



Top 10 Weather Events of the Decade ***2010-2019***

These weather events were voted upon by several of our staff,
and deemed the 10 most significant or interesting. Enjoy!

Here's to a good 2020!

National Weather Service – Billings, MT



Top 10 Weather Events 2010-2019

#10

March 28, 2015: Hot & Dry with Fires

Unseasonably warm and dry conditions, in combination with a fast-moving cold front, produced very early season critical fire weather conditions on March 28, 2015. Widespread wind gusts of 60-70 mph occurred with record warm temperatures, resulting in an outbreak of several wildfires. The two fires with biggest impacts were:

- **Pine Crest Fire:** Burned 3,000 acres near Park City, closing a 20-mile stretch of I-90 for several hours, due to smoke and poor visibility. Prior to the interstate closure, a multi-vehicle accident resulted in one fatality and several injuries. Also, two homes were lost and one firefighter suffered a minor injury in the fire.
- The **West Fork Fire** near Red Lodge burned 600 acres and threatened homes. Fire officials closed Ski Run Road while they battled the blaze. No one was allowed to enter or leave Red Lodge Mountain for part of the day. At 3 pm, skiers in their vehicles were escorted off the mountain by Carbon County officials.



Pine Crest Fire (USFS)



West Fork Fire (USFS)

| 3/28/2015 | Max Temp | Peak Wind Gust | Min Humidity |
|------------|----------|----------------|--------------|
| Baker | 82° | 59 mph | 16 % |
| Billings | 80° | 73 mph | 12 % |
| Livingston | 70° | 64 mph | 21 % |
| Miles City | 83° | 68 mph | 18 % |
| Sheridan | 80° | 59 mph | 12 % |

Baker, Billings, Miles City & Sheridan set record highs so early in the year



West Fork Fire (USFS)



Top 10 Weather Events 2010-2019

#9

August 11 & 22, 2019: Large Hail in Billings

On August 11, 2019, a thunderstorm produced large hail (golf ball to baseball size) and damaging winds (peak gust 71 mph at the airport) in Billings. Areas from Molt and Acton to Shepherd, Huntley and Worden were affected by this storm. Impacts were widespread, and included downed large trees and damage to vehicles and homes. Some damage reports:

- Shepherd schools damaged
- Plane damage at the airport
- Power outage for 1500 residents
- Barley and wheat crops severely damaged near Molt (estimated \$400,000 worth)
- 11,000 to 13,000 waterfowl and wetland birds were killed or maimed at the Big Lake Management Areas west of Molt

Then, only 11 days later, another severe storm caused significant hail and wind damage in Billings, along with torrential rainfall, especially in the Heights. Wind driven hail broke windows and damaged cars, roofs and siding. Street flooding occurred due to the heavy rain. The Billings airport set a daily precipitation record with 0.97 inches on the 22nd.



8/11 Damage in Shepherd (Heather Demaniow)



8/11 Hen egg sized hail (Cathy Rinderknecht)



8/11 Tree damage in Billings (Billings Gazette)



8/22 Radar Image of storm at 7:20 pm



8/22 Hail on the Rims (Marianne Beene)



Top 10 Weather Events 2010-2019

#8

May 31, 2018: Large Hail in Roundup

One of the most damaging hailstorms in recent memory occurred during the late afternoon in Roundup on May 31, 2018.

- Golf ball (1.75") to tennis ball (2.50") size hail along with wind gusts up to around 60 mph caused extensive damage to homes, businesses and vehicles across the town.
- Six county buildings as well as the hospital and high school were damaged.
- Trees were stripped of leaves.

In addition to the hail, very heavy rain produced flash flooding in town and along the Musselshell River. Parts of Highway 87 had debris washed over from the floodwaters. Bender Road was washed out between Log Cabin Road and County Road 4. The Musselshell River gauge at Roundup peaked at about 11.5 feet, 1.5 feet above flood stage, and the 6th highest crest on record.



