December 2008

Black Ice vs. Clear Ice

Ice is probably the most feared winter weather phenomena for pedestrians, motorists and property owners. But not all ice is created equal, at least in terms of slipperiness.

Ice is most slippery when air and/or ground temperatures are near 32 degrees Fahrenheit. That is the temperature at which water and ice can co-exist. This is important because downward force on ice, whether by foot or tire, causes a small amount of the surface to melt, acting as a lubricant. Interestingly, the warmer the shoe or tire, the more of the surface of the ice will melt.

“Black ice” is a notorious winter weather hazard, although this terminology is probably a little misleading. A thin sheet of ice takes on the appearance of the object beneath because ice of this nature is clear and can be seen through. If this ice forms on a blacktop road, it will appear black. But if the thin sheet of smooth ice forms on gray wooden steps, the ice will take on a gray color. Hence "clear ice" might be a better way to describe black ice.

The AccuWeather Forensics Team was called upon to help establish the truth about the weather conditions at the scene of a slip and fall incident at a small medical office. The person had fallen and was seriously injured on wooden steps at the entranceway of the practice, after safely traversing the walkway and driveway at the same location. There was testimony by the plaintiff that the sidewalk and driveway were wet.

The AccuWeather Forensics department reconstructed weather conditions in the vicinity, based on sun exposure and prior and current temperatures and precipitation. They found that it was possible for ground temperatures to remain above freezing at the time of the incident, while elevated surfaces, such as steps, cooled enough to allow rainfall from earlier that morning to freeze. The Forensic Meteorologists at AccuWeather uncovered several supporting reports of accidents on bridges and overpasses in the area that same morning due to "black ice".

A settlement was reached on behalf of the plaintiff to cover lost wages and medical expenses.