Severe Weather

Severe weather affects the entire Commonwealth and can be expected any time of year. Severe weather for Huntingdon County is considered to include: blizzards and/or heavy snowfall; heavy fog; hail; heavy precipitation (rain); high winds; ice storms; unseasonable temperature extremes; hurricanes; and severe thunderstorms.

Snowstorms occur approximately five times per year. Even though they are more prevalent in the northern and western regions of Pennsylvania, winter storms that include ice, high wind, and snow are seen in Huntingdon County.

Hurricanes, tropical storms, and windstorms occur in the County in the spring and summer. Most hurricanes that approach Huntingdon County are downgraded to tropical storms or tropical depressions by the time they reach this area of central Pennsylvania. Heavy rain and flooding produced by a hurricane, tropical storm, or tropical depression will have the greatest impact on the County.

Extreme temperatures can be devastating to any area. Extreme heat can cause sunburn, heat cramps, heat exhaustion, and heat/sun stroke. Likewise, extreme cold can cause hypothermia and frostbite.

History

Huntingdon County, as well as the entire Commonwealth, is vulnerable to a wide range of natural disasters. According to the Pennsylvania Emergency Incident Reporting System (PEIRS), there were six reportable severe weather incidents in Huntingdon County between November 2000 and November 2006. A summary of disaster declarations from severe weather that affected Huntingdon County can be seen below.

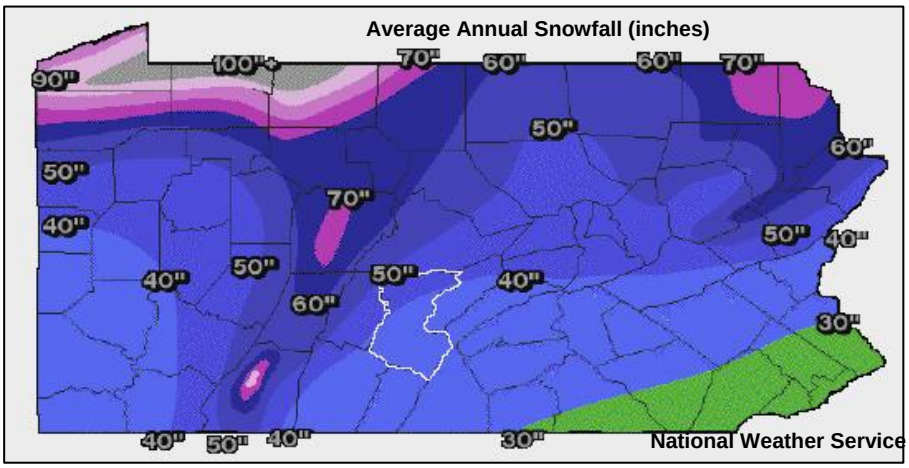
Disaster Declarations Affecting Huntingdon County				
Winter Storms	**Blizzards**	**Hurricanes/Tropical Storms***	**Floods**	**Droughts**
January 1966	February 1978	Agnes, 1972	January 1996	July 1991
February 1972	March 1993	Floyd, September 1999	June 1996	July 1999
February 1978	—	Isabel/Henri, September 1999	September 1996	February 2002
January 1994	—	Ivan, September 2004	—	2006
January 1996	—	Frances, September 2004	—	—
February 2003	—	—	—	—

Source: Pennsylvania Emergency Management Agency (PEMA)

****Disaster declarations are typically the result of severe rainfall and flooding***

Winter Storms

Huntingdon County is vulnerable to an array of winter weather. This weather has the ability to close businesses and schools, and block or damage roadways in the County. Huntingdon County has been included in several statewide emergency declarations because of significant snow and ice accumulation and the resulting floods, which are common secondary effects. The annual snowfall for Pennsylvania is depicted here.



The history of winter weather in Huntingdon County since 1994 is reflected below.

