



# Winter's Impact

In the Midwest and Plains, storms tend to develop over southeast Colorado in the lee of the Rockies. These storms move east or northeast and use both the southward plunge of cold air from Canada and the northward flow of moisture from the Gulf of Mexico to produce heavy snow and sometimes blizzard conditions. Wind and cold sometimes combine to cause wind chill temperatures as low as 50F below zero. The wind crosses the lakes, tapping its moisture and forming snow squalls and narrow heavy snow bands. This is called "lake-effect snow."

## **Storms with Strong Winds**

Sometimes winter storms are accompanied by strong winds creating blizzard conditions with blinding wind-driven snow, severe drifting, and dangerous wind chill. Strong winds with these intense storms and cold fronts can knock down trees, utility poles, and power lines. Storms near the coast can cause coastal flooding and beach erosion as well as sink ships at sea.

## **Extreme Cold**

Extreme cold often accompanies a winter storm or is left in its wake. Prolonged exposure to the cold can cause frostbite or hypothermia and become life threatening. Infants and elderly people are most susceptible. What constitutes extreme cold and its effect varies across different areas of the United States. In areas of the South unaccustomed to winter weather, freezing temperatures can cause severe damage to citrus fruit crops and other vegetation. Pipes may freeze and burst in homes that are poorly insulated or without heat. In the north, long cold spells can cause rivers to freeze, disrupting shipping. Ice jams may form and lead to flooding.

## **Ice Jams**

An ice jam can occur anytime from early winter to late spring in Michigan, depending upon changes in temperatures that cause alternate freezing and melting of water surfaces. The most likely times are early winter before the surfaces are completely frozen and early spring when the ice cover begins to break up due to melting. The water held back can cause flooding upstream, and if the ice jam suddenly breaks, flash flooding can then occur downstream as well.

## **Ice Storms**

Heavy accumulations of ice can bring down trees, electrical wires, telephone poles and lines, and communication towers. Communications and power can be disrupted for days while utility companies work to repair the extensive damage. Even small accumulations of ice may cause extreme hazards to motorists and pedestrians.

## **Heavy Snow Storms**

Heavy snow can immobilize a region and paralyze a city, stranding commuters, stopping the flow of supplies, and disrupting emergency and medical services. Accumulations of snow can collapse buildings and knock down trees and power lines. In rural areas, homes and farms may be isolated for days, and unprotected livestock may be lost. The cost of snow removal, repairing damages, and loss of business can have large economic impacts on cities and towns.

## **Sleet**

Rain drops that freeze into ice pellets before reaching the ground. Sleet usually bounces when hitting a surface and does not stick to objects. However, it can accumulate like snow and cause a hazard to motorists.

## **Freezing Rain**

Rain that falls onto a surface with a temperature below freezing. This causes it to freeze to surfaces, such as trees, cars, and roads, forming a coating or glaze of ice. Even small accumulations of ice can cause a significant hazard.