

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - July 31, 2020

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a ridge over the West and northcentral Gulf and a trough over the parts of the Southern Great Plains and Southern Mississippi Valley. At the surface, high pressure is across the Rockies and Northern Central Great Plains with low pressure across the East trough parts of the South Plains. The flow at upper levels is mainly southerly with it generally light and south southeasterly 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 clear skies to broken clouds and some mist across our area. For today, expect mainly quiet weather for much of the day; however, a cold front to near the target area and begin aided by convective outflow and a northerly flow aloft could bring some active weather across the southern Hill Country by late afternoon and early evening. Expect the cold front to enter central Texas and Hill Country by around midday/afternoon then the Coastal Plains on Saturday. Upward forcing the frontal boundary and the upper trough coupled with a precipitable water value around 2.0in will bring showers and thunderstorms across the northern target areas later in the day most of tonight into Saturday with daytime heating adding to the forcing. The Storm Prediction Center places areas to the north of Del Rio and San Antonio under a marginal risk for strong to severe storms today through the night due to moderate instability and steep mid-level lapse rates. Hail and strong winds plus heavy downpours will be the main threat that could take place outside of the target area. Another batch of storms arrives on Saturday that should move into the southern target area and along the coast through the evening. Rain chances decrease Saturday night into Sunday morning. There may be a few random storm clusters moving withing the northwesterly flow into south-central Texas Sunday night into Monday morning. However, the confidence and probability are low and there are no good trends through the same time frame. The highs are progged to be in the middle 90s and lower 100s with the lows in the lower to middle 70s through the end of the forecast period.

LIFTING MECHANISM:

Upper-Level Trough, Cold Front, Outflow Boundaries

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	5232.69	CAPE (J/Kg)	1994.01
Precipitable Water (inches)	1.71	CINH (J/Kg)	27.95
LCL	736.60	LI (°C)	-4.50
CCL	1111.68	PB	-4.50
CRP ICA	-21.14	Cloud Base Temp (°C)	22.1
Cloud Base (meters)	1636.22		
Warm Cloud Depth (meters)	3596.47		

DISCUSSION:

Conditions became conducive for seeding across the EAA counties by mid to late afternoon. 57AA was launched across the northern /central Bandera county. The pilot reported very strong turbulence with frequent lightning but was able to successfully seed that huge cell moving in from the north from east to west across the McMullen county. A few popups across the eastern target area led me to launch 60P to go across the Karnes county first where it seeded two cells. Cells also developed across Medina and Frio counties where I had 57AA and 60P head to next. 60p seeded a cell across the northern McMullen county while 57AA tried to target a cell across the Frio country. However, due to the time of the evening both 60P and 57AA could not keep on seeding and had to return to base while darkness was upon us. Unfortunately, 57AA could not have landed in Uvalde where it is originally from but had to land for at a small airport near Deli due to very strong winds from a thunderstorm across to the north of Uvalde. 60P made it back safely and on time before there was complete darkness.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

232	440	805	764						
-----	-----	-----	-----	--	--	--	--	--	--

FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
23:10	57AA	In Air	
23:33	57AA	315° @ 60 nm	Medina
23:36	57AA	314° @ 59 nm	Medina
23:37	57AA	315° @ 59 nm	Medina
23:38	57AA	314° @ 60 nm	Medina
23:38	57AA	313° @ 60 nm	Medina
23:39	57AA	312° @ 59 nm	Medina
24:05	57AA	Recon	
24:17	60P	In Air	
24:36	60P	69° @ 42 nm	Karnes
24:39	60P	67° @ 40 nm	Karnes
24:40	60P	65° @ 38 nm	Karnes
24:41	60P	70° @ 39 nm	Karnes
24:42	60P	72° @ 40 nm	Karnes
24:53	60P	57° @ 21 nm	Karnes
24:54	60P	60° @ 23 nm	Karnes
24:55	57AA	In Air	
24:55	60P	64° @ 22 nm	Karnes
01:07	57AA	251° @ 43 nm	Frio
01:08	57AA	249° @ 42 nm	Frio
01:08	57AA	248° @ 41 nm	Frio
01:09	57AA	249° @ 41 nm	Frio
01:17	60P	194° @ 25 nm	McMullen
01:18	60P	197° @ 27 nm	McMullen
01:19	60P	199° @ 27 nm	McMullen
01:20	60P	193° @ 27 nm	McMullen
01:45	60P	Landed	
01:49	57AA	Landed	

Seeding operations were conducted in Karnes (16+0H), Frio (8+0H), McMullen (8+0H and Medina(12+0H) Counties. 44 flares plus 0 hygroscopic flares were burned within 4 clouds. This is the 7th day for seeding in July and the 23rd day for seeding during the season.