

# FEDERAL COMMITTEE FOR METEOROLOGICAL SERVICES AND SUPPORTING RESEARCH (FCMSSR)

Record of Actions: 2016-1 Meeting  
April 19, 2016, 2:00 p.m. EDT

Room 52015, Herbert C. Hoover Building  
14th and Constitution Avenue NW  
Washington, DC 20230

Office of the Federal Coordinator for Meteorology  
Suite 7130, SSMC2  
1325 East West Highway  
Silver Spring, MD 20910

<b>Members</b>	<b>Agency</b>
Kathryn Sullivan (Chair)	DOC/NOAA
Earl Wyatt	DOD
Gary Geernaert	DOE
Michael Matthews for Reggie Brothers	DHS/S&T
David Turner for Kenneth Hodgkins	DOS
John Egentowich for James Eck	DOT/FAA
Steven Clarke for John M. Grunsfeld	NASA
Kenneth Erwin for Glenn Tracy	NRC
Therese Moretto Jorgensen for Roger Wakimoto	NSF
Benjamin Page	OMB
Tamara Dickinson	OSTP
William Schulz	OFCM

<b>Invited Participants</b>	<b>Agency</b>	<b>Invited Participants</b>	<b>Agency</b>
Dr. Richard Spinrad	DOC/NOAA	Mr. Rick Heuwinkel	DOT/FAA
Mr. Mark Paese	DOC/NOAA/NESDIS	Mr. Mark Brusburg	USDA
Dr. Louis Uccellini	DOC/NOAA/NWS	Mr. Michael Clark	OMB
Dr. Jessie Carman	DOC/NOAA/OAR	Dr. Kei Koizumi	OSTP
Mr. Paul Schlatter	DOC/NOAA/NWS	Mr. David Hermreck	OSTP
Mr. Scott Livezey	DOD/USN	Mr. Michael Bonadonna	OFCM
Mr. David McCarren	DOD/USN	Mr. Donell Woods	OFCM
Mr. Rickey Petty	DOE	Captain Erika Sauer	OFCM-USN
Dr. Jonathan Berkson	DHS/USCG	Mr. Floyd Hauth	OFCM
Mr. Christopher Cannizzaro	DOS/OES	Mr. Tony Ramirez	OFCM

**Date Issued:** May 16, 2016

## 1. OPENING REMARKS

Dr. William Schulz, recently appointed Federal Coordinator for Meteorology, opened the meeting by thanking all participants for attending.

Dr. Kathryn Sullivan, Under Secretary of Commerce for Oceans & Atmosphere, National Oceanic and Atmospheric Administration (NOAA) Administrator, and FCMSSR Chair, also welcomed the attendees. She noted that the FCMSSR was still in the early stages of its renewed formation and stated that meetings would be held semi-annually on the third Tuesday in April and third Tuesday in October. The subordinate Interdepartmental Committee for Meteorological Services and Supporting Research (ICMSSR) should meet quarterly to support FCMSSR direction. She requested participants to introduce themselves and the agencies they were representing. She also stated that the FCMSSR is intended to be a senior executive-level body and requested agency representative pass along her request that the primary agency member attend future meetings if at all possible. This would enable important committee decisions be made at the highest level.

## 2. ACTION ITEMS REVIEW

Dr. Schulz reviewed the status of the four Action Items recorded at previous FCMSSR meetings.

