

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - July 21, 2020

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows ridging over the South with a low over the middle Texas coast with troughing over the North. At the surface, high is across much of the country with low pressure across the West. The flow at upper levels is mainly southeasterly with it generally light and variable at the surface. The current dew point temperature is in the lower to upper 70s and the environmental temperature more or less the same with broken clouds to overcast skies across our area. For today, an area of disturbed weather is located to the east of the target area is not expected to directly impact region but a few isolated showers and thunderstorms area possible center of the low move inland. The precipitable water values will range between 2 and 2.3in from the coastal plains this morning then moving northwestward along the I-35 corridor and then the Hill Country by this afternoon. However, the vorticity maxima and abundant moisture are expected to be to our east and southeast. The best chance for active weather this afternoon will be along the eastern counties of the target zone though I can't rule out an isolated storm or tow across the central and western counties. Expect a few streamer showers this morning where low-level moisture is more pronounced but changes to storms this afternoon at sufficient heating. The temperatures are forecast to be around the climatological normal for this time of the year due to increased cloud coverage. Any showers and thunderstorms activity is expected to diminish around sunset as we lose daytime heat. There may also be lingering showers across eastern counties outside of the target area lasting around 10 p.m. as per the latest HRRR. I should also mention that today's event could a little more active than forecasted and if so, the precipitation probability will be higher is the weather does to go was some hi-res model suggests. The HRRR did not do that well yesterday as it was overdone by suggesting storms over the eastern target area. However, both the HRRR and the 3km NAM does most of the convection will be to the east of the target area while the Texas Tech WRF and ARW suggest more activity taking place across the target area. As aforementioned, conditions will settle overnight for much of the area. On Wednesday, deeper moisture will be pool towards to east especially near the coast where isolated showers and thunderstorms will be possible with diurnal heating. Active weather by then will be limited as mid-level subsidence should increase. Much of the area should be dry on Thursday as a mid to upper-level ridge strengthens with only a slight chance for precipitation across the far east. Come Friday, all of our attention turns towards to tropics as a tropical system will likely begin to affect south Texas. Currently, a tropical wave is located across northern Cuba and south of Florida is slated to move into the Gulf of Mexico later today. The National Hurricane Center does give this wave a 40% chance for becoming a depression or even a tropical storm in the next five days. This system will track west-northwestward after it enters the Gulf of Mexico beneath a ridge that will take its track into the Texas coast by as early as Friday morning. Whether this system develops or not, much-needed rain is anticipated beginning Friday into Friday night. More on this as we get closer to this event with data information becomes much clearer. 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:

Tropical Disturbance, Low-Level Moisture Advection, Warm Air Advection

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	4978.01	CAPE (J/Kg)	1312.44
Precipitable Water (inches)	1.99	CINH (J/Kg)	45.63
LCL	715.43	LI (°C)	-2.72
CCL	1157.54	PB	-2.72
CRP ICA	-18.08	Cloud Base Temp (°C)	23.7
Cloud Base (meters)	2078.34		
Warm Cloud Depth (meters)	2899.67		

DISCUSSION:

A surface trough along the middle and upper Texas coast along with increase low-level moisture and daytime heating aided in the development of showers and thunderstorms across South Texas. However, much of south-central Texas remained fairly quiet with just a few cells dropping in from the north across the northwestern Uvalde area; thus, 57AA was launched to target those cells. 57AA successfully target those cells even though they were small in area. During operations, 57AA had to linger without seeding at intervals as the cells took their time moving into the northwestern Uvalde county. There was a trick to the cell movement as they just scrapped the edge of the Uvalde county while moving southwestward so tough decisions had to be made in order to proceed with the operation. After 57AA seeded those cells it returned to base as conditions began to quiet down at least for that area. There were a few pop-us north of the Uvalde county but they did not make their way into the target area. Also, there were a few pop-us east of the Bee county and along the eastern Karnes county border. 60P was call out to go an investigate those cells but by the time 60 was about to head out, the cells were pretty much gone. The cells did not last long enough for the aircraft to reach them so none was lost. There were off and on pop-us thereafter but they to did not last a while and were not that all impressive.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

76	266									
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
20:45	57AA	In Air	
21:10	57AA	280° @ 91 nm	Uvalde
21:10	57AA	280° @ 91 nm	Uvalde
21:11	57AA	288° @ 92 nm	Uvalde
21:13	57AA	287° @ 92 nm	Uvalde
21:20	57AA	287° @ 93 nm	Uvalde
21:21	57AA	287° @ 94 nm	Uvalde
21:35	57AA	289° @ 87 nm	Uvalde
21:36	57AA	288° @ 87 nm	Uvalde
21:36	57AA	288° @ 86 nm	Uvalde
21:43	57AA	288° @ 89 nm	Uvalde
22:03	57AA	Landed	

Seeding operations were conducted in Uvalde (19+1H) County. 19 flares plus 1 hygroscopic flare were burned within 2 clouds. This is the 3rd day for seeding in July and the 19th day for seeding during the season.