

12 NW Whites City to

Carlsbad

1940MST 1500MST

National Weather Service Storm Data and Unusual Weather Phenomena



April 2004 Path Length (Miles) Time Local/ Path Width Number of Estimated Persons Damage **NEW MEXICO, Southeast Eddy County** Carlsbad 02 0 0 0 0 Hail(1.25) Penny to half dollar size hail was reported by both public and trained spotters on the north side of Carlsbad **Eddy County** Carlsbad to 10 WSW Carlsbad 2230MST 0100MST Flash Flood 02 03 **Eddy County** 2230MST 2240MST 30K Carlsbad 02 0 Hail(1.75) Nickel to golf ball size hail was reported covering the ground in the city of Carlsbad **Eddy County** 10 WSW Carlsbad 02 Hail(1.00) Quarter sized hail was reported along Dark Canyon Road, making the road impassable. Severe thunderstorms developed over Eddy County, southwest of Carlsbad, during the late evening on April 2nd. These thunderstorms progressed northeast into Carlsbad, inundating city streets with one to four feet of water. Numerous hail reports were also received, with two distinct periods of hail occurring over the city within a one hour period. Lea County **8 NE Eunice** 03 1430MST 0 Hail(0.88) 1434MST Lea County Eunice to Hobbs 1525MST 1545MST 0 Flash Flood A series of thunderstorms, that began on Saturday April 3rd and continued into the early afternoon on Sunday, resulted in significant flooding over Lea County, especially over the eastern portions of the county. Many roads across the eastern half of Lea County were closed due to flooding including State Routes 8, 18, 176, and U.S. Highway 62/180. During Sunday morning, the community of Nadine, between Eunice and Hobbs, also reported significant flooding. Lea County 03 1737MST Hail(0.88) **Eunice** Lea County 8 W Eunice 03 1910MST Hail(0.75) **Eddy County**

0

0

2M

100K

Flash Flood





Time Path Path Number of Estimated April 2004

Local/ Length Width Persons Damage

Location Date Standard (Miles) (Yards) Killed Injured Property Crops Character of Storm

NEW MEXICO, Southeast



During the evening of April 3rd, a National Weather Service spotter reported Dark Canyon Road, five miles east of State Highway 137, was under seven feet of water. Additional flooding over southwestern portions of Carlsbad was reported by local law enforcement and the public. Just after midnight, early Sunday morning, U.S. Highway 285 became impassable due to flooding ten miles northwest of Carlsbad. Flooding along County Roads 658 and 672 southwest of Carlsbad resulted in several evacuations and helicopter rescues during the early morning hours on Sunday along Dark Canyon Draw. As late as Sunday afternoon, flooding of low-lying areas around Carlsbad continued along the Pecos River, as well as along Dark Canyon, Dagger, Rocky Arroyo, and Hackberry Draws.

An Eddy County flood survey revealed that three different factors contributed to the record flooding in and near Carlsbad. Flood waters from Rocky Arroyo Draw fed into the Pecos River north of Avalon Reservoir. This flow along with heavy rainfall from thunderstorms resulted in a required release of water from the Avalon Reservoir. Radar estimated rainfall totals of three to four inches near and west of Avalon Reservoir between 900 PM MST on April 3rd through 100 AM MST on Sunday, April 4th. Releases from the reservoir began near 800 PM MST on April 3rd, with a measured peak rate of 14,800 cfs (cubic-feet per second) at around 400 AM MDT Sunday morning. This release of water eliminated the potential danger of a dam failure, but resulted in the washout of Callaway Drive just downstream from the release point on Avalon Reservoir.

The second factor contributing to the record flooding was extremely high flow through the Dark Canyon Draw into downtown Carlsbad. Radar estimated rainfall totals of one to three inches over and southwest of Dark Canyon Draw during the evening and overnight hours of Saturday April 3rd. This rainfall led to catastrophic flash flooding along the Dark Canyon Draw from southwest portions of Carlsbad into the downtown area. A wall of water moved down Dark Canyon Draw at approximately 130 AM MST Sunday morning.

