

**COMMITTEE FOR ENVIRONMENTAL
SERVICES, OPERATIONS, AND RESEARCH NEEDS (CESORN)**

**WORKING GROUP FOR WEATHER INFORMATION FOR SURFACE
TRANSPORTATION (WG/WIST)**

WG/WIST MEMORANDUM 05-02

April 6, 2005

MEMORANDUM FOR: WG/WIST Members

FROM: Frank L. Estis
 Executive Secretary

SUBJECT: Draft Record of Actions for WG/WIST Meeting 05-02

I have prepared for your review the attached draft Record of Actions for the WG/WIST Meeting 05-02 held on March 16, 2005. If you have any changes or additions, please call or send them to me as soon as possible. My telephone number is (301) 427-2002 and my e-mail address is frank.estis@noaa.gov.

Attachment

WG/WIST MEMBERS

DHS	-	Dr. Jonathan Berkson, DHS/USCG
	-	Mr. John Gambel, DHS/FEMA
DOC	-	Mr. Mike Campbell, NOAA/NWS, Co-Chairperson
	-	Mr. Charlie Challstrom, NOAA/NOS
DOD	-	Col Mark Weadon, US Air Force
	-	Mr. Robert Freeman, US Navy
DOE	-	Ms. Ella McNeil, DOE/EM-11
DOI	-	Mr. Lewis Moore, DOI/BUREC
DOT	-	Mr. Paul Pisano, DOT/FHWA, Co-Chairperson
	-	Ms. Jo Strang, DOT/FRA
	-	Mr. Chris Flanigan, DOT/FMCSA
	-	Ms. Charlene Wilder, DOT/FTA
	-	Mr. Donald Carver, DOT/FAA
EPA	-	Mr. Robert Gilliam, EPA
NASA	-	Dr. Martin Frederick, NASA
	-	Dr. William D. Graham, NASA
NSF	-	Ms. Pamela Stephens, NSF/ATM
NTSB	-	Mr. Donald Eick, NTSB/AS-30
OMB	-	Ms. Erin Wuchte, OMB/EOP
USDA	-	Mr. Bradley Rippey, USDA/OCE

cc:

WG/WIST Mailing List

OFCM Staff

**COMMITTEE FOR ENVIRONMENTAL
SERVICES, OPERATIONS, AND RESEARCH NEEDS (CESORN)**

**WORKING GROUP FOR WEATHER INFORMATION FOR SURFACE TRANSPORTATION
(WG/WIST)**

Record of Actions Meeting 05-02

March 16, 2005

Office of the Federal Coordinator for Meteorology
Large Conference Room

MEMBERS PRESENT

DHS	-	
DOC	-	Mr. Mike Campbell, NOAA/NWS, Co-Chairperson
	-	Mr. Charlie Challstrom, NOAA/NOS
DOD	-	Col. Mark Weadon, US Air Force
DOE	-	
DOI	-	
DOT	-	Mr. Paul Pisano, DOT/FHWA, Co-Chairperson
	-	Mr. Donald Carver, DOT/FAA
	-	Mr. Michael Rossetti, DOT/Volpe Center
EPA	-	Mr. Robert Gilliam, EPA
NASA	-	Dr. William D. Graham, NASA
NSF	-	
NTSB	-	
OMB	-	
USDA	-	

Mr. Frank Estis, Executive Secretary

INVITED PARTICIPANTS

DHS	-	
DOC:	-	Dr. Jim O'Sullivan, NOAA/NWS/OST

DOD: -
DOE: -
DOI: -
DOT: - Ms. Lynette Goodwin, DOT/FHWA (Mitretek Systems)
EPA -
NASA: -
NSF: -
NTSB -
OMB -
USDA -

1. **OPENING REMARKS.**

Co-Chairs, Paul Pisano and Mike Campbell, called the WG/WIST meeting to order. All attendees introduced themselves.

The Executive Secretary, Frank Estis, reviewed the administrative information for the meeting and outlined the proposed meeting agenda. The agenda was accepted as presented.

Mike Campbell then provided opening remarks:

- He briefly reported on a successful CLARUS ICC meeting held in Las Vegas, indicating he felt it was a great start to a very important surface weather program.

Paul Pisano then added:

- That 100 people attended the CLARUS meeting with broad representation from both the weather and transportation communities.
- That the CLARUS concept of operations was being finished and that the award of a system design contract should be expected by the end of April or early May.
- There is still lots of work ahead for the WG/WIST, and that we should get to it.