Photo courtesy of Sanford



Photo courtesy of Goffena

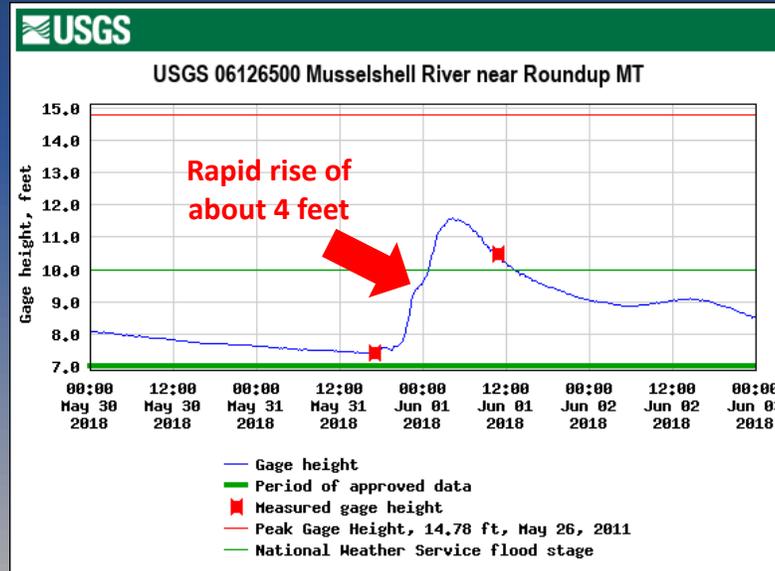


Photo courtesy of Higgins



Top 10 Weather Events 2010-2019

#7

June 17, 2014: Carter County Tornado

At around 2:27 pm on June 17, 2014, a tornado formed near Capitol in far southeast Montana.

Tornado facts:

- On ground for an hour
- Traveled 10 miles
- Width of ½ mile at times

Though the tornado was in a rural area, there was damage. A mobile home and old school house were destroyed, and power poles were downed. Vehicles were tossed about 200 yards. Many hay bales were picked up and never recovered. Two horses were killed, and there were cattle losses. This was the first tornado to be rated EF-3 in southeast Montana.

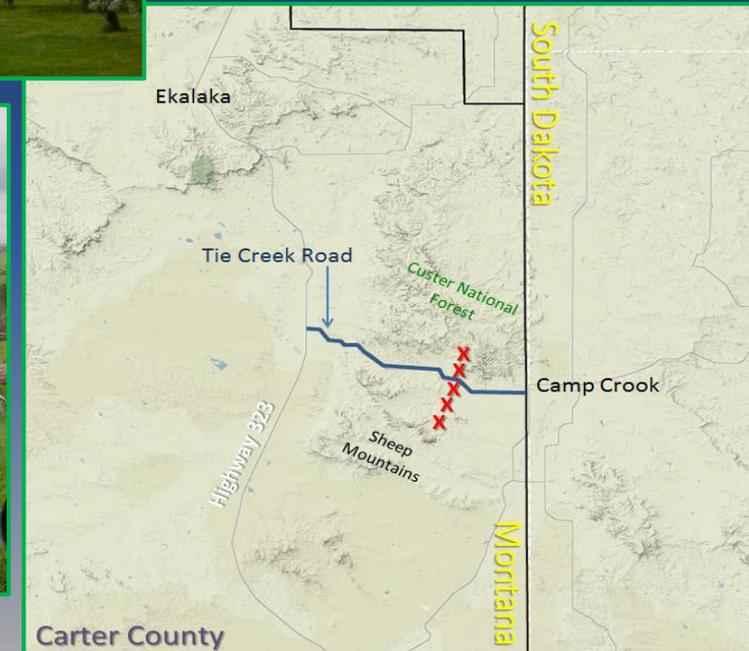
The radar image below shows the tight rotation shown on the Rapid City radar.



