

**FINAL AGENDA – 3/28/07**  
**Climate Working Group (CWG)**  
**COA Program Review**  
**April 11-13, 2007**  
**NOAA’s National Climatic Data Center**  
**Federal Building, Room 400, Asheville, N.C.**

**Day 1 – Wednesday, April 11**

- 8:00 **Executive Session:** Climate Working Group and COA Review Team (Tony Busalacchi)
- 8:30 Welcome and Meeting Logistics --- Tom Karl
- 8:45 Goal of COA Review --- Chet Koblinsky (CPO)/Kevin Trenberth (Chair, COA Review Team)
- 9:00 Overview of COA Program --- Tom Karl (Q&A discussion at the end of Overview)
- 10:15 Break
- 10:30 Overview of NCDC --- Tom Karl
- 10:45 **Panel 1 Discussion: *Data Ingest, Access, and Archive (and “Storage” CLASS CONOPS)***  
Moderator: Peter Cornillon (DAARWG member)  
Panelists: Chair-Glenn Rutledge (NCDC), Steve Del Greco (NCDC), Neal Lott (NCDC), David Urbanski (NCDC), John Bates (NCDC), Rick Vizbulis (NESDIS/OSD), Steve Hankin (OAR), Ken McDonald (NESDIS/OSD), David McGuirk (NCDC)
- 12:00 Working Lunch
- 12:30 **Panel 2 Discussion: *In-situ Observing Systems and Data Management including Stewardship***  
Moderator: Bob Weller (CWG member)  
Panelists: Chair-Mike Johnson (OAR/OCO), Co-Chairs - Dave Easterling and Howard Diamond, (NCDC), Kathy Crane (OAR/OCO), Ellsworth Dutton (OAR/ESRL), Steve Hankin (NOSC-DMC/DMIT)
- 2:15 CWG Members - NCDC “Walk About” and talk with NCDC personnel in work spaces
- 3:30 **Panel 3 Discussion: *Analysis including Reanalysis, OSSEs, OSEs, and related Research***  
Moderator: Kevin Trenberth (Chair, COA Review Team)  
Panelists: Chair-Robin Webb (OAR/ESRL), Chris Miller (OAR), Kathy Crane (OAR/OCO), Stephen Lord (NWS/NCEP), Dave Easterling (NCDC), John Bates (NCDC), Don Anderson (NASA), Russ Vose (NCDC)
- 4:45 Climate Assessments --- Tom Karl
- 5:00 **Executive Session:** Climate Working Group and COA Review Team
- 5:45 Adjourn for the day
- 7:30 Informal Discussions @ Barley’s Taproom

## **DAY 2 – Thursday, April 12**

- 8:30 **Panel 4 Discussion: *Climate Services and Product Development*** (*half of the hourglass*)  
Moderator: David Robinson (CWG member)  
Panelists: Chair-Russ Vose (NCDC), Chris Miller (OAR), Randy Dole (OAR/ESRL), Arun Kumar (NWS/CPC), Mike Brewer (NWS/CSD), Neal Lott (NCDC), Dave Easterling (NCDC), Steve Del Greco (NCDC)
- 10:15 Break
- 10:30 **Panel 5 Discussion: *User Communities*** (*the other half of the hourglass*)  
Moderator: Lee Branscome (Special invitee)  
Panelists: Chair-Eileen Shea (NCDC), Bruce Wielicki (NASA), Greg Carbone (U of SC), Dave Goodrich (WMO), Tim Owen (NCDC), Ken Hubbard (HP RCC), Paul Knight (AASC), Nancy Beller-Simms (CPO)
- 12:00 Working Lunch
- 12:30 **Panel 6 Discussion: *Detection, & Attribution***  
Moderator: Jonathan Overpeck (CWG member)  
Panelists: Chair-Dave Easterling (NCDC), Randy Dole (OAR/ESRL), Marty Hoerling (OAR/ESRL), Robin Webb (OAR/ESRL), Arun Kumar (NWS/CPC), Jay Lawrimore (NCDC), Richard Smith (UNC, via telecon)
- 1:45 **Panel 7 Discussion: *Understanding the State of the Climate (including data assimilation) and Monitoring***  
Moderator: Tony Busalacchi (Chair, CWG)  
Panelists: Chair-Jay Lawrimore (NCDC), Ken Casey (NESDIS/NODC), Stephen Lord (NWS/NCEP), John Bates (NCDC), David Anderson (NCDC), Marty Hoerling (OAR/ESRL)
- 3:00 Break
- 3:15 New Opportunities: General Discussions lead off --- Tom Karl  
*What's missing and what needs more emphasis?*
- 4:45 **Executive Session:** Climate Working Group – membership discussions, etc. (Tony Busalacchi)
- 6:00 Adjourn for the day
- 7:00 Advanced Discussions @ Local Restaurant TBD

