SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION – Pleasanton, TEXAS

SEEDING REPORT – June 27, 2019

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a low over the Pacific Northwest, troughing over the western parts of the country with a couple of disturbances over to the East. At the surface, low pressure is centered northwestern Utah and southeastern Idaho with high pressure centered across Virginia and North Carolina. The flow at upper levels is northwest with it light and variable at the surface. The current dew point temperature is in the mid 70's and environmental temperature in the lower to upper 70's with broken clouds to overcast skies in our area. For today, expect a warm and humid day with dew point temperatures in the low to mid 70's. With plenty of instability, daytime heating, low-level moisture, and mainly an uncapped region, expect showers and thunderstorms this afternoon. I'm not expecting severe thunderstorms as the shear values are forecast to be on the low side. Showers and thunderstorms should be isolated to scattered similar to that of yesterday. By this evening, active weather should begin to settle with the loss of daytime heating and a cap re-establishes across south-central Texas. Overnight, expect mainly quiet conditions as; however, there may be lingering weak storms from the day that should be taper off before midnight. By Friday, drier weather should finally be present with lower humidity values, and a dry atmospheric column will be in place throughout the day. By Saturday, a mid-level ridge of high pressure across west Texas will shift northwest across the Central High Plains as an inverted trough develops across Louisiana by then. Expect similar mainly a replica of Friday's weather on Saturday except for the far east zone where there may be an isolated storm or tow that develops during the afternoon hours. This inverted trough will gradually make its way westward across our region on Sunday that will provide enough moisture for convection. I will go with a slight to low chance for precipitation on Sunday due to hit or miss showers and storms. The highs are forecast to be in the upper 80's and mid 90's with the lows in the upper 60's to low 70's through the end of the period.

LIFTING MECHANISM:

Weak Ridge, Sea-Breeze, Outflow Boundary

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	4649.9	CAPE (J/Kg)	2745.5
Precipitable Water (inches)	1.97	CINH (J/Kg)	74.1
LCL	647.5	LI(°C)	-6.68
CCL	778.1	PB	-6.68
CRP ICA	-25.89	Cloud Base Temp (°C)	26
Cloud Base (meters)	1025.8		
Warm Cloud Depth (meters)	3624.1		

DISCUSSION:

The day started similar to yesterday with streamer showers and thunderstorms moving in from the south and headed north. Some of the showers had embedded convection cells that brought early and mid-morning showers and thunderstorms. However, today was slightly less active throughout the day than yesterday. As afternoon storms began to develop 60P and 57AA was launched across much of the area due to a sea-breeze event. Keep in mind that cells that developed over Bexar County could not be reached within the proximity of the non-seeding zone. 57AA went to a cell just south of Uvalde

airport but was unable to seed it as it was too weak. 60P went over the Atascosa County to try to seed mid-morning to early afternoon cells but was unsuccessful because there was nothing to support them. 57AA then left for Frio County for help 60P seed developing cells across that area. 60p left for Wilson County where it was successful while 57AA headed to the McMullen County after seeding across the Frio County. 57AA was not able to thoroughly seed over the McMullen County as the cell was about to exit that county. 57AA was then ordered back to the Uvalde County as a cell developed and moved in across the southwestern part of the region. 60P seeded over the eastern side of the Atascosa County then headed over the western side as it was unable to reach a cell that was almost joined onto a cell that 57AA had seeded before. 60P seeded a cell across the southern parts of the Bexar County and northern Atascosa County before it was sent to the eastern side of the Wilson County. While on the way a cell closer by over the Atascosa County was developing where I had 60P turned around seeded it. After 57AA was done seeding a cell across the Uvalde County, it returned to base as cells began to die down. 60P was then sent to a cell across the eastern side of the Wilson County, but by the time it approached that area, the cell either died or moved away from the target area. 60P return to Karnes Airport after all of the activities began to settle down.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

655	850	1057	654	1136	962				

FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
17:58	60P	In Air	
18:50	57AA	248° @ 23 nm	Frio
18:53	57AA	247° @ 35 nm	Frio
18:55	60P	52° @ 30 nm	Wilson
18:55	57AA	254° @ 25 nm	Frio
18:55	60P	50° @ 31 nm	Wilson
18:58	60P	49° @ 32 nm	Wilson
18:58	57AA	249° @ 28 nm	Frio
18:59	60P	49° @ 31 nm	Wilson
19:00	57AA	253° @ 28 nm	Frio
19:01	57AA	251° @ 30 nm	Frio
19:23	60P	161° @ 2 nm	Atascosa
19:23	57AA	214° @ 30 nm	McMullen
19:24	60P	150° @ 3 nm	Atascosa
19:27	57AA	215° @ 31 nm	McMullen
19:56	60P	5° @ 15 nm	Bexar
19:57	60P	1° @ 14 nm	Bexar
19:58	60P	4° @ 15 nm	Bexar
19:59	60P	353° @ 14 nm	Bexar
20:10	57AA	271° @ 79 nm	Uvalde
20:18	60P	181°@ 1 nm	Atascosa
20:19	57AA	270° @ 77 nm	Uvalde
20:21	60P	178° @ 3 nm	Atascosa
20:21	57AA	273° @ 79 nm	Uvalde
20:22	60P	198° @ 3 nm	Atascosa
20:24	60P	157° @ 3 nm	Atascosa
20:26	57AA	243° @ 77 nm	Uvalde
20:29	60P	Landed	
20:55	57AA	Landed	

Seeding operations were conducted in Atascosa (12+0H), Bexar (8+0H), Frio(12+0H), McMullen (4+0H), Uvalde (9+0H) and Wilson (8+0H) Counties.

53 flares plus 0 hygroscopic flares were burned within 6 clouds. This is the 5th day for seeding in June and the 12th day for seeding during the season.