Photo courtesy of Meagan Reedy



Photo courtesy of Jodi Schell





Top 10 Weather Events 2010-2019

#6

June 11, 2016: Baker Tornado

During the evening of June 11, 2016, an EF-3 tornado struck Baker and the surrounding areas. This tornado caused significant damage to several homes (10 homes destroyed and 30 sustained minor to moderate damage). The most severe damage occurred in about a square block area, in a subdivision just northeast of Baker Lake, where the tornado was reported to be nearly stationary for a short period of time. Based on the observed damage, peak winds were estimated to be 136-165 mph. Other damage included: a steel-framed barn destroyed, 3 RVs destroyed, and several horses killed. The tornado eventually dissipated over Baker Lake.

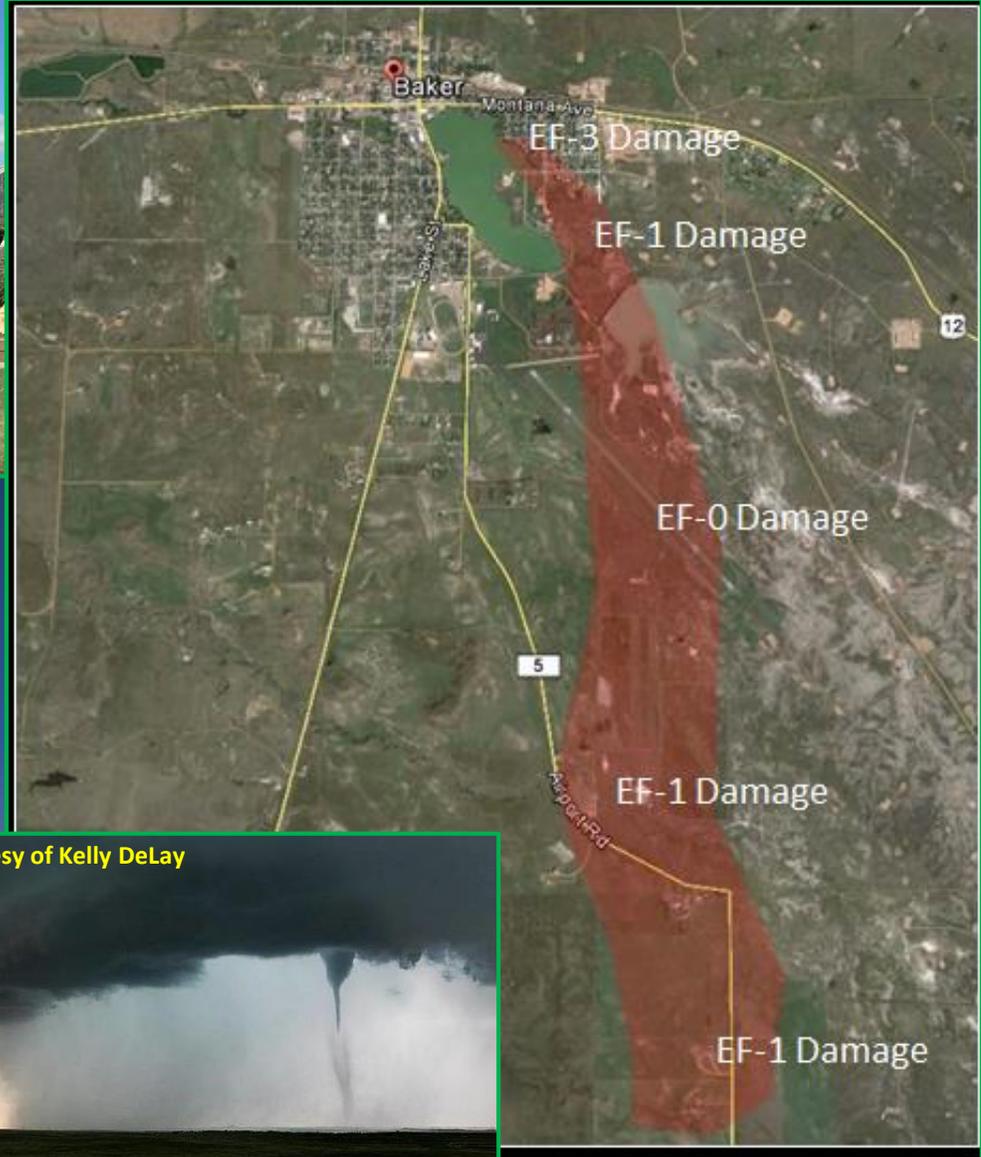


Photo courtesy of Kelly DeLay

Photo courtesy of Roger Meggers

Damage Path



Top 10 Weather Events 2010-2019

#5

December 14-19, 2016: Snow, Cold & Wind

A remarkable period of severe winter weather occurred in mid December 2016. Our region was impacted by heavy snow and arctic air, then strong winds and blizzard conditions along the foothills.

- **SNOW:** Very heavy from Billings westward on the 14-16th. Max of 23" at Big Timber. Billings airport measured 16.9" on the 15-16th. Billings' public schools were closed on the 16th.