### **Day 3 – Friday, April 13**

8:00 **Panel 8 Discussion: *Space-based Observing Systems and related Data Stewardship***

Moderator: Mark Abbott (Special Invitee)

Panelists: Chair-Jeff Privette (NCDC), John Bates (NCDC),  
Mitch Goldberg (NESDIS, STAR), Bruce Barkstrom (NCDC)  
Michael Prather (CWG member)

9:30 Break

9:45 **Executive Session:** Climate Working Group and COA Review Team (led by Kevin Trenberth)

11:45 **Executive Session:** Brief from COA Review Team to CWG and Climate Goal Leadership

12:30 Meeting Adjourns

## **BACKGROUND**

### **Areas of Consideration**

#### **Accomplishment:**

What have been the major accomplishments of the COA program over the past 6 years?

#### **Strategy:**

Does each of the capabilities (observing systems, data management, analyses) of the COA program have a clear strategy, schedule/road map, and implementation plan?

Are they aligned with the strategies & requirements of COA and the Climate Goal?

Are the COA capabilities integrated within COA?

Is the COA strategy effective, should changes be considered?

Is NOAA's COA program adequate in atmospheric observations, ocean observations, Arctic, land based measurements, data management and analyses?

#### **Requirements:**

Are the requirements and mandates that must be met by COA clear?

Are the requirements of other programs within the Climate Goal for COA clear?

Specifically, evaluate and validate the Climate requirements for GOES-R and NPOESS in their current configurations.

Priorities:

Are the priorities of the COA clear in terms of how it would address the use of new resources or divest or delay in the presence of reductions?

#### **Challenges:**

What are the major challenges and shortfalls of the COA program? How should the program address these shortfalls? In an increasing, level or decreasing budget scenario?

#### **Integration:**

How well does COA respond to requirements from other climate programs within and outside NOAA?

How well is COA aligned to leverage off and help those programs?

Are COA observations, data management and analyses activities well integrated and used?

Does COA sufficiently leverage the capabilities in other programs within NOAA, other agencies or international entities?

#### **Execution:**

Are the performance measures for COA activities realistic, useful, and appropriate for level of resources provided?

Does COA make effective use of the resources provided?

Is the execution of COA activities aligned with its requirements and strategy?

Do NOAA line organizations respond effectively to the needs of COA?

#### **Grants:**

Does the COA grant programs meet the needs of the Climate Goal and COA?

Does COA make effective use of grants and contracts to utilize the expertise of the external community?

#### **Cooperative Institutes:**

Are cooperative institutes used effectively in COA and how could they be more useful?

#### **Advisory:**

Are advisory groups used effectively in COA?

**International:**

What are the strengths and weaknesses of COA's international collaborations? Does COA use of international coordination organizations, such as WMO, WCRP, IOC, GCOS, GEOSS, JCOMM, effectively?

**National:**

What are strengths and weaknesses of COA's interactions with national and regional organizations, such as CCSP, CENR, NRC, US agencies, state climatologists, RCCs, etc.?

**Service:**

What are the strengths and weaknesses of COA provided climate services?

Is the coordination between national and regional centers effective?

Are stakeholder requirements clear?

**Transition:**

Does COA have effective programs to transition research accomplishments into operations?

**Users:**

What are the strengths and weaknesses in COA's responsiveness to user needs from a broad set of external users, e.g., academia, the private sector, and government?

**NOAA's unique contribution**

Unique Contribution (from CWG Oct 2006 review)

In this program element especially, the NOAA Climate Program would benefit from a clearer articulation of NOAA's unique contribution to the broad, national investment in...

**NASA/NOAA transition**

Describe how the NASA/NOAA transition works within this program...How does NOAA take advantage of NASA, NSF or DoE R&D

**Priorities:**

How are priorities determined

**Emerging issues:**

How are emerging issues identified? And addressed?

