IOWA CLIMATE STATEMENT 2014: IMPACTS ON THE HEALTH OF IOWANS

Iowans are experiencing the very real impacts of climate change, including heavier rains in spring, increased flooding, and a longer growing season. Human health effects are just as real and are already being felt in Iowa.

Most obvious, immediate, and direct are the health-related effects of extreme events, which are increasing in frequency and severity as our atmosphere warms and holds more moisture. Iowa and the Midwest have experienced higher humidities and increased nighttime temperatures making it harder to recover from daytime heat stress. Repeated heavy rain events cause increased exposures to toxic chemicals and raw sewage that are mobilized and spread by flood waters.

Degraded water quality is another direct and immediate problem associated with climate change. In farming states like Iowa, higher water temperatures and decreased mixing have combined with high nutrient levels to create harmful algal blooms that make the water unsuitable for human and animal consumption and for recreation as evidenced by more frequent beach closures at Iowa lakes. Algal blooms can produce crisis conditions as evidenced this summer in Toledo, Ohio, where a half-million people were left without safe water for drinking or bathing.

A less obvious, but perhaps more common, health effect of climate change is its impact on respiratory and cardiovascular health. With warmer temperatures and higher carbon dioxide levels in the air, plants produce not only more pollen, but also pollen with a higher allergen content. A longer growing season extends the period of exposure to allergens, and new allergenic plants moving northward into Iowa are magnifying the range of exposures. Respiratory problems such as childhood asthma have increased dramatically in prevalence since the 1980s. In many cases, this is related to increased exposures to flood molds and to higher indoor moisture, as well as to lung-damaging ozone and fine particulate matter made worse by higher heat in urban areas. Heat stress and exposure to air pollutants also increase the risk of heat attacks and stroke, especially in aging adults.

We are concerned about new infectious diseases arising in the Midwest as the organisms that carry them move north due to rising temperatures. We are now seeing new species of mosquitoes and ticks in Iowa capable of transmitting diseases such as Dengue Fever and Ehrlichiosis. With increasing temperatures, more rainfall, and longer summers, these mosquitoes and ticks can live longer and expand their range.

Our changing climate’s influence on mental health is perhaps less obvious, although the stress caused by climate-related physical displacement and loss of livelihood due to flood or drought is well established. Other mental health problems are growing concerns. For example, research since the 1980s has associated higher temperatures with increased aggression and violence and these are now being linked to climate change.

As long as greenhouse gas emissions continue to increase, climate-related health problems will continue to grow. However, lowering emissions and seeking new ways to adapt to climate stressors will help ease the risks of new health problems, while simultaneously benefitting our economy. Energy efficiency and clean renewable energy have the co-benefits of reducing air pollution and producing jobs, creating economic opportunities for Iowans. Many heart healthy activities such as walking or bicycling to work also decrease greenhouse gas emissions. Adopting strong climate-change policies will play a vital role in diminishing human suffering and illness now and for generations to come.

Signed by -

Peter S. Thorne
Professor and Head
Occupational & Environmental Health,
Director, Environmental Health Sciences
Research Ctr, College of Public Health
University of Iowa

Mary Mincer Hansen
Adjunct Professor
College of Health Sciences MPH
Program
Des Moines University

Yogesh Shah
Associate Dean
Department of Global Health
Des Moines University

David Courard-Hauri
Associate Professor
Environmental Science and Policy
Program
Drake University

David Osterberg
Clinical Professor
Occupational & Environmental Health,
College of Public Health
University of Iowa

Neil Bernstein
Chair, Department of Natural and
Applied Sciences
Mount Mercy University

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Iowa Climate Statement 2014: Impacts on the Health of Iowans

Matt Abbott
Biology Instructor
Des Moines Area Community College

Chris Anderson
Research Assistant Professor
Assistant Director, ISU Climate Change Program
Iowa State University

Marc P. Armstrong
Professor and CLAS Collegiate Fellow
Department of Geography and Sustainability Sciences
University of Iowa

Mark Aronson
Department of Biology
Scott Community College

Rajeev Arora
Professor
Horticulture
Iowa State University

Richard G. Baker
Professor Emeritus
Department of Earth and Environmental Sciences
University of Iowa

Paul E. Bartelt
Professor and Chair
Department of Biology
Waldorf College

William D. Beavis
Professor of Agronomy
Department of Agronomy
Iowa State University

