

Weather Research for Surface Transportation: The Roadway Environment

The National Highway Safety Administration estimates that adverse weather is a factor in 7,000 fatalities and 800,000 injuries on the nation's roadways each year. Highway transportation is also one of the key elements tying together the nation's economy. For example, on-time deliveries of components has become central in today's "just in time" manufacturing. Major winter storms and other meteorological events reducing the ability to move goods by road have ripple effects throughout the entire economy. Providing improved weather information to drivers and maintenance personnel has the potential to enhance their safety, while at the same time increasing mobility on the roadways. At the request of the Federal Highway Administration, the National Research Council convened a committee to examine the research opportunities and required services needed to support improved weather-related information for the nation's roadways. Specifically, the committee was charged to investigate the current state of knowledge regarding road weather conditions and recommend key areas of research to enhance operational production of weather-related information for roads. Further, the committee was asked to identify possible agency requirements and the observational, computing, and communication infrastructure needed to best provide this information to users. In essence, the study is intended to provide a framework and recommendations to engage the transportation and weather communities, as well as other stakeholders, in the development of a strategic plan to guide road weather research and, where appropriate, surface transportation more generally. The conduct of the study and its findings and recommendations will be discussed.