

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - July 07, 2018

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a ridge of high pressure across the Rockies and Central Plains with an easterly wave over southern Texas. At the surface, the flow is generally east northeasterly with it calm at the surface. The current dew point temperature is in the low to mid 70's with scattered and broken clouds pushing trough much of the area. There are few showers and thunderstorms northeast of San Antonio and showers over the Live Oak area that will eventually shift westward impacting possibly parts of the central and western counties. For today, expect another wave from the east to pass over the target areas with an upper ridge to the north. Expect more or less of similar conditions as yesterday with only this time showers and possibly thunderstorms role in before midday. This is a mesoscale feature that is heading our way, whereas yesterday we were downwind of the inverted trough that brought significant rainfall to our area on Wednesday afternoon and evening hours. With this feature, much of the energy will be focus around the Corpus Christi before midday but as few isolated showers and thunderstorms may impact much of the target zones in the afternoon. The showers and thunderstorms across San Antonio and Live Oak is also part of the easterly disturbance with the first band moving in that is of much significance but with the rest of the a mainly mid-level moisture and day time heating could produce showers and thunderstorms to much of the target zone. I'm not expecting was complete was out from the rain event today that may possibly carry-on into early evening hours but anywhere between .10 to .25in is possible in certain areas and even higher amounts under thunderstorms. For Saturday, another low level easterly wave moves across northern Gulf of Mexico with its center remain off shore that will bring another round of showers and thunderstorms to south Texas and northeastern Mexico. Scattered to isolated showers and thunderstorms will make their way across the target zones during the day with heavy downpours at times. A broad inverted trough will develop Sunday into Monday that will bring a chance for showers and thunderstorms again to our region on both days. Sunday during the day and overnight looks to be the better chance for rainfall. High temperatures will continue to remain below the normal for this time of the year through Monday.

LIFTING MECHANISM:

Low Level Moisture, Low level Warm Air Advection, Weak Mid-Level Disturbance

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	4728.27	CAPE (J/Kg)	646.87
Precipitable Water (inches)	1.99	CINH (J/Kg)	17.78
LCL	702.15	LI(°C)	-1.04
CCL	1009.15	PB	-1.04
CRP ICA	-14.19	Cloud Base Temp (°C)	21.8
Cloud Base (meters)	1439.46		
Warm Cloud Depth (meters)	3288.81		

DISCUSSION:

Showers and thunderstorms developed in the morning hours along a weak mid level disturbance that moved in from the east. The cells that had developed earlier were not seedable as they would appear for less than twenty minutes

and then die out. However, it has been active from since this morning but more seedable conditions came in mainly after 18UTC. Active cells developed or moved in across the western and central counties; thus, I had both 57AA and 160P flew to those counties. Aircraft 57AA was first launched across the Medina County before aircraft 160P was launched over the Frio County. Seeding was carried out by 57AA across the Medina County while 160P successfully performed operations across the Frio County. Several dosages of seeding materials were released across both counties that seeded a few cells. 57AA was then launched over the Uvalde County while 160P was sent to the Atascosa County where there was a promising cell to be seeded. After seeding across the Atascosa area, 160P was sent to the Bexar County for possible seeding. When 160P arrived, the aircraft was able release a few dosages of seeding material in Bexar County and parts of the Wilson County. During this time, 57AA was directed to remain across the Uvalde county as cells that popped-up were seedable. When 160P was through it headed back to base as cells were dissipating. 57AA successfully seeded the western and parts of the central counties and then returned to base. Both aircrafts 57AA and 160P were relaunch in the evening hours as there were a few cells that began to form. However, 57AA was not able to seed any of the clouds across Frio and McMullen Counties as the clouds had no bases and reported mist. Aircraft 160P was able to seed a cell across the Atascosa County while trying to seed a cell over the Wilson/Karnes County but was unsuccessful as there was no good inflow. Both aircrafts headed back to base as conditions deteriorated.

WATCHES/WARNINGS:

Hail

SEEDED CELL ID'S:

1542	1263	2090	1841	2230	2332	2272	2228	4267	2230	1751
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
18:32	57AA	In Air	
18:41	160P	In Air	
19:02	57AA	087° @ 63.0 nm	Medina
19:04	57AA	087° @ 63.0 nm	Medina
19:06	57AA	087° @ 63.0 nm	Medina
19:08	57AA	087° @ 63.0 nm	Medina
19:17	57AA	261° @ 53 nm	Frio
19:17	160P	261° @ 37 nm	Frio
19:18	160P	261° @ 39 nm	Frio
19:19	160P	265° @ 35 nm	Frio
19:20	160P	263° @ 40 nm	Frio
19:21	160P	261° @ 40 nm	Frio
19:21	57AA	262° @ 52 nm	Frio
19:57	57AA	308° @ 40 nm	Medina
19:59	57AA	307° @ 41 nm	Medina
20:05	57AA	304° @ 43 nm	Medina
20:09	57AA	304° @ 40 nm	Medina
20:12	160P	331° @ 10 nm	Atascosa
20:13	160P	337° @ 10 nm	Atascosa
20:13	160P	344° @ 9 nm	Atascosa
20:14	160P	356° @ 10 nm	Atascosa
20:16	160P	8° @ 13 nm	Bexar
20:17	160P	13° @ 14 nm	Bexar
20:18	160P	25° @ 14 nm	Wilson
20:22	57AA	294° @ 62 nm	Uvalde
20:23	57AA	116° @ 61.2 nm	Uvalde
20:26	57AA	116° @ 61.2 nm	Uvalde

20:28	57AA	115° @ 65.3 nm	Uvalde
20:32	160P	43° @ 18 nm	Wilson
20:32	160P	42° @ 18 nm	Wilson
20:33	57AA	114° @ 70.0 nm	Uvalde
20:41	57AA	110° @ 82.5 nm	Uvalde
20:44	160P	44° @ 17 nm	Wilson
20:44	160P	47° @ 18 nm	Wilson
20:54	57AA	288° @ 56 nm	Uvalde
20:54	57AA	287° @ 56 nm	Uvalde
20:58	160P	52° @ 36 nm	Wilson
20:58	57AA	110° @ 59.7 nm	Uvalde
20:59	160P	52° @ 37 nm	Wilson
21:01	160P	51° @ 39 nm	Wilson
21:01	57AA	287° @ 54 nm	Uvalde
21:02	160P	53° @ 40 nm	Wilson
21:02	160P	53° @ 37 nm	Wilson
21:03	57AA	286° @ 57 nm	Uvalde
21:24	57AA	106° @ 83 nm	Uvalde
21:42	160P	276° @ 47 nm	Medina
21:43	160P	277° @ 47 nm	Medina
21:44	160P	278° @ 51 nm	Uvalde
21:46	160P	276° @ 54 nm	Uvalde
21:47	160P	275° @ 57 nm	Uvalde
21:50	160P	275° @ 61 nm	Uvalde
22:16	57AA	Recon	
23:17	160P	Recon	
23:24	57AA	In Air	
00:20	57AA	Landed	
00:21	160P	In Air	
00:36	160P	88° @ 10 nm	Atascosa
00:37	160P	90° @ 12 nm	Atascosa
00:38	160P	91° @ 12 nm	Atascosa
01:13	160P	Landed	

Seeding operations were conducted in Atascosa (14+1H), Bexar (4+0H), Frio (14+0H), Medina (21+1H), Uvalde (32+5H) and Wilson (18+0H) Counties. 103 flares plus 6 hygroscopic flares were burned within 11 clouds. This is the 4th day for seeding in July and the 14th day for seeding during the season.