Philip W. Becraft
Professor of Genetics & Agronomy
Genetic, Development and Cell Biology,
College of Agriculture and Life Sciences
Iowa State University

Russ Benedict
Professor of Biology
Director of Prairies for Agriculture Project
Central College

David Bennett
Professor
Department of Geographical and Sustainability Sciences
University of Iowa

E. Arthur Bettis III
Academic Coordinator, Environmental Sciences Program, Associate Professor,
Department of Earth and Environmental Sciences
University of Iowa

Ryan Bezy
Assistant Professor of Biology
Dept. of Natural & Applied Sciences
Mount Mercy University

Diane Birt
Distinguished Professor
Food Science and Human Nutrition
College of Agricultural and Life Sciences
and College of Human Sciences
Iowa State University

Gail A. Bishop
Professor of Microbiology & Internal Medicine, Director, Center for Immunology & Immune-Based Diseases
Roy J. and Lucille A. Carver College of Medicine
University of Iowa

Andrea Bieler
Associate Professor
Department of Biology
Clarke University

Amy Blair
Associate Professor
Department of Biology
St. Ambrose University

Richard B. Hall
Professor of Biology
Natural Resource Ecology and Management
Iowa State University

Gary R. Buettner
Professor
Free Radical and Radiation Biology
Department of Radiation Oncology
College of Medicine
University of Iowa

Brenda S. Buikema
Assistant Professor, Clinical
Occupational & Environmental Health,
College of Public Health
University of Iowa

Anya Butt
Associate Professor of Biology
Environmental Studies Program
Central College

David G. Campbell
Professor of Biology and Chair of Environmental Studies
Department of Biology
Grinnell College

Greg Carmichael
Co-Director
Center for Global and Regional Environmental Research
University of Iowa

Ryan Carnahan
Associate Professor
Department of Epidemiology
College of Public Health
University of Iowa

Carri Casteel
Associate Professor
Occupational and Environmental Health, College of Public Health
University of Iowa

James Cheaney
Associate Professor of Biology
Science and Mathematics
Ellsworth Community College

Silvia Cianzio
Professor
Department of Agronomy
Iowa State University

Russell Ciochon
Director of Museum Studies
Professor and Associate Chair, Department of Anthropology
University of Iowa

Ronald J. Cisar
Assistant Professor
Biological Science
Iowa Western Community College

Elizabeth Collins
Advanced Instructor
Science Department
Iowa Central Community College

John Collins
Instructor
Sustainable Living Department
Maharishi University of Management

Alejandro Comellas
Assistant Professor
Department of Internal Medicine
Roy J. and Lucille A. Carver College of Medicine, University of Iowa

Charles Connerly
Professor and Director
School of Urban and Regional Planning
University of Iowa

James L. Cornette
Emeritus Professor of Mathematics
Iowa State University

Mary Kathryn Cowles
Professor
Department of Statistics and Actuarial Science
University of Iowa

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Richard Cruse
Professor and Director of the Iowa Water Center
Department of Agronomy
Iowa State University

Tori Forbes
Assistant Professor
Department of Chemistry
University of Iowa

Bill Gutowski
Professor of Meteorology
Department of Geological and Atmospheric Sciences
Iowa State University

Dennis Dahms
Professor
Quaternary Geochronology & Stratigraphy, Department of Geography
University of Northern Iowa

Andrew A. Forbes
Assistant Professor
Department of Biology
University of Iowa

Joel Haack
Dean, College of Humanities, Arts and Sciences
University of Northern Iowa

Kirkwood Community College

Clark Ford
Associate Professor
Food Science and Human Nutrition Department
Iowa State University

Richard B. Hall
Professor of Forestry
Natural Resource Ecology and Management
Iowa State University

Robert L. De Haan
Chair, Environmental Studies Department
Professor of Biology
Dordt College

Johanna Foster
Associate Professor
Biology Department
Wartburg College

Emily Heaton
Assistant Professor
Biomass Crop Production Department of Agronomy
Iowa State University

Diane Debinski
Professor
Ecology, Evolution, and Organismal Biology
Iowa State University

Laurence Fuortes
Professor
Occupational and Environmental Health, College of Public Health
University of Iowa

Suzanne Hendrich
Professor
Food Science and Human Nutrition
Iowa State University

Rhawn Denniston
Professor
Department of Geology
Cornell College

Laurie Furlong
Chair
Biology Department
Northwestern College

Steve Hendrix
Professor
Department of Biology
University of Iowa

Gary Donnermeyer
Biology Professor
Math-Science Department
Kirkwood Community College

