

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - September 2, 2020

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a shortwave trough over the Southern Great Plains, a ridge over the West and Southeast. At the surface, low pressure is across the South with high pressure across the Rockies and the West. The flow at upper levels is mainly west southwesterly with it southerly at the surface. The current dew point temperature is in the upper 60s and upper 70s and the environmental temperature in the upper 70s and lowers 80s with clear skies to broken clouds across our area. For today, the upper-level low associated with a shortwave trough across the Southern Great Plains and parts of the Southern Rockies will continue to gradually propagate eastward. This will bring a series of disturbed weather to our area in the short-term. Currently, a Mesoscale Convective System is across central and northeastern Texas that will eventually move east how an outflow boundary will develop along with weak surface convergence and daytime heating will cause convective cell development across our areas by this afternoon through the northern half of the target region. The precipitable water values will range anywhere between 1.7 and 2.5in that will lead to heavy downpours from isolated to scattered thunderstorms at times. I do not expect any severe storms; however, I can't completely rule out an isolated strong storm mainly this afternoon. Another weather disturbed weather across northeastern Mexico that is trying to make its way across the western target area is forecast to dissipate by around noon. Due to increased precipitation and cloud coverage today, the temperature max will be somewhat cooler than yesterday except for areas near the coast with precipitation is expected to be limited. Overnight, any leftover convection should diminish by around midnight. By early Thursday morning, another impulse develops across central Texas and the Hill country that will move south and southeasterly during the day bringing much-needed showers and thunderstorms to parts of the target areas mainly the northern and eastern half during the day. However, both the 3km NAM and ARW are in disagreement on when and where the next wave of clusters of storms will develop and spread across so I went ahead and introduce a slight chance for storms for now. Should it be in agreement with the ARW then the chances for active weather tomorrow will increase. The temperature by then continues to decrease due to rain cool air. Unsettled conditions will continue for our area Friday into the first half of the weekend as the upper-level shortwave through is sucked into the mainstream flow to the north and vorticity maxima over parts of Texas and a mid-level shear axis over south Texas will bring better rain chances to much of the area and to areas that will not receive any precipitation today and tomorrow. The highs are progged to be in the lower to upper 90s with the lows in the lower to upper 70s through the end of the forecast period.

LIFTING MECHANISM:

Outflow Boundary, Low-Level Moisture Advection, Upper-Level Impulse

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	5172.16	CAPE (J/Kg)	1106.15
Precipitable Water (inches)	1.49	CINH (J/Kg)	360.08
LCL	911.24	LI (°C)	-4.60
CCL	2374.78	PB	-4.60
CRP ICA	-19.31	Cloud Base Temp (°C)	28.9
Cloud Base (meters)	1036.32		
Warm Cloud Depth (meters)	4135.84		

DISCUSSION:

Much of the second halving of the day was mainly quiet after a relatively active morning. A mostly cloudy afternoon with stratus overhead suggesting that that atmosphere was mainly stable. However, where there were peaks of sunny and solar radiation could have heated the surface, plus moisture coupled with an impulse produced some convection across the far eastern target area. 57AA was launched to go across the Karnes county when a seedable cell developed. There were non-seedable cells that developed before over the same area that had very small areas and weak reflectivity. 57AA was able to seed that cell and returned to base at Uvalde as darkness approaches.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

143										
-----	--	--	--	--	--	--	--	--	--	--

FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
24:08	57AA	In Air	
24:28	57AA	82° @ 32 nm	Karnes
24:29	57AA	80° @ 33 nm	Karnes
24:33	57AA	84° @ 27 nm	Karnes
24:34	57AA	84° @ 28 nm	Karnes
24:36	57AA	85° @ 27 nm	Karnes
01:29	57AA	Landed	

Seeding operations were conducted in Karnes (10+0H) County. 10 flares plus 0 hygroscopic flares were burned within 1 cloud. This is the 1st day for seeding in September and the 33rd day for seeding during the season.