The third factor that contributed to the flooding was the failure at several points of the Carlsbad Irrigation District (CID) canals. These CID channels, used primarily to irrigate area alfalfa fields, began failing due to runoff crossing perpendicular to the CID channels. This runoff was due to 8-12 inches of rainfall in the previous three days. Erosion of the channels began occurring due to the high volume of water flowing over them. As the channels finally failed, water flowed into adjacent neighborhoods. The community hardest hit by this runoff was the La Huerta neighborhood in northeastern Carlsbad. As a result of this flooding, 6 to 12 inches of water was left standing throughout most of the La Huerta area with higher amounts at isolated points



Seminole

02

1725CST

National Weather Service Storm Data and Unusual Weather Phenomena



April 2004 Time Local/ Path Length Path Number of Estimated Width Persons Damage **NEW MEXICO, Southeast** Lea County Tatum 08 0 0 25K 0 Hail(1.75) Hail ranging in size from pennies to golfballs was reported in the city of Tatum. Hail accumulated on the ground up to four inches deep. Snowplows were used to the clear the hail from the city streets. Numerous reports of damage to vehicles were received Lea County 08 1750MST **Caprock** Hail(0.75) Lea County Caprock 08 1820MST 0 0 0 Hail(0.75) Penny size hail was reported in Caprock. This was the second severe storm to affect that community within an hour Several severe thunderstorms affected the northern parts of Lea County during the late afternoon and early evening of the 8th. These storms developed along a dryline that stretched across the eastern New Mexico Plains. The most significant damage occurred in Tatum, where large hail resulted in widespread damage to vehicles. Lea County 5 NE Lovington 1430MST Hail(0.88) Penny to nickel size hail was reported northeast of the Lovington. Lea County Eunice to 4 E Eunice 19 0 0 0 0 Hail(1.00) Penny to quarter size hail was reported near Eunice. Two severe thunderstorms developed along a dryline and affected parts of the Lea County during the late afternoon of the 19th. Large hail up to the size of quarters resulted from these storms. **Eddy County** 2 W Artesia 28 1810MST 0 0 0 Thunderstorm Wind (MG57) A dry microburst resulted from high based thunderstorms over northern Eddy County. These storms later encountered deep low level moisture and intensified over rural sections of eastern Eddy County Lea County Crossroads 30 Hail(0.88) Lea County Crossroads 30 Thunderstorm Wind (EG52) An isolated severe thunderstorm resulted in nickel size hail and severe thunderstorm winds in the Crossroads community in northern Lea County during the late afternoon of the 30th. TEXAS, West Mitchell County 2 SW Westbrook to Westbrook Hail(0.88) 1303CST Penny to nickel size hail reported by the public. **Gaines County**

0

0

0

Hail(0.88)





		Time	Path	Path	Numbe		Estin	nated		April 2004
		Local/	Length	Width	Perso	ons	Dar	nage		
Location	Date	Standard	(Miles)	(Yards)	Killed	Injured	Property	Crops	Character of Storm	

TEXAS, West

Gaines County Seminole Gaines County 22 W Seminole to 10 W Seminole 02 1725CST 0 0 0 Hail(0.88)
03 1554CST 0 0 0 0 Hail(0.88)



Thunderstorms developed over Lea County, New Mexico during Saturday afternoon on April 3rd. The most notable of these thunderstorms was a supercell thunderstorm that developed near Eunice, NM at 336 PM CST and moved northeast into Gaines County. This storm moved very slowly northeast across the western portions of Gaines County. Due to the storm's very slow propagation, large hail and heavy rainfall lingered over U.S Highway 62/180 from 3:54 pm to 5 pm CST. This resulted in up to 1 1/2 feet of hail accumulation and the closing of U.S. Highway 62/180.

