## Storm Data and Unusual Weather Phenomena - September 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
NORTH DAKOTA, Central and Wes	st			
WELLS COUNTY 3.9 WSW HARVEY ARF	PT [47.77, -100.00]			
	09/09/10 13:40 CST		0	Hail (0.88 in)
	09/09/10 13:45 CST		0	Source: Public
WELLS COUNTY 4.7 WSW HARVEY ARF	PT [47.77, -100.02]			
	09/09/10 13:45 CST		0	Hail (0.88 in)
	09/09/10 13:50 CST		0	Source: Law Enforcement
SLOPE COUNTY 13.9 NNW MARMARTH	[46.48, -104.03]			
	09/09/10 14:25 MST		0	Funnel Cloud
	09/09/10 14:25 MST		0	Source: Public
A brief funnel cloud was reported.				
SLOPE COUNTY 13.9 NNW MARMARTH	[46.48, -104.03]			
	09/09/10 14:25 MST		10K	Thunderstorm Wind (EG 61 kt)
	09/09/10 14:35 MST		0	Source: Public
The strong thunderstorm winds resulted in ro	oof damage.			
SLOPE COUNTY 12.4 N MARMARTH [46		[46.49, -103.87]		
	09/09/10 15:00 MST		30K	Tornado (EF0, L: 0.82 mi , W: 40 yd)
	09/09/10 15:05 MST		0	Source: Newspaper
damage was consistent with EF0 tornado da		-	-	
lamage was consistent with EF0 tornado dal ornado.	mage on the Enhanced Fujita Sca	-	-	
damage was consistent with EF0 tornado dal ornado.	mage on the Enhanced Fujita Sca	-	s determined that v	wind speeds were near 85 mph with this
damage was consistent with EF0 tornado da ornado. SLOPE COUNTY 15.9 N MARMARTH [46	.53, -103.92] 09/09/10 15:00 MST 09/09/10 15:15 MST	-	s determined that v	wind speeds were near 85 mph with this  Hail (2.00 in)
damage was consistent with EF0 tornado da ornado. SLOPE COUNTY 15.9 N MARMARTH [46	.53, -103.92] 09/09/10 15:00 MST 09/09/10 15:15 MST	-	s determined that v	wind speeds were near 85 mph with this  Hail (2.00 in)
lamage was consistent with EF0 tornado da ornado. SLOPE COUNTY 15.9 N MARMARTH [46	mage on the Enhanced Fujita Sca .53, -103.92] 09/09/10 15:00 MST 09/09/10 15:15 MST	-	s determined that w	wind speeds were near 85 mph with this  Hail (2.00 in)  Source: Public
damage was consistent with EF0 tornado date ornado.  SLOPE COUNTY 15.9 N MARMARTH [46	.53, -103.92] 09/09/10 15:00 MST 09/09/10 15:15 MST  LVA [46.68, -103.87] 09/09/10 15:19 MST 09/09/10 15:29 MST	-	s determined that w	wind speeds were near 85 mph with this  Hail (2.00 in)  Source: Public  Hail (2.75 in)
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damage was consistent with EF0 tornado date ornado.  SLOPE COUNTY 15.9 N MARMARTH [46  GOLDEN VALLEY COUNTY 6.3 ESE GOL	.53, -103.92] 09/09/10 15:00 MST 09/09/10 15:15 MST  LVA [46.68, -103.87] 09/09/10 15:19 MST 09/09/10 15:29 MST	-	o o o	Hail (2.75 in) Source: Public  Funnel Cloud
damage was consistent with EF0 tornado date ornado.  SLOPE COUNTY 15.9 N MARMARTH [46  GOLDEN VALLEY COUNTY 6.3 ESE GOL  BILLINGS COUNTY 1.5 SSW FRYBURG	.53, -103.92] 09/09/10 15:00 MST 09/09/10 15:15 MST  LVA [46.68, -103.87] 09/09/10 15:19 MST 09/09/10 15:29 MST  [46.85, -103.33] 09/09/10 15:45 MST 09/09/10 15:45 MST	-	o o o	Hail (2.00 in) Source: Public  Hail (2.75 in) Source: Public  Funnel Cloud Source: Trained Spotter