- FCMSSR Action Item 2015-1.1. ICMSSR will develop a concise framework to include a method for cost-benefit analytics which will help guide the acquisition of meteorological data and observing systems to include use of commercial and foreign sources.
  - Terms of reference are being developed for this activity and it will be reviewed and acted upon at the next ICMSSR meeting. Action Item remains open.
- FCMSSR Action Item 2015-1.2. Evaluate the status of Multifunction Phased Array Radar (MPAR) and prepare options for developing a whole of government radar capability to meet terminal and long-range weather and surveillance operational requirements and research needs.
  - OFCM established a Working Group of representatives from NOAA, DOD, DHS and FAA to develop a CONOPS for MPAR. Additional coordinating activities are underway by the FAA. Several members asked for background information on the program. Dr. Sullivan and Dr. Schulz provided background information and explained the primary issues and concerns regarding the technical readiness of the system and timelines for developing and implementing related technologies. The FAA is coordinating a four agency Memorandum of Understanding related to MPAR development. It is important for all agencies to understand that the path forward must include NOAA/NWS. Status of MPAR actions/activities will be updated at the next FCMSSR meeting. Action Item remains open.
- FCMSSR Action Item 2015-1.3. ICMSSR will provide a short list, including a summary from the Pre-FCMSSR meeting (May 11, 2015), of issues for FCMSSR consideration to be included on the agenda at future FCMSSR meetings. Action completed. Closed.
- FCMSSR Action Item 2015-1.4. OFCM will schedule the next FCMSSR meeting for Nov/Dec 2015 and propose dates for semiannual meetings during 2016. Action completed. Closed.

Dr. Schulz informed the members that the FCMSSR Charter was sent to the ICMSSR on Feb 26, 2016. Status:

- All recommended changes were incorporated
- The Charter was sent to DOC General Counsel and all FCMSSR members April 1, 2016 for review
- Feedback recommends an additional paragraph: FCMSSR will:

“3. e. Direct OFCM to prepare the Federal Plan for Meteorological Services and Supporting Research with budgetary information provided by the FCMSSR member agencies and submit this plan to OMB annually. OFCM will use the Federal Coordinating Infrastructure established by FCMSSR to facilitate coordination of the Federal plan and other activities as needed.”

There was considerable discussion regarding the current format and content of the Federal Plan. Dr. Schulz briefed a short history of OFCM starting with its organization in accordance with Public Law 87-843 and Bureau of Budget (now Office of Management and Budget (OMB)) Circular A-62. Currently, PL 87-843 directs preparation of an annual report showing the totality of government expenditures on meteorological services and supporting research. Under OMB delegation, OFCM collects budget data from agencies. Comments from members reflected their concerns that the current annual process to collect budget/funding data and analysis from all the agencies could be done more effectively and with less effort. The Federal Plan should be published annually in March, rather than September, in order to increase its usefulness to all agencies in developing and supporting their budget requests. An action item was proposed to modify the scope, content and timeliness of the Federal plan and include pertinent information including supporting research terminology in the charter. See Action Items 2016-1.1.

Additionally, OFCM will coordinate with Office of Science and Technology Policy (OSTP) and revise the FCMSSR charter to develop mutually supporting roles and responsibilities between the Committee on Environment and Natural Resource Sustainability (CENRS) and FCMSSR with particular attention to defining the concept of “supporting research” for meteorological service agencies. See Action Item 2016-1-2.

### 3. FEDERAL COORDINATOR'S ASSESSMENT AND OUTLOOK

Dr. Schulz provided his assessment of OFCM and his proposed priorities for the coming two years. This assessment and outlook was presented to FCMSSR's subordinate group, the ICMSR in February.

He presented the mission, structure, procedures, priorities, goals and envisioned outcomes for OFCM activities over the next two years. Dr. Schulz said he believed OFCM is a service organization. Its customers are the agencies comprising the Federal Weather Enterprise (FWE). OFCM's core mission is to facilitate sustained coordination efforts among the FWE agencies on cross-agency issues. OFCM facilitates the exchange of information, plans and concerns among the FWE to help the nation get the most out of the approximately \$5.3B spent annually on meteorological services and supporting research.

Dr. Schulz sees OFCM accomplishing its mission through three functions: Advising, Planning, and Coordinating. In its advisory role, OFCM provides strategic and operational views of interagency federal weather efforts in order to support related decisions at high levels. OFCM assists the agencies address complex issues such as technical obstacles, timeline discrepancies, testing and evaluation, and expected costs and benefits. The intention is to provide executive/senior agency (including OMB) leadership with solid background and help to manage expectations and enable more informed strategic planning and budgeting. Example issues include follow-on sensor development and modeling coordination.