Reeves County 20 SW Toyah	03	1622CST		0	0	100K	0	Hail(4.25)
Reeves County 20 SW Toyah	03	1640CST		0	0	0	0	Hail(3.00)
Presidio County 10 E Presidio to 15 ESE Presidio	03	1650CST 1657CST		0	0	20K	0	Hail(1.00)
Jeff Davis County 35 NW Ft Davis	03	1705CST 2000CST		0	0	0	0	Flash Flood
	Flood		ong Highway 118, 2.5	miles south the	Intersta	te 10.		
Jeff Davis County 36 NW Ft Davis	03	1708CST		0	0	0	0	Hail(1.75)
Reeves County 15 W Toyah	03	1708CST		0	0	0	0	Hail(1.75)
Brewster County Lajitas	03	1725CST 1747CST		0	0	0	0	Hail(4.50)

Supercell thunderstorms moving northeast into the extreme southwest portion of Brewster County produced grapefruit to softball





April 2004 Time Local/ Path Length Path Number of Estimated Width Persons Damage TEXAS, West size hail for 22 minutes. Reports indicated that the softball size hail occurred around 530 pm CST. **Gaines County** 20 W Seminole 03 1735CST 1742CST 10K Hail(2.75) Nickel to baseball size hail was reported covering the ground at the intersection of U.S. Highway 62/180 and Farm to Market Road 331. **Presidio County** 20 SW Marfa 03 1747CST Hail(1.00) Presidio County 25 SE Redford 03 1750CST 0 0 0 20K Hail(2.50) Tennis ball size hail resulted in car and camper damage in extreme southern portions of Presidio County. **Jeff Davis County** Valentine 03 0 0 0 0 Hail(0.88) **Reeves County** 6 W Toyah 03 1815CST 0 0 Hail(1.00) **Gaines County** 4 NW Seminole 03 1822CST 0 Hail(1.00) **Gaines County** 0 0 0 Flash Flood Seminole to 16 NW Seminole Thunderstorms that began on the afternoon of April 3rd continued into the afternoon of April 4th. This resulted in flooding across the western half of Gaines County. The flooding was also compounded by additional flooding caused by the melting of over one foot of hail in the western portions of the county. Many roads were closed due to flooding, including State Highway 214 between Seminole and Denver City and U.S. Highway 62/180 between Seminole and Hobbs. Flooding was reported at the intersection of County Road 331 and U.S. Highway 180 at Seminole Draw, along County Road 308 near Farm to Market Road 181, and along County Road 347 near the state line. Water five to six feet deep was reported four to five miles north of U.S. Highway 62/180 on Farm to Market Road 1757. **Gaines County** 13 SW Seminole 03 1905CST 0.1 25 Tornado (F0) A weak tornado was reported southwest of Seminole. **Reeves County** 2 NW Balmorhea to 25 03 1917CST 0 Tornado (F0) 2 N Balmorhea 1925CST A tornado was observed by a Texas Department of Public Safety trooper moving east at ten mph. The tornado moved over rural areas with no damage noted. **Reeves County** Verhalen 03 1930CST Thunderstorm Wind (EG52) **Reeves County** 4 NW Verhalen 25 03 0.1 Tornado (F0) A Department of Public Safety trooper observed the tornado "touch down and then go right back up". **Reeves County** 5 SW Pecos 03 1951CST 25 0 0 Tornado (F0) 0.1 1952CST A tornado was reported near the town of Pecos. **Reeves County**

0

0

0

0

Hail(0.88)

03

Pecos

2002CST





		Time Local/	Path Length	Path Width		ber of sons		nated nage		April 2004
Location	Date	Standard	(Miles)	(Yards)	Killed	Injured	Property	Crops	Character of Storm	
TEXAS, West										
Gaines County										

15 SW Seminole to 5 SW Seminole	03	2009CST 2035CST	0	0	0	0	Funnel Cloud
	There	were several reports of funnel	clouds by trained spotters	and the g	general publ	ic.	
Reeves County							
15 S Pecos	03	2030CST 2034CST	0	0	0	0	Hail(1.75)
Gaines County							
15 W Seminole	03	2035CST	0	0	0	0	Hail(1.00)
Brewster County							
50 E Lajitas	03	2215CST	0	0	30K	0	Hail(1.75)
	Seven	vehicles received hail damage	e during the storm.				
Reeves County							
10 N Balmorhea	03	2235CST 0130CST	0	0	0	0	Flash Flood

Flooding was reported along Farm to Market Road 2903 between Toyah and Balmorhea, making the road impassable. Farm to Market Road 869 and State Highway 17 were also closed due to flooding.