Lonnie Gamble
Co-Director
Sustainable Living Department
Maharishi University of Management

Richard Honiatko
Professor of Biochemistry
Department of Biochemistry, Biophysics & Molecular Biology
Iowa State University

Kamyar Enshayan
Director
Center for Energy & Environmental Education
University of Northern Iowa

Jack Gittinger
Professor
Science Education
Simpson College

Brian Hornbuckle
Associate Professor
Department of Agronomy, Department of Electrical and Computer Engineering, Department of Geological & Atmospheric Sciences
Iowa State University

Lakshmi Durairaj
Associate Professor
Division of Pulmonary, Critical Care, and Occupational Medicine, Roy J. and Lucille A. Carver College of Medicine
University of Iowa

Charles Glatz
Professor
Chemical and Biological Engineering
Iowa State University

Vicki F. Grassian
Wendell F. Miller Professor
Departments of Chemistry & Chemical and Biochemical Engineering
University of Iowa

Keri C. Hornbuckle
Professor, Department of Civil & Environmental Engineering
Associate Dean for Academic Programs, College of Engineering
University of Iowa

Julie Ehresmann
Advanced Instructor, Science
Science Department
Iowa Central Community College

Fredric Gerr
Professor
Department of Occupational and Environmental Health, College of Public Health
University of Iowa

Stephen Howell
Professor
Plant Sciences Institute
Department of Genetics, Development and Cell Biology
Iowa State University

Advanced Instructor, Science
Science Department
Iowa Central Community College

Charles Glatz
Professor
Chemical and Biological Engineering
Iowa State University

Vicki F. Grassian
Wendell F. Miller Professor
Departments of Chemistry & Chemical and Biochemical Engineering
University of Iowa

Mohammad Iqbal
Professor of Geology & Environmental Science
Department of Earth Science
University of Northern Iowa

R. William Field
Professor
Occupational & Environmental Health, Department of Epidemiology, College of Public Health
University of Iowa

Benjamin J. Greenstein
Associate Dean of the College
Professor of Geology
Department of Geology
Cornell College

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Erin Irish
Associate Professor of Biology
University of Iowa

Joel N. Kline
Professor of Medicine & Occupational and Environmental Health
Roy J. and Lucille A. Carver College of Medicine, University of Iowa

Mark T. Madsen
Professor
Department of Radiology
University of Iowa

Laura Jackson
Director, Tallgrass Prairie Center
Professor of Biology
Department of Biology
University of Northern Iowa

Witold Krajewski
Director, Iowa Flood Center,
Rose & Joseph Summers Chair in Water Resources
University of Iowa

Dave May
Professor
Department of Geography
University of Northern Iowa

Sam James
Adjunct Associate Professor
Department of Biology
University of Iowa

Rick Lampe
Professor Emeritus
Department of Biology
Buena Vista University

Paul Mayes
Professor of Biology-Retired
Eastern Iowa Community College

Brandi Jansen
Clinical Assistant Professor
Occupational and Environmental Health, College of Public Health
University of Iowa

Dennis Lavrov
Associate Professor
Department of Ecology, Evolution, and Organismal Biology,
Iowa State University

M. Patrick McAdams
Emeritus Faculty
Division of Health and Life Science
William Penn University

Clinical Assistant Professor
Occupational and Environmental Health, College of Public Health
University of Iowa

Hans-Joachim Lehmler
Associate Professor
Occupational and Environmental Health
University of Iowa

Katherine McCarville
Associate Professor of Geosciences
School of Science and Mathematics
Upper Iowa University

Laura R. Jarboe
Associate Professor
Chemical and Biological Engineering
Iowa State University

Louis Licht
Associate Professor, Adjunct
Department of Civil & Environmental Engineering
University of Iowa

Paul B. McCray
Professor
Department of Pediatrics
Roy J. and Lucille A. Carver College of Medicine, University of Iowa

John Jorstad
Science Instructor
Western Iowa Tech Community College

Matt Liebman
Professor and H.A. Wallace Endowed Chair for Sustainable Agriculture
Department of Agronomy
Iowa State University

David McCullough
Professor of Biology, Co-coordinator
Environmental Science and Studies
Wartburg College

Craig Just
Assistant Professor
Department of Civil & Environmental Engineering
University of Iowa

