SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION – Pleasanton, TEXAS

SEEDING REPORT – July 3, 2019

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a trough over Texas into Mexico sandwiched between two subtropical ridges and a long-wave trough located over the Pacific West. At the surface, high pressure is across much of the state with low/trough axes across the western half of the country. The flow at upper levels is light and south-southwesterly with it light and variable at the surface. The current dew point temperature is in the lower to mid 70's and environmental temperature in the lower to upper 70's with scattered to broken clouds in our area. For today, expect similar weather to yesterday. However, I anticipate showers and thunderstorms to possibly spread across to the western county that include the Uvalde late this afternoon into the evening. The upper trough will continue to bring rain chances to our area. Abundant moisture, daytime heating and weakness aloft with trigger convection this afternoon. Expect scattered showers and storms across the central and eastern zones with more isolated across the western zones. The precipitable water values are forecast to range from 1.9 to 2.15 in, which can lead to heavy downpours from strong thunderstorms that can produce minor flooding. The upper trough weakens by Thursday as an upper ridge begins to build in from the east. It should be slightly unsettled on Thursday with relatively weak stability and residual moisture in place should aid in isolated showers and thunderstorm development during the day. The upper ridge continues to build in on Friday and Saturday bring much drier and warmer conditions on both days. The highs are progged to be in the lower to mid 90's with the lows in the lower to upper 70's through the end of the period.

LIFTING MECHANISM:

Upper-Level trough, Warm Moist Air Advection, Sea-Breeze

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	4745.67	CAPE (J/Kg)	1838.5
Precipitable Water (inches)	1.96	CINH (J/Kg)	60.64
LCL	790.99	LI(°C)	-3.83
CCL	968.82	PB	-3.83
CRP ICA	-18.99	Cloud Base Temp (°C)	24.7
Cloud Base (meters)	1067.67		
Warm Cloud Depth (meters)	3678.00		

DISCUSSION:

Conditions today were similar to that of yesterday. A few stream showers this morning led to afternoon and evening thunderstorms as the day heated up. 60P was fire launched over the McMullen County. However, 60P able to seed but left that cell to develop further and headed to the Bee County where better cells were located. 60p was able to seed a cell over the Bee/Karnes County. 60p was sent to a cell just northeast of the one it was seeding but it had nothing going on there. It then headed back to the Bee County to seed another cell. 57AA was not able to seed a cell over McMullen County due to a lot of lightning and no cloud bases. 60P continued on to south Bee County for additional seeding. 57AA went to the eastern side of the Atascosa County to seed a strong cell. 60p was sent to Wilson County to seed another cell. 57AA was redirected back to McMullen County but was not that successful due to too much lightning and strong turbulence. 60P return to the airport to refuel

after finishing with the cell over the Wilson County. 57AA then headed to Frio County; however, the cells looked too weak for seeding. After refueling, 60P was launched over the McMullen County where there was a nice elongated thunderstorm. 60p was sent a cell further south-southwest of the previous cell but there was nothing associated with it. 60P was then ordered to return to base as the atmosphere began to more or less stabilize. On the way to Karnes airport, I had 60P investigate a couple of cells that developed outside of the target area. Initially, the cells had small areas but they grew and merged into a big cell that was seeded across the McMullen County. The pilot reported a low inflow rate, small area. Due to the proximity of the cells, 60P did not bother to seed them. Also, it appeared as though the cells were moving very little if at all. It looked as if it was stationary at first. However, there were very little southerly movements. Lastly, there were a severe thunderstorm and flood warnings with cells over McMullen through the Bee Counties including Live Oaks.

WATCHES/WARNINGS:
Severe Thunderstorm, Hail, Flood

SEEDED CELL ID'S:

517	541	913	954	567	276	1260			

FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
18:37	60P	In Air	
19:01	60P	187˚ @ 9 nm	Atascosa
19:02	60P	200˚ @ 9 nm	Atascosa
19:22	60P	112˚ @ 35 nm	Bee
19:23	60P	105˚ @ 34 nm	Bee
19:24	60P	103˚ @ 34 nm	Bee
19:25	60P	101˚ @ 36 nm	Karnes
19:26	60P	98˚ @ 38 nm	Karnes
19:36	57AA	In Air	
19:55	60P	102˚ @ 43 nm	Bee
19:55	60P	105˚ @ 43 nm	Bee
19:56	60P	106˚ @ 39 nm	Karnes
19:58	60P	104˚ @ 38 nm	Karnes
20:15	57AA	121˚ @ 15 nm	Atascosa
20:16	57AA	125˚ @ 15 nm	Atascosa
20:17	60P	124˚ @ 40 nm	Bee
20:18	60P	127˚ @ 42 nm	Bee
20:19	57AA	128˚ @ 16 nm	Atascosa
20:19	60P	128˚ @ 44 nm	Bee
20:19	57AA	125˚ @ 15 nm	Atascosa
20:20	60P	126˚ @ 45 nm	Bee
20:21	57AA	115˚ @ 15 nm	Atascosa
20:22	60P	124˚ @ 48 nm	Bee
20:24	57AA	111˚ @ 15 nm	Atascosa
20:27	57AA	115˚ @ 14 nm	Atascosa
20:45	57AA	177˚ @ 34 nm	McMullen
20:52	60P	35˚ @ 38 nm	Wilson
20:53	60P	34˚ @ 37 nm	Wilson
20:54	60P	35˚ @ 34 nm	Wilson
21:13	57AA	246˚ @ 43 nm	Frio
21:15	57AA	245˚ @ 43 nm	Frio
21:16	57AA	248˚ @ 43 nm	Frio
21:17	57AA	248˚ @ 42 nm	Frio
21:28	57AA	267˚ @ 34 nm	Frio
22:08	60P	199˚ @ 51 nm	McMullen
22:09	60P	198˚ @ 55 nm	McMullen

22:10	**60P**	**197˚ @ 56 nm**	**McMullen**
22:01	**57AA**	**Landed**	
23:07	**60P**	**Landed**	

Seeding operations were conducted in Atascosa (18+0H), Bee (20+0H), Frio (10+0H), Karnes (8+0H), McMullen (8+0H) and Wilson (6+0H) Counties. 70 flares plus 0 hygroscopic flares were burned within 7 clouds. This is the 2nd day for seeding in July and the 16th day for seeding during the season.