

SNOW / ICE STORM

Definition of Hazard

This type of hazard is an atmospheric disturbance characterized by a strong wind and usually accompanied by rain, snow, sleet, hail, and often thunder or lightning. Also characteristic of this hazard is any heavy fall of snow, rain, or hail.

Snow storms or blizzards, which are snow storms accompanied by high wind and/or drifting snow, occur occasionally in the area.

Hail storms occur when freezing water in thunderstorm type clouds accumulates in layers around an icy core. Wind added to hail can batter crops, structures and transportation systems.

An ice storm occurs when rain falls out of warm moist upper layer of atmosphere into a below freezing, drier layer near the ground. The rain freezes on contact with the cold ground and accumulates on exposed surfaces. If this is accompanied by wind, damage can occur to trees and utility wires.



Freezing ice can cause severe immediate impacts

History of Hazard

The Kent area, like the rest of the Puget Sound area is known for its moderate climate. Snowfall rarely exceeds ten inches in an entire season. The snow that does fall seldom remains on the ground more than a day or two.

Chances for accumulation of snow in the event of one severe weather front following another is historically minimal. However, since 1985 and most recently in *January 2004* the area has experienced major winter storms that have created significant hazards and disastrous results totaling in the millions of dollars of damage.

Hazard Identification

All areas of Kent are subject to the effects of these incidents. In particular, people, power lines, transportation routes and structures are vulnerable to the effects of cold, weight of the snow, winds and falling trees.

Snow, like other hazards, does not have the same impact on all areas. The depth of the

snow as well as the temperature and location of the snowfall are major factors in determining the degree of hazard that is presented to the area.

Building codes continue to be strengthened to address potential effects of snow and ice storms on structural integrity of buildings.

Vulnerability Analysis

The Kent area has hills on either side of the valley. The hillsides and relatively infrequency of snowstorms make such storms dangerous and difficult to deal with. Major transportation difficulties usually occur as the result of even a minimal snowfall.



Heavy snowfalls create dangerous, inaccessible roads, poor visibility, and resulting traffic accidents. Drivers in the area have little opportunity to gain experience driving on snow covered streets, with problems amplified by lack of proper tires and chains to mitigate the hazardous driving conditions. Snow removal operations are often hampered by lack of manpower and equipment. Emergency response by fire and police personnel is often hampered by ice and snow on roads which are inaccessible under such conditions making emergency response unavailable.

Most of the structural damage resulting from heavy snowfalls is roof and structure collapse, with downed power lines and trees providing major difficulties for repair crews and residents alike. Elderly and invalid persons often find themselves isolated in these situations and have difficulty obtaining food, medicines and other necessities. Additionally, dangerous situations occur as the result of power outages which result in the lack of heat for many areas. Efforts made to create makeshift heating and lighting often lead to fires, explosions and asphyxiation.

Ice and freezing rain, which we are prone to experience annually, create similar difficulties. Ice and freezing rain are not as visible as snow, and therefore intensify the driving and transportation hazards. Freezing conditions are a common occurrence from November to February. These conditions can exist as the result of a simple rain with temperatures dropping below the freezing level overnight creating an 'unknown' hazard to the community as morning activities begin.

Conclusions

Snow and ice storms can strike the area with little warning. These incidents occur infrequently and as a result, the effects of them are often enhanced by the public's

inexperience dealing with the challenges posed by them.

The most significant effect of these storms is structural collapse, interruption of utilities and the disruption of transportation routes, causing life threat, hardship and economic loss.