

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - June 15, 2018

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a subtropical ridge of high pressure moving into the lower Mississippi Valley with a trough across the west and an inverted trough over southwestern Gulf of Mexico. At low levels, mainly ridging across the south with a low centered across the Upper Mississippi Valley. The flow at upper levels is from the east southeast with mainly calm winds near the surface. The current dew point temperature is in the low to mid 70's with our area under scattered low base clouds. For today, expect the subtropical ridge to continue to build in across the Lower Mississippi Valley with Tropical Storm Bub moving up western Mexico today through Saturday. This will erode the ridge a little with moisture remaining generally to the west of the target areas. Expect another day of as sea-breeze type pattern with a little deeper moisture from the Gulf of Mexico moving into our area. Showers and thunderstorms are forecast to begin before noon today and last through 02UTC Saturday. For Saturday, the inverted trough will gradually to make its way near the coast as the as the ridge breaks down and shift to the east allowing for some increasing tropical moisture to impact the coastal and inland counties. Expect for today and tomorrow, scattered showers and thunderstorms across much of the target areas. The dew point temperature is forecast to be in the low to mid 70's which will impact feel like temperature. The heat index value is expected to be again in the low 100's even though the actual temperature is expected to be near the mid 90's. Come Sunday, we will begin to tap into much more deeper tropical moisture as the inverted trough makes landfall. This broad area of disturbance will bring much needed rainfall to the southwest Texas through the end of the forecast period. The precipitable water is forecast to be between 2.0 and 2.7 inches which can lead to substantial amount of rainfall through Monday. Steady rainfall amounts can range anywhere between 1.5 and 4 inches with possibly higher amounts under areas of heavy rainfall due to thunderstorms by Monday evening.

LIFTING MECHANISM:

Low Level Moisture Advection, Low Level Warm Air Advection, Sea-Breeze

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	4794.14	CAPE (J/Kg)	1112.0
Precipitable Water (inches)	1.85	CINH (J/Kg)	15.66
LCL	758.01	LI(°C)	-4.93
CCL	1103.91	PB	-4.93
CRP ICA	-29.47	Cloud Base Temp (°C)	20.4
Cloud Base (meters)	1464.02		
Warm Cloud Depth (meters)	3330.12		

DISCUSSION:

Another sea breeze event impacted the south mainly across central and eastern target zones. Storms began firing up along the far eastern counties with a few weak cells that pushed through before 18UTC. As the cells came over or were about to come over the seeding zones, they dissipated within a short period of time. Seeding took place a little later in the day than the previous days, but still another successful day accomplished. Aircraft 160P, was launched to the Karnes County where it had seeded one cell. This seeding did not last long time as inflow became unfavorable. Afterward, 160P was

directed to go to Wilson County where it seeded two cells. One of the cells split in two and then rejoined after the aircraft left that area. Aircraft 160P delivered the full dose of seeding materials in both cells. Eventually, 160P flew over to the Frio County and performed operations on one cell that had continued to live on for a while into the Medina County. Aircraft 160P then went to the McMullen County and seeded another cell of that area. While there, cells began to develop over the Atascosa, Bexar and Medina Counties that were seeded over Medina County. After a few seedings, the aircraft had the restock up on flares and so, 160P returned to base. After stocking up on flares, aircraft 160P return to the skies to continue operations over the Frio/Medina Counties but not until it passed over the McMullen County for a possible seeding opportunity. However, that cell was not good for operations as the inflow was very weak and not worth seeding. Aircraft 160P returned to base after completing seeding across the Frio/Medina Counties.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

305	359	459	456	540	612	710	888		
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
19:20	160P	In Air	
19:33	160P	68° @ 36 nm	Karnes
19:35	160P	68° @ 37 nm	Karnes
19:45	160P	43° @ 40 nm	Wilson
19:46	160P	44° @ 39 nm	Wilson
19:47	160P	43° @ 38 nm	Wilson
19:51	160P	35° @ 38 nm	Wilson
19:51	160P	38° @ 38 nm	Wilson
19:53	160P	36° @ 39 nm	Wilson
21:09	160P	25° @ 12 nm	Wilson
21:10	160P	29° @ 19 nm	Wilson
20:12	160P	28° @ 15 nm	Wilson
20:13	160P	24° @ 14 nm	Wilson
20:14	160P	28° @ 14 nm	Wilson
20:34	160P	269° @ 27 nm	Frio
20:35	160P	269° @ 26 nm	Frio
20:40	160P	271° @ 27 nm	Frio
20:42	160P	273° @ 28 nm	Frio
21:08	160P	219° @ 27 nm	McMullen
21:09	160P	220° @ 29 nm	McMullen
21:10	160P	220° @ 28 nm	McMullen
21:11	160P	222° @ 26 nm	McMullen
21:13	160P	222° @ 28 nm	McMullen
21:35	160P	311° @ 25 nm	Medina
21:35	160P	311° @ 27 nm	Medina
21:36	160P	310° @ 10 nm	Medina
21:37	160P	312° @ 26 nm	Medina
21:55	160P	landed	
22:32	160P	In Air	
22:54	160P	277° @ 25 nm	Frio
22:55	160P	281° @ 26 nm	Medina
22:56	160P	281° @ 27 nm	Medina
22:58	160P	280° @ 26 nm	Medina
22:59	160P	282° @ 28 nm	Medina
22:55	160P	landed	

Seeding operations were conducted in Frio (10+0H), Karnes (4+0H), McMullen (10+0H), Medina (16+0H) and Wilson (22+1H) Counties. 62 flares

plus 1 hygroscopic flare were burned within 8 clouds. This is the 5th day for seeding in June and the 8th day for seeding during the season.