Storm Data and Unusual Weather Phenomena - January 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details

OKLAHOMA, Panhandle

(OK-Z001) CIMARRON, (OK-Z002) TEXAS, (OK-Z003) BEAVER

	01/01/13 00:00 CST	0	Drought
	01/31/13 23:59 CST	79M	

The month of January showed little to no improvement in drought conditions despite a few chances for precipitation throughout the month. Exceptional (D4) drought affects all of Beaver County and most of Texas County. Extreme (D3) drought affects the northwest corner of Texas County and the southern half of Cimarron County. Severe (D2) drought affects the northern half of Cimarron County.

A couple of snow events provided the Oklahoma Panhandle with some much needed moisture, but fell short of December's above normal precipitation. Guymon recorded 0.31 inches of precipitation (0.09 inches below normal) for the month. Overall this month ranked as the 40th warmest and 45th wettest January on record for the Oklahoma Panhandle.

Limited dormant fuels remain in prime condition for the spread of fires across the Panhandle. The few wetting rain events during the month kept the Keetch-Byram Drought Index for the Oklahoma Panhandle steady state within the 600 to 800 range.

The recent rains did little to help the growth of dryland winter wheat as crops had already failed or failed to emerge in some counties. Irrigated fields showed average growth but have required significant supplemental watering. The Palmer Drought Severity Index showed degradation to Severe Drought for the Oklahoma Panhandle. Water watches remain in effect for several public water systems through January while voluntary to mandatory water restrictions have been enacted.

Economic losses due to the drought through January were estimated near $20 million (D3)/$30 million (D4) a county, and were predominately the result for poor growth of winter wheat, heavy supplemental watering, and supplemental feed for cattle in pastures and rangeland.

(OK-Z001) CIMARRON, (OK-Z002) TEXAS

	01/11/13 11:45 CST	0	High Wind (MAX 56 kt)
	01/11/13 14:53 CST	0	

During the late morning and early afternoon hours of the 11th portions of the Oklahoma Panhandle experienced both sustained high wind and high wind gusts. The windy conditions were the result of the combination of a strong surface pressure gradient situated over the Southern High Plains, a 50 to 70 mph jet at 800mb, and a well-mixed atmosphere. The 6 PM CST upper air sounding from Amarillo showed the well mixed atmosphere had allowed the 800mb jet winds to sink dry adiabatically to the surface leading to non-convective wind gusts between 58 and 64 mph. Sustained winds of 45 to 49 mph were also reported by the Guymon (Texas County) ASOS. While no accidents or injuries were reported due to the high winds, traveling on east-west oriented roadways did become difficult. The following is a listing of the highest gusts for the Oklahoma Panhandle: 5 SE Kenton (Cimarron County) 59 mph; 3 SSE Boise City (Cimarron County) 63 mph; Goodwell (Texas County) 60 mph; 2 E Goodwell (Texas County) 63 mph; 2 W Guymon (Texas County) 64 mph; Texhoma (Texas County) 61 mph; and 1 W Hooker (Texas County) 62 mph.

(OK-Z001) CIMARRON

	01/29/13 19:00 CST	0	Winter Weather
	01/29/13 23:00 CST	0	

An upper level trough of low pressure moved across the Oklahoma Panhandle on January 29th and caused snow showers during the afternoon and overnight hours. The combination of divergence aloft from a 145 mph to 170 mph jet streak at 300mb, southwesterly winds at 700mb bringing in pacific moisture, and a surface cold front dropping surface temperatures below freezing proved adequate to produce one inch of snow in Boise City (Cimarron County) and several reports of vehicle accidents. The 6 AM CST sounding from the National Weather Service in Amarillo (Potter County, Texas) showed the lowest twelve thousand feet of the atmosphere was extremely dry with dewpoint depressions ranging from 5 to 15 degrees. As upper level forcing increased over the course of the day, dewpoint depressions decreased as evaporative cooling provided by virga lowered atmospheric temperatures within this layer. By the early afternoon a cold front dropped across the area to lower surface temperatures below freezing. The colder airmass behind the front provided the last needed cooling of the lowest layers of the atmosphere and precipitation began in the form of snow. Snow persisted for several hours before coming to an end just before 11 PM CST. The snow caused several vehicle accidents across Cimarron County as drivers slid off roadways due to slick conditions however, no injuries were reported with these accidents.

