

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - August 18, 2020

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a huge ridge over the West and the Great Plains with a trough over to the East. At the surface, high pressure is across the Great Plains with low pressure across the Southwest, Rockies and far Northeast. The flow at upper levels is mainly variable with it light and variable at the surface. The current dew point temperature is in the middle 60s and middle 70s and the environmental temperature in the middle to upper 70s with clear to overcast skies across our area. For today, a few remnant showers from last evening should diminish early this morning leaving mid-morning through noon mainly quiet. An unstable northerly flow combined with a residual moist boundary and daytime heating will produce showers and thunderstorms during the afternoon hours. I'm not anticipating widespread storm activities but a multiple storm event is expected across the target area. With that being said some areas will not even see a trace of precipitation as it will be hit or miss. The precipitable water values will range between 1.5 to 2.0in with some storms could produce brief heavy downpour at times. An inverted v-shaped forecast sounding suggests localized strong downdrafts. A surge of dryer low to mid-level air mass from the north and with sunset will end rain chances by early this evening. The daytime temperature will remain above the climatological normal for this time of the year. Overnight, with dryer air in place will cause the temperature to feel more pleasant. Wednesday morning's low will be around the normal with limited moist present. Wednesday, conditions are expected to be more settled with the temperature on slightly higher than today's temperature. However, due to a north northeasterly flow at low levels, the dew point temperature will be on the lower side causing the feel-like temperature to not exceed the actual environmental temperature. Not many changes are expected Thursday through Friday, with continued dry and hot conditions each consecutive day. I should also mention that the overnight Wednesday lows should be the coolest of the week with clear to mostly clear skies to enhance radiational cooling. The highs are progged to be in the middle 90s and lower 100s with the lows in the lower to middle 70s through the end of the forecast period.

LIFTING MECHANISM:

Upper-Level Disturbance, Low-Level Moisture Advection, Warm Air Advection

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	4516.75	CAPE (J/Kg)	1412.15
Precipitable Water (inches)	1.78	CINH (J/Kg)	122.65
LCL	1025.89	LI (°C)	-3.26
CCL	1827.41	PB	-3.26
CRP ICA	-17.00	Cloud Base Temp (°C)	21.5
Cloud Base (meters)	1775.69		
Warm Cloud Depth (meters)	2741.06		

DISCUSSION:

Mainly, quiet weather across, much of the target area with a few showers just across parts of the western counties this morning. A few pop-ups early this afternoon led me to launch 57AA early. 57AA was first launched to go across the Uvalde county. Today the cells looked to be small in area and non-lasting

than yesterday at least at the beginning of the operations. 57AA seeded a few cells across the Uvalde county before heading to the Frio County. 60P was launched to go across the eastern target area where a couple of very small cells developed over the Atascosa and Karnes counties. While seeding across the southern Medina county. 57AA had reflare so it landed at Hondo for a while. 60P continued to seed whatever cells it was able to seed across the Karnes county. After 60P was unable to get anything out of the cells across the eastern target area, I had it go to Frio County to help out 57AA while it was on the ground reflaring. 60P did seed a cell over the Atascosa County that was across the southeastern Frio county. Eventually, 57AA returned to the skies to continue seeding. 57AA finishing up with the remaining cells across the Medina and Frio counties before heading to Uvalde where a couple of cells began to develop and move in. 60P seeded across the Atascosa and counties. 57AA did seed a few cells over the Uvalde area while 60P returned to base to reflare after seeding the most significant cell across the Bee county. 57AA returned to base when there were no other cells to seed at the time while 60P returned to the skies to head back down to Bee county as a cell across the southeastern part of the county merged with the cell we already seeded. Seeing that 60P was called back out with limited flares before the pilot could have reflared, we had to use them sparingly. 60P released a few across the southern Bee County then headed to Atascosa county, but while on its way there the cell had died; thus, 60P returned to southern Bee County to finish off with the remainder of the last sets of flares to a cell that we started seeding before. After 60P returned to base to rest and reflare. A few popups across Bandera and Medina continued, which caused me to relaunch 57AA to go and investigate those cells. There were a few pop-ups across the non-seeding zone of the Bexar county that was untouched in the meantime. 57AA released just a few seeding materials in that cell. Before heading to the southwestern Bexar county. After seeding over the Bexar county, a decent cell developed along eastern Wilson and Karnes county where I had 57AA released the full dose of seeding materials into that cell. From there, 57AA returned to the cell that it seeded across the southwestern Bexar county to add a final dose of silver iodide to it. While on its way there, a cell developed across the northern Bandera county. I initially had 57AA go and investigate it but on its way there it began to weaken significantly; thus, there was no point in 57AA continuing all the way there so instead 57AA headed back to base for the evening.

