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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,*

Chris Anderson, Climate Science Program, Iowa State University
Ray Arritt, Climate Science Program, Iowa State University
Bill Gutowski, Climate Science Program, Iowa State University
Gene Takle, Climate Science Program, Iowa State University, Ames
Mark Aronson, Department of Biology, Scott Community College, Davenport
Neil Bernstein, Chair, Department of Natural and Applied Sciences, Mount Mercy University, Cedar Rapids
Aaron Bunker, Department of Biology, Morningside College, Sioux City
David Campbell, Henry R. Luce Professor in Nations & the Global Environment and Professor of Biology, Grinnell College, Grinnell

David Courard-Hauri, Environmental Science and Policy Program, Drake University, Des Moines
Richard Cruse, Director, Iowa Water Center, Department of Agronomy, Iowa State University, Ames
Gary Donnermeyer, Math/Science Department, Kirkwood Community College, Cedar Rapids
Robert de Haan, Environmental Studies Department, Dordt College, Sioux City
Rhawn Denniston, Chair, Department of Geology, Cornell College, Mt. Vernon
Jack Gittinger, Science Education, Simpson College, Indianola
Brian Hazlett, Director, Environmental Science Program, Briar Cliff University, Sioux City
Laura Jackson, Professor of Biology, University of Northern Iowa, Cedar Falls
M. Patrick McAdams, Division of Health and Life Science, William Penn University, Oskaloosa
David McCullough, Professor of Biology, Coordinator, Environmental Studies, Wartburg College, Waverly
Gilbert Nebgen, Associate Professor of Science and Math, Indian Hills Community College, Ottumwa
Laura Peterson, Department of Chemistry, Environmental Studies Program, Luther College, Decorah
Gary Phillips, Environmental Studies Department, Iowa Lakes Community College, Estherville Thomas Rosburg, Professor of Biology, Drake University, Des Moines
Melanie Hansen Sadeghpour, Chair, Environmental Science Program, Des Moines Area Community College, Des Moines
Paula Sanchini, Professor of Biology, Coe College, Cedar Rapids
Jerald Schnoor, Department of Civil and Environmental Engineering, Co-Director, Center for Global and Regional Environmental Research, University of Iowa
Keith Summerville, Environmental Science and Policy, Drake University, Des Moines
Kathryn Szramek, Environmental Science and Policy, Drake University, Des Moines
Martin St. Clair, Professor of Chemistry, Coe College, Cedar Rapids
Tracy Todd, Associate Professor of Biology, Northwestern College, Orange City
Paul Weihe, Biology & Environmental Science, Central College, Pella
Danielle Wirth, Environmental Science Department, Des Moines Area Community College, Des Moines

*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.