

WEST TEXAS WEATHER MODIFICATION ASSOCIATION - SAN ANGELO, TEXAS

SEEDING REPORT - September 20, 2017

SYNOPTIC/MESOSCALE CONDITIONS:

Zonal flow aloft continues today with continued disturbances embedded in the flow aloft. Meanwhile, a dryline has developed across parts of the Trans-Pecos and western Permian Basin. This boundary could be a focal point for shower/storm activity as a moist and unstable atmosphere develops ahead of it this afternoon. The latest HRRR fires up convection on the southern end of this boundary across Pecos County by 2PM. More development takes place as we head into the 4PM hour across parts of the western Concho Valley. Shower and storm activity will then become more widespread throughout the evening. With all of that said, the WRF is much more conservative with development. However, with a dryline in place and sufficient surface moisture available, I am leaning towards the HRRR solution even if not as aggressive.

LIFTING MECHANISM:

Strong Dynamics Aloft, Strong Dryline

THERMODYNAMIC INDICES (12Z KMAF)

| | | | |
|-----------------------------|------|----------------------|-----|
| Freezing Level (m) | 5171 | CAPE (J/Kg) | 194 |
| Precipitable Water (inches) | 0.83 | CINH (J/Kg) | 279 |
| LCL | 1516 | LI(°C) | 1 |
| CCL | 3671 | PB | 0 |
| MAF ICA | -0.4 | DRT ICA | |
| Cloud Base (meters) | 3156 | Cloud Base Temp (°C) | 9 |
| Warm Cloud Depth (meters) | 2015 | | |

DISCUSSION:

SHOWERS AND STORMS FIRED ALONG THE DRYLINE AROUND 2130Z. PILOT WAS CALLED AIRBORNE TO INVESTIGATE. AS HE GOT AIRBORNE, CONVECTION BECAME MORE WIDESPREAD WITH MORE STORMS SOUTH INTO SC/SU COUNTIES. WE'LL FOCUS ON THE MAIN LINE FIRST AS HE IS THE ONLY PILOT AVAILABLE. SEEDING TOOK PLACE AT 2228Z IN CENTRAL IRION COUNTY ALONG THE LEADING EDGE OF THE DRYLINE. STORMS EXPLODED DURING THE SEEDING MISSION WITH DBZ'S FLUCTUATING BETWEEN 65-70. WE FOCUSED ON THE SVR STORM IN IRION IN AN ATTEMPT TO SUPPRESS ANY HAIL DEVELOPMENT. SEEDING CONTINUED EAST INTO EASTERN IRION COUNTY AS THE STORM PUSHED INTO TOM GREEN COUNTY. PILOT CONTINUED SEEDING THROUGH 2330Z WITH GOOD SUCCESS, HOWEVER, STORMS BEGAN TO THREATEN BASE SO WE DECIED TO RTB.

WATCHES/WARNINGS:

- T-STORM WARNING - SCHLEICHER
- T-STORM WARNING - IRION
- T-STORM WARNING - TOM GREEN

SEEDED CELL ID'S:

| | | | | | | | | |
|-----|-----|--|--|--|--|--|--|--|
| 644 | 670 | | | | | | | |
|-----|-----|--|--|--|--|--|--|--|

FLIGHT INFORMATION:

| TIME (Z) | Plane | Flare Location | County |
|----------|-------|----------------|--------|
| 2210 | 24P | IN AIR | |
| 2228 | 24P | 273° @ 18 nm | IRION |
| 2231 | 24P | 265° @ 16 nm | IRION |
| 2232 | 24P | 263° @ 16 nm | IRION |
| 2236 | 24P | 263° @ 23 nm | IRION |
| 2238 | 24P | 268° @ 26 nm | IRION |
| 2245 | 24P | 266° @ 35 nm | IRION |
| 2249 | 24P | 261° @ 38 nm | IRION |
| 2250 | 24P | 259° @ 38 nm | IRION |

| | | | |
|------|-----|--------------|-------|
| 2253 | 24P | 257° @ 39 nm | IRION |
| 2304 | 24P | 259° @ 29 nm | IRION |
| 2308 | 24P | 269° @ 23 nm | IRION |
| 2314 | 24P | 265° @ 18 nm | IRION |
| 2316 | 24P | 264° @ 17 nm | IRION |
| 2316 | 24P | 264° @ 17 nm | IRION |
| 2327 | 24P | 277° @ 12 nm | IRION |
| 2328 | 24P | 279° @ 11 nm | IRION |
| 2329 | 24P | 276° @ 10 nm | IRION |
| 2331 | 24P | 279° @ 09 nm | IRION |
| 2335 | 24P | RTB | |

Seeding operations were conducted in Irion (36+3H) County. 36 flares plus 3 hygroscopic flares were burned within 2 clouds. This is the 1st day for seeding in September and the 25th day for seeding during the season.