Brewster County 5 E Alpine

04 0130CST 0 0 0 Hail(1.75) Golfball hail was reported by the Sheriff's office.

Reeves County Toyah

04 0200CST 0 0 500K 0 Flash Flood 1430CST



Eight to twelve inches of rainfall resulted in the failure of a protective levee near Toyah. With the failure of this dike, three to four feet of water inundated the town of Toyah and prompted the evacuation of the town's residents. While 19 people in the town of 103 elected to stay through the flood event, the remainder of the town's residents were moved to a Red Cross shelter in the nearby community of Pecos. The extensive flooding in Toyah left virtually every home with flood damage. One home was completely destroyed.

Flooding lingered until late afternoon on Sunday, April 4th with State Highway 17 and Farm to Market Roads 2903, 869, and 1450 remaining underwater.





Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)		ber of sons Injured		nated nage Crops	Character of Storm	April 2004
TEXAS, West										
Pecos County										
25 W Ft Stockton	04 Nicke	0230CST el size hail was rep	ported along Ir	nterstate 10 b	0 y a Sheriff	s Deputy.	0	0	Hail(0.88)	
Pecos County										
1 SE Hovey	04 Golfb	0235CST all sized hail repo	orted by Sherif	f's deputy.	0	0	0	0	Hail(1.75)	
Reeves County										
7 WSW Pecos	04	0300CST 0600CST			0	0	0	0	Flash Flood	
	Flood	ing was reported	along Farm to	Market Road	d 869.					
Pecos County										

A high precipitation supercell formed in extreme southwestern Pecos County early in the morning on Sunday, April 4th, and moved to the northeast, eventually affecting Fort Stockton. This thunderstorm produced extremely heavy rainfall, very high wind gusts (80 mph estimated), hail up to the size of golfballs, and flooding as it moved across the city of Fort Stockton. Quarter to golfball size hail was reported by the public. The hail lasted for ten minutes and accumulated to three inches deep in some places. The Belding Farms complex southwest of Fort Stockton reported extensive damage totaling approximately \$2.5 million to pecan orchards.

50K

Hail(1.75)

Pecos County
Ft Stockton
Pecos County
5 ENE Belding to
Ft Stockton

7 SW Ft Stockton to Ft Stockton

0359CST 0415CST

4 0415CST 0 0 0 0 Thunderstorm Wind (EG70)
4 0500CST 0 0 0 Flash Flood



Thunderstorms that moved across Pecos County produced flash flooding over the central and northeastern portions of the county. The Old Alpine Highway (U.S. Highway 67) was closed between Fort Stockton and Belding. Additionally, U.S. Highway 285 between Fort Stockton and Sanderson was closed. During the event, a sheriff deputy's vehicle and a truck stalled in high water. This resulted in two high water rescues. In addition, several homes were flooded on the southeast side of Fort Stockton, and residents were relocated to temporary shelters. The hardest hit areas in the city were the neighborhoods around James Rooney Memorial Park.





April 2004 Time Local/ Path Length Path Width Number of Estimated Persons Damage TEXAS, West Comanche Creek, which runs through the park, ran well out of its banks as can be seen in the above photo. **Jeff Davis County** Hail(0.88) Ft Davis 04 0738CST **Reeves County** Pecos 04 0920CST Flash Flood 1230CST Flooding was reported along U.S. Highway 285. Street flooding was also reported in the city of Pecos. **Ward County** Barstow 04 Flash Flood A thunderstorm moving out of Pecos County produced flooding over portions of Ward County during the morning of Sunday, April 4th. Several streets were flooded in the town of Barstow. Flooding was also reported at the intersection of Interstate 20 and Farm to Market Road 1219 and along a four mile stretch southward along Farm to Market Road 1219. **Ector County** Odessa 04 Flash Flood Thunderstorms produced up to five inches of rain in western portions of Odessa, resulting in flash flooding. Flash flooding was reported in the western and northeast portions of Odessa and also in the town of Gardendale. The flooding finally subsided by late afternoon. **Andrews County** 16 WNW Frankel City Flash Flood 04 Flooding was reported at a guardhouse in western Andrews county. Additionally, reports indicated several feet of water on field roads. **Reeves County** Flash Flood 3.5 ENE Toyah 0 2.5M



