SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION – Pleasanton, TEXAS

SEEDING REPORT – July 06, 2018

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a ridge of high pressure across the Rockies and Central Plains with an easterly wave over southern Texas. At the surface, the flow is generally east northeasterly with it calm at the surface. The current dew point temperature is in the low to mid 70's with scattered and broken clouds pushing trough much of the area. There are few showers and thunderstorms northeast of San Antonio and showers over the Live Oak area that will eventually shift westward impacting possibly parts of the central and western counties. For today, expect another wave from the east to pass over the target areas with an upper ridge to the north. Expect more or less of similar conditions as yesterday with only this time showers and possibly thunderstorms role in before midday. This is a mesoscale feature that is heading our way, whereas yesterday we were downwind of the inverted trough that brought significant rainfall to our area on Wednesday afternoon and evening hours. With this feature, much of the energy with be focus around the Corpus Christi before midday but as few isolated showers and thunderstorms may impact much of the target zones in the afternoon. The showers and thunderstorms across San Antonio and Live Oak is also part of the easterly disturbance with the first band moving in that is of much significance but with the rest of the a mainly mid-level moisture and day time heating could produce showers and thunderstorms to much of the target zone. I'm not expecting was complete was out from the rain event today that may possibly carry-on into early evening hours but anywhere between .10 to .25in is possible in certain areas and even higher amounts under thunderstorms. For Saturday, another low level easterly wave moves across northern Gulf of Mexico with its center remain off shore that will bring another round of showers and thunderstorms to south Texas and northeastern Mexico. Scattered to isolated showers and thunderstorms will make their way across the target zones during the day with heavy downpours at times. A broad inverted trough will develop Sunday into Monday that will bring a chance for showers and thunderstorms again to our region on both days. Sunday during the day and overnight looks to be the better chance for rainfall. High temperatures will continue to remain below the normal for this time of the year through Monday.

LIFTING MECHANISM:

Low Level Moisture, Low Level Warm Air Advection, Mid-Level Disturbance

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	4397.54	CAPE (J/Kg)	1081.2
Precipitable Water (inches)	1.98	CINH (J/Kg)	54.40
LCL	884.71	LI(°C)	-3.38
CCL	1430.98	PB	-3.38
CRP ICA	-17.21	Cloud Base Temp (°C)	22
Cloud Base (meters)	1241.55		
Warm Cloud Depth (meters)	3155.99		

DISCUSSION:

A disturbance from the east brought widespread showers and thunderstorms to our area late early morning mainly across the much of the northern, central and western counties. This was the first wave. The second wave of energy

came in hours after. With enough planetary boundary layer moisture and daytime heating, storms fired up across much of the target zone. When I suspected that the cells were going to last long enough for the aircrafts to seed them, I final launched aircrafts 57AA and 160P. 57AA was launched first to go over the Bandera County as there were some cells over that location. 57AA was able to seed one cell when it arrived. Aircraft 160P, was launched where much of the activities were taking place. First 160P was sent over the Karnes County and then to the Bee County where storm cells had been exploding. Successful seeding took place over both counties by 160P. On the way back from the Bandera County, some cells developed over eastern Medina County and so I had 57AA take a look at them and see what could have been seeded. 57AA was able to seed a few cells while returning to Atascosa County. 106P continued to seed across the Bee county but I was unable to reach the aircraft as a very powerful cell was near the airport. As the cell was approaching, I had 57AA return to base ahead of the it. 160P ended up returning to its base after communications were lost. The electricity and internet were gone a couple of times due to severe weather. Never the less, seeding was a total success as we were able to target several cells across a few counties.

WATCHES/WARNINGS:
Hail and Flood

SEEDED CELL ID'S:

2096	1970	2186	321	2186	1324				

FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
19:14	57AA	In Air	
19:50	160P	In Air	
19:54	57AA	132º @ 60.7 nm	Bandera
19:57	57AA	134º @ 62.3 nm	Bandera
20:00	160P	90º @ 30 nm	Karnes
20:01	160P	92º @ 28 nm	Karnes
20:02	160P	91º @ 26 nm	Karnes
20:05	160P	94º @ 28 nm	Karnes
20:06	160P	94º @ 28 nm	Karnes
20:13	57AA	313º @ 35 nm	Medina
20:14	57AA	316º @ 39 nm	Medina
20:15	57AA	317º @ 35 nm	Medina
20:17	57AA	313º @ 34 nm	Medina
20:19	160P	114º @ 47 nm	Bee
20:20	57AA	319º @ 35 nm	Medina
20:20	160P	117º @ 47 nm	Bee
20:21	160P	120º @ 48 nm	Bee
20:24	57AA	318º @ 36 nm	Medina
20:25	160P	124º @ 50 nm	Bee
20:29	57AA	310º @ 42 nm	Medina
20:37	160P	303º @ 35.2 nm	Bee
20:39	160P	307º @ 34.2 nm	Bee
20:40	160P	312º @ 33.0 nm	Bee
20:41	57AA	305º @ 60 nm	Bandera
20:41	160P	315º @ 31.9 nm	Bee
20:42	160P	316º @ 30.2 nm	Bee
20:45	57AA	307º @ 60 nm	Bandera
21:15	57AA	Landed	
21:32	160P	292º @ 29.9 nm	Bee
21:33	160P	297º @ 28.1 nm	Bee
21:34	160P	300º @ 27.6 nm	Bee

21:35	**160P**	**304º @ 27.8 nm**	**Bee**
21:36	**160P**	**307º @ 27.9 nm**	**Bee**
22:07	**160P**	**Landed**	

Seeding operations were conducted in Bandera (7+2H), Bee (28+2H), Karnes (10+0H) and Medina (14+0H) Counties. 59 flares plus 2 hygroscopic flares were burned within 6 clouds. This is the 3rd day for seeding in July and the 13th day for seeding during the season.