Severe Winter Weather in Huntingdon County			
Date	**Type**	**Date**	**Type**
1/4/1994	Heavy Snow	1/30/2000	Heavy Snow
1/17/1994	Heavy Snow	2/13/2000	Ice Storm
1/27/1994	Ice	2/18/2000	Winter Storm
3/2/1994	Heavy Snow/Blizzard/Avalanche	12/13/2000	Winter Storm
1/4/1995	Heavy Snow	3/4/2001	Heavy Snow
1/7/1995	Ice	1/6/2002	Heavy Snow
11/14/1995	Winter Storm	12/5/2002	Heavy Snow
11/29/1995	Snow	12/10/2002	Ice Storm
12/19/1995	Winter Storm	12/25/2002	Heavy Snow
1/12/1996	Heavy Snow	2/16/2003	Heavy Snow
11/28/1996	Heavy Snow	12/5/2003	Heavy Snow
2/13/1997	Winter Storm	1/14/2004	Heavy Snow
3/14/1997	Ice Storm	1/25/2004	Heavy Snow
11/14/1997	Heavy Snow	2/3/2004	Heavy Snow
12/29/1997	Heavy Snow	2/6/2004	Ice Storm
1/15/1998	Ice Storm	1/5/2005	Winter Storm
1/2/1999	Winter Storm	2/24/2005	Heavy Snow
1/8/1999	Winter Storm	12/9/2005	Heavy Snow
1/14/1999	Winter Storm	12/16/2005	Winter Storm
3/14/1999	Heavy Snow		

Source: National Climatic Data Center (NCDC)

Spring and Summer Storms

Every year, Huntingdon County experiences severe spring and summer storms with associated lightning and tornados. These storms have an immediate impact, as well as longer lasting secondary effects. Over the past 30 years, these storms have caused significant damage. Five deaths and six injuries have been recorded from these events throughout Huntingdon County and the surrounding region. A table of regional severe storms from 1968-2005 is presented here.

Huntingdon County Severe Storms			
Location/County	**Date**	**Time**	**Type**
Huntingdon	8/19/1968	1:45 PM	Thunderstorm and Winds
Huntingdon	5/13/1970	3:45 PM	Thunderstorm and Winds
Huntingdon	7/11/1976	3:00 PM	Thunderstorm and Winds
Huntingdon	8/3/1981	5:25 PM	Thunderstorm and Winds
Huntingdon	7/21/1983	4:40 PM	Thunderstorm and Winds
Huntingdon	8/1/1983	3:20 PM	Thunderstorm and Winds
Huntingdon	7/12/1985	3:00 PM	Thunderstorm and Winds
Huntingdon	7/13/1987	3:15 PM	Thunderstorm and Winds
Huntingdon	8/2/1987	3:15 PM	Thunderstorm and Winds
Huntingdon	11/20/1989	7:07 PM	Thunderstorm and Winds
Huntingdon	11/20/1989	7:30 PM	Thunderstorm and Winds
Huntingdon	6/29/1990	6:30 PM	Thunderstorm and Winds
Huntingdon	6/30/1990	7:00 PM	Thunderstorm and Winds
Huntingdon	9/14/1990	9:10 PM	Thunderstorm and Winds
Huntingdon	4/9/1991	7:30 PM	Thunderstorm and Winds
Huntingdon	5/6/1991	3:05 PM	Thunderstorm and Winds
Huntingdon	7/5/1991	3:20 PM	Thunderstorm and Winds
Huntingdon	7/23/1991	12:35 PM	Thunderstorm and Winds
Huntingdon	7/23/1991	1:00 PM	Thunderstorm and Winds
Huntingdon	7/23/1991	2:00 PM	Thunderstorm and Winds
Huntingdon	7/13/1992	11:00 PM	Thunderstorm and Winds
Huntingdon	7/13/1992	11:10 PM	Thunderstorm and Winds
Huntingdon	8/28/1992	3:45 PM	Thunderstorm and Winds
Huntingdon	4/15/1994	6:00 PM	High Wind
Alexandria	6/16/1994	3:00 PM	Thunderstorm and Winds
Mill Creek	7/20/1994	7:15 PM	Thunderstorm and Winds
Huntingdon	11/6/1994	7:00 AM	High Winds
Huntingdon	11/27/1994	8:00 PM	High Winds
Millcreek	4/4/1995	10:07 AM	Thunderstorm Winds
Mount Union	4/9/1995	5:14 PM	Thunderstorm Winds
Barree	6/7/1995	5:00 PM	Thunderstorm Winds

