

WEST TEXAS WEATHER MODIFICATION ASSOCIATION - SAN ANGELO, TEXAS

SEEDING REPORT - May 18, 2023

SYNOPTIC/MESOSCALE CONDITIONS:

A shortwave trough is expected to spin off a cut off low over the Baja Peninsula over the Trans-Pecos region into the western portions of the Concho Valley and Rolling Plains. Models favor the Trans-Pecos region, but placement of the shortwave will largely influence best rain chances. Latest HRRR initiates convection around 19Z with more widespread development by 22Z. Will go with likely rain chances for areas west of a Stamford to Ozona line.

LIFTING MECHANISM:

Shortwave Trough

THERMODYNAMIC INDICES (12Z KMAF)

Table with 4 columns: Parameter, Value 1, Value 2, Value 3. Rows include Freezing Level (m), Precipitable Water (inches), LCL, CCL, MAF ICA, Cloud Base (meters), and Warm Cloud Depth (meters).

DISCUSSION:

The anticipated shortwave was now spreading across parts of the western target area. Sat imagery was showing some good development trying to get started in Reagan and Crockett Counties. All pilots are on standby with 41P called airborne. 49P was also called airborne as both areas are looking favorable to the west. The first pilot, 49P, will target Reagan County, while the second pilot, 41P, will target Crockett County. First pilot began seeding in northern Reagan County just prior to 2040Z. We'll focus on the backside of this storm where the dbz gradient is its strongest. This cell was seeded as we neared the 21Z hour as it moved into Sterling County. Interesting note, cell was at 68dbz with tops of 15.5km. After several minutes of seeding, dbz fell to 61 with tops now at 18.5km. The second pilot made it to the cell in western Crockett County and began seeding just after 21Z. Meanwhile, the further south cell has been warned. Both pilots, and radar, were describing embedded conditions. However, it's still a bit early for that it seems. We'll stay aggressive. Conditions in southern Crockett County were not suitable for seeding. There was simply too much virga on the outside of the convection per the pilot. We'll bail and bring 41P back to the north and 49P wraps up in Sterling County. 49P will take one more look at the back building of the cell extending into Irion/Reagan County. We'll work here briefly as this cell has plenty of material in it already. 41P will take one more look at the cell in central Crockett County. This cell was falling apart rapidly so 41P was called back to base. Meanwhile, 49P found a good area on the southern edge of the cell but was now running low on flares. With this cell heavily seeded, we'll RTB for now. By 2230Z, the area to the south in Crockett County blew off an outflow boundary. This started a few showers/storms extending through eastern Crockett County into Sutton County. As we prepped for launch, the outflow brought very high winds and scattered showers/storms to the area. Due to low chance of recovery, we opted to stand down.

WATCHES/WARNINGS:

T-Storm Warning - Crockett

SEEDED CELL ID'S:

Table with 10 columns for cell IDs. Values: 210, 182, 158, 147, followed by empty cells.

FLIGHT INFORMATION:

Table with 4 columns: TIME (Z), Plane, Flare Location, County.

| | | | |
|------|-----|--------------|----------|
| 2015 | 49P | IN AIR | |
| 2025 | 41P | IN AIR | |
| 2038 | 49P | 285° @ 43 nm | REAGAN |
| 2039 | 49P | 287° @ 47 nm | REAGAN |
| 2043 | 49P | 285° @ 50 nm | REAGAN |
| 2045 | 49P | 282° @ 50 nm | REAGAN |
| 2047 | 49P | 277° @ 49 nm | REAGAN |
| 2048 | 49P | 277° @ 49 nm | REAGAN |
| 2048 | 49P | 275° @ 48 nm | REAGAN |
| 2050 | 49P | 274° @ 46 nm | REAGAN |
| 2051 | 49P | 270° @ 45 nm | REAGAN |
| 2052 | 49P | 269° @ 45 nm | REAGAN |
| 2056 | 49P | 271° @ 46 nm | REAGAN |
| 2058 | 49P | 275° @ 46 nm | REAGAN |
| 2059 | 49P | 277° @ 46 nm | REAGAN |
| 2100 | 49P | 278° @ 47 nm | REAGAN |
| 2101 | 41P | 235° @ 62 nm | CROCKETT |
| 2105 | 41P | 235° @ 62 nm | CROCKETT |
| 2110 | 49P | 303° @ 52 nm | STERLING |
| 2111 | 41P | 231° @ 62 nm | CROCKETT |
| 2114 | 49P | 305° @ 47 nm | STERLING |
| 2118 | 49P | 304° @ 40 nm | STERLING |
| 2121 | 49P | 304° @ 34 nm | STERLING |
| 2125 | 49P | 294° @ 31 nm | STERLING |
| 2133 | 49P | 270° @ 31 nm | IRION |
| 2134 | 49P | 267° @ 33 nm | IRION |
| 2134 | 41P | RTB | |
| 2135 | 49P | 270° @ 33 nm | IRION |
| 2136 | 49P | 268° @ 35 nm | IRION |
| 2137 | 49P | 268° @ 36 nm | IRION |
| 2137 | 49P | RTB | |

Seeding operations were conducted over Reagan (30G+2H), Crockett (12G+1H), and Sterling (12G) Counties. 60 glaciogenic flares and 4 hygroscopic flares were burned within 4 clouds. This is the 8th day for seeding in May and the 10th day for seeding during the season.