

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

**SEEDING REPORT - July 18, 2020**

**SYNOPTIC/MESOSCALE CONDITIONS:**

Upper air analysis shows a broad flat ridge over the southern half of the country with an inverted trough over the Upper Texas coast and trough across much of the northern half of the country. At the surface, high is across the Southern Rockies and Eastern half of the country with low pressure across the Northern Rockies and the West. The flow at upper levels is mainly easterly with it generally light and southeasterly at the surface. The current dew point temperature is in the lower 70s to middle 70s and the environmental temperature in the middle 70 and upper 70s with broken clouds to overcast skies and some fog across our area. For today, expect some morning stratus clouds as the flow at low levels is from the south southeasterly allowing for moisture to move in from off the Gulf of Mexico. The low clouds and fog should burn off this morning leaving the rest of the day under mostly sunny to partly cloudy skies as an inverted trough over the northwest Gulf of Mexico continues to move westward that will bring increasing cloud coverage across the eastern target area near the coastal plains. This feature could also bring a chance that is on the low side for showers and thunderstorms to parts of the target region. There is an inverted v-shaped forecast sounding with DCAPE values around 1200 J/kg across the southeastern areas; however, I can't rule out a strong downburst produced by a strong wind gust. Also, the temperature will be a few degrees cooler than yesterday as the upper-level ridge continues to weaken coupled with increasing cloud coverage. Conditions begin to settle as we lose daytime heating near sunset. Overnight, I'm not expecting much in way of precipitation with lows a few degrees warmer than the average as increased moisture. On Saturday, in the inverted trough moves into Mexico but weak low-level convergence across mid-Texas coast could cause a few showers isolated showers and thunderstorms to develop in the afternoon after possible streamer showers in the morning. The temperature on Saturday will drop a couple of degrees from today which, will be such a relief from what we endured throughout much of this week. As of now, Sunday and Monday look to be relatively dry, however, shower weak impulses move in over near the coast, there could be a chance each day for afternoon and evening showers and thunderstorms. Due to low confidence and uncertainty, I have opted out in not mentioning any active weather for the same time frame. The highs are progged to be in the lower to upper 90s with the lows in the lower to middle 70s through the end of the forecast period.

**LIFTING MECHANISM:**

Inverted Trough, Low-Level Moisture Advection, Sea Breeze

**THERMODYNAMIC INDICES (12Z KCRP)**

Freezing Level (m)	4808.49	CAPE (J/Kg)	208.67
Precipitable Water (inches)	2.02	CINH (J/Kg)	77.36
LCL	1042.48	LI (°C)	-0.64
CCL	1624.56	PB	-0.64
CRP ICA	-11.50	Cloud Base Temp (°C)	23.6
Cloud Base (meters)	1215.62		
Warm Cloud Depth (meters)	3592.87		

**DISCUSSION:**

Active conditions began early this afternoon mainly across the southern half of the target areas with spotty shows and possibly weak thunderstorms. As the

afternoon went by a few cells looked seedable; thus, 60P and 57AA were called out. 57AA was first sent to parts of the EAA counties but had no luck with those cells out there while 60P was first launched across the Atascosa county but that had proven futile. Also, should mention that 60P had intended to go down to the southern Bee county before heading to Atascosa county but the aircraft was not able to take off on time and so we were not able to seed a good cell across the southern Bee County in time. 60P continued on the seed a cell across the Frio county. It seeded the best cell of the afternoon/evening. The first one it seeded successfully was a descent cell while the other was not so descent but worth it. However, when it began to see the second cell, it merged with the bigger cell that we already seeded; thus, there was no point in seeding it further as the cells became one. While 60P was seeding across Frio county, a couple of cells were developing across the Karnes county so I had 60P head east towards that county to try and target them. While on its way there, the cells merged but still were seedable. 57AA flew to the eastern Frio county as a cell developed east but very close to the cell that 60P was seeding. 57AA released a few seeding materials in that cell before it merged with the bigger cell that 60P seeded. After 60P and 57AA finished seeding the cells, both returned to base. 57AA returned to base with the intention of heading back out into the skies. As cells began moving into the V=Uvalde County, it tried to target them but 57AA could not become airborne as strong winds were blowing across the runway as well as a cell over the airport. The pilot had to wait a little while on the ground for an open window to take off. However, by the time the aircraft got airborne, it was only able to seed on cell across the southern Uvalde county that looked fairly okay. After seeding that cell, 57AA returned to base for the evening.

**WATCHES/WARNINGS:**

N/A

**SEEDED CELL ID'S:**

832	1042	1233	1115	1340						
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**FLIGHT INFORMATION:**

TIME (Z)	Plane	Flare Location	County
21:20	60P	In Air	
21:30	57AA	In Air	
21:44	60P	237° @ 17 nm	Atascosa
21:45	60P	244° @ 17 nm	Atascosa
21:46	60P	253° @ 19 nm	Frio
21:47	60P	259° @ 22 nm	Frio
21:48	60P	262° @ 25 nm	Frio
21:51	60P	262° @ 31 nm	Frio
21:52	60P	264° @ 30 nm	Frio
22:17	57AA	264° @ 24 nm	Frio
22:18	57AA	263° @ 26 nm	Frio
22:20	57AA	265° @ 27 nm	Frio
22:29	60P	87° @ 31 nm	Karnes
22:30	60P	90° @ 31 nm	Karnes
22:31	60P	92° @ 31 nm	Karnes
22:37	60P	Landed	
22:44	57AA	Recon	
23:09	57AA	In Air	
23:15	57AA	277° @ 74 nm	Uvalde
23:16	57AA	278° @ 74 nm	Uvalde
23:16	57AA	278° @ 74 nm	Uvalde
23:17	57AA	277° @ 74 nm	Uvalde
23:28	57AA	Landed	

Seeding operations were conducted in Atascosa (4+0H), Frio (16+0H), Karnes (6+0H), and Uvalde (8+0H) Counties. 34 flares plus 0 hygroscopic flares were burned within 5 clouds. This is the 2<sup>nd</sup> day for seeding in July and the 18<sup>th</sup> day for seeding during the season.