Huntingdon County Severe Storms (continued)			
Location/County	**Date**	**Time**	**Type**
Orbisonia	7/10/1995	4:57 PM	Thunderstorm Winds
Mill Creek	7/15/1995	10:55 PM	Thunderstorm Winds
Roberts Dale	7/15/1995	11:18 PM	Thunderstorm Winds
Huntingdon	11/11/1995	5:01 PM	Thunderstorm Winds
Mt Union	11/11/1995	5:48 PM	Thunderstorm Winds
Kistler	4/23/1996	4:40 PM	Thunderstorm Winds
Huntingdon	6/22/1996	2:15 PM	Thunderstorm Winds
Alexandria	7/2/1996	3:45 PM	Thunderstorm Winds
Blairs Mills	7/2/1996	4:30 PM	Thunderstorm Winds
Huntingdon	7/3/1996	3:25 AM	Thunderstorm Winds
Alexandria	7/19/1996	11:15 AM	Thunderstorm Winds
Newton Hamilton	7/30/1996	4:55 PM	Thunderstorm Winds
Mt Union	8/15/1996	8:00 PM	Thunderstorm Winds
Alexandria	10/18/1996	6:04 PM	Thunderstorm and Winds
Huntingdon	11/8/1996	9:15 AM	Thunderstorm and Winds
Marklesburg	11/8/1996	9:25 AM	Thunderstorm and Winds
Warriors Mark	11/8/1996	9:30 AM	Thunderstorm and Winds
Huntingdon	5/19/1997	6:50 PM	Thunderstorm and Winds
Huntingdon	6/18/1997	5:00 PM	Thunderstorm and Winds
Mill Creek	7/5/1997	5:20 PM	Thunderstorm and Winds
Orbisonia	7/15/1997	7:30 PM	Thunderstorm and Winds
Smithfield	5/29/1998	4:47 PM	Thunderstorm and Winds
Huntingdon	5/29/1998	4:55 PM	Thunderstorm and Winds
Shade Gap	5/31/1998	10:30 PM	Thunderstorm and Winds
Warriors Mark	6/2/1998	7:35 PM	Thunderstorm and Winds
Warriors Mark	6/16/1998	6:00 PM	Thunderstorm and Winds
Petersburg	6/23/1998	4:30 PM	Thunderstorm and Winds
Marklesburg	6/30/1998	3:55 PM	Thunderstorm and Winds
Orbisonia	6/2/1999	3:55 PM	Thunderstorm and Winds
Warriors Mark	7/9/1999	8:55 PM	Thunderstorm and Winds
Mc Alevys Fort	7/9/1999	9:03 PM	Thunderstorm and Winds
Regional	9/29/1999	8:00 PM	High Wind
Neffs Mills	10/13/1999	8:10 PM	Thunderstorm and Winds
Regional	1/10/2000	4:00 PM	High Wind
Huntingdon	6/2/2000	4:36 PM	Thunderstorm and Winds
Mc Alevys Fort	6/15/2000	1:45 PM	Thunderstorm and Winds
Mc Alevys Fort	9/12/2000	2:55 PM	Thunderstorm and Winds
Regional	12/12/2000	4:00 AM	High Wind
Regional	2/10/2001	2:00 AM	High Wind
Spruce Creek	4/9/2001	4:50 PM	Thunderstorm and Winds
Huntingdon	6/12/2001	4:30 PM	Thunderstorm and Winds

