SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION – Pleasanton, TEXAS

SEEDING REPORT – June 30, 2019

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows troughing over much of the West, ridging over the Rockies and parts of the Central Plains, a developing inverted trough over the Southern Mississippi Valley. At the surface, weak low pressure is across to the west, and high pressure is to the east. The flow at upper levels is northerly with it light and variable at the surface. The current dew point temperature is in the low to mid 70's and environmental temperature the same with broken to overcast skies and fog in our area. For today, expect a warm and humid day similar to that of yesterday. With plenty of instability, day time heating, low-level moisture, and mainly an uncapped region, expect showers and thunderstorms this afternoon. However, coverage of storms should be confined to the coast. Many models do not suggest any storms development this afternoon not even the ARW which has been overly aggressive since the start of the season. The latest HRRR, on the other hand, does indicate some convection this afternoon. Any storm development should be brief with moderate to heavy rainfall. 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; however, there may be lingering left over from the day that should be taper off before midnight. By Saturday, drier weather should finally be present with lower humidity values, and a dry atmospheric column will be in place throughout the day courtesy of a high moving a bit north. The inverted trough across Mississippi will translate Southeast Texas on Saturday. The GFS brings in showers and storms as early as overnight Saturday into Sunday whereas the rest of the models keeps us dry. The inverted through progress further westward on Sunday bringing cooler temperature due to cloud cover and a slight chance for showers and thunderstorms mainly for the central and eastern zone. By Monday, the center of the mid-level low associated with the inverted trough sets up over the Rio Grande area. For now, will keep forecast dry by then due to the lack of cloud coverage. 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: Upper-level Disturbance, Inverted Trough, Weak Sea-Breeze

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	4050.6	CAPE (J/Kg)	1341.5
Precipitable Water (inches)	1.56	CINH (J/Kg)	51.58
LCL	1010.6	LI(°C)	-3.02
CCL	1805.0	PB	-3.02
CRP ICA	-15.59	Cloud Base Temp (°C)	19.4
Cloud Base (meters)	1356.4		
Warm Cloud Depth (meters)	2694.2		

DISCUSSION:

An upper-level inverted trough brought the first batch of showers and thunderstorms to our area overnight into this morning. There were a few lingering showers across parts of the target area during through the afternoon hours. Much of the area was under mostly cloudy skies; however, the region where the sun was able to heat the surface completely, a few cells developed. Cells developed over the southern edge south of the target zone then moved in over the McMullen and the Bee Counties. 60p was launched across

the Bee County first where it seeded a well-defined thunderstorm. Later it was launched across the McMullen County where it seeded a smaller but developing thunderstorm. 60P was able to release the full dosages of seeding materials in them. The cells that were seeded, divided into smaller secondary cells, and then rejoin at some point in time. 60P headed back to base when no other cells developed for the evening.

WATCHES/WARNINGS:
N/A

SEEDED CELL ID'S:

1886	2090								

FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
22:04	**60P**	**In Air**	
22:42	**60P**	**302 56.6 m**	**Bee**
22:43	**60P**	**304 54.9 m**	**Bee**
22:45	**60P**	**305 52.8 m**	**Bee**
22:46	**60P**	**304 50.3 m**	**Bee**
22:48	**60P**	**303 48.1 m**	**Bee**
23:08	**60P**	**172° @ 37 nm**	**McMullen**
23:09	**60P**	**175° @ 35 nm**	**McMullen**
23:11	**60P**	**182° @ 34 nm**	**McMullen**
23:13	**60P**	**178° @ 33 nm**	**McMullen**
23:15	**60P**	**172° @ 35 nm**	**McMullen**
23:44	**60P**	**Landed**	

Seeding operations were conducted in Bee (10+0H) and McMullen (10+0H) Counties. 20 flares plus 0 hygroscopic flares were burned within 2 clouds. This is the 7th day for seeding in June and the 14th day for seeding during the season.