State Climatologist Program

Roger A. Pielke, Sr.

Colorado State Climatologist,

Past President, American Association of State Climatologists (AASC),

Colorado Climate Center

Colorado State University

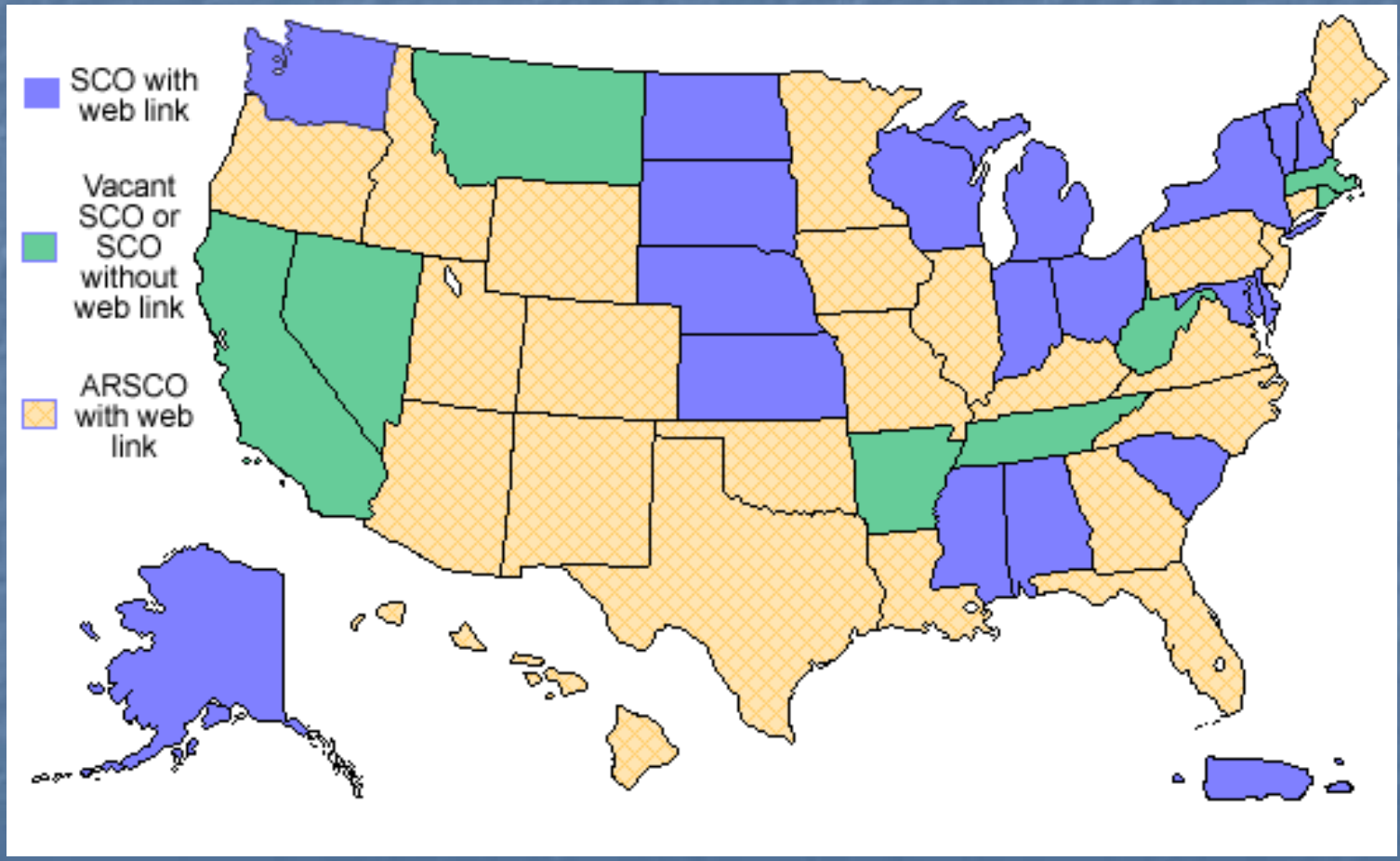
Colorado State University

Knowledge to Go Places

Current Officers of AASC

- Dave Robinson, NJ, President (term Aug 2003-Aug 2004)
- Ken Crawford, OK, President-elect (term Aug 2004-Aug 2006)
- Paul Knight, PA, Secretary-Treasurer (term Aug 2003-Aug 2005)

