

**SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS**

**SEEDING REPORT - July 2, 2019**

**SYNOPTIC/MESOSCALE CONDITIONS:**

Upper air analysis shows a trough across Texas into Mexico and a ridge over parts of the East and Central Plains. 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 variable with it calm to light and variable at the surface. The current dew point temperature is in the lower 70's and environmental temperature in the lower to mid 70's with scattered to broken clouds in our area. For today, expect unsettled conditions as moisture from the tropics work inland. There may be a few streamer showers this morning that will lead to isolated to scattered thunderstorms this afternoon into this evening mainly across the eastern zone and parts of the central zone. This is all due to an upper-level low located over the target area. The precipitable water values are forecast to range 1.8" to 2.1" across south-central Texas. The latest HRRR does suggest much of the storms take place after 18UTC across the eastern counties of the target area. However, some of these storms could move into the central provinces and even possibly into the western counties should strong outflow boundaries be pushed westward. With sufficient precipitable water and an upper-level weakness, there could be isolated heavy downpours at times under strong thunderstorms. A lull of convection is expected overnight before more showers and thunderstorms develop and move in on Wednesday. Active weather on Wednesday may begin before the afternoon hours. Energy over northwest Texas will move southeast that will help sharpen the upper-level trough across the western counties on Wednesday afternoon allowing for isolated showers and thunderstorms to spread farther west by then. Also, heavy downpours are possible on Wednesday that could cause minor flooding due to good precipitable water values in place. Moisture will begin to decrease on Thursday but still, enough combined the upper weakness to bring a few showers and thunderstorms during the day. A weak upper-level ridge will start to build in on Friday, bringing dry and warm conditions by then. The highs are forecast to be in the upper 80's and mid 90's with the lows in the lower to mid 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)	4439.53	CAPE (J/Kg)	2628.9
Precipitable Water (inches)	1.92	CINH (J/Kg)	72.51
LCL	645.71	LI (°C)	-7.28
CCL	744.79	PB	-7.28
CRP ICA	-25.92	Cloud Base Temp (°C)	23.4
Cloud Base (meters)	1140.66		
Warm Cloud Depth (meters)	3298.87		

**DISCUSSION:**

Mainly quiet conditions with a few stream showers that developed near the coast tried to move inland but weakened. With daytime heating and mostly uncapped atmosphere, weak thunderstorms developed first over the Bee County. 60P was launched across the Bee County as cells developed. 60p couldn't seed cells along the Bee County border as there was not much going on there. The

cells had small areas; however, 60P was able to see just one over Bee and Karnes counties. There were clouds associated with the so-called cells over both Bee and Karnes Counties with the pilot reporting only rain and lightning. Very weak cells kept popping up with no support and dissipating after 10mins or so. Cells over Atascosa County were weak. 60P tried to seed some of them but were unsuccessful with due to very week inflow rates. 60p then headed over to the Bee County while 57AA was first launched over the Atascosa County. Cells over the Bee County later in in the afternoon developed much better the than the early afternoon. The cells over that county quickly moved out and moved over a county to the east of it. While 60P was on its way to the Bee County a nice cell that developed across that county was weakening and so the pilot was unable to seed it. 60P was then directed to the McMullen where it seeded two cells both there and over the Atascosa County. The cells were divided into two. While 57AA was on its way to seed cells over the Atascosa County, the cells did not hold out long enough. 57AA was then launched over the McMullen County where it tried to seed a few cells. However, 57AA was not able to release the full dosages of seeding materials as they did not have much inflow. Both 60P and 57AA was sent back to base due to weak outflow boundaries and cell developments began to halt.

**WATCHES/WARNINGS:**

N/A

**SEEDED CELL ID'S:**

725	1225	1398	1134	1484	1720			
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**FLIGHT INFORMATION:**

TIME (Z)	Plane	Flare Location	County
18:14	60P		
18:29	60P	113° @ 47 nm	Bee
18:30	60P	113° @ 48 nm	Bee
18:31	60P	111° @ 47 nm	Bee
18:29	60P	86° @ 37 nm	Karnes
18:30	60P	88° @ 35 nm	Karnes
20:37	60P	Recon	
20:55	60P	In Air	
21:14	60P	115° @ 10 nm	Atascosa
21:15	60P	118° @ 9 nm	Atascosa
21:31	60P	260° @ 21 nm	Frio
21:32	60P	264° @ 21 nm	Frio
21:33	60P	155° @ 32 nm	McMullen
21:33	60P	156° @ 32 nm	McMullen
21:34	60P	155° @ 31 nm	McMullen
21:35	60P	155° @ 31 nm	McMullen
21:36	60P	154° @ 30 nm	McMullen
22:48	57AA	211° @ 20 nm	Atascosa
22:49	57AA	213° @ 20 nm	Atascosa
22:52	57AA	211° @ 19 nm	Atascosa
22:53	60P	112° @ 14 nm	Atascosa
22:54	60P	114° @ 13 nm	Atascosa
22:55	60P	118° @ 15 nm	Atascosa
22:55	60P	113° @ 14 nm	Atascosa
22:58	60P	113° @ 13 nm	Atascosa
23:14	57AA	201° @ 34 nm	McMullen
23:15	57AA	200° @ 33 nm	McMullen
23:15	57AA	201° @ 35 nm	McMullen
23:18	57AA	199° @ 35 nm	McMullen
23:22	60P	Landed	

<b>24:08</b>	<b>57AA</b>	<b>Landed</b>	
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Seeding operations were conducted in Atascosa (20+0H), Bee (6+0H), Frio (2+0H), Karnes (4+0H) and McMullen (18+0H) Counties. 52 flares plus 0 hygroscopic flares were burned within 6 clouds. This is the 1<sup>st</sup> day for seeding in July and the 15<sup>th</sup> day for seeding during the season.