damage was consistent with EF0 tornado date ornado.  SLOPE COUNTY 15.9 N MARMARTH [46  GOLDEN VALLEY COUNTY 6.3 ESE GOL  BILLINGS COUNTY 1.5 SSW FRYBURG	mage on the Enhanced Fujita Sca .53, -103.92] 09/09/10 15:00 MST 09/09/10 15:15 MST LVA [46.68, -103.87] 09/09/10 15:19 MST 09/09/10 15:29 MST [46.85, -103.33] 09/09/10 15:45 MST 09/09/10 15:45 MST	-	o o o	Hail (2.00 in) Source: Public  Hail (2.75 in) Source: Public  Funnel Cloud Source: Trained Spotter  Hail (0.88 in)
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damage was consistent with EF0 tornado date ornado.  SLOPE COUNTY 15.9 N MARMARTH [46  GOLDEN VALLEY COUNTY 6.3 ESE GOL  BILLINGS COUNTY 1.5 SSW FRYBURG [46.  BILLINGS COUNTY 0.9 E FRYBURG [46.  BILLINGS COUNTY 3.4 SW FRYBURG [46.	.53, -103.92] 09/09/10 15:00 MST 09/09/10 15:15 MST  LVA [46.68, -103.87] 09/09/10 15:19 MST 09/09/10 15:29 MST  [46.85, -103.33] 09/09/10 15:45 MST 09/09/10 15:45 MST 09/09/10 15:52 MST	-	o o o o o o o o o o o o o o o o o o o	Hail (2.75 in) Source: Public  Funnel Cloud Source: Trained Spotter  Hail (0.88 in) Source: Law Enforcement
damage was consistent with EF0 tornado datornado.  SLOPE COUNTY 15.9 N MARMARTH [46  GOLDEN VALLEY COUNTY 6.3 ESE GOL  BILLINGS COUNTY 1.5 SSW FRYBURG [46.  BILLINGS COUNTY 0.9 E FRYBURG [46.  BILLINGS COUNTY 3.4 SW FRYBURG [46.  Strong thunderstorm winds accompanied the	mage on the Enhanced Fujita Sca .53, -103.92] 09/09/10 15:00 MST 09/09/10 15:15 MST LVA [46.68, -103.87] 09/09/10 15:19 MST 09/09/10 15:29 MST [46.85, -103.33] 09/09/10 15:45 MST 09/09/10 15:52 MST .09/09/10 15:55 MST 09/09/10 16:05 MST e large hail.	-	o o o o o o o o o o o o o o o o o o o	Hail (2.75 in) Source: Public  Funnel Cloud Source: Trained Spotter  Hail (0.88 in) Source: Law Enforcement
damage was consistent with EF0 tornado date ornado.  SLOPE COUNTY 15.9 N MARMARTH [46  GOLDEN VALLEY COUNTY 6.3 ESE GOL  BILLINGS COUNTY 1.5 SSW FRYBURG [46.  BILLINGS COUNTY 0.9 E FRYBURG [46.  BILLINGS COUNTY 3.4 SW FRYBURG [46.  Strong thunderstorm winds accompanied the	mage on the Enhanced Fujita Sca .53, -103.92] 09/09/10 15:00 MST 09/09/10 15:15 MST LVA [46.68, -103.87] 09/09/10 15:19 MST 09/09/10 15:29 MST [46.85, -103.33] 09/09/10 15:45 MST 09/09/10 15:52 MST .09/09/10 15:55 MST 09/09/10 16:05 MST e large hail.	-	o o o o o o o o o o o o o o o o o o o	Hail (2.75 in) Source: Public  Funnel Cloud Source: Trained Spotter  Hail (0.88 in) Source: Law Enforcement