2. **RECORD OF ACTIONS.**

The Executive Secretary for the Committee previously sent out the ROA for meeting 05-01 on February 28, 2005, and received only a few recommended changes, which were incorporated into the latest copy that was provided committee members before meeting 05-02. The Committee accepted the revised ROA as the final version.

3. **MEETING DISCUSSION TOPICS:**

A. THE APPLIED SCIENCES DIRECTORATE OF NASA'S EARTH SCIENCE ENTERPRISE (ESE) WILL PROVIDE A BRIEFING ON ITS EFFORTS TO PROVIDE SOCIETAL BENEFITS THROUGH APPLICATION OF ESE RESEARCH AND TECHNOLOGY.

Dr. Bill Graham, NASA Applied Science Directorate, presented a briefing covering the efforts underway in NASA's Applied Science Directorate that have an impact on the surface weather community.

- Directorate working cross-cutting solution activities
- 12 activity areas
- NASA working on institutional and technological aspects of applied science...institutionally reaching out to agencies and technically providing users access to data sets
- He provided an example of such work (see slides on WG/WIST homepage): An Assessment of Satellite Thermal Imagery for estimating Road Surface Temperatures.
- After the briefing there were questions and discussion of where this kind of data has already been used and to what effect. Bill indicated they have used such data to support several state projects with success where both ground and satellite based data were available.
- NASA is currently moving forward to use such data in a number of states where both ground- and satellite-based data are available.
- Bill also covered a recent NASA Cooperative Agreement Notice which announced opportunities to participate in the Applied Sciences Program of the Science Mission Directorate. The Program requested innovative solutions to evaluate, verify and validate, and benchmark solutions that integrate NASA Earth and Space science results into decision-support tools of

partnering organizations. Proposals were invited in two main areas: 1) Integrated Systems Solutions to integrate NASA Earth and Space science results into applications of national priority, demonstrate prototypes, and benchmark performance, and 2) Solutions Networks to improve the collective ability of Earth science organizations to interact and harness the results of NASA Earth and Space science research.

B. UPDATE WG/WIST ON ACTIONS TAKEN TO ESTABLISH A WG/WIST WEB PAGE TO FACILITATE SHARING INFORMATION (Action Item 2005-1.1).

Frank Estis provided an update and a live run through of the WG/WIST web site to meeting attendees. This web site was requested under WG/WIST Action Item 2005-1.1. The web site was approved as presented, and Action Item 2005-1.1 was closed.

C. REVIEW AND FINALIZE ANY PROPOSED CHANGES TO THE WG/WIST TOR (Action Item 2005-1.2).

Frank Estis presented a recap of actions taken to update the draft TOR as directed by Action Item 2005-1.2. The recap keyed on possible changes needed to paragraph 3.a. The WG/WIST suggested that the word “detailed” be taken out and that the word “each” be changed to say something about recommendations within the purview of the WG/WIST.

The original paragraph 3.a. read, “Conduct a detailed review of the WIST Report (Ref: f) recommendations and prepare an initial set of appropriate actions to be taken for each recommendation.”

The new paragraph 3.a. reads, “Conduct a review of the WIST Report (Ref: f) recommendations and prepare an initial set of appropriate actions to be taken for any recommendation that falls within the purview of the WG/WIST as established by the ICMSSR at its May 14, 2004 meeting.”

This new draft TOR will be sent out by the Exec Secretary for another review by WG/WIST members.

D. FINALIZE THE VISION AND GOAL(S) FOR A NATIONAL WIST PROGRAM AND IMMEDIATE NEXT STEPS (Action Item 2005-1.5).

The WG/WIST reviewed the draft vision and goals from the March 16th meeting.

Initial comments indicated that the vision and goals need to be reworded to ensure they don't imply that the WG/WIST will provide surface weather data. The vision and goal should address the end state expected from implementing the WIST R&D and Implementation Plan. This was done.

The draft vision was expanded to include both safety and efficiency aspects of surface transportation.

WG/WIST agreed that the WG is not intended to work on new roadbed sensor technologies, new in vehicle technologies, etc. The WG will focus on use of weather data from these technologies to allow better surface transportation decision making.

The WG will also look at providing data to the air quality community to better address surface transportation air quality issues.