Huntingdon County Severe Storms (continued)			
Location/County	**Date**	**Time**	**Type**
Warriors Mark	7/1/2001	2:35 PM	Thunderstorm and Winds
Warriors Mark	8/19/2001	3:42 PM	Thunderstorm and Winds
Petersburg	8/28/2001	2:15 PM	Thunderstorm and Winds
Alexandria	8/31/2001	5:40 PM	Thunderstorm and Winds
Huntingdon	5/12/2002	3:15 PM	Thunderstorm and Winds
Orbisonia	5/12/2002	3:15 PM	Thunderstorm and Winds
Huntingdon	5/31/2002	6:00 PM	Thunderstorm and Winds
Mt Union	5/31/2002	6:20 PM	Thunderstorm and Winds
Petersburg	6/4/2002	7:00 PM	Thunderstorm and Winds
Huntingdon	7/23/2002	1:35 PM	Thunderstorm and Winds
Mt Union	7/6/2003	6:00 PM	Thunderstorm and Winds
Mc Alevys Fort	7/18/2003	4:48 PM	Thunderstorm and Winds
Calvin	7/18/2003	6:50 PM	Thunderstorm and Winds
Petersburg	7/21/2003	2:54 PM	Thunderstorm and Winds
Robertsdale	8/26/2003	1:58 PM	Thunderstorm and Winds
Spring Mt	8/27/2003	9:30 AM	Thunderstorm and Winds
Regional	11/13/2003	5:00 AM	High Wind
Mapleton	11/19/2003	12:16 PM	Thunderstorm and Winds
Huntingdon	5/7/2004	11:00 AM	Thunderstorm and Winds
Huntingdon	5/7/2004	11:00 AM	Thunderstorm and Winds
Cassville	5/15/2004	4:50 PM	Thunderstorm and Winds
Shirleysburg	5/25/2004	3:40 PM	Thunderstorm and Winds
Warriors Mark	8/4/2004	4:05 PM	Thunderstorm and Winds
Huntingdon	9/17/2004	7:00 PM	Strong Wind
Regional	12/1/2004	7:00 AM	High Wind
Warriors Mark	6/6/2005	2:35 PM	Thunderstorm and Winds
Shade Gap	9/29/2005	6:20 AM	Thunderstorm and Winds

Source: National Climatic Data Center

Extreme Temperatures

This hazard is generally a regional problem and not necessarily confined to Huntingdon County. One notable major event involving extreme temperatures has affected Huntingdon County. In January 1994, 132 people fell victim to excessive cold conditions. An arctic air mass caused temperatures to plunge 20 to 40 degrees below normal. Thousands of residences were damaged by the extreme temperatures. Water pipes froze and burst. Roofs buckled, and awnings and gutters collapsed. Hospitals throughout the area reported numerous cases of frostbite, hypothermia, and heart attacks from the extreme cold.

Ordinarily, those most detrimentally affected are the elderly and fixed income individuals within the area. Extreme temperatures can result in unmanageable heating or cooling bills, and personal injury such as heat exhaustion and hypothermia. These instances can stretch the capacity of local emergency management services.

Extreme Temperature					
Location or County	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**
Regional	1/14/1994	Extreme Cold	3	129	$5,000,000
TOTALS			3	129	$5,000,000

Source: National Climactic Data Center (NCDC)

Vulnerability

Winter Storms

Huntingdon County is vulnerable to severe winter weather. The economic impacts from snow removal, road and infrastructure repair, etc. impart a great strain on the budgets and material resources of local municipalities. Along with municipalities, other vulnerable entities in the County include business and utility companies. Drivers experience automobile accidents while homeowners experience property damage. Municipalities are burdened with snow and ice removal, businesses lose income from closures, and utility companies are tasked with repairing the damage done to critical infrastructure (fallen power lines, water main breaks, etc.).