TEXAS, North Panhandle

(TX-Z001) DALLAM, (TX-Z002) SHERMAN, (TX-Z003) HANSFORD, (TX-Z004) OCHILTREE, (TX-Z005) LIPSCOMB, (TX-Z006) HARTLEY, (TX-Z007) MOORE, (TX-Z008) HUTCHINSON, (TX-Z009) ROBERTS, (TX-Z010) HEMPHILL, (TX-Z011) OLDHAM, (TX-Z012) POTTER, (TX-Z013) CARSON,

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
(TX-Z014) GRAY, (TX-Z015) WHEELER, (TX-Z016) DEAF SMITH, (TX-Z017) RANDALL, (TX-Z018) ARMSTRONG, (TX-Z019) DONLEY, (TX-Z020) COLLINGSWORTH				
	01/01/13 00:00 CST		0	Drought
	01/31/13 23:59 CST		0.39B	

The month of January provided some much needed precipitation for the southern Texas Panhandle. Exceptional (D4) drought affects the far northern Texas Panhandle including Moore County. Extreme (D3) drought affects most of the central and south central Texas Panhandle. Severe (D2) drought affects parts of the southeastern and southwestern corners of the Texas Panhandle.

Several snow events provided the Texas Panhandle with some much needed moisture. Amarillo recorded 0.76 inches of precipitation for January (0.04 inches above normal), Dalhart recorded 0.17 inches (0.35 inches below normal), and Borger recorded 0.81 inches of precipitation (0.22 inches above normal). Overall this month ranked as the 54th warmest and 30th wettest January on record for the Texas High Plains region.

Limited dormant fuels remain in prime condition for the spread of fires across the Panhandle. Given the several wetting rain events for the month the Keetch-Byram Drought Index showed continued improvement for the Texas Panhandle. Dallam, Hartley, and Lipscomb are the only Texas Panhandle counties remaining within the 600 to 800 range. The rest of the area stayed relatively steady state within the 400 to 600 range with Collingsworth County dropping into the 200 to 400 range. These prime conditions for the spread of wildfires have led to countywide burn bans for all of the Texas Panhandle except for Hansford, Sherman, and Hemphill County.

The recent rains did little to help the growth of dryland winter wheat as crops had already failed or failed to emerge in some counties. Irrigated fields showed average growth but have required significant supplemental watering. Rangeland and pastures across the Texas Panhandle have remained in very poor condition and cattle have continued to require supplemental feed as observed by the Texas Crop and Weather Report. The Palmer Drought Severity Index remained steady state for the Texas High Plains with a rating of Severe Drought.

Reservoirs and stream flows across the Panhandles have remained at below normal levels. The reservoirs of Palo Duro and Greenbelt Lake are both below 13 percent capacity with Lake Meredith below 1 percent capacity. Water watches for several public water systems persisted through January while voluntary to mandatory mild water restrictions have been enacted.

Economic losses due to the drought through January were estimated near $20 million (D3)/$30 million (D4) a county, and were predominately the result for poor growth of winter wheat, heavy supplemental watering, and supplemental feed for cattle in pastures and rangeland.

(TX-Z001) DALLAM, (TX-Z003) HANSFORD, (TX-Z006) HARTLEY, (TX-Z007) MOORE, (TX-Z009) ROBERTS				
	01/11/13 11:00 CST		0	High Wind (MAX 53 kt)
	01/11/13 15:00 CST		0	

During the late morning and early afternoon hours of the 11th portions of the Texas Panhandle experienced both sustained high wind and high wind gusts. The windy conditions were the result of the combination of a strong surface pressure gradient situated over the Southern High Plains, a 50 mph to 70 mph jet at 800mb, and a well-mixed atmosphere. The 6 PM CST upper air sounding from Amarillo showed the well mixed atmosphere had allowed the 800mb jet winds to sink dry adiabatically to the surface leading to non-convective winds between 58 and 64 mph. Sustained winds of 40 to 49 mph were also reported at Dalhart (Dallam and Hartley County), and Dumas (Moore County). While no accidents or injuries were reported due to the high winds, traveling on east-west oriented roadways did become difficult. The following is a listing of the highest gusts for the Texas Panhandle: 11 NNW Codman (Roberts County) 59 mph; Texline (Dallam County) 61 mph; 3 W Dumas (Moore County) 60 mph; Gruver (Hansford County) 58 mph; and 3 SW Dalhart (Hartley County) 61 mph.