A decision was made to not add the words “environmentally sound” into the vision statement since it was believed that environmental aspects of WIST are covered by “safe and efficient” wording in the vision.

The WG/WIST settled on one vision statement and two goals with associated expected outcomes.

The Exec Secretary was tasked to send the draft vision and goals out for another round of review.

The vision and goals are:

VISION: Safe and efficient movement of people and goods on the surface transportation system, whatever the weather.

GOALS:

1. Timely, accurate, relevant and accessible information on weather and resulting surface conditions that will support decisions that contribute to:
 - A reduction in weather-related surface transportation deaths & injuries
 - Improved management of weather-related delays & operating costs
 - Mitigation of adverse environmental impacts due to surface transportation operations
2. Facilitate development and delivery of training and outreach materials to build capacity of surface transportation constituents.

E. REVIEW THE SYNTHESIZED R&D NEEDS LISTS AND BEGIN TO DETERMINE THE R&D NEEDS THAT WOULD BE THE FOCUS OF THE WIST R&D PLAN AND START TO BUILD A STRUCTURE FOR THE R&D PLAN TO CLEARLY EXPRESS THE PRIORITIES OF THE WIST COMMUNITY (Action Item 2005-1.3).

The WG reviewed the structure used in the WIST Report, the NRC Surface Weather Study Report, the AMS Policy Forum Report, the FHWA's *A Blueprint for Road Weather Research*, in the CTRE's *Weather Issues in Transportation--Report on Research Focus Groups and Recommendations for Future Action*, and the European CO-operation in the field of Scientific and Technical (COST) Research report on Road Weather Conditions. After review there appeared to be two main structures for outlining R&D needs—either by major activity groupings (observations, modeling, assimilation, etc.) or by weather hazard (reduced visibility, snow, sleet, rain, etc.).

The group asked how the FAA had structured their aviation weather research program. The program is structured around weather hazards and has worked well to stimulate R&D activities and results have been seen in reduced aviation mishaps fatalities. The program has shifted priorities as lessons were learned along the way. No numerical priorities were assigned...rather a cost-benefit grouping was used to highlight quick payoff efforts to concentrate on.

Some discussion followed on what is the best way to structure the R&D needs information to quickly inform our users and budget decision makers on the importance of WIST improvements. WG needs to consider both the meteorological and transportation community viewpoints. It was suggested that several high visibility surface weather-related mishaps could be used to highlight the needs.

One suggestion presented was to use a matrix to show weather parameters on one axis with R&D needs on the other axis to lay out a picture of requirements and highlight the cross-cutting nature of the work in surface weather.

Dissemination was held up as a key area for improvement, and to emphasis that we must not let it get lost in any matrix we develop to present our requirements. The WG agreed.

It was also pointed out that we have a lot of weather-related accident data and that we should be able to pull some useful statistics out of it that would stand up to scrutiny by decision makers.

- Fatal accidents are usually investigated in more depth
- We can probably safely assume that when weather is present at an accident scene it contributed to the accident in some degree...it is just hard to pin point to what degree.

The WG decided to take this discussion off-line for a smaller number of people to develop an initial scheme for the whole group to critique with the following ideas in mind:

- key on user/operator impacts and actions.
- keep in mind who are constituents are.
- matrix approach seems to be the best place to start.
- see if we can use an already established structure instead of creating a new one.
- use the fewest number of elements on each axis of the matrix.
- 5 by 5 was expressed as a preferred size of matrix.
- use weather elements (fog, rain, snow, etc.) along one axis with broad activity areas (observations, modeling, etc.) along the other.
- could the CTRE report structure be used? It represents user's expressions of needs. About 5 areas?
- One aviation R&D group is using observations, forecasts, integration, dissemination, and training.

The Exec Secretary will work with the co-chairs and other members they identify to develop an initial R&D needs matrix.

F. AGENCY INPUTS AND NEW ITEMS.

OFCM (Frank Estis):

- The office will present at the upcoming AMS Corporate Forum on March 31st and at the ITS America Annual meeting in May 2005.

DOD (Col Weadon):

- DOD surface weather requirements will be stated by U.S. TRANSCOM.
- TRANSCOM has already provided an initial input.
- The Army has developed the IRRIS program which should be of interest to the group.

Information on IRRIS can be found at <http://www.tea.army.mil/tools/irris.htm>.

- Army trafficability forecast techniques and R&D may be of interest to such agencies as DOI, NPS, border patrols, etc.