A bridge along Interstate 20 just east-northeast of Toyah over the normally dry Salt Draw failed Sunday evening. This failure was the result of fast-moving flood waters originating from previous heavy rainfall over the Davis Mountains. Hydrologists also credited a residual flow of water through the draw from the Toyah dike break early Sunday for contributing to the gradual process that caused





Local/ Length Width Persons Damage Location Date Standard (Miles) (Yards) Killed Injured Property Crops Character of Storm		Time	Path	Path	Numb		Estim	ated		Aprii 2004
Location Date Standard (Miles) (Yards) Killed Injured Property Crops Character of Storm		Local/		Width	Pers		Dam	iage		
	Location Date	Standard	(Miles)	(Yards)	Killed	Injured	Property	Crops	Character of Storm	

TEXAS, West

the bridge to collapse. Authorities said that advance warning of additional runoff and flooding allowed the interstate to be closed to both eastbound and westbound traffic at the first sign of danger to the bridge. A state official for the Texas Department of Transportation said that 86 feet of roadway in the eastbound lanes fell into the river, and that additional 40-foot segments on each side of the river were also damaged. On the westbound side, one of the upright supports holding the bridge had moved six to eight inches, opening a crack in the roadway.

No fatalities were reported with the bridge collapse, however, five indirect fatalities occurred in a multi-vehicle collision along a detour, U.S. Highway 285, south of Pecos.

Jeff Davis County							
4 W Ft Davis	05	1335CST	0	0	0	0	Hail(0.88)
Presidio County	0.5	1251 CCT	0	0	0		H 3(0.75)
20 NW Marfa	05	1351CST	0	0	0	0	Hail(0.75)
Brewster County 4 N Study Butte to	05	1550CST	0	0	0	0	Hail(0.75)
7 N Study Butte	0.5	1623CST	v	Ü	v	Ü	11411(0.75)
Reeves County							
Balmorhea to 9 E Pecos	05	1615CST 1645CST	0	0	0	0	Hail(2.75)
> 210005		l to baseball size hail fell in Balmorhea and also		rm to Mar	ket Road 14	450 east c	of Pecos
	Hail wa	s still covering FM 1450 at 915 pm that evenin	g.				
Midland County							
Midland to Greenwood	05	1636CST 1657CST	0	0	0	0	Hail(0.88)
0-11-11-11-11-11-11-11-11-11-11-11-11-11	Penny to	o nickel size hail was reported in Greenwood a	nd Midland	d.			
Brewster County							
25 ENE Panther Junction		1720CST	0	0	50K	0	Hail(4.00)
	House v	vindows and cars were heavily damaged.					
Brewster County							
25 ENE Panther Junction	05	1720CST	0	0	0	0	Thunderstorm Wind (EG61)
Howard County							
Big Spring	05	1925CST 2230CST	0	0	0	0	Flash Flood
	Heavy r	ains forced road closures in Big Spring.					
Mitchell County							
7 N Westbrook	05 06	2100CST 0000CST	0	0	0	0	Flash Flood
		nes of water was reported on FM 1229.					
Scurry County							
Snyder to	05	2113CST	0	0	0	0	Flash Flood
9 SE Hermleigh	06 Un to 19	0000CST 8 inches of water was reported on city streets i	n Snyder	Flooding	was also re	enorted in	Hermleigh and along U.S. Highway
		neast of Hermleigh.	n onyder.	1 rooung		ported III	Tremmergh and along C.S. Highway
Scurry County							
6 SE Hermleigh	05	2250CST	0	0	0	0	Flash Flood
3	06	0200CST					

Water and debris running across U.S. Highway 84.