WATCHES/WARNINGS:

Severe Thunderstorm

SEEDED CELL ID'S:

138	124	236	229	236	248	274	288	413	231	457
593	440	593	812	1033	1028	1215	1204	1401		

FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
18:04	57AA		
18:09	57AA	277° @ 73 nm	Uvalde
18:10	57AA	276° @ 74 nm	Uvalde
18:11	57AA	275° @ 73 nm	Uvalde
18:24	57AA	277° @ 53 nm	Uvalde
18:26	57AA	277° @ 54 nm	Uvalde
18:27	57AA	276° @ 54 nm	Uvalde
18:28	60P	In Air	
18:43	60P	94° @ 31 nm	Karnes
18:44	60P	93° @ 29 nm	Karnes
18:48	57AA	258° @ 43 nm	Frio

18:49	57AA	257° @ 44 nm	Frio
18:51	60P	74° @ 28 nm	Karnes
18:52	60P	72° @ 26 nm	Karnes
18:55	57AA	267° @ 44 nm	Frio
18:58	57AA	262° @ 43 nm	Frio
18:59	57AA	265° @ 43 nm	Frio
19:00	57AA	267° @ 44 nm	Frio
19:03	57AA	272° @ 44 nm	Frio
19:03	57AA	272° @ 44 nm	Frio
19:06	57AA	274° @ 42 nm	Medina
19:09	60P	69° @ 29 nm	Wilson
19:10	60P	68° @ 27 nm	Wilson
19:19	57AA	Recon	
19:49	60P	219° @ 21 nm	Atascosa
19:50	60P	223° @ 19 nm	Atascosa
19:52	57AA	In Air	
19:52	60P	221° @ 21 nm	Atascosa
19:57	57AA	291° @ 21 nm	Medina
19:58	57AA	290° @ 36 nm	Medina
20:04	57AA	269° @ 35 nm	Frio
20:05	57AA	268° @ 35 nm	Frio
20:08	60P	138° @ 15 nm	Atascosa
20:09	60P	134° @ 14 nm	Atascosa
20:10	60P	132° @ 12 nm	Atascosa
20:11	60P	127° @ 11 nm	Atascosa
20:12	60P	133° @ 11 nm	Atascosa
20:13	60P	139° @ 15 nm	Atascosa
20:29	57AA	284° @ 78 nm	Uvalde
20:33	60P	122° @ 44 nm	Bee
20:33	57AA	283° @ 78 nm	Uvalde
20:34	57AA	284° @ 78 nm	Uvalde
20:34	60P	120° @ 43 nm	Bee
20:36	60P	121° @ 44 nm	Bee
20:39	57AA	278° @ 82 nm	Uvalde
20:43	57AA	277° @ 84 nm	Uvalde
20:47	57AA	277° @ 82 nm	Uvalde
20:53	60P	Recon	
20:59	57AA	288° @ 74 nm	Uvalde
21:00	57AA	288° @ 74 nm	Uvalde
21:01	57AA	288° @ 76 nm	Uvalde
21:11	57AA	287° @ 73 nm	Uvalde
21:12	60P	In Air	
21:21	57AA	Recon	
21:33	60P	125° @ 59 nm	Bee
21:33	60P	126° @ 58 nm	Bee
21:38	60P	132° @ 56 nm	Bee
22:12	60P	135° @ 58 nm	Bee
22:13	60P	134° @ 58 nm	Bee
22:14	60P	133° @ 59 nm	Bee
22:15	60P	130° @ 59 nm	Bee
22:22	57AA	In Air	
22:36	60P	Landed	
22:41	57AA	300° @ 48 nm	Medina
22:48	57AA	301° @ 46 nm	Medina
23:16	57AA	314° @ 28 nm	Bexar
23:16	57AA	315° @ 27 nm	Bexar
23:17	57AA	315° @ 25 nm	Bexar
23:17	57AA	313° @ 34 nm	Bexar
23:44	57AA	70° @ 34 nm	Karnes
23:45	57AA	72° @ 35 nm	Karnes

23:46	57AA	74° @ 35 nm	Karnes
23:47	57AA	75° @ 35 nm	Karnes
23:47	57AA	74° @ 34 nm	Karnes
24:14	57AA	278° @ 27 nm	Frio
24:37	57AA	Landed	

Seeding operations were conducted in Atascosa (16+1H), Bexar (8+0H), Bee (18+2H), Frio (22+0H), Karnes (18+0H), Medina (10+0H), Uvalde (30+0H), and Wilson (4+0H) Counties. 126 flares plus 3 hygroscopic flares were burned within 20 clouds. This is the 5th day for seeding in August and the 28th day for seeding during the season.