

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

**SEEDING REPORT - July 27, 2020**

**SYNOPTIC/MESOSCALE CONDITIONS:**

Upper air analysis shows an inverted trough over Mexico, a ridge centered over the Southern Rockies and off the Southeastern coast. At the surface, high pressure is across the Rockies and Southeast with low pressure across the West and the Great Lakes area. The flow at upper levels is mainly easterly with is generally light and east northeast at the surface. The current dew point temperature is in the lower 70 and lower 80s and the environmental temperature more or less the same with overcast skies across our area. For today, remnants of what was once Hurricane Hanna will continue to impact parts of Mexico. Due to this, we have a weakness in a Subtropical Ridge and moisture moving in from off the Gulf of Mexico. The precipitable water values for a part of today will range between 1.5 to 2.25in where some isolated areas could receive brief heavy downpours from thunderstorms. Expect a chance for isolated to scattered showers and thunderstorms throughout the day with all of the two aforementioned ingredients plus diurnal heating will be present. I should also mention due to the disturbance across the northeast Mexico active weather could develop and move in as early as this morning. The Partly sunny to mostly cloudy skies with the temperature a few degrees lower the climatological normal for this time of the year. The afternoon dew point temperature will be above the upper 60s for most areas; thus, the heat index value should serval degrees warmer than the environmental temperature. Any showers and storms that develop during the day across south-central Texas should dissipate around sunset as we begin to lose daytime heat. Expect more settled conditions during the overnight hours with Tuesday's morning low a few degrees above the average with increased cloud coverage. Tuesday's weather should be a replica of today isolated to scattered showers and thunderstorms across the south and east. The temperature will continue to increase a degree or two. Tuesday night, there may be a slight decrease in cloud coverage that will allow for the Wednesday morning's low to be near or at the normal. By Wednesday rain probability will begin to go down slight especially for far inland areas where moisture will be weak but will be the greatest near the coast with the moisture will be the strongest. Expect isolated showers and thunderstorms with weakness aloft. Moisture values will drop off a bit on Thursday with the only real chance for convection will be mainly near or along the coast with the rest of the areas mostly dry. The highs are progged to be in the upper 80s and upper 90s with the lows in the lower to middle 70s through the end of the forecast period.

**LIFTING MECHANISM:**

Sea-Breeze, Low-Level Moisture Advection, Warm Air Advection

**THERMODYNAMIC INDICES (12Z KCRP)**

Freezing Level (m)	4753.75	CAPE (J/Kg)	2416.77
Precipitable Water (inches)	2.19	CINH (J/Kg)	4.01
LCL	601.48	LI (°C)	-6.44
CCL	694.56	PB	-6.44
CRP ICA	-25.49	Cloud Base Temp (°C)	22.3
Cloud Base (meters)	1109.83		
Warm Cloud Depth (meters)	3643.92		

**DISCUSSION:**

Mainly quiet weather for at least much of the early to mid-morning hours with a decent cell that developed across the Bee County around noon. 60P was called out but it had a mechanical issue and thus was not able to depart the Kennedy Airport to seed that cell. Due to this, 57AA had to be called out from Uvalde to fill in for 60P until 60P was able to take to the skies again. However, by the time 57AA approached the eastern target area, that cell was already gone. 57AA instead landed at Pleasanton. Shortly after, 57AA was launched across the southeastern Frio county but that cell was non-seedable. At that time the small cells out there were weak with no goof tops or vil. 57AA returned to base in Pleasanton until better cells developed or 60P was operable. Eventually, 60P was in full service so 57AA headed back to Uvalde for the rest of the afternoon. A few seedable cells developed across eastern counties that either moved in from outside the target area of actually developed across the target zone and gradually moved westward. However, there were technical issues on my end and so some data were not available at the time of operation. 60P seeded a few cells across the Karnes County before heading to the Bee County. The cells across the Bee County were either moving out of that county or they were not impressive for seeding. 60Pn was only able to seed one cell across that county. 60P then visited a cell that moved out of the Karnes County into the southeast Atascosa county but the pilot reported good inflow but it did not have a good cloud base so its base so it decided not to seed that cell. From there, 60P then went to Wilson County where it seeded a few cells where it did not release the full dosages of seeding materials in them as well as with the others. After seeding those cells, I did have 60P head to another cell moving into southeastern Atascosa County that had from northern Live Oak county. However, by the time 60P was approaching the cell, it began to weaken significantly so 60P instead head back to base as the rest of the cells out there were either seeded and or were non-seedable.

**WATCHES/WARNINGS:**

N/A

**SEEDED CELL ID'S:**

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**FLIGHT INFORMATION:**

TIME (Z)	Plane	Flare Location	County
18:20	57AA	In Air	
18:55	57AA	Recon	
21:20	60P	In Air	
21:19	60P	98° @ 33 nm	Karnes
21:20	60P	96° @ 32 nm	Karnes
21:21	60P	95° @ 32 nm	Karnes
21:22	60P	97° @ 32 nm	Karnes
21:37	60P	284, 42.6	Karnes
21:38	60P	286, 40.4	Karnes
21:39	60P	287, 39.5	Karnes
21:40	60P	286, 41.2	Karnes
21:53	60P	305, 46.8	Bee
21:54	60P	305, 45.9	Bee
22:24	60P	73° @ 19 nm	Wilson
22:26	60P	69° @ 18 nm	Wilson
22:27	60P	70° @ 16 nm	Wilson
22:28	60P	70° @ 18 nm	Wilson
22:41	60P	41° @ 32 nm	Wilson
22:42	60P	44° @ 30 nm	Wilson
22:44	60P	40° @ 30 nm	Wilson
23:09	60P	Landed	

Seeding operations were conducted in Bee (4+0H), Karnes (16+0H), and Wilson (14+0H) Counties. 34 flares plus 0 hygroscopic flares were burned within 5 clouds. This is the 4<sup>th</sup> day for seeding in July and the 20<sup>th</sup> day for seeding during the season.