEDED CELL ID'S:

2600	2559	2933	3445	3448	3690	4002	2473	3952	3952
2473	4622	4955	4859	4956	4622	4620			

FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
18:14	**47P**	**In Air**	
18:34	**47P**	**70° @ 17 nm**	**Wilson**
18:35	**47P**	**73° @ 16 nm**	**Wilson**
18:56	**47P**	**309° @ 24 nm**	**Medina**
19:58	**47P**	**309° @ 29 nm**	**Medina**
19:01	**47P**	**311° @ 21 nm**	**Atascosa**
19:16	**47P**	**311° @ 39 nm**	**Medina**
19:16	**47P**	**313° @ 41 nm**	**Medina**
19:18	**47P**	**312° @ 40 nm**	**Medina**
19:20	**47P**	**312° @ 42 nm**	**Medina**
19:23	**47P**	**313° @ 42 nm**	**Medina**
19:59	**47P**	**291° @ 37 nm**	**Medina**
19:59	**47P**	**287° @ 41 nm**	**Medina**
20:00	**47P**	**288° @ 42 nm**	**Medina**
20:05	**47P**	**287° @ 43 nm**	**Medina**
20:10	**47P**	**293° @ 50 nm**	**Medina**
20:18	**47P**	**293° @ 48 nm**	**Medina**
20:28	**47P**	**282° @ 46 nm**	**Medina**
20:29	**47P**	**280° @ 46 nm**	**Medina**
20:36	**47P**	**283° @ 47 nm**	**Medina**
20:48	**160P**	**In Air**	
20:50	**47P**	**275° @ 62.0 nm**	**Uvalde**

20:54	**47P**	**280° @ 66.0 nm**	**Uvalde**
21:14	**47P**	**275° @ 73.0 nm**	**Uvalde**
20:26	**160P**	**287° @ 39 nm**	**Medina**
20:27	**160P**	**284° @ 38 nm**	**Medina**
20:43	**160P**	**306° @ 42 nm**	**Medina**
21:44	**160P**	**305° @ 43 nm**	**Medina**
21:48	**47P**	**243° @ 48 nm**	**Frio**
21;49	**160P**	**301° @ 40 nm**	**Medina**
21:50	**160P**	**299° @ 40 nm**	**Medina**
21:51	**47P**	**245° @ 47 nm**	**Frio**
21:55	**47P**	**248° @ 47 nm**	**Frio**
22:14	**47P**	**269° @ 34 nm**	**Frio**
22:16	**47P**	**270° @ 35 nm**	**Frio**
22:17	**47P**	**271° @ 33 nm**	**Frio**
22:37	**160P**	**177° @ 29 nm**	**McMullen**
22:37	**160P**	**174° @ 29 nm**	**McMullen**
22:54	**47P**	**177° @ 12 nm**	**Atascosa**
22:55	**160P**	**176° @ 45 nm**	**McMullen**
22:56	**160P**	**177° @ 44 nm**	**McMullen**
22:58	**47P**	**179° @ 10 nm**	**Atascosa**
23:01	**47P**	**180° @ 8 nm**	**Atascosa**
23:10	**160P**	**179° @ 39 nm**	**McMullen**
23:10	**160P**	**181° @ 31 nm**	**McMullen**
23:12	**47P**	**98° @ 9 nm**	**Atascosa**
23:13	**47P**	**96° @ 9 nm**	**Atascosa**
23:13	**160P**	**178° @ 28 nm**	**McMullen**
23:32	**160P**	**199° @ 31 nm**	**McMullen**
23:39	**160P**	**198° @ 30 nm**	**McMullen**
23:40	**47P**	**Landed**	
24:18	**160P**	**Landed**	

Seeding operations were conducted in Atascosa (12+24H), Frio (12+24H), Medina (44+64H), McMullen (18+0H), Uvalde (6+12H) and Wilson (4+8H) Counties. 96 flares plus 132 hygroscopic flares were burned within 17 clouds. This is the 7th day for seeding in August and the 25th day for seeding during the season.