A tornado touched down near a farmstead in damage was consistent with EF0 tornado date tornado.  SLOPE COUNTY 15.9 N MARMARTH [46  GOLDEN VALLEY COUNTY 6.3 ESE GOL  BILLINGS COUNTY 1.5 SSW FRYBURG [46.  BILLINGS COUNTY 0.9 E FRYBURG [46.  BILLINGS COUNTY 3.4 SW FRYBURG [46.  Strong thunderstorm winds accompanied the BILLINGS COUNTY 3.4 SW FRYBURG [46.	mage on the Enhanced Fujita Sca .53, -103.92]	-	o o o o o o o o o o o o o o o o o o o	Hail (2.00 in) Source: Public  Hail (2.75 in) Source: Public  Funnel Cloud Source: Trained Spotter  Hail (0.88 in) Source: Law Enforcement  Hail (2.75 in) Source: Trained Spotter

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
STARK COUNTY 3.5 N BELFIELD [46.93, -103	.20]			
•	09/09/10 16:00 MST		0	Hail (1.50 in)
	09/09/10 16:08 MST		0	Source: COOP Observer
STARK COUNTY 1.2 SW GLADSTONE [46.86,	-102.57]			
	09/09/10 16:05 MST		0	Hail (1.00 in)
	09/09/10 16:11 MST		0	Source: Trained Spotter
STARK COUNTY 1.2 NW BELFIELD [46.89, -10				
- · ·	09/09/10 16:06 MST		0	Hail (1.00 in)
	09/09/10 16:12 MST		0	Source: Law Enforcement
STARK COUNTY 6.7 NNE BELFIELD [46.97, -1	03.15]			
	09/09/10 16:20 MST		0	Hail (1.50 in)
	09/09/10 16:25 MST		75K	Source: Trained Spotter
The large hail resulted in some crop damage.				
STARK COUNTY 3.4 WNW TAYLOR [46.91, -1	02.49]			
	09/09/10 16:23 MST		0	Hail (1.00 in)
	09/09/10 16:28 MST		0	Source: Trained Spotter
STARK COUNTY 6.2 N BELFIELD [46.97, -103	.201			
• ,	09/09/10 16:31 MST		0	Hail (0.75 in)
	09/09/10 16:38 MST		0	Source: Public
DUNN COUNTY 6.3 ENE EMERSON [47.22, -10	12 521			
DUNN COUNTY 6.3 ENE EMERSON [47.22, -10	09/09/10 17:15 MST		0	Hail (1.50 in)
	09/09/10 17:22 MST		0	Source: Public
	12 241			
DONN GOONTT 0.4 HE MANGHALE [47.20, -10	09/09/10 17:30 MST		0	Hail (1.75 in)
	09/09/10 17:40 MST		0	Source: Trained Spotter
MERCER COUNTY 1.6 WNW BEULAH [47.28,	<u> </u>			
	09/09/10 17:36 MST		0	Hail (1.00 in)
	09/09/10 17:45 MST		0	Source: COOP Observer
MERCER COUNTY 1.6 WNW BEULAH [47.28,	-101 811			
	09/09/10 17:55 MST		0	Thunderstorm Wind (EG 52 kt)
	09/09/10 18:02 MST		0	Source: COOP Observer
Heavy rain accompanied the strong thunderstorm	winds.			
MERCER COUNTY 11.8 N ZAP [47.45, -101.92]	1			
	09/09/10 18:36 MST		0	Thunderstorm Wind (EG 52 kt)
	09/09/10 18:44 MST		0	Source: Mesonet
Heavy rain accompanied the strong thunderstorm	winds.			
GOLDEN VALLEY COUNTY 13.0 SSW TROTT	ERS [47.14, -104.00]			
	09/09/10 18:45 MST		0	Hail (1.00 in)
	09/09/10 18:53 MST		0	Source: Trained Spotter
GOLDEN VALLEY COUNTY 15.1 NNE SENTIN	EL BUTTE [47 12 -103 70]			
TOTAL TABLE TO SOUTH TO THE OF THE	09/09/10 18:50 MST		0	Hail (1.00 in)
	09/09/10 19:00 MST		0	Source: Trained Spotter

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## Storm Data and Unusual Weather Phenomena - September 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
Strong thunderstorm winds accomp	panied the large hail.	-		
GOLDEN VALLEY COUNTY 15.	.1 NNE SENTINEL BUTTE [47.12, -103.70]			
	09/09/10 18:50 MST		0	Thunderstorm Wind (EG 61 kt)
	09/09/10 19:00 MST		0	Source: Trained Spotter
Large hail accompanied the strong	thunderstorm winds.			
