



West Texas Weather Modification Association

Monthly Operations Report

May 2023 Operations Report

The month of May contained 10 days of operations.

Date	Flares	Counties seeded
5/4	23G+3H	Tom Green
5/6	12G+2H	Crockett
5/7	49G+1H	Sutton, Schleicher, Crockett, Reagan
5/8	27G+3H	Tom Green, Schleicher, Sutton
5/12	37G+1H	Irion, Sterling, Schleicher, Crockett
5/15	79G+3H	Sutton, Schleicher, Irion, Crockett, Reagan
5/17	37G+3.25H	Sterling
5/18	60G+4H	Reagan, Sterling, Irion, Crockett
5/19	46G+4.25H	Crockett, Irion, Tom Green
5/28	12G+1.5H	Schleicher
TOTAL	381G+28H	29.9 Flight Hours

May 2023 was one of the busiest spring months to date for WTWMA operations. A total of 10 operational days were conducted with 29.9 hours of flight time. Overall, 381 glaciogenic flares and 28 hygroscopic flares were used within all counties of the target area. Several factors were in play for the busy month. First, the transition season tends to be busier due to dryline development. Second, the dissipation of La Nina allowed the atmosphere to respond providing more normal conditions. Lastly, a blocking pattern set up which put southwesterly flow aloft over the region for a prolonged amount of time. All these factors led to numerous rounds of showers and storms which resulted in the busy month. On top of the 10 operational days, the area also experienced 3 overnight rain events which also added to the rainfall data for the month.

San Angelo's 4.19" in May exceeded the average of 3.05" for the month. This takes the year-to-date rainfall to 6.42", still falling behind the year-to-date average of 8.12". Midland and Abilene both exceeded their monthly average with only Abilene above their year-to-date average. However, numerous stations across the target area saw higher totals. Most areas in Crockett County exceeded 4" for the month, while Sutton and Schleicher Counties saw totals in the 3-6" range. Irion and Sterling County pushed in the 3.5-5" range as well. Though convective activity could be spotty at times, larger overnight events tried to smooth totals out.

Looking ahead into June, El Nino has officially been declared. However, the atmosphere seems to be calming down some after such a busy May. The first few weeks of June look hot, and primarily dry, though long-range models do hint at the normal diurnal convection we can expect in the peak of the summer.



West Texas Weather Modification Association

Monthly Operations Report

Monthly rain gauge measurements from nearest locations inside and out of the target area recorded either by the National Weather Service, Texas Tech University, Mesowest as well as CoCoRaHS.

May 2023 (Normal's of 0.07" from Midland to 3.05" in San Angelo)

Crockett County		Sterling County		Area Average	
Ozona 32SW	4.83	Sterling City (TTU)	3.89	4.31	
Escondido Draw	4.82	Irion County			
Ozona 19.6S	-	Mertzon (TTU)	5.08	Out of Target Area	
Ozona Airport	1.86	Mertzon (S)	-	Junction (Kimble)	4.08
Fort Lancaster	4.11	Barnhart	0.50	Abilene (Taylor)	5.36
Reagan County		Tom Green		Midland (Midland)	0.98
Big Lake (TTU)	1.80	Wall	3.90	St. Lawrence (GL)	3.20
Acton Ranch	N/A	San Angelo 7NW	6.23	Lomax (Howard)	3.24
Schleicher County		Knickerbocker	8.06	Fort McKavett (MN)	6.30
Eldorado 0.2	3.58	Carlsbad	3.79	McCamey (Upton)	1.93
Eldorado 22.6ENE	4.65	Miles	5.98	Menard (Menard)	3.97
Eldorado 14.5ENE	3.37	San Angelo (NWS)	4.19		
Sutton County		Christoval	3.85		
Sonora	5.60	Water Valley	3.36		
Sonora 23.9E	6.97				

Year to Date (Normal's of 4.26" from Midland to 8.12" in San Angelo)

Crockett County		Sterling County		Area Average	
Ozona 32SW	5.84	Sterling City (TTU)	5.72	6.14	
Escondido Draw	6.46	Irion County			
Ozona 19.6S	-	Mertzon (TTU)	9.55	Out of Target Area	
Ozona Airport	2.52	Mertzon (S)	-	Junction (Kimble)	5.73
Fort Lancaster	5.46	Barnhart	2.89	Abilene (Taylor)	9.88
Reagan County		Tom Green		Midland (Midland)	1.19
Big Lake (TTU)	2.84	Wall	6.77	St. Lawrence (GL)	4.95
Acton Ranch	-	San Angelo 7NW	8.99	Lomax (Howard)	4.66
Schleicher County		Knickerbocker	10.76	Fort McKavett (MN)	8.80
Eldorado 0.2	5.59	Carlsbad	8.74	McCamey (Upton)	3.37
Eldorado 22.6ENE	6.32	Miles	8.74	Menard (Menard)	6.36
Eldorado 14.5ENE	5.62	San Angelo (NWS)	6.42		
Sutton County		Christoval	5.56		
Sonora	7.99	Water Valley	5.75		
Sonora 23.9E	9.56				