- **COLD:** It was very cold on the 16-17th. Lows on the morning of the 17th were widespread in the -20s and -30s.
- **WIND:** Strong winds on the 18-19th caused significant blowing & drifting snow (a ground blizzard) along the foothills. I-90 from Livingston to Park City was closed for about 27 hours. Other smaller roads in Park and Sweet Grass counties were drifted over and impassable. Peak wind gusts included: Livingston 83 mph, Nye 74 mph and Big Timber 72 mph.

| Dec 17 th Low Temps | |
|--------------------------------|------|
| Ingomar 9E | -43° |
| Dayton | -39° |
| Columbus | -34° |
| Ryegate | -34° |
| Harlowton | -33° |
| Hysham | -33° |
| Roundup | -32° |
| Livingston | -27° |
| Miles City | -27° |



Big Timber (Mary Langhus)

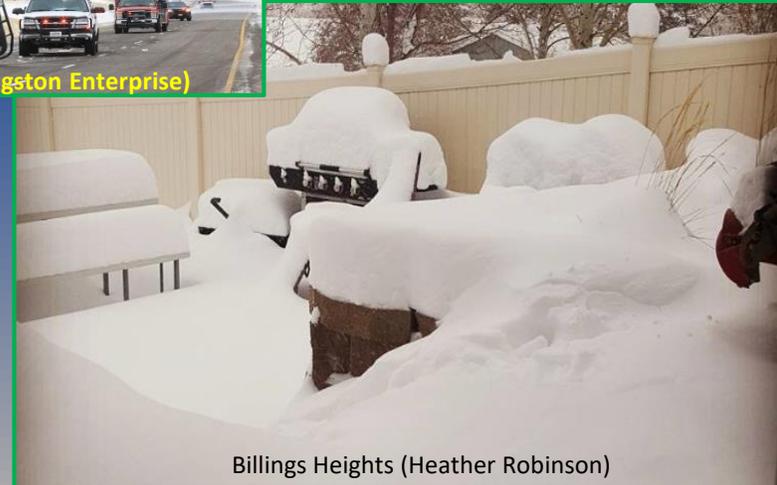
| Snowfall Totals (inches) | |
|--------------------------|------|
| Big Timber | 23.0 |
| Silver Gate | 23.0 |
| Mystic Lake | 19.5 |
| Springdale | 18.0 |
| Billings | 16.9 |
| Livingston | 14.0 |
| Joliet | 12.0 |
| Hardin | 11.1 |
| Ryegate | 11.0 |



I-90 near Livingston (Livingston Enterprise)



I-90 at Livingston (MT DOT)



Billings Heights (Heather Robinson)