MEDGED COUNTY 5 0 NNE CO	NI DEN VI V 147 2C 402 021 7.0 NNW DELII ALI	1.547.27 404.02	1 2 7 WCW DEU	ALL [47 OC 404 041 2.4 WCW 7AD
MERCER COUNTY 5.9 NNE GC [47.27, -101.98]	DLDEN VLY [47.36, -102.02], 7.0 NNW BEULAH	1 [47.37, -101.62	ZJ, Z.7 WYSWY BEUL	AH [47.26, -101.64], 3.1 WSW ZAP
			4517	Floob Flood (due to Lloove, Dain)
	09/09/10 19:00 MST		45K	Flash Flood (due to Heavy Rain)
	09/09/10 19:00 MST 09/09/10 22:00 MST		0 0	Source: Law Enforcement
Torrential rain resulted in a flash flo		75 inches was re	0	Source: Law Enforcement
water covered county roads and hi	09/09/10 22:00 MST ood around Zap. A thunderstorm rain total of 4.7 ghway 200. There was also a report of water in	the basement of	0 eported from six m of a home. In addit	Source: Law Enforcement iles northwest of Zap. Two feet of ion, Spring Creek near Zap rose nearly
water covered county roads and hi	09/09/10 22:00 MST pood around Zap. A thunderstorm rain total of 4.7	the basement of	0 eported from six m of a home. In addit	Source: Law Enforcement iles northwest of Zap. Two feet of ion, Spring Creek near Zap rose nearly
water covered county roads and hi ten feet in response to the rain. It p	09/09/10 22:00 MST bood around Zap. A thunderstorm rain total of 4.7 ghway 200. There was also a report of water in bushed the creek to almost one foot over flood s	the basement of	0 eported from six m of a home. In addit	Source: Law Enforcement iles northwest of Zap. Two feet of ion, Spring Creek near Zap rose nearly
water covered county roads and hi ten feet in response to the rain. It p	09/09/10 22:00 MST bood around Zap. A thunderstorm rain total of 4.7 ghway 200. There was also a report of water in bushed the creek to almost one foot over flood s	the basement of	0 eported from six m of a home. In addit	Source: Law Enforcement iles northwest of Zap. Two feet of ion, Spring Creek near Zap rose nearly
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water covered county roads and hi ten feet in response to the rain. It p	09/09/10 22:00 MST  ood around Zap. A thunderstorm rain total of 4.7 ghway 200. There was also a report of water in bushed the creek to almost one foot over flood s  ASSY BUTTE [47.40, -103.21]  09/09/10 19:35 MST	the basement of	0 eported from six m of a home. In addit x was quick to rece	Source: Law Enforcement iles northwest of Zap. Two feet of ion, Spring Creek near Zap rose nearly eed.  Hail (1.00 in)
water covered county roads and hi ten feet in response to the rain. It p	09/09/10 22:00 MST  ood around Zap. A thunderstorm rain total of 4.7 ghway 200. There was also a report of water in bushed the creek to almost one foot over flood s  ASSY BUTTE [47.40, -103.21]  09/09/10 19:35 MST	the basement of	0 eported from six m of a home. In addit x was quick to rece	Source: Law Enforcement iles northwest of Zap. Two feet of ion, Spring Creek near Zap rose nearly eed.  Hail (1.00 in)

A strong surface low pressure system lifting north through the Dakotas, combined with large scale ascent ahead of a long wave upper level trough, brought a prolonged period of severe weather to parts of west and central North Dakota Thursday, September 9th. Severe Thunderstorm Watch number 650 was issued during the mid afternoon in anticipation of increasing thunderstorm coverage and intensity along a surface warm front and ahead of the upper level trough. Tornado Watch number 651 was issued shortly after, as observations and short range model guidance indicated increasing low level wind shear conducive to tornadogenesis.

Multiple severe thunderstorm and tornado warnings were issued. Numerous reports of large hail and severe thunderstorm winds were received along with reports of flash flooding and a tornado.

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