

Climate Science and Public Policy in Iowa

November, 2011

The productive soils and favorable climate of Iowa underpin the economy of our State. Over the last half-century our farmers have adapted to changing conditions to keep Iowa ranked as one of the leading agriculture states in the US. We take well-earned pride in our contributions to national and global food security.

Changes in rainfall patterns and other climate indicators have emerged as the latest and potentially the most serious challenge to Iowans' lives and livelihoods. Subtle changes in climate can have large effects on agriculture, making it a sensitive indicator of climate change. Statewide data show changes in temperature, precipitation, and humidity over the last forty years affecting Iowa's producers. In recent decades a longer growing season, more precipitation, and lack of extreme high daytime temperatures have contributed to improved crop yields in our State. But the accompanying increase in extreme rainfall events, higher humidity, and higher nighttime temperatures have required costly adaptations.

Like its farmers, Iowa's cities and rural communities, which provide our infrastructure, educational opportunities, and cultural amenities, also have felt the effects of a changing climate. Over the last 40 years intense rainfall has occurred about five times more often than in our previous history. As a result our communities have faced enormous expense to recover from repeated "500-year" floods. Cedar Rapids, Des Moines, Iowa City, and Ames all have suffered multi-million dollar losses from floods since 1993. In 2008 alone, 85 of Iowa's 99 counties were declared federal disaster areas.

These changes in Iowa's climate have clear connections to changes in global climate and to changes in how we use the land. As the global climate continues to evolve, our farmers and city planners will face new challenges to maintain the prosperity of our state and its role in national and global food security. All major scientific societies and the US National Academy of Science have affirmed that the recent rise in greenhouse gases in the global atmosphere has contributed to changes in our climate. We urge all candidates for public office at national, state, and local levels to acknowledge the overwhelming balance of evidence for the underpinning causes of climate change, to develop appropriate policy responses, and to develop local and statewide strategies to adapt to near-term changes in climate.

Signed*

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*The views expressed herein are those of the individual signatories, and do not necessarily represent the views of the institutions with which they are affiliated

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