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

Program Updated (11/12/2015)

Tuesday, November 10
720 Shuttle Pick-up at the Courtyard Marriott - 808 R Street.
0800-830 Registration
0830-900 Welcome and Opening Remarks
   Don Wilhite, Professor, Applied Climate Science, School of Natural Resources, UNL
   Martha Shulski, Director, High Plains Regional Climate Center, UNL
   Roberto Lenton, Executive Director, Daugherty Water for Food Institute, University of Nebraska

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
   Science of Arctic Change- Implications for Central U.S. Water and Agriculture
   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)

   Implications of Extreme Climate Events for Water Management and Policy. 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 -2030 Public Lecture (https://youtu.be/WhKG6EckN_c)

   Introductions, Don Wilhite, Applied Climate Science, School of Natural Resources, University of Nebraska-Lincoln
   • Crazy Weather and the Arctic Meltdown: Are they connected? Jennifer Francis, Research Professor, Department of Marine and Coastal Sciences, Rutgers University.

2045 Shuttle Pick-up at the NIC Conference Center and transport back to the Courtyard Marriott.

Wednesday, November 11

0720 Shuttle Pick-up at the Courtyard Marriott - 808 R Street.

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?

1215-1345 Lunch
Capturing Climate Variability and Change in the Platte River Basin.
Mike Forsberg, Nature Photographer.

1345-1530 Stakeholder Panel Discussion
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

1530-1600 Refreshment Break
The Arctic Council and more: U.S. engagement on international climate. 
Karen Florini, Deputy Special Envoy for Climate Change, U.S. Department of State.

1730 Shuttle Pick-up at the NIC Conference Center and transport back to the Courtyard Marriott.

Thursday, November 12

720 Shuttle Pick-up at the Courtyard Marriott - 808 R Street.
0800–0900 Breakout Group Session: Report back Water resources and agriculture breakout group discussions

0900-1030 Panel Discussion 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

Refreshment Break (incorporated in the panel discussion)

1030-1130 Recommendations and Next Steps

1130-1200 Wrap-up and Adjourn
1200 Shuttle Pick-up at the NIC Conference Center and transport back to the Courtyard Marriott.