

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - July 5, 2018

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows riding across much of the country with an inverted trough over northeastern Mexico and South Texas border with another low located across northeast Gulf of Mexico. At the surface, low trough axis shifts further westward across western New Mexico and the middle of Mexico with high pressure across eastern Texas and across much of the Gulf of Mexico. The flow at upper levels is from the east southeast and mainly east at the surface. The current dew point temperature is in the mid 70's with our area under mostly cloudy skies and a few scattered showers in the vicinity. For today, expect showers and thunderstorms to continue due to riding to the north and a zonal easterly flow to the south with remnants of the inverted trough. The precipitable water values ranges from 2.5 this morning to a 2.0 to 2.3in this afternoon. Expect another 0.25 to .75in of rainfall across the central and western counties before this evening especially with areas under thunderstorms where they may experience rainfall on the higher spectrum even close to 1.0in possible. Showers and thunderstorms will continue overnight but may there may be a break in showers activities at least before midnight and possible early morning. Another wave by Friday morning that may give way to additional showers and thunderstorms to southern and western counties of the target zone in the morning then across central western counties of the target zone in the afternoon. However, much of the target zone should get a chance for showers and thunderstorms. Active weather will continue into the weekend with mainly a moist easterly flow pattern bringing low to medium chances for showers and thunderstorms to much of the target zone. On Sunday, the GFS brings I an inverted trough across southern Texas while the ECMWF has mainly a ridge over our area. I will lean a little towards the GFS and go with a low chance for showers and storms on Sunday. However, another upside to this is that the high temperatures are forecast to be below the normal for this time of the year.

LIFTING MECHANISM:

Low Level Moisture, Low level Warm Air Advection, Easterly Flow

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	4743.60	CAPE (J/Kg)	379
Precipitable Water (inches)	2.20	CINH (J/Kg)	63
LCL	997	LI(°C)	-3.10
CCL	1080	PB	-3.10
CRP ICA	-14.73	Cloud Base Temp (°C)	23.5
Cloud Base (meters)	1449.79		
Warm Cloud Depth (meters)	3293.81		

DISCUSSION:

An inverted trough across northeastern Mexico brought showers and thunderstorms to much southern and western counties this morning. Downwind of this system moist easterly flow and daytime heating with good instability fired up some cells along the Coastal Plains that moved inland. Some cells developed from the outflow from other cells across the target zone. In the afternoon both aircraft 160P and 57AA where launched at a different location. Aircraft 160P was launched over the Bee County while 57AA was sent to the Uvalde County. While on the way to the Uvalde County I noticed a cell trying

to develop, so I had 57AA look at it, but it turned out to be unseedable as the pilot only spotted rain shafts. Aircraft 160P seeded two cells across the Bee County one to the north and the other one to the south. After successfully seeding over the Bee County, 160P returned to the airport as cells were dissipating. On the other hand, while on the way to Uvalde County, the cells over that area were also dying. Aircraft 57AA was called back to the airport but on its way back a cell was developing, so the pilot was able to perform some operations across the Atascosa County. After releasing a few dosages of seeding materials, aircraft 57AA return to the airport. Not too long after, a few cells developed across the Frio and Medina Counties where I eventually relaunched 57AA to go and seed a cell that hold out long enough across the Medina County. While in Medina County, additional cells fired up across the Uvalde County and so I had 57AA go there and do some seeding. Aircraft 57AA, on its way back from Uvalde was able to seed two cells across the Frio County. All in all, it was a very successful day for operations as were able to seed several cells during the afternoon hours.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

2173	2378	2298	2592	2640	2786	2597			
------	------	------	------	------	------	------	--	--	--

FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
19:50	160P	In Air	
19:50	57AA	In Air	
19:58	160P	120° @ 38 nm	Bee
19:58	160P	121° @ 36 nm	Bee
19:59	160P	124° @ 35 nm	Bee
20:00	160P	124° @ 34 nm	Bee
20:01	160P	127° @ 32 nm	Bee
20:37	160P	311° @ 61.7 nm	Bee
20:39	160P	310° @ 60.5 nm	Bee
20:43	57AA	211° @ 14 nm	Atascosa
20:44	57AA	214° @ 12 nm	Atascosa
21:05	57AA	Landed	
21:12	160P	Landed	
21:56	57AA	In Air	
22:13	57AA	285° @ 25 nm	Medina
22:14	57AA	282° @ 27 nm	Medina
22:16	57AA	283° @ 26 nm	Medina
22:34	57AA	273° @ 49 nm	Uvalde
22:38	57AA	268° @ 60 nm	Uvalde
22:44	57AA	271° @ 65 nm	Uvalde
22:46	57AA	274° @ 67 nm	Uvalde
22:49	57AA	271° @ 71 nm	Uvalde
23:17	57AA	235° @ 44 nm	Frio
23:30	57AA	267° @ 40 nm	Frio
23:35	57AA	265° @ 41 nm	Frio
23:37	57AA	263° @ 41 nm	Frio
23:38	57AA	264° @ 42 nm	Frio
23:44	57AA	263° @ 41 nm	Frio
00:15	57AA	Landed	

Seeding operations were conducted in Atascosa (4+1H), Bee (14+0H), Frio (9+1H), Medina (5+0H) and Uvalde (9+0H) Counties. 40 flares plus 2 hygroscopic flares were burned within 7 clouds. This is the 2nd day for seeding in July and the 12th day for seeding during the season.