



- Logo designed by Jay Langone

## Climate Variability & Michigan Tourism

Most tourism business owners and managers are acutely aware of the impacts that weather conditions can have on the success of their tourism ventures in Michigan. While rain may impact tourists' decisions of whether or not to participate in outdoor recreation activities—such as camping or boating—during the summer months, snowfall and sustained cold temperatures are vital to the winter tourism industry, including downhill skiing and snowboarding, snowmobiling and ice fishing. Following are several examples of how climate can impact upon tourist behaviors.

Occupancy levels at Michigan State Park campgrounds are often measurably influenced by weather conditions that differ significantly from reported 100-year averages. For example, May 2001 was 65 percent rainier than normal statewide, and consequently, campsite occupancies were down by nearly 32 percent. Conversely, in July 2001 Michigan received 40 percent less rain statewide than normal, and campsite occupancies were up by 13 percent statewide. Although weather is not the only factor affecting these occupancy rates, it certainly has an influence on family vacation planning.

While rain can impact upon tourists' decisions to participate in outdoor activities during the summer months, snowfall is vital to Michigan's downhill skiing and snowboarding industry during the winter season. Already, there has been an observed decline in ice cover on Lake Michigan during certain years, according to the state's climatologists. Less ice cover can result in lesser amounts of lake-effect snowfall, and abnormally light snowfall can, in turn, be damaging to the region's downhill skiing and snowboarding industry. For example, during the 1997-98 El Nino year, below average snowfall contributed to a 50 percent decline in business at Midwestern ski resorts, amounting to an estimated \$120 million loss of revenue.

### So, just what is the *Pileus Project* anyway?

The U.S. Environmental Protection Agency has awarded a \$1.8 million grant to Michigan State University researchers to help tourism and agriculture industry stakeholders understand how climate change and weather variability impact upon their businesses now and into the future. This 3-year project has been named the *Pileus Project*.

The Project's team of tourism researchers is currently designing decision-support tools to help owners and managers from three sectors of Michigan's tourism industry to include both what is known and what is anticipated about climate trends into their planning processes. Work is underway to create tools for the following sectors of the industry, with differing seasonal periods of peak season activity.

- A wintertime demand model is being developed for the **downhill skiing and snowboarding industry**. This model is based upon historical daily counts of lift tickets sold.
- Similarly, a summertime demand model is being developed for the **camping industry**, with the critical bit of data for this model being historical daily campground occupancy data.
- And finally, a "comprehensive" or "year-round" tourism model is being developed based upon daily highway traffic count data as reported by the Michigan Department of Transportation. This tool is likely to be of interest to any community or tourism business dependent upon **tourist traffic**.

To ensure that the tools being developed will be as useful as possible to the business owners and managers within these industry sectors, it is critical that the researchers at Michigan State University identify stakeholders from those sectors who are willing to voluntarily share their knowledge, experience, techniques—and most importantly of all—their historical data with the *Pileus Project* tourism team researchers.

For more information about this Project, contact Dr. Donald F. Holecek at 517-353-0793 or [dholecek@msu.edu](mailto:dholecek@msu.edu).