**COA Program**  
**Broad Range of Overview Questions to be Considered/Addressed**

- 1) What is COA?
  - a. *Is there an advisory group?*
    - i. *Is it appropriately used, aligned with CWG, and functioning?*
- 2) What is its goal and strategy for accomplishing it?
  - a. *Is there an implementation plan and how adequate is it?*
- 3) What are its major accomplishments over the past 5 years?
  - a. *Comment on merit, balance, gaps.*
- 4) What are the requirements of COA from NOAA and the nation?
  - a. *Are they clear and attainable?*
- 5) What are its challenges, issues and concerns for this program?
  - a. *Are there plans for addressing these?*
  - b. *How about NOAA support?*
- 6) Are the resources adequate and used wisely?
  - a. *Are there plans and contingencies for budget cuts?*
  - b. *Are there plans for expansion and new endeavors, should more funds become available?*
  - c. *Are priorities clear and appropriate?*
- 7) What are the linkages with other programs: within the U.S. and internationally?
  - a. *Are these appropriate?*
  - b. *Is the research to operations transition functional?*
  - c. *In particular is the NASA to NOAA handoff on data and data management, and satellite missions working?*
- 8) How are user needs considered?
  - a. *Is the current user set representative of national or international needs?*
  - b. *Are user needs being adequately assessed?*
- 9) What are the performance metrics?
  - a. *Is COA performing according to the metrics and are the metrics appropriate?*
- 10) What is the grants program and what has it achieved?
  - a. *Is the grants program a useful complement to achieving the goals?*
- 11) Should NOAA consider a reorganization of the COA program?
  - a. *Separate Research and Development from operations?*
  - b. *Separate into new programs:*
    - i. *R&D: Climate State Observations (Atmosphere, Arctic, Oceans).*
    - ii. *Operations: Climate Monitoring and Services (Monitoring, Data Management, Predictions, Service delivery)*

**PANEL DISCUSSION QUESTIONS TO BE ADDRESSED BY CHAIR & CO-CHAIRS  
IN 20 MINUTE OVERVIEW**

**Panel members address these and other questions in Q&A with CWG and invited Guests**

**A. Questions for All Panels to Consider:**

1) What are the most significant pressures changing demand for NOAA Applications?

**Possible Response:** Understanding our vulnerability to climate and enabling resilience in a changing climate

2) How do last year's priorities need to be adjusted to respond to these pressures?

**Possible Response:** Priority needs to be increased on helping to identify thresholds and change points that nonlinearly impact various sectors of society and ecosystems. Priorities related to increased physical understanding must go hand in hand with understanding the risk of non-linear impacts in a changing climate.

3) What questions do we need to answer in Planning to address the changing priorities?

**Possible Response:** How will climate change affect the efficiency of the US economy and the global ecosystems we depend upon?

**B. Questions for Each Individual Panel to address/consider:**

**Panel 1**

How do the existing observing systems move data to the Archive Storage?

How do customers get access to data?

What are the interagency linkages and leveraging?

What is the grand strategy?

What are the major obstacles to success (and what defines successful), and how can they be overcome?

**Panel 2**

What are the primary observation systems?

What is the state of evolution of the observing system?

Who are the users and what are the requirements?

Who ensures data quality?

How does implementation affect planning?

What are the mid- and long-term plans?

What are the major obstacles to success (and what defines successful) and how will they be overcome?

**Panel 3**

What interagency and international coordination is occurring

How is NOAA leveraging its capability?

What is the strategy for success (and what defines success)?

What are the current activities?

What are the obstacles to achieving success and how will they be overcome?

**Panel 4**

What is the basis for developing new products?  
Who is responsible for maintaining and documenting new products?  
What is the role of research to operations in new product development?  
How are user requirements addressed?

**Panel 5**

How are user requirements factored into climate services?  
How do regional, local, national, and international requirements get addressed?  
What is the role of major climate assessments in terms of defining decision makers needs?  
How do user requirements work their way into NOAA products and services?  
What is working well and what isn't?  
What is a successful climate service and how do we get their?

**Panel 6**

How does NOAA currently develop detection and attribution statements?  
How timely are these statements?  
Is it possible to develop this into a routine service?  
If so, what can be done to develop this into a routine service?  
How can or does NOAA leverage its partners?

**Panel 7**

What is the goal of this effort and how do we measure success?  
What our capabilities?  
What do we produce now?  
What is our strategy for filling any gaps?

**Panel 8**

What is NOAA's role in space observing and related data stewardship in Climate and what are NOAA's expectations?  
What is the current status of NOAA/NASA activities related to Nunn-McCurdy and NRC Decadal Survey?  
What role can (should) COA or the Climate Goal play in the satellite observing system?  
How are we working to overcome current obstacles to success?  
How does the interagency "process" factor into the Climate Goal (including research to operations)?  
What are the impediments and solution to developing climate data records?