SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION – Pleasanton, TEXAS

SEEDING REPORT – September 10, 2019

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a trough to the West, a ridge to the East and a low over the parts of deep south Texas and the northwestern Gulf of Mexico. At the surface, low pressure across the Rockies and a high across the eastern half of the country. The flow at upper levels is mainly northeasterly with it southeasterly at the surface. The current dew point temperature is in the lower 70s and environmental temperature in the middle to upper 70s with clear to broken clouds across our area. For today, the upper-level low continues to play a role in our weather. This low will open up into a trough axis later today and hover over south-central Texas today and Wednesday. This will cause an increase in mid-level moisture in the southeasterly flow. The precipitable water values should range between 1.8 and 2.0in with some areas under heavy downpours from thunderstorms. There may be strong gusty winds from storms suggested by the inverted v forecast sounding. Showers and thunderstorms will begin across the eastern zone by early afternoon then the western zone in the afternoon. A few streamer showers are possible this morning mainly near the coast along the sea-breeze. Conditions settle somewhat overnight; however, can't rule out isolated along the coast. Both the ARW and HRRR do suggest active weather along the Rio Grande and the Edward Plateau due to a plume of moisture in the mid-levels meeting up with the trough axis. Some precipitation could occur across the Uvalde area overnight. For Wednesday, another round of scattered showers and thunderstorms are expected. First across the central and eastern zone by mid-morning and early afternoon with it extending across the western zone by late afternoon and evening hours. There is going to be some weakness in the atmosphere on Thursday even as the inverted trough exits our area; thus, I went ahead and introduced a low chance for active weather in the forecast. A flat ridge builds in overnight Thursday into Friday bringing drier air across the region. This will lead to drier weather and slightly warmer temperature by the end of the workweek. The highs are progged to be in the lower to middle 90s with the lows in the lower to middle 70s through the end of the forecast period.

LIFTING MECHANISM:
Sea Breeze, Upper-Level Low, Warm Air Advection

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	4635.36	CAPE (J/Kg)	2277.5
Precipitable Water (inches)	1.95	CINH (J/Kg)	67.50
LCL	736.48	LI(°C)	-7.15
CCL	912.57	PB	-7.15
CRP ICA	-24.70	Cloud Base Temp (°C)	21.5
Cloud Base (meters)	1370.55		
Warm Cloud Depth (meters)	3264.81		

DISCUSSION:
A few streamer showers occurred by mid-morning with a couple of isolated thunderstorms across the east. Around the afternoon, a couple of cells began to and so 60P was launched first across the Karnes county and then the Bee county. Bee county had many cells at the time. I had 60P check a cell along

the southeastern Bee county border but the pilot reported no good clouds associated with it and it was not getting much of anything. There were a few small weaker cells that developed across the Karnes and Wilson counties at the time but decided to let 60P visit the rest of the unseeded cells across the Bee county for possible seeding. Some cells 60P was able to seed while some of the cells it was unable to seed. There were some poor communication problems with 60P and myself which made it difficult to know what was going on across the southern parts of the Bee county. However, 60P did shoot a couple of flares in some seedable cells. I had 57AA leave Uvalde to come to the east to help 60P with seeding. 57AA seeded a cell across the Atascosa county while 60P went to Karnes county to refuel. I had 57AA return to Uvalde County as there were some cells moving across the southern side. 57AA seeded a couple of cells across the Uvalde county but was not able to release the full dosages of seeding materials in those cells. I had 60P after refueling to check out some cells across the southern Karnes County but was unsuccessful there. After that, 60P headed to McMullen County as a couple of merged cells became one across the non-seeding zone. However, 60P was successful in seeding that cell. Then I had 57AA head up to the northern side of the Uvalde county to finish seeding a cell then brought it back down to the southern side for possible seeding opportunities. 60P was ordered to go across the Frio County where there was a small cell in the area, but unfortunately when it got there it had already weakened. 57AA returned to base to refuel with much of cells already seeded. 60P returned to base as conditions settled across the east. 57AA was relaunched across the Bandera/Median county for the possibility of seeding a cell or two. 57AA seeded two cells across the Medina county. There was a line of thunderstorms along the border of Uvalde/Medina and along the western Frio county that 57AA took care of. 57AA returned to base thereafter for the evening.