State Climate Offices



taken from http://lwf.ncdc.noaa.gov/oa/climate/stateclimatologists.html

New State Climatologists

- Dennis Todey, SD (new appointment)
- Mark Wysocki, NY (new appointment)
- Philip Mote, WA (new appointment)

AASC News

- Don Jensen, UT, retired
- Keith Eggleston, NY, resigned
- Jay Grymes, LA, resigned
- John Griffiths, TX, deceased
- Dwight Pollack, AK, deceased
- New NCDC liaison, from Mike Helfert to Tim Owen
- Steve Doty, NCDC, retired

AASC Recognized State Climate Office (ARSCO)

I. INTRODUCTION

The mission of the National Climate Services Partnership is to effectively provide the nation with high-quality, timely, and relevant climate services. This comes at a time when the demand for climate services is at record levels and is expected to continue growing. The National Climate Services Partnership, comprised of national and regional centers and American Association of State Climatologists (AASC) recognized state climate offices, was created to meet this need. The Partnership seeks to meet the following objectives:

- Maximize the efficiency and effectiveness of the partners
- Minimize duplication of services
- Streamline climate information delivery

This document defines the role of the AASC Recognized State Climate Office (ARSCO) within this partnership. The ARSCOs bring their climatological expertise and climate resources to serve the citizens of their states with specific and first-hand support. This support will aid in climate-related decisions for users in the public and private sectors.

II. THE NATIONAL CLIMATE SERVICES PARTNERSHIP

A. Role of National Partner -- The National Partner, the National Climatic Data Center (NCDC), is responsible for the archive, quality control, dissemination, monitoring, and description of global and nationally observed climate data. These data are the source for local, regional, national, and global climate descriptors and summaries produced by NCDC.

B. Role of Regional Partner -- The Regional Partners, the Regional Climate Centers (RCCs), are responsible for the collection of regionally observed climate data and the application of these data to region-wide problems and issues. Dissemination of climate data and information are targeted to a broad regional audience. The RCCs will also serve end users in those states lacking a state climate office.

C. Role of the State Partner -- To satisfy the current and growing needs for climate services, climatological expertise must be readily available at the local level. The AASC Recognized State Climate Office has the best understanding of the climate of its state, and the ability and knowledge to provide climate data and information to the user.

The ARSCO will engage in a variety of activities and services that include one or more of the following:

- Coordinate and collect weather observations for the purpose of climate monitoring
- Summarize and disseminate weather and climate information to the user community
- Demonstrate to the user community the value of climate information in the decision making process
- Perform climate impact assessments and weather event evaluations
- Conduct climate research, diagnosis, and projections

The National Climatic Data Center, the Regional Climate Centers, and the American Association of State Climatologists are fully committed to supporting the development of the ARSCO program.

The process of becoming an ARSCO is detailed in Section VI. The target is to have an ARSCO in every state and Puerto Rico by the end of 2002. In order to reach this target, the partners are encouraged to help cultivate potential ARSCOs in states without one.

III. ARSCO TERMS OF REFERENCE

The following set of capabilities and activities defines the requirements for qualification as an AASC Recognized State Climate Office.

Communication Capabilities -- ARSCOs must have adequate access to the Internet in order to connect to data archives at the NCDC, RCCs, and other locations. Multiple pathways for dissemination, e.g., telephone, fax, mail, and e-mail, shall be used and ARSCOs shall maintain Web sites.

A. Information Services -- ARSCOs shall have the capability and the willingness to provide data and information to users. ARSCOs are encouraged to charge fees for services in order to cover the cost of filling the users' requests.

B. Research -- ARSCOs investigate relationships between climate and human activities that impact their state.

C. Outreach -- ARSCOs shall evaluate the needs of the user community regularly, adjusting and developing products and services as required. Outreach activities will include the following: - Education: The ARSCOs will educate the people of their states on current and emerging climate issues. This may involve a combination of public appearances, publications, and information. - Climate Products: The ARSCOs will publish climate information, both printed and on-line. - Awareness: The ARSCOs will promote its program as well as regional and national programs. - Media Contacts: The ARSCOs will cultivate print and broadcast media contacts since they can greatly assist the ARSCOs' efforts to foster awareness and educate the public.

D. Monitoring and Impact Assessments -- ARSCOs monitor current climate conditions, evaluate potential future impacts and place events in historical perspective.

