Actuaries Climate Index Continues to Climb

Index’s Five-Year Average and Three Components’ Five-Year Averages Reach New Highs

Washington, D.C., Arlington, VA, Schaumburg, IL, and Ottawa, ON (November 21, 2019)—Newly released spring 2019 data added to the Actuaries Climate Index (ACI) show that more frequent extreme weather and increases in sea level continue to push the index upward. The ACI’s five-year moving average now stands at 1.16, up from 1.12 last quarter. This is the fifth consecutive quarter that the ACI’s five-year moving average has set a new high.

“Three components of the ACI also saw new highs in their respective five-year averages: sea level, the frequency of high temperatures, and the frequency of heavy precipitation,” says Doug Collins, Chair of the Climate Index Working Group. “The high values and upward trends in these components are significant to the big-picture, long-term changes measured by the ACI, which is a composite of values measured across the U.S. and Canada.”
The Actuaries Climate Index is based on analysis of seasonal data from neutral, scientific sources for six index components collected since 1961. The index measures changes in extremes of high and low temperatures, high winds, heavy precipitation, and drought, as well as changes in sea level, expressed in units of standard deviations from the mean for the 30-year reference period of 1961 to 1990 for the United States and Canada combined and by region. Combining six components over a five-year measurement period, the index’s moving average smooths out monthly and seasonal fluctuations for a meaningful measurement of long-term climate trends.

“As the index moves up and away from a mean of zero during the reference period, it reveals itself clearly as a statistically significant outlier,” says Collins.

The index, sponsored by the American Academy of Actuaries, the Canadian Institute of Actuaries, the Casualty Actuarial Society, and the Society of Actuaries, is designed to provide actuaries, public policymakers, and the general public with objective data about changes in the frequency of extreme climate events over recent decades.

Updated values are posted quarterly on ActuariesClimateIndex.org as data for each meteorological season become available. The organizations are also developing a second index, the Actuaries Climate Risk Index, to measure correlations between changes in the frequency of extreme events and economic losses, mortality, and injuries.

About the Sponsoring Organizations

The American Academy of Actuaries is a 19,500+ member professional association whose mission is to serve the public and the U.S. actuarial profession. For more than 50 years, the Academy has assisted public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

The Canadian Institute of Actuaries (CIA) is the national, bilingual organization and voice of the actuarial profession in Canada. Our 6,000+ members are dedicated to providing actuarial services and advice of the highest quality. The Institute holds the duty of the profession to the public above the needs of the profession and its members.

The Casualty Actuarial Society (CAS) is a leading international organization for credentialing and professional education. Founded in 1914, the CAS is the world’s only actuarial organization focused exclusively on property and casualty risks and serves over 8,000 members worldwide. Professionals educated by the CAS empower business and government to make well-informed strategic, financial and operational decisions.
With roots dating back to 1889, the Society of Actuaries (SOA) is the world’s largest actuarial professional organization with more than 30,000 actuaries as members. Through research and education, the SOA’s mission is to advance actuarial knowledge and to enhance the ability of actuaries to provide expert advice and relevant solutions for financial, business and societal challenges. The SOA’s vision is for actuaries to be the leading professionals in the measurement and management of risk.

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