Top 10 Weather Events 2010-2019

#4

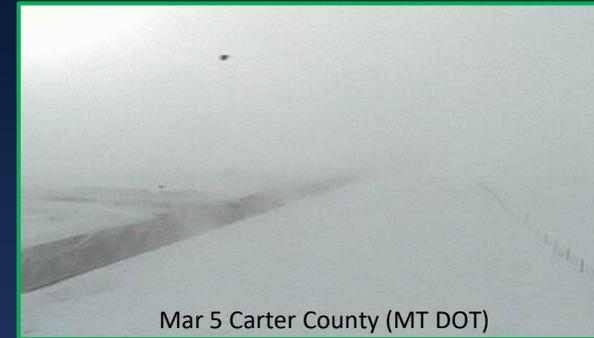
Winter 2017-18: Record Snowfall

The 2017-18 winter season will go down as one of the harshest in recent memory, with record snowfall, cold temperatures and persistent snow cover. After several snow events, snow depths of 1-2 feet (or more) were common from Roundup to Billings eastward by mid-February. Billings' total snowfall of 106.1" set a seasonal record. Here are some other highlights:

- **Feb 3-5:** 12-24" of snow fell near Busby, Ashland & Roundup.
- **Feb 3-19:** Brutally cold & snowy weather. Billings received 32.4" of snow during these 17 days. The entire region was 10-18 degrees colder than normal.
- **Feb 8:** Freezing rain impacted much of the region. Hwy 3 from Harlowton to Garneill was closed. In Billings, a 6-car pile up involving 4 separate crashes caused a portion of I-90 to close for over 2 hours.
- **Feb 15 – Apr 9:** Miles City went 54 consecutive days with below normal temperatures.
- **Mar 5:** Snow, wind and blowing snow caused numerous road closers in Fallon & Carter counties.
- **Mar 17-26:** Ice jams caused flooding along the Musselshell River.



Feb 5 I-90 near Billings (Billings Gazette)



Mar 5 Carter County (MT DOT)



Feb 15 Musselshell County



Feb 18 Sheridan (Bruce Edwards)



Feb 10 Sun Dog (Kalbach)

2017-18 Total Snowfall (inches)

| | |
|--------------|-------|
| Mystic Lake | 322.2 |
| McLeod | 195.2 |
| Red Lodge | 167.0 |
| Rapelje | 153.5 |
| Melville | 140.8 |
| Roundup 15SW | 126.0 |
| Story | 121.5 |
| Columbus | 109.6 |
| Billings | 106.1 |
| Dayton | 102.4 |
| Forsyth | 93.2 |



Top 10 Weather Events 2010-2019

#3

Spring & Summer 2012: Hot, Dry & Wildfires

2012 was dominated by warm and dry weather, and had the most active wildfire season of the decade. Here are some of the highlights:

- **March** was warmest on record for Billings (47.0°), Miles City (47.1°) and Sheridan (45.5°).
- **June 26** was an epic critical fire weather day, with hot, dry and windy conditions. Miles City set its all-time record high temperature with 111 degrees! Wind gusts of 30 to 50 mph occurred across the lower elevations, while Livingston hit a peak of 71 mph. Humidity was as low as 4-8 %. Several fires spread rapidly, including Dahl and Ash Creek.
- **Drought** conditions intensified through the spring and summer, and peaked in September when drought was classified as severe to extreme.
- **Sheridan** had no measurable rain from August 11th through October 2nd (53 days), the longest dry streak on record.
- Fall precip finally arrived in early October.

The 2012 wildfire season began in June and lasted into early October.