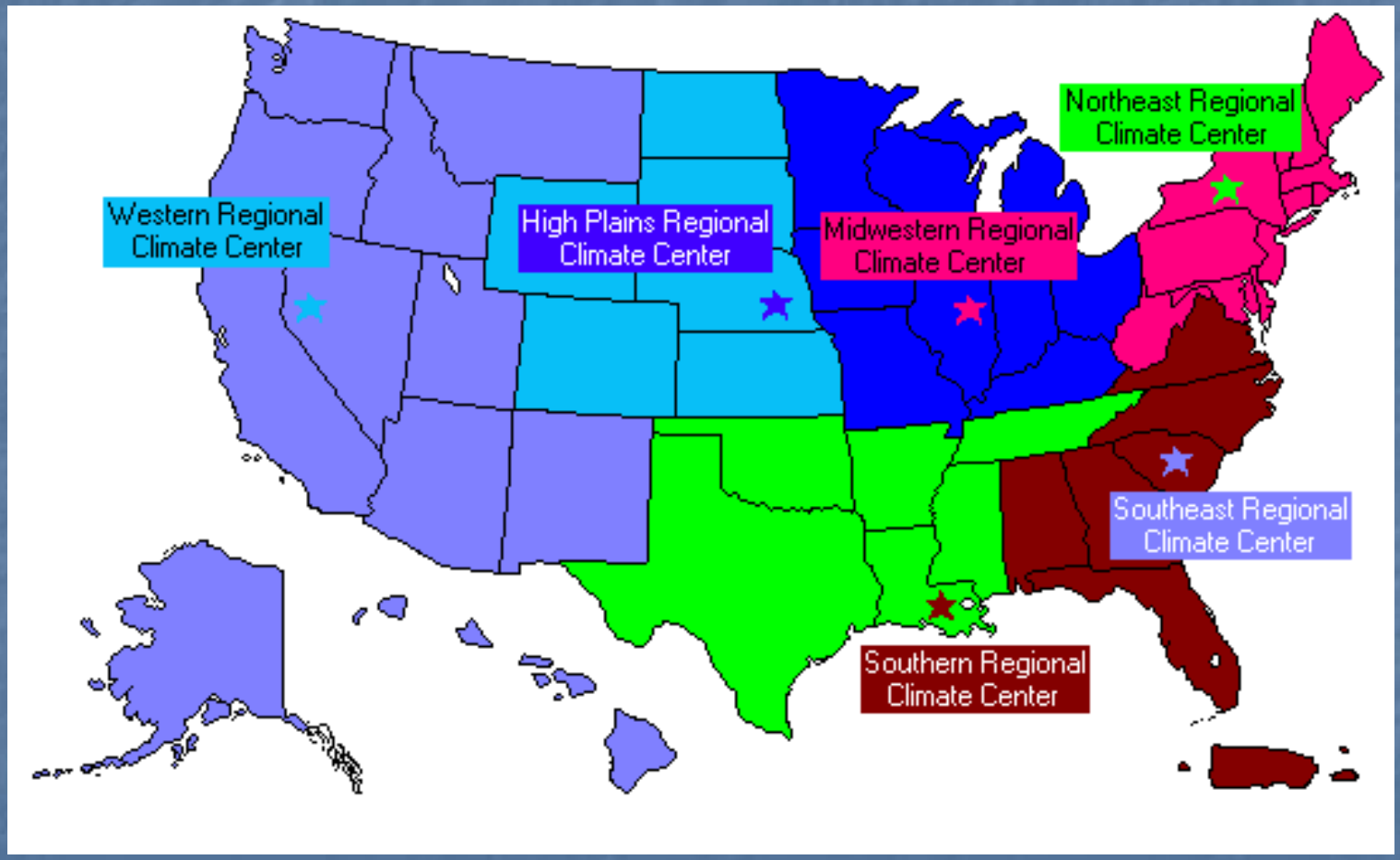
http://lwf.ncdc.noaa.gov/oa/climate/aasc.html#ARSCO

SC List and ARSCOs

John Christy, Alabama
Jim Rice, Alaska
Andrew W. Ellis, Arizona (ARSCO)
John G. Hehr, Arkansas
William A. Mork, Calif
Roger A. Pielke Sr, Colorado (ARSCO)
Xiusheng (Harrison) Yang, Connecticut (ARSCO)
Daniel J. Leathers, Delaware
James J. O'Brien, Florida (ARSCO)
David E. Stooksbury, Georgia (ARSCO)
Pao-Shin Chu, Hawaii (ARSCO)
Russell Qualls, Idaho (ARSCO)
Jim Angel, Illinois (ARSCO)
Ken Scheeringa, Indiana
Harry J. Hillaker, Jr., Iowa (ARSCO)`
Mary Knapp, Kansas
Stuart A. Foster, Kentucky
John M. ("Jay") Grymes, III, Louisiana (ARSCO)
Gregory A. Zielinski, Maine (ARSCO)
Kenneth E. Pickering, Maryland
David Taylor, Massachusetts
Jeffrey A. Andresen, Michigan
Jim Zandlo, Minnesota (ARSCO)
Charles L. Wax, Mississippi
F. Adnan Akyuz, Missouri (ARSCO)

