

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

**SEEDING REPORT - June 26, 2019**

**SYNOPTIC/MESOSCALE CONDITIONS:**

Upper air analysis shows a trough over the Pacific Northwest, a weak ridge over parts of the Plains and Southeast with embedded shortwaves. At the surface, low pressure across the Inter-Mountain West with high pressure across to the East. The flow at upper levels is northwest with it light and variable at the surface. The current dew point temperature is in the lower 70's and environmental temperature in the mid 70's with overcast skies and showers and storms in the vicinity. For today, a 700mb inverted trough will take a toll on our weather bringing isolated to scattered showers and thunderstorms to our area. Current, there is a line of storms over parts of the Frio, Medina and Bexar Counties moving northward. Expect stream showers this morning with a few short live embedded thunderstorms before better convection this afternoon. There should be enough instability this afternoon for good convection with forecast models suggesting CAPE values ranging between 1500 and 2500 J/kg. South-central Texas is expected to remain uncapped at least until 23 UTC that will allow for free convection. However, I'm not expecting every area to see active weather during the day. The 700mb inverted trough shifts to the west this evening leaving room for showers and storms to extend across the Rio Grande area into the evening hours. For Thursday, expect showers and thunderstorms to be limited across much of the area as a ridge begins to strengthen. However, can't rule out an isolated shower or thunderstorm near the coast due to a moist onshore flow. The upper ridge of high pressure will amplify across the South Plains Friday through Saturday from west Texas. This should block storms from developing or entering our region. The high temperatures are forecast to return to the normal by then. A 500mb inverted trough will track westward this weekend along the northeast Gulf. The ridge this will cause the ridge to break down overnight Saturday. Until then settled conditions will be in the forecast for the first half of the weekend. The highs are progged to be in the upper 80's and mid 90's with the lows in the upper 60's and mid 70's through the end of the forecast period.

**LIFTING MECHANISM:**

Weak Ridge, Sea-Breeze, Low-Level Moisture Advection

**THERMODYNAMIC INDICES (12Z KCRP)**

Freezing Level (m)	4453.6	CAPE (J/Kg)	2564.4
Precipitable Water (inches)	1.87	CINH (J/Kg)	71.62
LCL	569.2	LI (°C)	-6.17
CCL	616.76	PB	-6.17
CRP ICA	-25.01	Cloud Base Temp (°C)	23.3
Cloud Base (meters)	1124.3		
Warm Cloud Depth (meters)	3329.3		

**DISCUSSION:**

The day started with advective showers and thunderstorms in the morning with remnants of that through the early afternoon. As the day continued to heat up near the surface, better cells began to develop across much of the target area. A pilot was called in from Hondo, but he was unavailable to fly until 2 pm, so I went ahead and contacted 60P which was launched across the Bee County and then Karnes County. It was not able to seed storms over the Bee

County as the cells were not cooked as yet or were too weak. A cell over the Uvalde County was not seeded on time because the pilot was unavailable at the moment. However, 57AA from Uvalde was launched across the Uvalde County where it seeded a few cells. A storm thunderstorm that developed across the north of the Wilson County was too close to the Bexar County non-seeding zone; thus, the pilot of 60P was unable to reach it as it was already at the edge of the Bexar County. However, 60P successfully seeded several cells in the afternoon. Over the Medina, Atascosa, Wilson and Karnes Counties. 60P had to refuel, and much of the activities began to settle. By this time 57AA was sent back to base. After 60P was back in the air, a cell across to a county south of the Frio County looked impressive, and so 60P was launched over the southern parts of the Frio County. Unfortunately, 60P had only a few silver flares, and one hygroscopic flare left it released less than the average amount of the seeding materials into that cell. Since that was the case I, had 57AA go to Frio County to finish off with the remainder of seeding materials in that cell. At that time, I had to attend an important meeting at the Evergreen Underground Water Conservation District; so, I had to leave the 57AA to complete the seeding process south of Frio. Other cells developed while I was at the meeting and were unseeded during the early evening hours. Despite missing some cells due to my absence this evening, we were at least able to seed fourteen cells in one day. This was impressive compared to all the other days before today and even many days during last season. This was due to an uncapped atmosphere, strong instability, and an excellent moist on-shore flow.

**WATCHES/WARNINGS:**

Hail

**SEEDED CELL ID'S:**

481	817	879	1190	735	1006	952	1433	1471	1394	1470	1605	1486	1823
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**FLIGHT INFORMATION:**

TIME (Z)	Plane	Flare Location	County
17:46	60P	In Air	
17:53	60P	107° @ 26 nm	Karnes
17:55	60P	105° @ 26 nm	Karnes
17:56	60P	104° @ 26 nm	Karnes
17:57	60P	104° @ 26 nm	Karnes
18:34	60P	46° @ 45 nm	Wilson
18:35	60P	45° @ 44 nm	Wilson
18:36	60P	45° @ 44 nm	Wilson
18:46	60P	46° @ 29 nm	Wilson
18:47	60P	48° @ 27 nm	Wilson
18:48	60P	55° @ 22 nm	Wilson
19:03	57AA	In Air	
19:14	57AA	286° @ 78 nm	Uvalde
19:16	57AA	287° @ 77 nm	Uvalde
19:20	57AA	288° @ 80 nm	Uvalde
19:24	60P	88° @ 32 nm	Karnes
19:25	60P	86° @ 34 nm	Karnes
19:27	60P	84° @ 37 nm	Karnes
19:28	60P	84° @ 35 nm	Karnes
19:29	60P	84° @ 33 nm	Karnes
19:51	60P	85° @ 28 nm	Karnes
19:55	60P	76° @ 26 nm	Karnes
19:57	60P	70° @ 23 nm	Karnes
19:58	60P	71° @ 23 nm	Karnes
19:59	60P	77° @ 25 nm	Karnes
20:09	57AA	279° @ 28 nm	Uvalde

20:10	60P	46° @ 22 nm	Wilson
20:11	60P	45° @ 21 nm	Wilson
20:11	60P	44° @ 19 nm	Wilson
20:14	57AA	279° @ 80 nm	Uvalde
20:26	60P	295° @ 12 nm	Atascosa
20:27	60P	290° @ 13 nm	Atascosa
20:28	60P	298° @ 12 nm	Atascosa
20:33	57AA	276° @ 68 nm	Uvalde
20:37	57AA	276° @ 67 nm	Uvalde
20:38	60P	296° @ 23 nm	Medina
20:39	60P	301° @ 23 nm	Medina
20:40	57AA	276° @ 68 nm	Uvalde
20:47	57AA	276° @ 68 nm	Uvalde
20:47	57AA	276° @ 68 nm	Uvalde
20:56	57AA	Landed	
22:23	57AA	In Air	
22:19	60P	230° @ 40 nm	Frio
22:20	60P	235° @ 42 nm	Frio
22:21	60P	239° @ 45 nm	Frio
22:40	57AA	28.72 N 99.38 W	Frio
22:44	57AA	28.75 N 99.33 W	Frio
22:50	57AA	28.80 N 99.35 W	Frio
23:20	57AA	Landed	
23:23	60P	Landed	

Seeding operations were conducted in Atascosa (6+0H), Frio (12+1H), Karnes (24+2H), Medina(18+0H), Wilson (3+1H) and Uvalde (18+0H) Counties. 81 flares plus 4 hygroscopic flares were burned within 14 clouds. This is the 4<sup>th</sup> day for seeding in June and the 11<sup>th</sup> day for seeding during the season.