(TX-Z009) ROBERTS, (TX-Z013) CARSON, (TX-Z015) WHEELER, (TX-Z016) DEAF SMITH				
	01/12/13 15:00 CST		0	Winter Weather
	01/13/13 02:00 CST		0	

A shortwave trough rotated around the base of a long wave trough positioned across the 4 corners region on the 12th. The forcing provided by this shortwave brought warm moist air over a cold airmass which had moved into the Panhandle during the early morning hours of the 12th. Several hours of virga were evident due to the drier airmass across the Panhandles. By the early afternoon, the lowest layers of the atmosphere had moistened enough for snow to reach the surface. While widespread light snow accumulations were reported, only Roberts, Deaf Smith, Carson, and Wheeler reported amounts of 1 inch or greater. The highest amount was reported 16 miles north northwest of Codman (Roberts County) where 2 inches of snow was observed by the public. A brief lull in snowfall occurred as a weak dry slot developed across the central and eastern Texas Panhandle before wrap around moisture produced 2 inches of fresh snow in Dawn (Deaf Smith County) just after midnight of the 13th. Snow quickly diminished as the upper level support for the system moved further to the north and east for the Texas Panhandle. The following is a list of snow accumulations across the Texas Panhandle: 16 NNW Codman (Roberts County) 2 inches; Skellytown (Carson County) 1.5 inches; Panhandle (Carson County) 1; 3 South Mobeetie (Wheeler County) 1 inch; and Dawn (Deaf Smith County) 2 inches.

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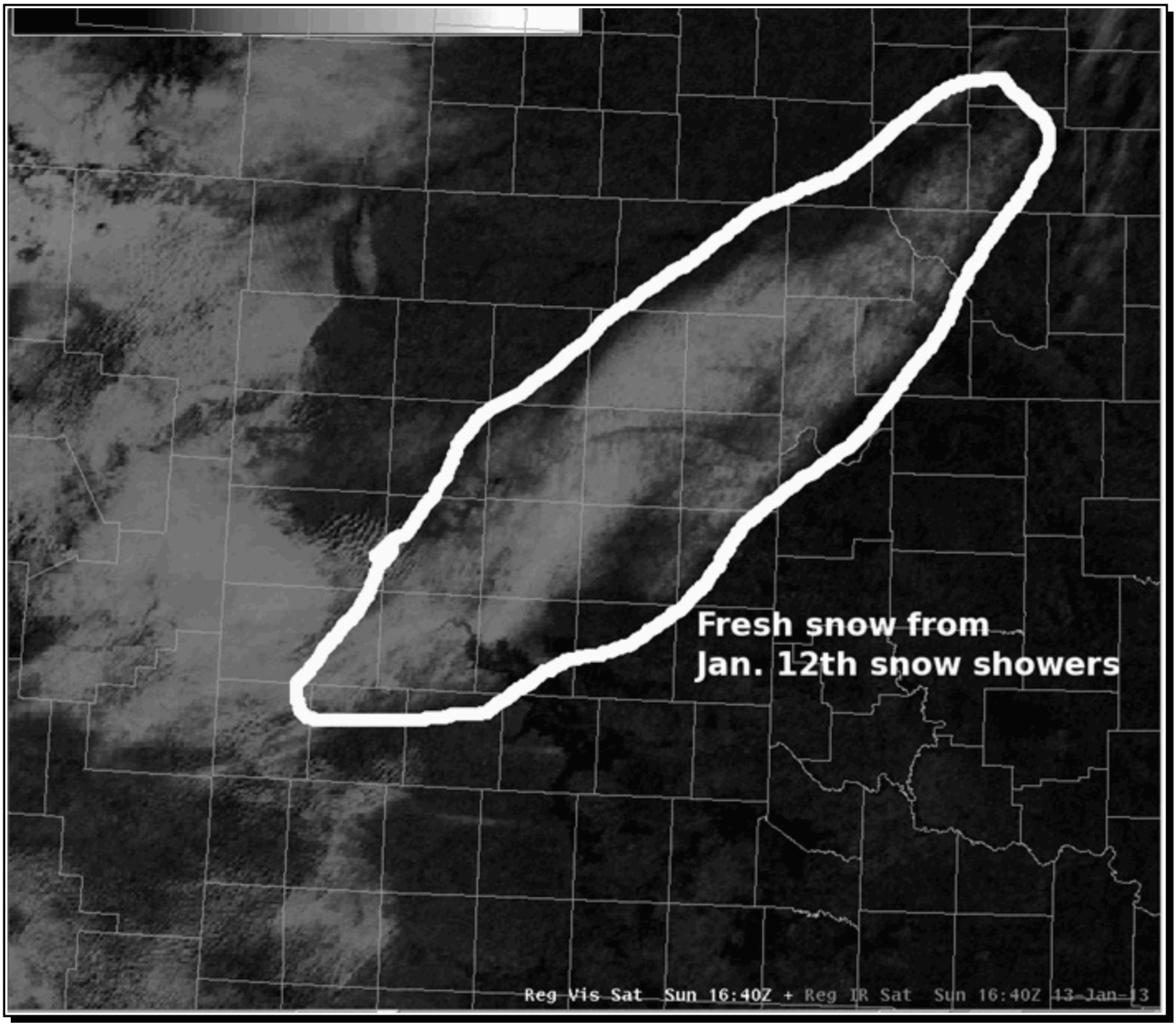