No SC, Montana
Allen Dutcher, Nebraska
John W. James, Nevada
Jason Allard, New Hampshire
David A. Robinson, New Jersey (ARSCO)
Ted Sammis, New Mexico (ARSCO)
Mark Wysocki, New York
Sethu Raman, North Carolina (ARSCO)
John W. Enz, North Dakota
Jeffrey C. Rogers, Ohio
Ken Crawford, Oklahoma (ARSCO)
George H. Taylor, Oregon (ARSCO)
Paul Knight, Pennsylvania (ARSCO)
Amos Winter, Puerto Rico
No SC, Rhode Island
Dennis Todey, South Dakota
Wayne Hamberger, Tennessee
John Nielsen-Gammon, Texas (ARSCO)
E. Malek, Utah (ARSCO)
Lesley-Ann Dupigny-Giroux, Vermont
Patrick J. Michaels, Virginia (ARSCO)
Philip Mote, Washington
No SC, West Virginia
John A. Young, Wisconsin
Jan Curtis, Wyoming (ARSCO)

RCC



http://lwf.ncdc.noaa.gov/oa/climate/regionalclimatecenters.html

REGIONAL CLIMATE CENTERS

- Kenneth G. Hubbard, Director, High Plains RCC
- Steven D. Hilberg, Director, Midwestern RCC
- Arthur T. DeGeatano, Director, Northeast RCC
- Michael J. Janis, Director, Southeast RCC
- Kevin Robbins, Director, Southern RCC
- Richard Reinhardt, Director, Western RCC

AASC Accomplishments

- Input to the legislation on Global Change Research initiated by Congressman Udall. (http://ccc.atmos.colostate.edu/pdf/UdallBill.pdf)
- Input to the NOAA Climate Strategic Plan for Climate Change Science Program. (http://ccc.atmos.colostate.edu/pdfs/CommentsonStrategic%20PlanCCSP.pdf)
- AASC Policy Statement on Climate Variability and Change. (http://ccc.atmos.colostate.edu/policystatement.php)
- Testimony before House Subcommittee on Oversight and Investigations entitled "The U.S. National Climate Change Assessment: Do the Climate Models Project a Useful Picture of Regional Climate?" (http://energycommerce.house.gov/107/hearings/07252002Hearing676/Pielke,Sr.1144.htm)

AASC Accomplishments cont.

- Input to the National Association of State Universities and Land Grant Colleges advisory for climate science and for the NOAA budget.
- National Integrated Drought Information System Planning (Western Governors' Association).
- Continued development of the NCDC/NWS/AASC Partnership.

"Policy Statement on Climate Variability and Change"

American Association of State Climatologists (AASC)

This statement provides the perspective of the AASC on issues of climate variability and change. Since the AASC members work directly with users of climate information at the local, state and regional levels, it is uniquely able to put global climate issues into the local perspective needed by the users of climate information. Our conclusions are as follows:

1. Past climate is a useful guide to the future - Assessing past climate conditions provides a very effective analysis tool to assess societal and environmental vulnerability to future climate, regardless of the extent the future climate is altered by human activity. Our current and future vulnerability, however, will be different than in the past, even if climate were not to change, because society and the environment change as well. Decision makers need assessments of how climate vulnerability has changed.

2. Climate prediction is complex with many uncertainties - The AASC recognizes climate prediction is an extremely difficult undertaking. For time scales of a decade or more, understanding the empirical accuracy of such predictions - called "verification" - is simply impossible, since we have to wait a decade or longer to assess the accuracy of the forecasts.