Ronald Lindblom
Science Instructor, VESTA Coordinator,
Outdoor Learning Lab Manager
Northeast Iowa Community College

James Merchant
Professor
Occupational and Environmental Health, College of Public Health
University of Iowa

Kristopher J. Keuseman
Assistant Professor of Chemistry,
Medical Laboratory Science Program Director
Department of Natural & Applied Sciences
Mount Mercy University

Marc Linderman
Associate Professor
Department of Geography
University of Iowa

Laura C. Merrick
Lecturer
Department of Agronomy
Iowa State University

Frederick Kirschenmann
Distinguished Fellow
Leopold Center for Sustainable Agriculture
Iowa State University

Gabriele Ludewig
Professor
Occupational & Environmental Health
University of Iowa

Kenneth J. Moore
Charles F. Curtiss Distinguished Professor
Department of Agronomy
Iowa State University

Andrew Kitchen
Assistant Professor
Department of Anthropology
University of Iowa

Charles F. Lynch
Professor
Department of Epidemiology
College of Public Health
University of Iowa

Peter L. Moore
Adjunct Assistant Professor
Natural Resources Ecology & Management
Iowa State University

Erwin Klaas
Professor Emeritus of Animal Ecology
Natural Resources Ecology Management
Iowa State University

J. Elizabeth Maas
Biology and Environmental Science Instructor
Math/Science Department
Kirkwood Community College

Forest Morrissett
Instructor of Biology
Biology Department
Southeastern Community College

Endorser affiliations are for identification purposes only and do not reflect the views of their academic institutions.

October 10, 2014
Iowa Climate Statement 2014: Impacts on the Health of Iowans

Rasika G. Muralige-Jayawickrama
Associate Professor of Plant Biology
Department of Natural and Applied Sciences
University of Dubuque

Endorser

Marian Muste
Research Engineer and Adjunct Professor
IIHR-Hydroscience & Engineering
University of Iowa

Connie Mutel
Senior Science Writer
IIHR-Hydroscience & Engineering
University of Iowa

Robert Mutel
Professor of Astronomy
Department of Physics and Astronomy
University of Iowa

William M. Nauseef
Director, Inflammation Program
Professor of Medicine and of Microbiology
Roy J. and Lucille A. Carver College of Medicine
University of Iowa

Maurine Neiman
Assistant Professor
Department of Biology
University of Iowa

Steve L. O’Kane, Jr.
Professor of Biology
Department of Biology
University of Northern Iowa

Resmiye Oral
Clinical Professor of Pediatrics
Director, Child Protection Program
University of Iowa Children’s Hospital,
Roy J. and Lucille A. Carver College of Medicine, University of Iowa

Patrick T. O’Shaughnessy
Professor
Director, Heartland Center for Occupational Health and Safety
Occupational & Environmental Health
University of Iowa

Dale W. Olson
Professor of Physics
Department of Physics
University of Northern Iowa

Steve Openshaw
Professor
Science Department
Iowa Central Community College

Corrine Peek-Asa
Professor, Associate Dean for Research, Occupational and Environmental Health, College of Public Health
University of Iowa

Maria Perez
Adjunct Instructor
Department of Biology
University of Northern Iowa

Gary Phillips
Professor
Environmental Studies Department
Iowa Lakes Community College

Jeff Ploegstra
Assistant Professor of Biology
Dordt College

Jim Raich
Professor
Department of Ecology, Evolution and Organismal Biology
Iowa State University

Mark Rasmussen
Director
Leopold Center for Sustainable Agriculture
Iowa State University

Ryan Rehmeier
Associate Professor and Chair
Department of Biology and Environmental Science
Simpson College

Peter Reilly
Anson Marston Distinguished Professor Emeritus in Engineering
Chemical and Biological Engineering
Iowa State University

Michael Renner
Professor
Environmental Science and Policy Program
Drake University

Heather A. Riley
Professor of Chemistry
Science Department
Des Moines Area Community College

Larry Robertson
Professor
Occupational & Environmental Health College of Public Health
University of Iowa

Jennifer G. Robinson
Professor, Departments of Epidemiology & Medicine, Director, Prevention Intervention Center,
College of Public Health
University of Iowa

Nilda E. Rodriguez
Assistant Professor
Department of Biology
University of Northern Iowa

Diane Rohiman
Associate Professor
Occupational & Environmental Health
College of Public Health
University of Iowa

Thomas Rosburg
Professor
Department of Biology
Biodiversity Center and Herbarium
Drake University