AWIPS screenshot of visible satellite imagery from Jan 13th.

(TX-Z002) SHERMAN, (TX-Z003) HANSFORD, (TX-Z008) HUTCHINSON, (TX-Z011) OLDHAM, (TX-Z012) POTTER, (TX-Z013) CARSON, (TX-Z016) DEAF SMITH, (TX-Z017) RANDALL

	01/29/13 19:00 CST	0	Winter Weather
	01/29/13 23:00 CST	0	

An upper level trough of low pressure moved across the Texas Panhandle on January 29th and caused snow showers during the afternoon and overnight hours. The combination of divergence aloft from a 145 mph to 170 mph jet streak at 300mb, southwesterly winds at 700mb bringing in pacific moisture, and a surface cold front dropping surface temperatures below freezing proved adequate to produce several reports of 1 inch to 3 inches of snow across the Texas Panhandle. The 6 AM CST sounding from the National Weather Service in Amarillo (Potter County) showed the lowest twelve thousand feet of the atmosphere was extremely dry with dewpoint depressions ranging from 5 to 15 degrees. As upper level forcing increased over the course of the day, dewpoint depressions decreased as evaporative cooling provided by virga lowered atmospheric temperatures within this layer. By the early afternoon a cold front dropped across the area to lower surface temperatures below freezing. The colder airmass behind the front provided the last needed cooling of the lowest layers of the atmosphere and precipitation began in the form of snow. Snow persisted for several hours before coming to an end just before 11 PM CST. The snow caused several vehicle accidents in Oldham, Potter, Randall, and Moore

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County as drivers slid off roadways due to slick conditions however, no injuries were reported with these accidents. In Potter County, police closed the 34th Street Bridge due to several vehicle accidents as icy conditions developed on elevated surfaces.

The following is a list of snow accumulations across the Texas Panhandle: 2 inches 5 miles north northeast of Panhandle (Carson County); 2 inches in Dawn (Deaf Smith County); 1 inch in Gruver (Hansford County); 1.5 inches in Borger (Hutchinson County); 3 inches in Vega (Oldham County); 2 inches in Boys Ranch (Oldham County); 1 inch 8 miles south southwest of Romero (Oldham County); 3 inches in Bushland (Potter County); 2 inches in Amarillo (Potter County); 2 inches 6 miles west of Amarillo (Potter County); 2 inches 6 miles northwest of Amarillo (Potter County); 1.7 inches 7 miles east northeast of Amarillo (Potter County); 1.6 inches 1 mile west southwest of Bushland (Potter County); 3.9 inches 3 miles southwest of Amarillo (Randall County); 2.5 inches 5 miles south southwest of Amarillo (Randall County); 2.5 inches 8 miles southwest of Amarillo (Randall County); 2 inches 6 miles southwest of Amarillo (Randall County); 1.8 inches 5 miles west southwest of Amarillo (Randall County); and 1 inch in Stratford (Sherman County).

Picture taken by NWS staff of the snow at the NWS office in Amarillo.