WATCHES/WARNINGS:
N/A

SEEDED CELL ID'S:

425	334	418	562	1293	1129	1386	1227	1509	1355
2271	2471								

FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
17:26	60P	In Air	
17:35	60P	80° @ 37 nm	Karnes
17:36	60P	81° @ 36 nm	Karnes
17:56	60P	113° @ 46 nm	Bee
17:57	60P	114° @ 45 nm	Bee
17:58	60P	115° @ 46 nm	Bee
17:59	60P	116° @ 48 nm	Bee
18:00	60P	119° @ 52 nm	Bee
18:39	60P	311, 59.8	Bee
18:41	60P	311, 59.7	Bee
18:43	60P	311, 56.7	Bee
18:51	60P	130° @ 43 nm	Bee
18:51	60P	131° @ 42 nm	Bee
18:52	60P	130° @ 43 nm	Bee
18:54	60P	130° @ 44 nm	Bee
19:19	60P	308, 52.2	Bee
19:21	60P	308, 55.4	Bee
19:22	60P	309, 57.7	Bee
19:57	60P	296, 54.5	Bee
19:59	60P	297, 55.2	Bee
20:11	57AA	300° @ 5 nm	Atascosa

20:14	**57AA**	**345° @ 5 nm**	**Atascosa**
20:16	**60P**	**Refueled**	
20:34	**60P**	**In Air**	
20:43	**57AA**	**274° @ 55 nm**	**Uvalde**
20:54	**57AA**	**283° @ 71 nm**	**Uvalde**
20:54	**57AA**	**285° @ 71 nm**	**Uvalde**
20:55	**57AA**	**286° @ 71 nm**	**Uvalde**
20:56	**57AA**	**287° @ 71 nm**	**Uvalde**
20:57	**57AA**	**287° @ 70 nm**	**Uvalde**
21:11	**57AA**	**274° @ 67 nm**	**Uvalde**
21:12	**57AA**	**275° @ 67 nm**	**Uvalde**
21:15	**57AA**	**275° @ 66 nm**	**Uvalde**
21:17	**57AA**	**276° @ 68 nm**	**Uvalde**
21:17	**60P**	**193° @ 31 nm**	**McMullen**
21:18	**60P**	**195° @ 29 nm**	**McMullen**
21:19	**57AA**	**276° @ 68 nm**	**Uvalde**
21:19	**60P**	**199° @ 26 nm**	**McMullen**
21:23	**57AA**	**273° @ 68 nm**	**Uvalde**
21:23	**60P**	**209° @ 26 nm**	**Uvalde**
21:24	**57AA**	**272° @ 66 nm**	**Uvalde**
21:25	**57AA**	**270° @ 68 nm**	**Uvalde**
21:38	**57AA**	**287° @ 77 nm**	**Uvalde**
21:39	**57AA**	**290° @ 79 nm**	**Uvalde**
22:00	**57AA**	**29.06N, 99.43W**	**Uvalde**
22:01	**57AA**	**272° @ 65 nm**	**Uvalde**
22:02	**57AA**	**271° @ 66 nm**	**Uvalde**
22:03	**57AA**	**271° @ 65 nm**	**Uvalde**
22:04	**57AA**	**272° @ 65 nm**	**Uvalde**
22:12	**57AA**	**Refueled**	
22:36	**57AA**	**In Air**	
22:47	**57AA**	**298° @ 58 nm**	**Medina**
22:47	**57AA**	**299° @ 57 nm**	**Medina**
22:48	**57AA**	**298° @ 56 nm**	**Medina**
22:48	**57AA**	**299° @ 56 nm**	**Medina**
22:48	**60P**	**Landed**	
22:49	**57AA**	**299° @ 57 nm**	**Medina**
22:59	**57AA**	**299° @ 52 nm**	**Medina**
23:02	**57AA**	**299° @ 50 nm**	**Medina**
23:04	**57AA**	**299° @ 49 nm**	**Medina**
23:05	**57AA**	**300° @ 49 nm**	**Medina**
23:07	**57AA**	**299° @ 49 nm**	**Medina**
23:14	**57AA**	**303° @ 52 nm**	**Medina**
23:15	**57AA**	**302° @ 50 nm**	**Medina**
24:02	**57AA**	**Landed**	

Seeding operations were conducted in Atascosa (4+0H), Bee (34+0H), Karnes (4+0H), McMullen (8+0H), Medina (24+0H) and Uvalde (42+0H) Counties. 116 flares plus 0 hygroscopic flares were burned within 12 clouds. This is the 4th day for seeding in September and the 32nd day for seeding during the season.