In its planning role, OFCM produces and maintains authoritative meteorological documents including the Federal Plan for Meteorological Services and Supporting Research, Federal Meteorological Handbooks, the National Hurricane Operations Plan and others as directed.

The coordination role includes working with government committees as well as non-governmental organizations like the American Meteorological Society, National Academies of Science, and the academic community. The focus of this coordination is on strategic issues, improving forecasts, facilitating data exchange and availability, etc. The basic procedural guideline for OFCM is to engage agencies in areas where it can add value and assist with interagency problem solving and complying with legal/policy mandates. OFCM also maintains the Federal Meteorological Coordinating Infrastructure organized through Committees, Working Groups and Joint Action Groups. Participants from across the Federal Weather Enterprise work through these groups to tackle a wide range of challenging interagency issues.

OFCM currently has 3 personnel vacancies on its staff. Dr. Schulz would like to fill these vacancies in 2016 and 2017 in order to fulfill mission responsibilities.

From meetings over the last two months, Dr. Schulz observed several common interests emerged among the FWE agencies. These included multi-purpose radar CONOPS, FMH updates, determining the economic value of forecast improvements, access to (and interpretation of) worldwide meteorological data, space based sensor data sharing, and coordinated approaches to modeling.

Dr. Schulz presented the CY 2016 and 2017 goals, both internal to OFCM and those addressing FWE issues described above. An example of OFCM's functions is an action item from the March 2016 Tropical Cyclone Research and Operations Forum; "OFCM will coordinate an effort to establish an interagency process, sanctioned by FCMSSR, to define observational requirements to support tropical cyclone forecasting."

Dr. Schulz also proposed that carefully selected metrics could reflect the effectiveness of the OFCM in meeting its mission. He closed by reiterating that OFCM is a service organization that fosters cross-agency consensus views. He expressed his appreciation of FCMSSR/ICMSSR prioritization guidance, personnel support, and funding.

#### 4. SPACE WEATHER COORDINATION

Dr. Louis W. Uccellini, NOAA Assistant Administrator for Weather Services and Co-Chair of the Space Weather Operations, Research, and Mitigation (SWORM) Task Force, provided an overview of SWORM activities and a proposed path forward for OFCM involvement.

Background prior to SWORM:

- 1995 - ~2010 National Space Weather Program (NSWP) facilitates inter-agency interactions
- 2005 - Conversion of the Space Environment Center to a 24x7 Space Weather Prediction Center
- 2010 and 2013: Congressional direction and National Research Council (NRC) recommendation to clarify organizational roles and other space weather activities

After the NASA Authorization Act of 2010 (Sec. 809) and the NRC Decadal Survey on Solar and Space Physics (2013), the National Science and Technology Council (NSTC) chartered the SWORM Task Force (TF) in November 2014.

The SWORM TF included all the participants of the NSWP, with additional emphasis on disaster reduction and mitigation. The SWORM TF was tasked to develop the National Space Weather Strategy (NSWS) and the Space Weather Action Plan (SWAP). The strategy and plan were developed in parallel and were released October 29, 2015 and articulates six high-level goals:

- Establish Benchmarks for Space Weather Events
- Enhance Response and Recovery Capabilities
- Improve Protection and Mitigation Efforts
- Improve Assessment, Modeling, and Prediction of Impacts on Critical Infrastructure
- Improve Space Weather Services through Advancing Understanding and Forecasting (R2O/O2R, Observations)
- Increase International Cooperation

Dr. Uccellini also described critical ground based and space based observations, covered current and upcoming improvements in space weather modeling and forecasting, and summarized current forecast processes for geomagnetic storm watches warnings and alerts.

At the time of the meeting the NSTC was in the process of formalizing continuation of Space Weather coordination activities initiated by the SWORM Task Force. The new entity would be responsible to execute and regularly update the NSW and SWAP. The SWAP is the way forward for space weather operations, prediction, and mitigation in the U.S. and world-wide.

