

Climate Change and Occupational Safety and Health: the NIOSH Perspective

Health Impacts from Climate Change

Aspen Global Change Institute

September 12, 2016

Max Kiefer

NIOSH Western States Division

Denver, Colorado

Agenda

NIOSH Overview

Climate Change and Workers

NIOSH Climate Change Initiative

Research Needs

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National Institute for Occupational Safety and Health



Every day in the US...

9,000 U.S. workers sustain disabling injuries

16 die from a work injury

137 die from work-related illnesses



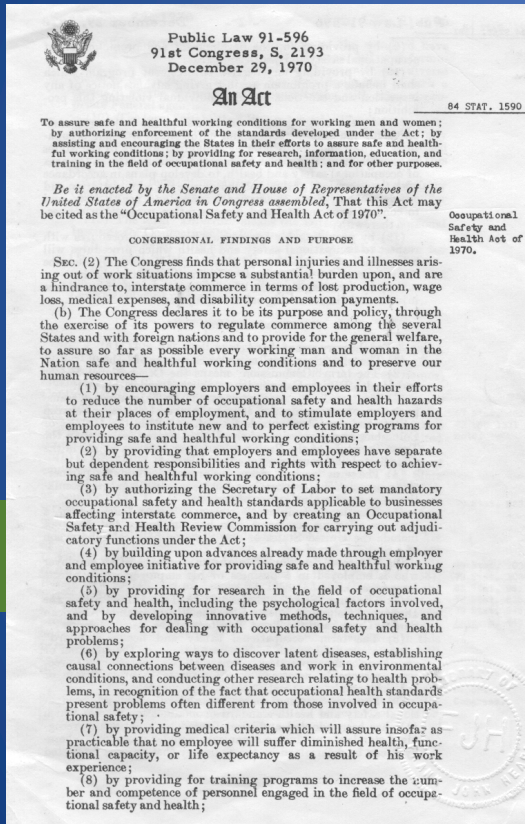
Origin of NIOSH

Occupational Safety and Health Act of 1970
created OSHA and NIOSH

U.S. federal agency that conducts research
and makes recommendations to prevent
worker injury and illness

NIOSH Mission

To provide leadership in research to prevent
work-related illness, injury, disability, and
death.



Department of Health and Human Services
Centers for Disease Control and Prevention
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Occupational Safety and Health

Regulation/Enforcement/
Consultation

Research/Recommendations

Department of Labor
(DOL)

Department of
Health and Human Services
(HHS)

Mine Safety
and Health
Administration
(MSHA)

Occupational
Safety and Health
Administration
(OSHA)

Centers for Disease
Control and Prevention
(CDC)

National Institute for
Occupational Safety
and Health (NIOSH)