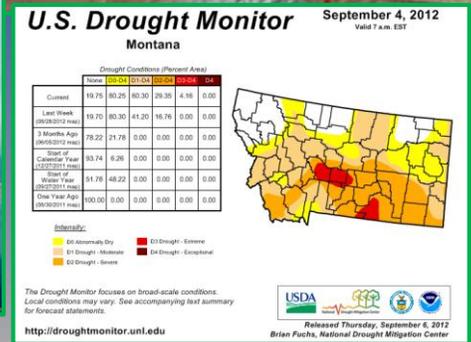
Billings Gazette



Billings Gazette



Billings Gazette



Megan Dawson

07/03/2012



Top 10 Weather Events 2010-2019

#2

May 2011: Rain & Flooding

2011 will be long remembered for the record-setting rainfall and flooding that occurred in May. Here are some of the highlights:

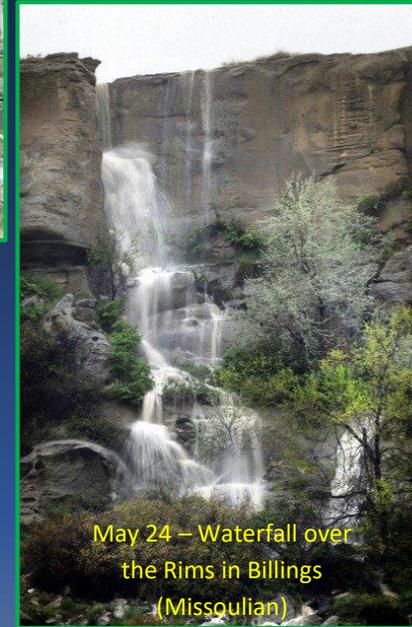
- **May 8-10:** Widespread rain caused flooding along Blue Creek south of Billings, west of Livingston, and near Fort Smith and Pryor.
- **May 19-21:** Up to six inches of rain fell over the Pryor Mountains, causing extensive flooding along Pryor Creek and the Bighorn River.
- **May 21:** Widespread severe flooding, including the Little Missouri River, Pryor Creek, Bighorn and Little Bighorn Rivers; many roads closed.
- **May 22:** Several towns isolated by flooding in Big Horn county.
- **May 23-25:** Severe flooding along the Musselshell River from Ryegate to Lavina and Roundup. Hwy 87 into Roundup and parts of US-12 were closed.
- **May 24:** All-time daily record of 3.12" of rain fell at the Billings airport, causing widespread urban flooding. Mud and rocks were swept from the Rims to downtown.



Aerial view of flooding in Roundup



Aerial view of flooding at Crow Agency (Billings Gazette)



May 24 – Waterfall over the Rims in Billings (Missoulian)



Zimmerman Drive in Billings (Missoulian)

| River Gauge | Record Stage | Date |
|----------------------------------|--------------|-----------|
| Musselshell River near Harlowton | 10.25 feet | 5/25/2011 |
| Musselshell River near Roundup | 14.78 feet | 5/26/2011 |
| Little Bighorn River near Hardin | 12.32 feet | 5/23/2011 |
| Tongue River at Miles City | 13.99 feet | 5/21/2011 |

| May 2011 Rainfall Totals (inches) | |
|-----------------------------------|-------|
| Red Lodge | 13.80 |
| Ekalaka | 11.99 |
| Story | 10.09 |
| Colstrip | 10.00 |
| Billings | 9.54 |
| Miles City | 9.35 |
| Broadus | 8.19 |
| Baker | 7.34 |
| Livingston | 5.19 |



Top 10 Weather Events 2010-2019

#1

June 20, 2010: Billings Tornado

On Father's Day in 2010, at approximately 4:24 pm, a tornado developed near the intersection of Lake Elmo Drive and Main Street in the Heights. Damage included rooftops being blown off three structures, windows blown out, power poles downed, business signs and billboards blown down, and several trees uprooted. Significant damage occurred to the Metra, which had much of its roof taken off.

