



# West Texas Weather Modification Association

## Monthly Operations Report

### April 2023 Operations Report

The month of April contained 2 days of operations.

<b>Date</b>	<b>Flares</b>	<b>Counties seeded</b>
<b>20</b>	<b>16G+2H</b>	Sutton
<b>22</b>	<b>35G+3H</b>	Tom Green, Irion
<b>TOTAL</b>	<b>51G+5H</b>	

April 2023 was a dry month with only an area average precipitation of 0.48". This compares to the averages of 0.70" west to Midland and 1.47" for eastern areas near San Angelo. Upper-level ridging dominated much of the month which kept the dryline far west into southeastern New Mexico and Far West Texas. During these spring months, West Texas relies on the dryline for convective activity. However, it was the tail end of a cold frontal passage that got the season started on April 20<sup>th</sup> in Sutton County. Here, an area of convection fired up which was promptly seeded with 16 glaciogenic flares and 2 hygroscopic flares. Just a couple of days later, a cold front and dryline combination moved through the area providing showers and storms across parts of eastern Irion County into western Tom Green County. These cells were sufficiently seeded with 35 glaciogenic flares and 3 hygroscopic flares. Still, these were not our normal spring season thunderstorms with limited convective parameters in place.

All three major reporting stations were well below normal for precipitation during the month of April. San Angelo (0.20"), Midland (0.00") and Abilene (1.38") were all below normal while we saw totals of 1.05" east of Sonora, 0.82" near the Mertzson and the highest total for the area of 1.72" near Barnhart in southwest Irion County. Still, the area average of 0.48" for the month is far from the 1-1.5" average we typically see. For the year, the annual average now sits at 1.97" for the target area.

Looking ahead, the month of May looks more promising. La Nina has dissipated allowing for normal ENSO conditions which should begin to be felt this month. Mid-range models suggest that a blocking pattern may develop which would put West Texas under southwesterly flow aloft for a period of time. This should allow for the dryline to be more active further east into parts of the Concho Valley. If so, May could be a rather busy month and may get a busy season started as El Nino conditions begin to build through the summer.



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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.

### April 2023 (Normal's of 0.70" from Midland to 1.47" in San Angelo)

<b>Crockett County</b>		<b>Sterling County</b>		<b>Area Average</b>	
Ozona 32SW	0.01	Sterling City (TTU)	0.55	0.48	
Escondido Draw	0.42	<b>Irion County</b>			
Ozona 19.6S	-	Mertzon (TTU)	0.82	<b>Out of Target Area</b>	
Ozona Airport	N/A	Mertzon (S)	-	Junction (Kimble)	0.89
Fort Lancaster	0.00	Barnhart	1.72	Abilene (Taylor)	1.38
<b>Reagan County</b>		<b>Tom Green</b>		Midland (Midland)	0.00
Big Lake (TTU)	0.02	Wall	0.40	St. Lawrence (GL)	0.11
Acton Ranch	N/A	San Angelo 7NW	0.69	Lomax (Howard)	0.40
<b>Schleicher County</b>		Knickerbocker	0.67	Fort McKavett (MN)	0.55
Eldorado 0.2	0.27	Carlsbad	0.36	McCamey (Upton)	0.41
Eldorado 22.6ENE	0.11	Miles	0.24	Menard (Menard)	0.36
Eldorado 14.5ENE	0.45	San Angelo (NWS)	0.20		
<b>Sutton County</b>		Christoval	0.07		
Sonora	0.96	Water Valley	0.66		
Sonora 23.9E	1.05				

### Year to Date (Normal's of 2.62" from Midland to 5.07" in San Angelo)

<b>Crockett County</b>		<b>Sterling County</b>		<b>Area Average</b>	
Ozona 32SW	1.01	Sterling City (TTU)	1.83	1.97	
Escondido Draw	1.64	<b>Irion County</b>			
Ozona 19.6S	-	Mertzon (TTU)	4.47	<b>Out of Target Area</b>	
Ozona Airport	0.66*	Mertzon (S)	-	Junction (Kimble)	1.65
Fort Lancaster	1.35	Barnhart	2.39	Abilene (Taylor)	4.52
<b>Reagan County</b>		<b>Tom Green</b>		Midland (Midland)	0.21
Big Lake (TTU)	1.04	Wall	2.87	St. Lawrence (GL)	1.75
Acton Ranch	0.50*	San Angelo 7NW	2.76	Lomax (Howard)	1.42
<b>Schleicher County</b>		Knickerbocker	2.70	Fort McKavett (MN)	2.50
Eldorado 0.2	2.01	Carlsbad	2.02	McCamey (Upton)	1.44
Eldorado 22.6ENE	1.67	Miles	2.76	Menard (Menard)	2.39
Eldorado 14.5ENE	2.25	San Angelo (NWS)	2.23		
<b>Sutton County</b>		Christoval	1.71		
Sonora	2.39	Water Valley	2.39		
Sonora 23.9E	2.59				