DOC (Charlie Challstrom and Mike Campbell):

- WG/WIST is important to NOAA' Commerce and transportation Goal Team.
- NOAA's program managers are key to meeting program goals.
- NOAA is beginning FY08-12 budget development.
- ISOS is a key NOAA program that will help improve surface weather data collection efforts and

Mike Campbell is a member of the ISOS development team.

DOT (Paul Pisano):

- FHWA drafted an internal DOT proposal to develop a cross DOT surface weather coordination group, led by FHWA, to ensure DOT surface weather needs are met.
- The transportation reauthorization bill is still making its way through Congress. The House version does provide funding for a surface weather R&D program.

- The NOAA-FHWA MOU is ready for signing...working to arrange a date for signature.
- Paul Pisano has been selected as Chairman Elect for the Joint AMS ITS and Surface Transportation Committee and ITS America Weather Information Applications Special Interest Group (WIASIG).

NASA (Bill Graham):

- NASA sees its role in the surface weather arena as a facilitator to connect space asset data sets to decision support tools...not to develop those tools.

EPA (Rob Gilliam):

- Rob indicated he is getting his feet on the ground when it comes to the surface weather community and sees his role as bringing EPA requirements to the table.

FAA (Doc Carver):

- FAA is interested in ground operations as it affects aviation operations...interface of ground and air operations is important.

VOLPE (Mike Rossetti):

- NOAA's QPF are of high interest to the rail community.
- Research and Innovative Technology Administration (RITA) is a new organization in DOT. The establishment of RITA will enable the Department to more effectively coordinate and manage the Department's research portfolio and expedite implementation of cross-cutting innovative technologies.
- There is great interest in the impact of weather on the movement of freight.

4. **REVIEW OF ACTION ITEMS.**

The WG/WIST reviewed the actions from the previous meeting and updated the status of each. There were no new action items from Meeting 05-02.

ACTION ITEM 2005-1.1: The Executive Secretary will establish a web site where all WG reference materials can be posted to ensure all WG/WIST members have access to them.

STATUS: CLOSED.

March 16th update: The web site was developed and presented for approval at the March 16, 2005, WG/WIST meeting. The web site was accepted as presented, and this action was closed.

ACTION ITEM 2005-1.2: The Executive Secretary will provide all WG/WIST members with a consolidated listing of all WIST Report recommendations so they can review them and determine if the TOR's paragraph 3a is too ambitious based on ICMSSR tasking actions from May 2004.

STATUS: OPEN.

March 16th update: At the March 16th WG/WIST meeting, the WG/WIST members suggested that the word "detailed" be taken out of paragraph 3.a. and that the word "each" be changed to say something about recommendations within the purview of the WG/WIST .

The new paragraph 3.a. reads, "Conduct a review of the WIST Report (Ref: f) recommendations and prepare an initial set of appropriate actions to be taken for any recommendation that falls within the purview of the WG/WIST as established by the ICMSSR at its May 14, 2004 meeting."

The new draft TOR will be sent out by the Exec Secretary for another review by WG/WIST members.

ACTION ITEM 2005-1.3: The Executive Secretary will provide a synthesized R&D needs list so that WG members could review them and begin to determine the R&D needs that would be the focus of the WIST R&D Plan and start to build a structure for the R&D Plan to clearly express the priorities of the WIST community.

STATUS: OPEN

March 16th update: The WG decided to take its discussion of how to structure the layout of WIST R&D needs off-line for a smaller number of people to develop an initial scheme for the whole group to critique. The Exec Secretary will work with the co-chairs and other members they identify to develop an initial R&D needs matrix.

ACTION ITEM 2005-1.4: The Executive Secretary will work with the WG/WIST to perform an information gathering activity to find out what WIST R&D work is already going on and tabulate and cross feed the information to all members.

STATUS: OPEN

March 16th update: No action taken yet.

ACTION ITEM 2005-1.5: WG/WIST members will review and comment on the draft vision and goals.

STATUS: OPEN.

March 16th update: The WG/WIST reviewed the draft vision and goals from the March 16th meeting. The draft vision was expanded to include both safety and efficiency aspects of surface transportation. The WG/WIST settled on one vision statement and two goals with associated expected outcomes. The Exec Secretary was tasked to send the draft vision and goals out for another round of review.

5. **NEXT MEETING.** Projected for April 27th or 28th.