Huntingdon County Severe Winter Weather	
Heavy Snow Storm	Four inches or more of snow in a six hour period, or six inches or more in a 12 hour period.
Sleet Storm	Significant accumulation of solid ice pellets causing slippery surfaces.
Ice Storm	Significant accumulation of rain freezing on trees, power lines, causing slippery surfaces and damage.
Blizzard	35 - 44 mph winds, 32-11degrees Fahrenheit temperatures, blowing snow, and frequent one-quarter mile visibility over an extended period of time.
Severe Blizzard	44+ mph winds, temperatures of 10 degrees Fahrenheit or lower, a high density of blowing snow with visibility generally measured in feet for an extended period of time.

Source: National Climactic Data Center

Spring and Summer Storms

Huntingdon County is vulnerable to spring and summer storms. Hurricanes, tropical storms, and tropical depressions can also occur in this region. The difference in these types of storms is shown below. The chance of wind damage in the County increases, as housing and commercial development continues. These storms can be expected from the spring to early fall months (hurricane season officially runs from June to November).

Storm Categories		
Type of Storm	**Maximum Sustained Winds (mph)**	**Estimated Damage**
Tropical Depression	Less than 39 mph	
Tropical Storm	39 - 73 mph	
Saffir-Simpson Scale		
Category 1 Hurricane	74 - 95 mph	Minimal damage to vegetation
Category 2 Hurricane	96 - 110 mph	Moderate damage to structures
Category 3 Hurricane	111 - 130 mph	Extensive damage to small structures
Category 4 Hurricane	131 - 155 mph	Extreme structural damage
Category 5 Hurricane	Greater than 155 mph	Catastrophic structural failure possible

Extreme Temperatures

Extreme temperatures are usually a regional problem. Approximately 22 percent of the land in Huntingdon County is agricultural. In relatively rural communities, such as Huntingdon County, crop damage can occur. This can be the result of excessive heat or unseasonably cold conditions.

Huntingdon County Averages and Records						
Month	**Average High**	**Average Low**	**Mean Temperature**	**Average Precipitation**	**Record High**	**Record Low**
January	35°F	18°F	26°F	2.54 in.	66°F (1998)	-15°F (1994)
February	39°F	19°F	29°F	2.23 in.	79°F (1985)	-12°F (1979)
March	48°F	27°F	37°F	3.24 in.	84°F (1977)	0°F (1978)
April	60°F	36°F	48°F	3.24 in.	91°F (1985)	15°F (1982)
May	71°F	46°F	58°F	4.08 in.	93°F (1996)	25°F (1978)
June	79°F	54°F	67°F	3.91 in.	94°F (1988)	33°F (1978)
July	83°F	59°F	71°F	3.36 in.	104°F (1988)	42°F (1988)
August	82°F	58°F	70°F	3.19 in.	99°F (1988)	37°F (1982)
September	75°F	51°F	63°F	3.29 in.	96°F (1983)	29°F (1980)
October	63°F	40°F	52°F	3.26 in.	89°F (1986)	20°F (1988)
November	51°F	32°F	41°F	3.29 in.	82°F (2003)	10°F (1976)
December	40°F	24°F	32°F	2.62 in.	74°F (2001)	-7°F (1983)

Source: The Weather Channel www.weather.com

The elderly and youth populations are the most vulnerable to severe weather, due to their mobility challenges, disabilities, fixed income, increased susceptibility to illness from compromised or developing immune systems, etc.

Probability

There is a high probability of severe weather affecting Huntingdon County, as severe weather is an annual event. Hurricanes and tropical storms, heavy fog, high winds, and unseasonable temperatures all affect Huntingdon County.

Maximum Threat

Severe weather can come in many forms. Most often, instances of severe weather are regional events affecting large areas.

Secondary Effect

Flooding and power outages are major secondary effects of severe weather. Heavy rain and melting snow can lead to large amounts of ground water that cannot be contained by streams and rivers. Power outages can be caused by heavy winds, strong storms, and large amounts of snow that weigh on power lines.