Amber D. Ruskell-Lamer
Natural Sciences Instructor
Department of Math and Sciences
Southeastern Community College

Ann Russell
Affiliate Assistant Professor
Natural Resources Ecology & Management
Iowa State University

James B. Sacco
Assistant Professor
College of Pharmacy and Health Sciences
Drake University

Melanie H. Sadeghpour
Associate Professor/Program Chair, Environmental Science
Co-Chair, DMACC Sustainability Task Force
Des Moines Area Community College

Ali Asgar K. Salem
Professor and Head
Department of Pharmaceutical Sciences and Experimental Therapeutics
College of Pharmacy
University of Iowa

J. Michael Sallee
Biology Instructor
Southeastern Community College

Paula Sanchini
Professor
Department of Biology
Coe College

Michelle Scherer
Professor and Chair
Department of Civil and Environmental Engineering
University of Iowa

Jerald Schnoor
Co-Director
Center for Global and Regional Environmental Research
University of Iowa

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5
Lisa Schulte Moore
Associate Professor
Natural Resource Ecology & Management
Iowa State University

Timothy M. Sesterhenn
Assistant Professor of Biology
Department of Biology and Chemistry
Morningside College

Anupam Sharma
Assistant Professor
Aerospace Engineering
Iowa State University

David A. Shealer
Associate Professor of Biology
Loras College

Mack Shelley II
Professor of Statistics Political Science, and Educational Leadership and Policy Studies
Iowa State University

William W. Simpkins
Professor of Hydrogeology
Department of Geological and Atmospheric Sciences
Iowa State University

Mindy Skarda
Biology Instructor
Biology Department
Southwestern Community College

Daryl Smith
Professor of Biology and Advocate
Tallgrass Prairie Center
University of Northern Iowa

Tex A. Sordahl
Professor of Biology
Department of Biology
Luther College

Scott Spak
Assistant Professor
Public Policy Center
University of Iowa

Martin St. Clair
Professor
Department of Chemistry and Environmental Studies
Coe College

Charles Stanier
Associate Professor of Chemical and Biochemical Engineering
College of Engineering
University of Iowa

Bill Stigliani
Professor
Center for Energy & Environmental Education
University of Northern Iowa

Elizabeth A. Stone
Assistant Professor
Department of Chemistry
University of Iowa

Monica R. Storm
A&P Instructor
Biological Sciences
Iowa Western Community College

Robert Summerfelt
Professor Emeritus
Department of Natural Resource Ecology and Management
Iowa State University

Keith S. Summerville
Associate Dean, College of Arts and Sciences
Associate Professor
Environmental Science and Policy
Drake University

Fayyaz Sutterwala
Associate Professor
Department of Internal Medicine
Roy J. and Lucille A. Carver College of Medicine
University of Iowa

Gene Takle
Director, ISU Climate Science Program
Professor of Geological & Atmospheric Sciences
Department of Agronomy
Iowa State University

Geb Thomas
Associate Professor
Department of Mechanical and Industrial Engineering
University of Iowa

Sara S. Tolsma
Professor of Biology
Northwestern College

Richard L. Valentine
Professor
Department of Civil and Environmental Engineering
University of Iowa

Qun Wang
Adjunct Assistant Professor
Department of Chemical and Biological Engineering
Iowa State University

Kristina Walkup
Associate Professor
Biology
Des Moines Area Community College

Michael Walter
Associate Professor
Department of Biology
University of Northern Iowa

Larry Weber
Edwin B. Green Chair in Hydraulics
Director, IIHR - Hydrosience and Engineering
University of Iowa

Paul Weihe
Associate Professor
Biology & Environmental Science
Biology Department
Central College

Jerrold Weiss
Professor
Department of Internal Medicine, The Inflammation Program, Roy J. and Lucille A. Carver College of Medicine, University of Iowa

Michael D. Wichman
Associate Director
Environmental Health Division
State Hygienic Laboratory
University of Iowa

Darrell Wiens
Professor of Biology
Department of Biology
University of Northern Iowa

Danielle Wirth
Adjunct Assistant Professor
Environmental Science and Policy
Drake University

Lee Wymore
Professor and Program Director
Department of Science and Mathematics
Indian Hills Community College

Mark A. Young
Associate Professor
Department of Chemistry
University of Iowa

Catherine Zeman
Professor, Environmental Health
Health Division
University of Northern Iowa

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