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NIOSH

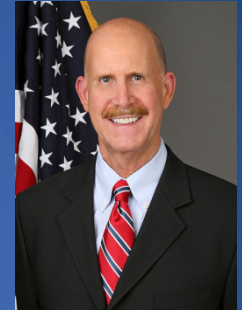
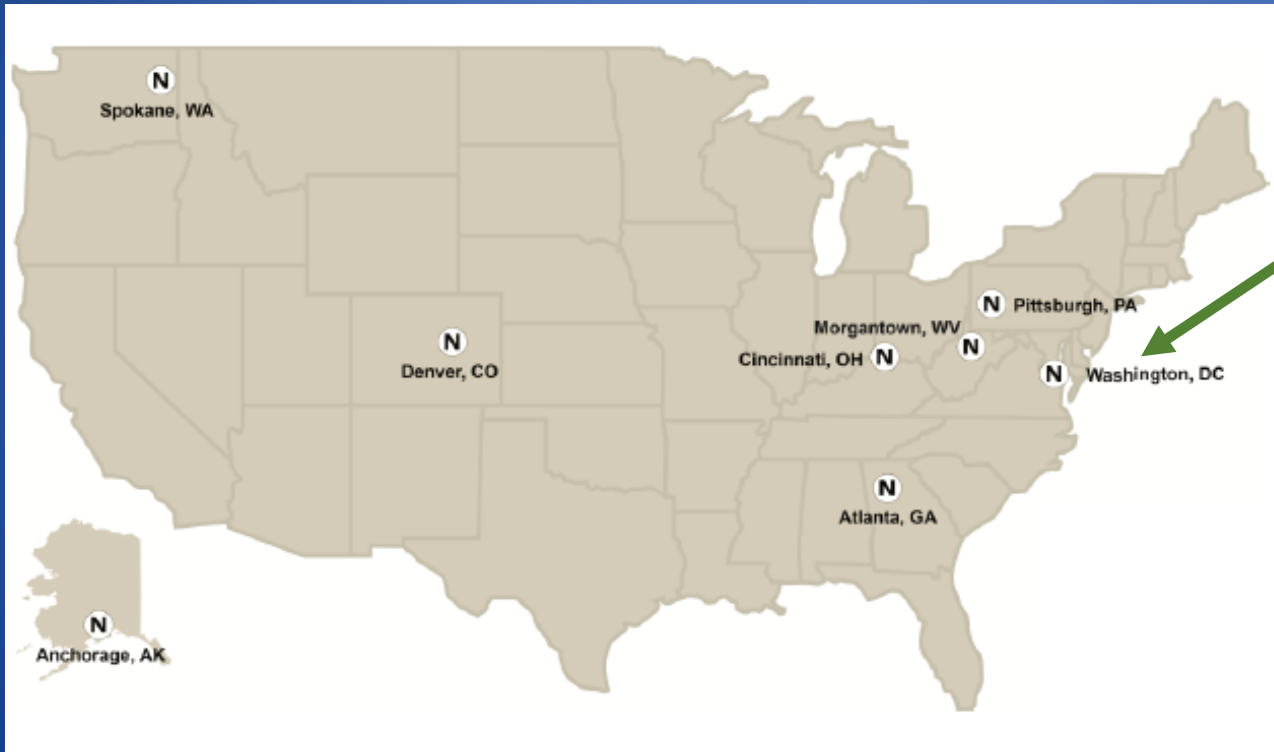


Joined CDC
in 1973

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NIOSH Locations



Washington, DC
Atlanta, GA
Spokane, WA
Cincinnati, OH
Morgantown, WV
Pittsburgh, PA
Anchorage, AK
Denver, CO

NIOSH Programs

- Epidemiology and surveillance
- Field studies
- Laboratory research
- Exposure measurement
- Control technology
- Protective equipment
- Training



Climate Change and Workers

Amplification of existing hazards

New, unanticipated, or unrecognized hazards

Changes in how we respond to climate change

Why Workers are Important

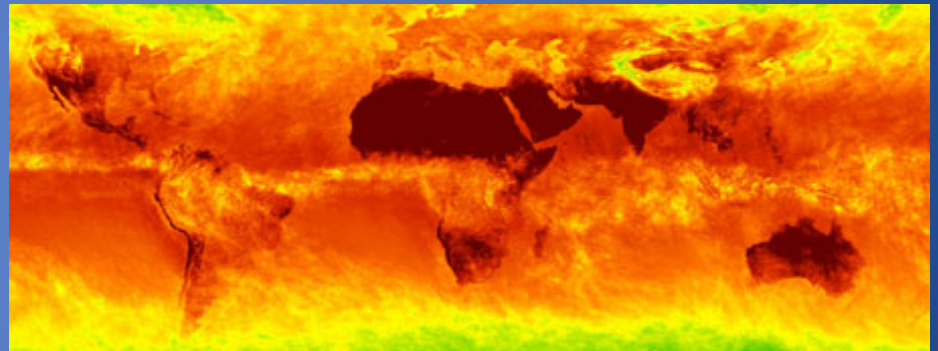
Workers are often at higher risk

Workers face unique hazards

Intervention opportunities

Climate Change and Workers

- Temperature Extremes
- Air Pollution
- Extreme Weather
- Wildland Fires
- Vector-borne and Other Infectious Diseases
- Changes in Built Environment
- Industrial Transitions





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NIOSH Activities

2009

Developed a Conceptual Framework

2014

Established Climate Change Workgroup

2015

Established Climate Change Initiative

NIOSH Climate Change Workgroup

Charter

Ensure current, emerging, and anticipated worker safety and health issues associated with climate change are appropriately identified and prioritized, and to determine the most important actions to address these issues

NIOSH Climate Change Work Group Determination

There is strong evidence that climate change is and will present occupational safety and health (OSH) hazards

