SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION – Pleasanton, TEXAS

SEEDING REPORT – September 06, 2018

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a trough of low pressure across the four corners with a ridge of high pressure across the east with an inverted trough across the south and Tropical Depression Gordon centered across Arkansas and Mississippi. At the surface, mainly weak ridging with a low /trough axis extending across middle Texas coast though Arkansas and a cold front located across north-central Texas. The flow at upper levels is light and variable with it mainly calm at the surface. The current dew point temperature is in the mid 70's and the environmental temperature in the mid to upper 70's with low level to mid-level scattered and broken clouds across our area. Showers are present across isolated areas of the target zone. For today, the long-wave upper trough lingers across to the far west with an inverted trough across the deep south Texas and ample tropical moisture, conditions will continue to be active. Expect showers and thunderstorms today through the early parts of the evening. I'm not expecting wide spread showers, but some storms could produce and inch of more of rainfall with an hour with gust up to 40mph. With that said, places that have already received close to 10 inches or more of rainfall over the past 48 hours could anticipate flash flooding events today through the end of the forecast period. Expect active weather through much of the target zone today with main areas of focus would be the central and eastern counties. There will be isolated storms across the western counties mainly later in the afternoon across the Uvalde County. Can't rule out cells developing through the mid to late morning and early afternoon period across the western. 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 again should be below the normal for this time of the year due to cloud cover and wet grounds. The highs for the rest of the forecast period is expected below the normal. Friday through Sunday, 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 Southern Rockies and parts of South Plains. The upper trough is expected to slowly push eastward across Central South Texas this weekend and as it does it deepens before lifting towards to northeast. Expect unsettled conditions through Sunday with good upper level support and deep low-level moisture. Every single day there will be chances for showers and thunderstorms but much of the active weather after today will be towards the end of the period when the jetsteam moves over Texas.

LIFTING MECHANISM:

Upper Level Dynamics, Low level Moisture Advection, Inverted Trough

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	5070.15	CAPE (J/Kg)	1541.1
Precipitable Water (inches)	2.42	CINH (J/Kg)	7.26
LCL	740.75	LI(°C)	-3.20
CCL	919.34	PB	-3.20
CRP ICA	-18.90	Cloud Base Temp (°C)	25
Cloud Base (meters)	996.79		
Warm Cloud Depth (meters)	4073.36		

DISCUSSION:
The upper trough continued to linger across much of the western half of the country with an inverted trough across the South produced showers and thunderstorms by mid-morning through the afternoon hours and even into the early evening hours. As the day progressed and storms became increasing active, 160P was first launched across the McMullen County where it seeded a cell. 47P was also launched as good seedable cells became numerous. 47P was launched across the Karnes County and then the Wilson County. It seeded one cell across Karnes and few cells across Wilson. 47P was able to release the full dosages of seeding materials into the cells across both counties. While 47P was taking care of the cells across the eastern Counties, 160P was over the southern parts of the Bexar County where it seeded one cell. Afterwards, 160P went on to the Frio County where it barely seeded a cell as it was weak. 160P then headed to the Medina County as active weather began to stir up across the area. Also, when 47P was done across the east it the sent to the western counties of the target zone for possible seeding. However, when 47P got to Uvalde, the cells were non-seedable. When 160P got to Medina and Bandera Counties, it had a hard time in getting seedable cells as most of them were either very weak or they had no bases with only showers. However, 160p was still able to seed one cell with 47P helping to seed another cell nearby. Most of the cells across to the west were not impressive for seeding; thus, after the aircrafts were done operating across the Medina County, they were sent to the Atascosa and Wilson Counties as cells look to redevelop across the central and eastern counties. 160P was able to seed a cell across the Atascosa County first before heading to the Wilson County while 47P was only able seed another single cell across the Atascosa County. The cells continued to live on while weakening into the counties to the west of them. The cells matured and continued on westward as the afternoon progressed. Both aircrafts returned to base after seeding as much cells as they could with some of them being non-seedable. Overall, this day was a good day for seeding as we were able to seed multiple cells across several counties.

WATCHES/WARNINGS:
N/A

SEEDED CELL ID'S:

2955	2999	4245	3438	4005	4323	5225	4879	5415	4575

FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
18:00	160P	In Air	
18:28	160P	176° @ 44 nm	McMullen
18:28	160P	174° @ 46 nm	McMullen
18:30	160P	174° @ 46 nm	McMullen
18:58	47P	In Air	
19:07	47P	105° @ 28 nm	Karnes
19:10	47P	109° @ 28 nm	Karnes
19:11	47P	339° @ 14 nm	Bexar
19:12	47P	115° @ 25 nm	Karnes
19:12	160P	339° @ 15 nm	Bexar
19:13	47P	111° @ 24 nm	Karnes
19:27	47P	47° @ 20 nm	Wilson
19:29	47P	50° @ 22 nm	Wilson
19:29	47P	50° @ 22 nm	Wilson
19:34	160P	229° @ 26 nm	Frio
19:35	160P	213° @ 19 nm	Frio
19:37	47P	45° @ 29 nm	Wilson
19:39	47P	44° @ 31 nm	Wilson
20:10	160P	326° @ 45 nm	Medina

20:11	**160P**	**325° @ 45 nm**	**Medina**
20:55	**47P**	**283° @ 38 nm**	**Medina**
20:57	**47P**	**285° @ 37 nm**	**Medina**
20:59	**47P**	**283° @ 38 nm**	**Medina**
21:03	**47P**	**287° @ 38 nm**	**Medina**
21:09	**160P**	**319° @ 41 nm**	**Atascosa**
21:10	**160P**	**320° @ 3 nm**	**Atascosa**
21:11	**160P**	**313° @ 4 nm**	**Atascosa**
21:19	**47P**	**259° @ 15 nm**	**Atascosa**
21:21	**47P**	**261° @ 16 nm**	**Atascosa**
21:30	**160P**	**46° @ 24 nm**	**Wilson**
21:31	**160P**	**52° @ 22 nm**	**Wilson**
21:41	**160P**	**56° @ 38 nm**	**Wilson**
21:42	**160P**	**56° @ 39 nm**	**Wilson**
21:43	**160P**	**54° @ 39 nm**	**Wilson**
22:35	**160P**	**Landed**	
22:45	**47P**	**Landed**	

Seeding operations were conducted in Atascosa (10+0H), Bexar (4+0H), Frio (4+0H), Karnes (9+0H), Medina(12+0H), McMullen (6+0H) and Wilson (20+4H) Counties. 65 flares plus 4 hygroscopic flares were burned within 10 clouds. This is the 5th day for seeding in September and the 33rd day for seeding during the season.