Climate prediction is difficult because it involves complex, nonlinear interactions among all components of the earth's environmental system. These components include the oceans, land, lakes, and continental ice sheets, and involve physical, biological, and chemical processes. The complicated feedbacks and forcings within the climate system are the reasons for the difficulty in accurately predicting the future climate. The AASC recognizes that human activities have an influence on the climate system. Such activities, however, are not limited to greenhouse gas forcing and include changing land use and sulfate emissions, which further complicates the issue of climate prediction. Furthermore, climate predictions have not demonstrated skill in projecting future variability and changes in such important climate conditions as growing season, drought, flood-producing rainfall, heat waves, tropical cyclones and winter storms. These are the type of events that have a more significant impact on society than annual average global temperature trends.

3. Policy responses to climate variability and change should be flexible and sensible - The difficulty of prediction and the impossibility of verification of predictions decades into the future are important factors that allow for competing views of the long-term climate future. Therefore, the AASC recommends that policies related to long-term climate not be based on particular predictions, but instead should focus on policy alternatives that make sense for a wide range of plausible climatic conditions regardless of future climate. Climate is always changing on a variety of time scales and being prepared for the consequences of this variability is a wise policy.

4. In their interactions with users of climate information, AASC members recognize that the nation's climate policies must involve much more than discussions of alternative energy policies - Climate has a profound effect on sectors such as energy supply and demand, agriculture, insurance, water supply and quality, ecosystem management and the impacts of natural disasters. Whatever policies are promulgated with respect to energy, it is imperative that policy makers recognize that climate - its variability and change - has a broad impact on society. The policy responses should also be broad.

Thus, to address the issues of climate variability and change, modernizing and maintaining high quality long-term climate data must be a high priority in order to permit careful monitoring. With the rapid dissemination of these data, State Climate Offices, as well as the Regional Climate Centers, and the National Climatic Data Center can better monitor emerging climate threats to critical national resources, such as our water supply, agriculture, and energy needs. The climate data must include all-important components of the climate system (e.g., temperature, precipitation, humidity, vegetation health and soil moisture). We also recommend that the nation strengthen its local, state, and regional climate services infrastructure in order to develop greater support capabilities for those decision makers who have to respond to climate variability and change.

Finally, ongoing political debate about global energy policy should not stand in the way of common sense action to reduce societal and environmental vulnerabilities to climate variability and change. Considerable potential exists to improve policies related to climate; the AASC is working to turn that potential into reality.

Approved by the AASC, October 2001.

http://ccc.atmos.colostate.edu/policystatement.php

The U.S. National Climate Change Assessment: Do the Climate Models Project a Useful Picture of Regional Climate?

Subcommittee on Oversight and Investigations

Roger A. Pielke, Sr.

July 25, 2002, 09:30 AM

Mr. Chairman, Members of the Committee, thank you for the opportunity to present testimony on "The U.S. National Climate Change Assessment: Do the Climate Models Project a Useful Picture of Regional Climate?"

I am a Professor of Atmospheric Science at Colorado State University. I am also State Climatologist for Colorado and President-Elect of the American Association of State Climatologists. I received my M.S. and Ph.D. from Pennsylvania State University in the Department of Meteorology. Since the 1960s, my research focuses on weather and climate studies using models and observations.

In my testimony I'd like to convey the following two points:

1. The perspective I am presenting today does not easily fit into the conventional two-sided debate over climate change. This third perspective, as I have written elsewhere, "suggest[s] that humans have an even greater impact on climate than is suggested by [international and national assessments]. The human influence on climate is significant and multi-faceted."
2. Any attempt to accurately predict future climate is fundamentally constrained by the significant and multi-faceted characteristics of the human influence on climate. By focusing on *vulnerabilities* rather than *prediction* as a focus of research, I believe that the scientific community can provide more comprehensive and likely more useful, information to decision makers.

These points are consistent with the American Association of State Climatologists Policy Statement on Climate Variability and Change which was approved on October 25, 2001. The American Association of State Climatologists is a professional scientific organization composed of state climatologists (one per state), directors of the six Regional Climate Centers of the National Oceanic and Atmospheric Administration within the Department of Commerce, and associate members who are persons interested in the goals and activities of the Association. State Climatologists are individuals who have been identified by a state entity as the state's climatologist and who are also recognized by the Director of the National Climatic Data Center of the National Oceanic and Atmospheric Administration as the state climatologist of a particular state.

State Climatologists currently exist in 47 states and Puerto Rico. They are typically either employees of state agencies or are staff members of state-supported universities. Associate members may be assistant state climatologists or other climatologists under the employ of the state climatologist; representatives of federal climate agencies; retired state climatologists; or others interested in climate services. The total membership of the Association is approximately 150.

Continued….