Numerous critical research questions need to be resolved to better characterize and understand how OSH may be associated with climate change events

Workers should be included as a core component of all climate change related public health initiatives

Work Group Accomplishments

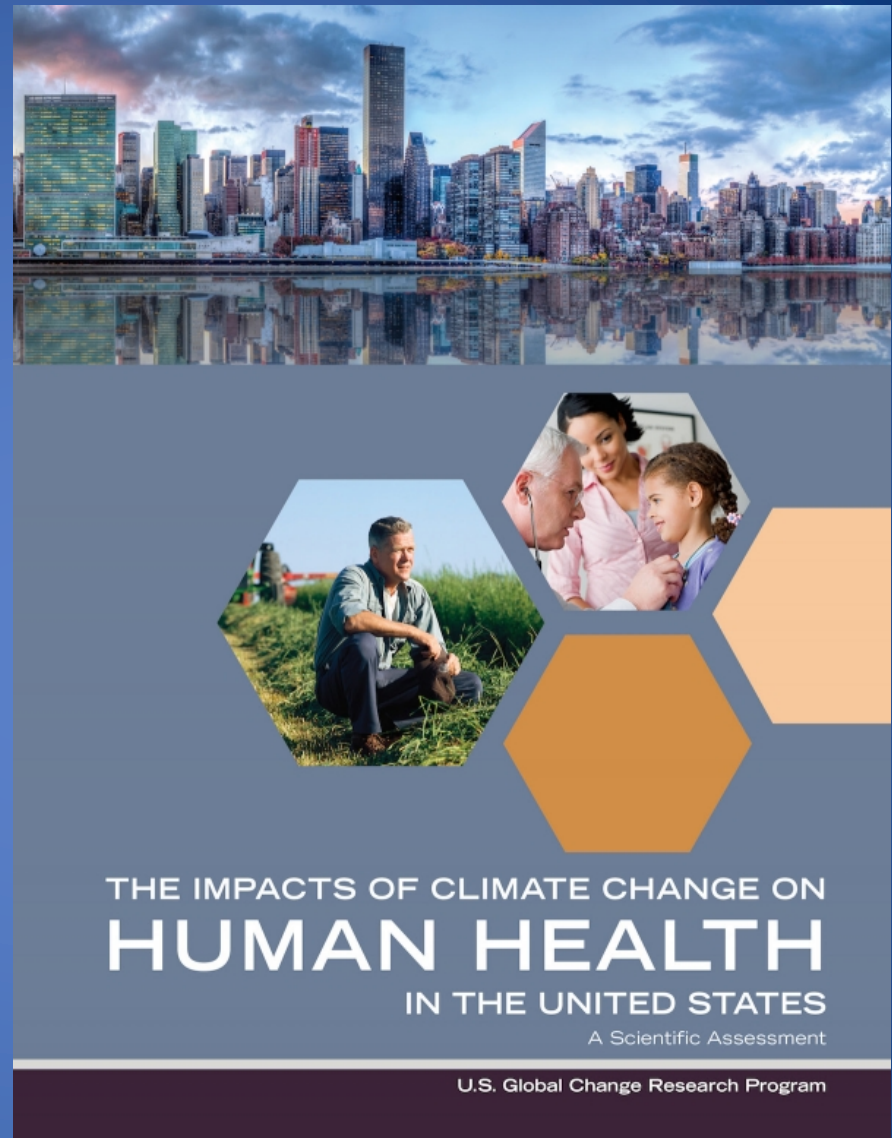
- Developed internal report and draft research agenda
- Intramural project funded:
 - *Identifying Workers and Facilities Likely to be Impacted by Severe Weather Events Stemming from Climate Change: a Geospatial Approach*
- Established comprehensive reference database on climate change
- Published peer reviewed and professional association papers
- Launched NIOSH Climate Change Web Site
- Presentations at National/International conferences

Interagency Activities

- USGCRP Interagency Special Report on the Impacts of Climate Change on Human Health
- OSH contribution to DHHS Adaptation Plan
- DHHS Work Group
- Interagency Environmental Justice WG
- NIEHS, EPA
- International – IRSST, PAHO

Activities coordinated with CDC's Climate and Health Program

OSH inclusion in the Interagency Climate Change and Human Health Report



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Communicating our Findings

CDC Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

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The National Institute for Occupational Safety and Health (NIOSH)

