

**SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS**

**SEEDING REPORT - September 03, 2018**

**SYNOPTIC/MESOSCALE CONDITIONS:**

Upper air analysis shows a low pressure trough across parts of the Southern Rockies and South Plains with a tropical low across southeastern Texas. At the surface, mainly ridging with a low across the target area and a low /trough axis across northern and western Texas. The flow at upper levels is generally from the south southwest with it light and variable at the surface. The current dew point temperature is in low to mid 70's and the environmental temperature in the mid to upper 70's with low level broken clouds across our area. There are showers current along the Uvalde and Medina Counties that are moving mainly northward. For today, expect activity conditions as the trough across west Texas remains mainly in stationary state while the tropical low lifts off to the north across eastern Texas. The 500 mb trough will be across much of our area today; thus, expect showers and thunderstorms today due to good upper level dynamics. The precipitable water values a forecast to be between 2.3 and 2.6 inches across much of the target zones. I'm not expecting a total wash out some areas may encounter heavy downpours from thunderstorms that can lead to minor flooding. The showers across the Uvalde and Medina Counties will continue this morning that may reach into the Bandera County. Conditions settle late this morning before a and round of isolated to scattered showers and storms enter the zone. These are expected to last through the evening hours. The dew point temperature is forecast the be in the upper 60's to 70's across much of the target zone; thus, the heat index values are expected to be on the high side later in the day. Expect the feel like temperature to be several degrees warmer the actual temperature by this afternoon. Also, the highs for today should be a near the normal for this time of the year especially for the inland areas. The highs for the rest of the forecast period is expected to be at or below the normal. Tuesday through Thursday, the forecast calls for more showers and storms as we tap into moisture from off the gulf and the Jetstream lingers across parts of the South Plain. A tropical cyclone is expecting to form across eastern Gulf of Mexico that is forecast to moving anywhere between parts of the Louisiana and Mississippi Coast by late Tuesday evening. This this feature should not have any direct impact on our weather. However, a series of impulses could make it to our area by Wednesday and Thursday. By then, the chances for showers and thunderstorms will lower as much of the energy will be focus to our east.

**LIFTING MECHANISM:**

Upper Level Dynamics, Low level Moisture Advection, Inverted Trough

**THERMODYNAMIC INDICES (12Z KCRP)**

Freezing Level (m)	5017.83	CAPE (J/Kg)	1452.5
Precipitable Water (inches)	2.20	CINH (J/Kg)	30.26
LCL	766.85	LI(°C)	-3.94
CCL	1261.61	PB	-3.94
CRP ICA	-19.18	Cloud Base Temp (°C)	20.1
Cloud Base (meters)	1413.69		
Warm Cloud Depth (meters)	3604.14		

**DISCUSSION:**

A trough of low pressure across to the far West Texas continued to bring active weather to much of the area especially to northwestern counties of the

target zone. As this trough tapped into moisture from off the Gulf, lingering showers and thunderstorms continued through the morning and early afternoon period. As a few cells stood out around noon, 47P was launched across the Median County where is successfully seeded a cell by releasing the full dosage of seeding materials in it. By that time, cells started to develop across the eastern counties courtesy of a very weak ridge, tropical low and daytime heating. 160P was first launched across the Bee County where it seeded a few cells then it headed to the Wilson County for more opportunities. While 160P was performing operations, 47P headed back to base as cells were not that aggressive in development. Eventually, cells started to develop numerously later in the afternoon; thus, both 160P and 47P was in the air seeding as much cells as possible. 47p was launched across the McMullen County and 160P after seeding over the Wilson County it was sent back to the Bee County hit another cell. Both aircrafts seeded eventually seeded over the McMullen County where several cells were developing. However, some of the cells were not intercepted as the flow rates were very low with no bases. However, the aircrafts were able to seed several cells over that county. Keep in mind, that some cells did not get the full dosages of seeding materials as they were too weak. 160P was then diverted to the Frio County where cells were moving in while 47P heading back to base. 160P was able to seed a cell across the Frio County even though there were multiple. Some of the cells were already seeded across the McMullen County while the rest that were not seeded were non-seedable. 160p then headed to Atascosa County where it seeded another promising cell. As cells began to die out, 160P returned to base to refuel in Atascosa County. Finally, while 160P was enroute to home base, a cell developed across the Medina County that 160P went ahead and seeded it. Overall, this was an awesome day for seeding as we were able to seed many cells across several counties.

**WATCHES/WARNINGS:**

N/A

**SEEDED CELL ID'S:**

2580	3163	3394	3423	3632	3373	3841	3771	4041	4041	4042
4026	4477	4508	5040							

**FLIGHT INFORMATION:**

TIME (Z)	Plane	Flare Location	County
17:52	47P	In Air	
18:26	47P	297° @ 36 nm	Medina
18:29	47P	303° @ 34 nm	Medina
18:32	47P	301° @ 35 nm	Medina
18:38	47P	306° @ 35 nm	Medina
18:43	47P	306° @ 36 nm	Medina
18:40	160P	In Air	
18:48	160P	103° @ 50 nm	Bee
18:49	160P	104° @ 49 nm	Bee
19:02	160P	125° @ 60 nm	Bee
19:04	160P	117° @ 54 nm	Bee
19:10	160P	108° @ 43 nm	Bee
19:11	160P	110° @ 42 nm	Bee
20:02	47P	In Air	
20:07	160P	61° @ 50 nm	Wilson
20:08	160P	60° @ 49 nm	Wilson
20:17	160P	55° @ 39 nm	Wilson
20:18	160P	58° @ 40 nm	Wilson
20:27	47P	183° @ 38 nm	McMullen
20:33	47P	182° @ 38 nm	McMullen
20:41	160P	127° @ 26 nm	Bee

20:41	160P	124° @ 26 nm	Bee
20:42	160P	122° @ 26 nm	Bee
20:45	47P	152° @ 29 nm	McMullen
20:45	47P	152° @ 29 nm	McMullen
20:48	47P	161° @ 31 nm	McMullen
20:59	47P	156° @ 18 nm	McMullen
20:02	47P	162° @ 20 nm	McMullen
20:04	160P	208° @ 27 nm	McMullen
20:04	160P	208° @ 27 nm	McMullen
20:05	160P	208° @ 29 nm	McMullen
20:07	160P	210° @ 30 nm	McMullen
20:09	160P	209° @ 28 nm	McMullen
20:19	160P	196° @ 37 nm	McMullen
21:19	160P	198° @ 37 nm	McMullen
21:20	160P	198° @ 38 nm	McMullen
21:59	160P	246° @ 29 nm	Frio
22:00	160P	245° @ 27 nm	Frio
22:14	160P	349° @ 7 nm	Atascosa
22:15	160P	336° @ 3 nm	Atascosa
22:16	160P	336° @ 6 nm	Atascosa
23:22	160P	301° @ 31 nm	Medina
23:23	160P	300° @ 31 nm	Medina
23:32	160P	305° @ 32 nm	Medina
23:35	160P	300° @ 33 nm	Medina
24:23	160P	Landed	

Seeding operations were conducted in Atascosa (4+1H), Bee (16+1H), Frio (4+0H), McMullen (25+3H), Medina (16+1H) and Wilson (8+0H) Counties. 73 flares plus 6 hygroscopic flares were burned within 15 clouds. This is the 2<sup>nd</sup> day for seeding in September and the 30<sup>th</sup> day for seeding during the season.