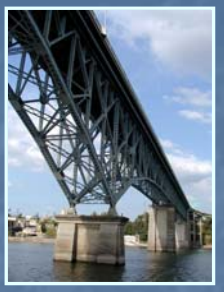
http://energycommerce.house.gov/107/hearings/07252002Hearing676/Pielke,Sr.1144.htm

AASC Committees

- Climate data trends, Jim Angel, IL (Chair)
- Climate projection model skill, John Christy, AL (Chair)
- COOP-Modernization Plan, Ken Crawford, OK (Chair)
- Drought Monitoring Core Group and Statement, Dave Robinson, NJ (Co-Chair) and Roger Pielke, Sr, CO (Co-Chair)
- Free Access to IPCC and U.S. National Assessment GCM Model data, John Young, WI (Chair)

AASC 2003 meeting participants

Portland, Oregon [Local Host: George Taylor, OR]



AASC Agenda
Wednesday, August 6, morning

Roger Pielke, Chair

8:30am	President's Welcome and Report, Roger Pielke, Sr., CO
8:45am	Committee Reports (~25 minutes each) Jim Angel, IL -- Climate data trends John Christy, AL -- Climate projection model skill Ken Crawford, OK -- COOP-Modernization Plan Dave Robinson, NJ -- Drought Monitoring Core Group
10:45am	Jim Angel, IL – ARSCO Status; Potential New State Climate Offices (MT, WA)
11:15am	Doug Gifford, NWS -- New ASOS Gauge

AASC Agenda
Wednesday, August 6, afternoon

Jim Angel, Chair

1:30pm Dave Robinson - Partnership meeting and action items in progress or planned

2:00pm Tim Owen - NCDC/AASC Partnering for better climate services

2:30pm Bob Livezey, NWS Climate Services Division – NWS Regional and Local Climate Services: Progress, Roles, Partnerships.

3:00pm Andrea Bair and Kelly Redmond -- Western CSFP activities and plans

3:30pm Fiona Horsfall -- NCTP and Cores; ARSCO Workshop

4:00pm Roy Jenne, UCAR – Reanalysis Update; also Climate, Energy and Kyoto

4:30pm Adjourn meeting

5:00pm Bus will transport attendees at 5:10 and 5:30pm
5:45pm Evening dinner cruise on the Portland Spirit, George Taylor, host

AASC Agenda
Thursday, August 7, morning

Roger Pielke (Chair)

8:30am Updates on State Climate and Regional Climate Offices (15 minute presentations)

8:30am	George Taylor, Oregon
8:45am	Jim O'Brien, Florida
9:00am	Jan Curtis, Wyoming
9:15am	Mark Shafer, Oklahoma
9:30am	Dave Robinson, New Jersey
9:45am	Greg Zielinski, Maine
10:00am	Charlie Wax, Missisippi
10:15am	Stu Foster, Kentucky
10:30am	John Nielsen-Gammon, Texas
10:45am	Sethu Raman, North Carolina
11:00am	Adnan Akyuz, Missouri
11:15am	Roger Pielke, Colorado
11:30am	Dave Robinson, Ken Crawford, Phil Pasteris, and Kelly Redmond. Further discussions on the Western Governor Association efforts to develop a national drought monitoring and information system.

AASC Agenda
Thursday, August 7, afternoon

Dave Robinson (Chair)

1:30pm	Ken Hubbard, HPCC, and Kevin Robbins, SRCC -- Regional Climate Center Update
2:00pm	Bob Livezey, NWS Climate Services Division -- CPC Forecasts
2:15pm	Klaus Wolter, CPC -- Monitoring the Drought and Predicting Climate with New Climate Divisions in Colorado and Elsewhere
2:45pm	Geoffrey Bonnin, NWS -- Precipitation Frequency Updates
3:15pm	Rainer Dombrowsky - Addressing Quality Snow Observations at LCD locations
3:45pm	Open Dialog
4:30pm	Adjourn meeting
6:00pm	Banquet, Heathman Hotel, Dinner speaker: Bill Lang, Portland State University -- The Lewis and Clark Expedition; Approaching the Bicentennial Anniversary

Minutes of 2003 AASC meeting

- Read the minutes at the following urls:

http://climate.umn.edu/aasc/aasc2003annualmeeting.htm

http://climate.umn.edu/aasc/aasc2003annualmeeting.doc

http://climate.umn.edu/aasc/aasc2003annualmeeting.pdf

AASC link

- For more details:

  http://lwf.ncdc.noaa.gov/oa/climate/aasc.html