Workplace Safety & Health Topics

Climate Change and Occupational Safety and Health

Climate Change: A Risk for Workers

Related Publications

Related Web Resources

Related Topics

- Outdoor Workers
- Heat Stress
- Poisonous Plants
- West Nile Virus
- Lyme Disease
- Tick-borne Diseases
- Natural Disasters
- Green, Safe and Healthy Jobs

Providing National and World Leadership to Prevent Workplace Illnesses and Injuries **NIOSH**

NIOSH > Workplace Safety & Health Topics > Climate Change and Occupational Safety and Health

CLIMATE CHANGE AND OCCUPATIONAL SAFETY AND HEALTH

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Climate Change and Occupational Safety and Health

Posted on September 22, 2014 by

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Ill Wind

Climate Change and Industrial Hygiene

BY MAX KIEFER AND JOANNA WATSON

What does climate change have to do with industrial hygiene?

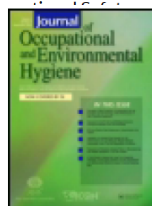
Well, the guiding tenets of our profession are "anticipation, recognition, evaluation, control, and confirmation," and these certainly apply to emerging issues such as the impact of climate change on worker safety and health. A report released in May 2014 by the U.S. Global Change Research Program concluded that weather and climate patterns are changing, causing increasingly frequent and severe heat waves, wildland fires, drought, flooding, and extreme weather events, as well as a rise in sea levels. What was a theoretical possibility some 20 or so years ago has now become a recognized public health threat. Global climate change has become one of the most visible environmental concerns of the 21st century, and it has the potential to affect worker health and safety both directly and indirectly.

It is not to debate the potential causes of climate change, but rather to focus on what we can do as safety and health professionals to address a changing climate. It is important that we do so proactively, addressing the health issues, and identify controls for them as we can.

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Journal of Occupational and Environmental Hygiene



ISSN: 1545-9624 (Print) 1545-9632 (Online) Journal homepage: <http://www.tandfonline.com/loi/uoeh20>

Advancing the Framework for Considering the Effects of Climate Change on Worker Safety and Health

P.A. Schulte, A. Bhattacharya, C.R. Butler, H.K. Chun, B. Jacklitsch, T. Jacobs, M. Kiefer, J. Lincoln, S. Pendergrass, J. Shire, J. Watson & G.R. Wagner

NIOSH Climate Change Initiative

Mission: Protect workers from the adverse impacts of climate change

1. Identify current, emerging, and anticipated worker safety and health issues
2. Increase awareness of occupational hazards resulting from climate change
3. Use research findings to develop recommendations, guidance and policies

NIOSH Climate Change Initiative Objectives

- Promote and coordinate innovative intramural and extramural research
- Support and help facilitate other NIOSH initiatives with climate change implications
- Establish and communicate research priorities
- Recommend appropriate policies to NIOSH Leadership

Objectives - Continued

- Collaborate with agencies and organizations involved with climate change
- Participate on standard setting and technology development committees
- Maintain an inventory of intra- and extra-mural Climate Change projects/initiatives
- Develop guidance documents, publications, and other products pertinent to climate change and OSH

Research Priorities

- **Characterize who is impacted and how**
 - Surveillance
 - Targeted data collection
 - Leading indicators
- **Determine controls and guidance**
 - Transfer existing knowledge
 - Identify new interventions
- **Research to Practice**
 - Disseminating information/risk communication
 - Influencing policy

Challenges

- Defining “climate change related”
- Estimating burden
- Identifying emerging hazards
- Communicating importance of workers

Conclusions

- Considerable research needs
- Existing evaluation and control strategies often apply
- Continuous reassessment
- Involve stakeholders and leverage resources
- Workers should be included in public health and climate change activities

Contributors

Paul Schulte

J. Lincoln

A. Bhattacharya

S. Pendergrass

C.R. Butler

J. Shire

HK Chun

G.R. Wagner

B. Jacklitsch

T. Jacobs

J. Watson

Manager, NIOSH Climate Change Initiative

Joanna Watson, MSc DPhil

Epidemiologist, NIOSH Western States Division

Spokane, WA

509-354-8063

WGQ6@cdc.gov

Questions/Discussion



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