Implications of a Changing Arctic on Water Resources and Agriculture in the Central U.S.  
Nebraska Research Innovation Campus  
November 10-12, 2015

Updated 10-08-2015

Tuesday, November 10
0800-830  Registration
0830-900  Welcome and Opening Remarks  
  Don Wilhite, Applied Climate Science, School of Natural Resources, UNL  
  Martha Shulski, Director, High Plains Regional Climate Center, UNL

0900-1000  Plenary Session: Implications of a Changing Arctic  
  Don Wilhite (Moderator)

  An Arctic Connection to Extreme Weather in Mid-Latitudes: New Evidence, Mechanisms, Metrics, and Emerging Questions.  
  Jennifer Francis, Research Professor, Department of Marine and Coastal Sciences, Rutgers University

1000-1030  Refreshment Break

1030-1200  Plenary Session: Implications of a Changing Arctic on Mid-Latitude Weather Patterns and Climate Extremes  
  Michael Hayes, Director, National Drought Mitigation Center, UNL (Moderator)

  Arctic Change and Possible Influence on Mid-latitude Weather Extremes.  
  Judah Cohen, Principal Scientist, Climate Analysis Group, Atmospheric and Environmental Research

  Is ‘Warm Arctic, Cold Continent’ a Fingerprint Pattern of Climate Change?  
  Marty Hoerling, Physical Sciences Division, NOAA/ESRL

1200-1330  Lunch

1330-1500  Plenary Session: Building Resilience to a Changing Water Regime: Implications for water resources in the Great Plains and Midwest regions  
  Roberto Lenton, Executive Director, Daugherty Water for Food Institute, University of Nebraska (Moderator)

  TBA.  Richard Palmer, Director of the DOI Northeast Climate Science Center, University of Massachusetts

  A Fresh Look at Central U.S. Extreme Precipitation Trends.  Ken Kunkel, NOAA’s National Centers for Environmental Information,

1500-1530  Refreshment Break
1530-1700  Plenary Session: Building Resilience to a Changing Climate Regime: Implications for agriculture in the Great Plains and Midwest regions

Mark Brusberg, Deputy Chief Meteorologist, USDA (Moderator) (invited)

Healthy Soils as the Cornerstone of Climate Resilience for Agriculture. Jerry Hatfield, Research Plant Physiologist, National Laboratory for Agriculture and the Environment, USDA/ARS, Ames, Iowa

Using the Arctic Oscillation to Improve Agricultural Decisions. Guillermo Baigorria, Crop Simulation Modeler, UNL

Discussant:
Gene Takle, Director, Climate Science Program, Iowa State University, Ames, Iowa

1700-1830  Dinner (Banquet hall, Nebraska Innovation Campus)

1900-2100  Public Lecture

Introductions, Don Wilhite, Applied Climate Science, School of Natural Resources, University of Nebraska-Lincoln

- The U.S. Chairmanship of the Arctic Council: Why should we care about the Arctic? Karen Florini, Deputy Special Envoy for Climate Change, U.S. Department of State.
- Crazy Weather and the Arctic Meltdown: Are they connected? Jennifer Francis, Research Professor, Department of Marine and Coastal Sciences, Rutgers University.

Wednesday, November 11
0800-845  Plenary Session: Climate change, drought and agriculture

Clinton Rowe, Department of Earth and Atmospheric Sciences, UNL (Moderator)

Trends in Climate Teleconnections and Effects on the Midwest. Donald Wuebbles, Professor of Atmospheric Science, University of Illinois and Assistant Director, Office of Science and Technology Policy, and Zach Zobel, University of Illinois.


Michael Hayes, Director, National Drought Mitigation Center, and Mark Svoboda, Climatologist and Monitoring Program Leader, National Drought Mitigation Center, UNL.

0930-1000  Refreshment Break

1000-1030  Plenary Session: Climate change, drought and agriculture (continued)

Marty Hoerling, NOAA/ESRL, Physical Sciences Division.

1030-1045 Breakout group instructions

1045-1215 Breakout groups: Water resources and agriculture
- What are the key concerns for the water resources and agricultural sectors in association with increasing climate variability and the occurrence of extreme events?
- What adaptation and mitigation actions could be used to deal with a changing climate in the future?
- What data and information needs/gaps exist to effectively respond?
- What key communication strategies are required to promote changes in water and agricultural management practices?
- What research gaps/priorities exist?
- What policy options should be considered in order to adapt to and mitigate the effects of a changing climate on agriculture and water resources?

1215-1330 Lunch

Capturing Climate Variability and Change in the Platte River Basin.

Mike Forsberg, Nature Photographer.

1330-1500 Management Strategies Associated with a Changing Climate: A Local, Regional and Global Perspective (Stakeholder Panel)

Donald Wilhite, Applied Climate Science, School of Natural Resources (Moderator)

Douglas Bereuter, Co-chairman, Chicago Council on Global Affairs' Global Agricultural Development Initiative; Member, State Department's International Security Board (Arctic Policy Study Committee)

John Berge, Manager, North Platte Natural Resources District

Martha Kauffman, Managing Director, Northern Great Plains Program, World Wildlife Fund

John Hansen, President, Nebraska Farmers Union

1500-1530 Refreshment Break

1530-1700 Breakout Group Session: Report back
Water resources and agriculture breakout group discussions

Thursday, November 12
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| 0800-1000| Adapting to a Changing Regional Climate: Understanding and Communicating the Science to Practitioners/Identifying Adaptation and Mitigation Actions/Policy Implications  
*Martha Shulski*. Director, High Plains Regional Climate Center, University of Nebraska-Lincoln (Moderator)  
**Panelists:**  
*Linda Prokopy*, Natural Resource Social Science, Purdue University  
*Taryn Finnessey*, Colorado Water Conservation Board  
*Dennis Todey*, South Dakota State Climatologist, South Dakota State University  
*Tom Buman*, AGREN |
| 1000-1030| Refreshment Break                                                                |
| 1030-1130| Recommendations and Next Steps                                                    |
| 1130-1200| Wrap-up and Adjourn                                                              |