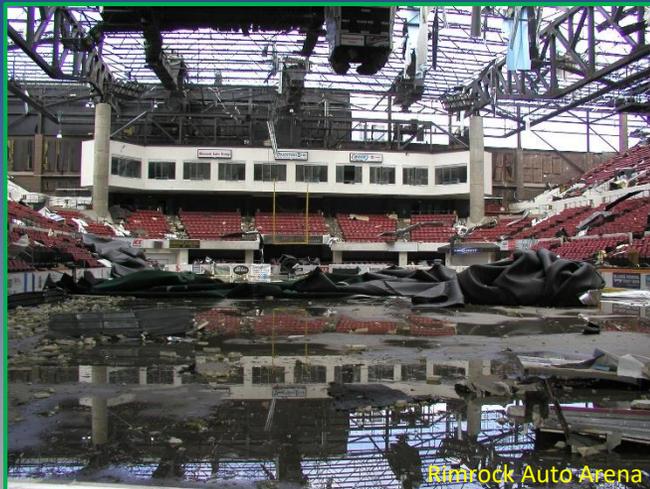
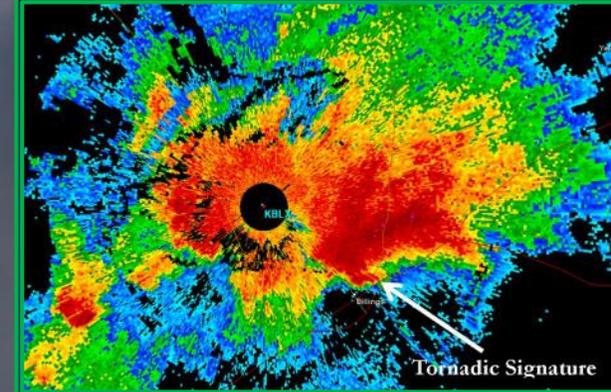
Tornado facts:

- Based on a survey of damage, was rated EF-2 (111-135 mph wind speeds)
- On ground for an estimated 12 minutes
- Damage path was 120 yards wide and ½ mile long

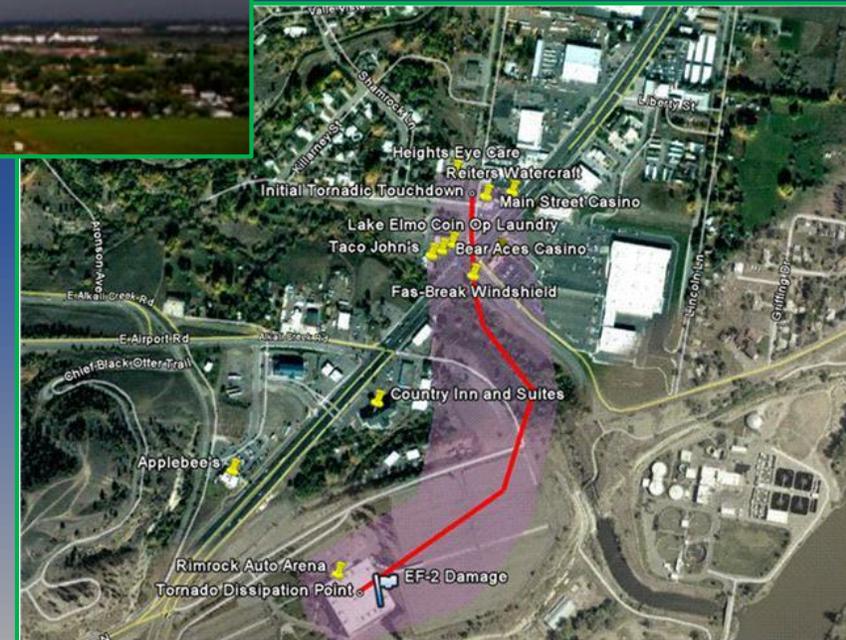
This storm also produced large hail in the Billings area.



Photo courtesy of Darrell Buszmann



Rimrock Auto Arena



Rimrock Auto Arena
Tornado Dissipation Point
EF-2 Damage