OFCM is proposed to support SWORM efforts by retaining a focus area on Space Weather, and be prepared to support SWORM efforts going forward by providing Executive Secretary services. This proposal has been jointly developed and coordinated with the Assistant Director for Space Weather, OSTP. The proposal included maintaining the Working Group for the Space Weather Enterprise Forum (SWEF) within the FCMSSR Infrastructure to organize and conduct the SWEF annually as directed by ICMSSR, with funding support from the member agencies. The next SEWF is planned to be conducted in May/June 2017. This proposal was accepted unanimously by the FCMSSR.

#### 5. ALIGNMENT OF THE NATIONAL EARTH SYSTEM PREDICTION CAPABILITY

The National Earth System Prediction Capability (ESPC) is a collaborative effort between the NOAA, U.S. Navy, U.S. Air Force, Dept. of Energy (DOE), National Aeronautics and Space Administration (NASA), and the National Science Foundation (NSF) to coordinate and enhance sponsor-level, multi-year investments from basic science through acquisition and operations. The National ESPC vision is to establish a global physical earth system analysis and prediction system to provide seamless predictions covering hours to decadal timescales including the atmosphere, ocean, land, cryosphere and space.

The National ESPC Executive Steering Group (ESG) met on April 18, 2016 (one day before the FCMSSR meeting) to review their structure and alignments with various committees and organizations. They strongly supported a proposal to align their group under FCMSSR.

FCMSSR members considered the proposed optimal National ESPC Organization chart and affiliations with FCMSSR and the CENRS. Although there was general consensus to accept the ESG as a subordinate group aligned under FCMSSR, the issues was deferred. They felt more time was needed to determine issues and concerns related to the ESG – CENRS organizational relationship before committing to a course of action. A concurrence paper will be circulated among members for an alignment decision before the next FCMSSR meeting. OFCM will take action to bring this issue to closure as documented in Action Item 2016-1.3.

#### 6. OPEN DISCUSSION:

Members briefly continued the discussion on CENRS – FCMSSR roles and responsibilities.

#### 7. NEXT STEPS/CLOSING COMMENTS/ADJOURN:

Dr. Sullivan again thanked all the participants in today's meeting. The next meeting is scheduled for the third Tuesday in October 2016. The meeting adjourned at 1:40 P.M.

# **Federal Committee for Meteorological Services and Supporting Research (FCMSSR)**

## **Meeting 2016-1 Action Items**

**FCMSSR Action Item 2016-1.1.** Work with Office of Management and Budget (OMB) and agency budget personnel to develop a proposal for adjusting the scope, contents, and process of the annual “Federal Plan for Meteorological Services and Supporting Research” to ensure that it becomes a functional product for interagency coordination and budget development.

**Responsible Office:** OFCM

**Due Date:** Sep 1, 2016.

**FCMSSR Action Item 2016-1.2.** Coordinate with Office of Science and Technology Policy (OSTP) and revise the FCMSSR charter to develop mutually supporting roles and responsibilities between the Committee on Environment and Natural Resource Sustainability (CENRS) including defining the concept of “supporting research” for meteorological service agencies.

**Responsible Office:** OFCM

**Due Date:** Oct 1, 2016.

### **FCMSSR Action Item 2016-1.3.**

- (a.)** Arrange for the Earth System Prediction Capability (ESPC) Executive Steering Group (ESG) to brief OSTP on ESPC construct and goals, enabling OSTP to determine necessity/benefits of OSTP involvement in ESPC guidance.
- (b.)** Define mechanisms for ESPC ESG guidance and support, taking into consideration FCMSSR and OSTP (if deemed appropriate following the briefing) functions, as well as OFCM coordination and support services (e.g. serving as Executive Secretary).
- (c.)** Circulate a concurrence paper through FCMSSR membership for decision on the proposed mechanisms.

**Responsible Offices:** OFCM

**Due Date:** August 31, 2016