
Federal Committee for Meteorological Services and Supporting Research (FCMSSR)

Mr. Benjamin Friedman,

Deputy Under Secretary for Operations

**Performing the duties of Under Secretary of Commerce for
Oceans and Atmosphere**

and

FCMSSR Chair

October 24, 2017

Agenda

2:00 – Opening Remarks (Mr. Benjamin Friedman)

2:10 – Action Item Review (Dr. Bill Schulz, OFCM)

2:20 – Federal Coordinator's Update (OFCM)

**2:30 – Implementing Section 402 of the
Weather Research And Forecasting Innovation Act Of 2017 (OFCM)**

**3:00 – Federal Meteorological Services And Supporting Research
Strategic Plan and Annual Report. (OFCM)**

**3:20 – Spectrum Efficient National Surveillance Radar (SENSR) Update.
(Mr. Kevin Cooley, NOAA-NWS & SENSR Joint Program Office)**

3:40 – Open Discussion (All)

3:50 – Wrap-Up (Mr. Benjamin Friedman)

FCMSSR Action Items

AI #	OPR	Text	Comment	Status	Due Date
2017-1.2	ICMSSR	Present proposals to FCMSSR to implement Weather Research and Forecasting Innovation Act of 2017 Section 402 requirements for the Interagency Committee for Advancing Weather Services.	Will be presented to FCMSSR in October	On Track	10/24/17
2017-1.4	ICMSSR, OFCM	Produce the Strategic Plan for Federal Weather Coordination.	Will be provided to FCMSSR in October for approval	On Track	10/24/17

FEDERAL COORDINATOR'S UPDATE

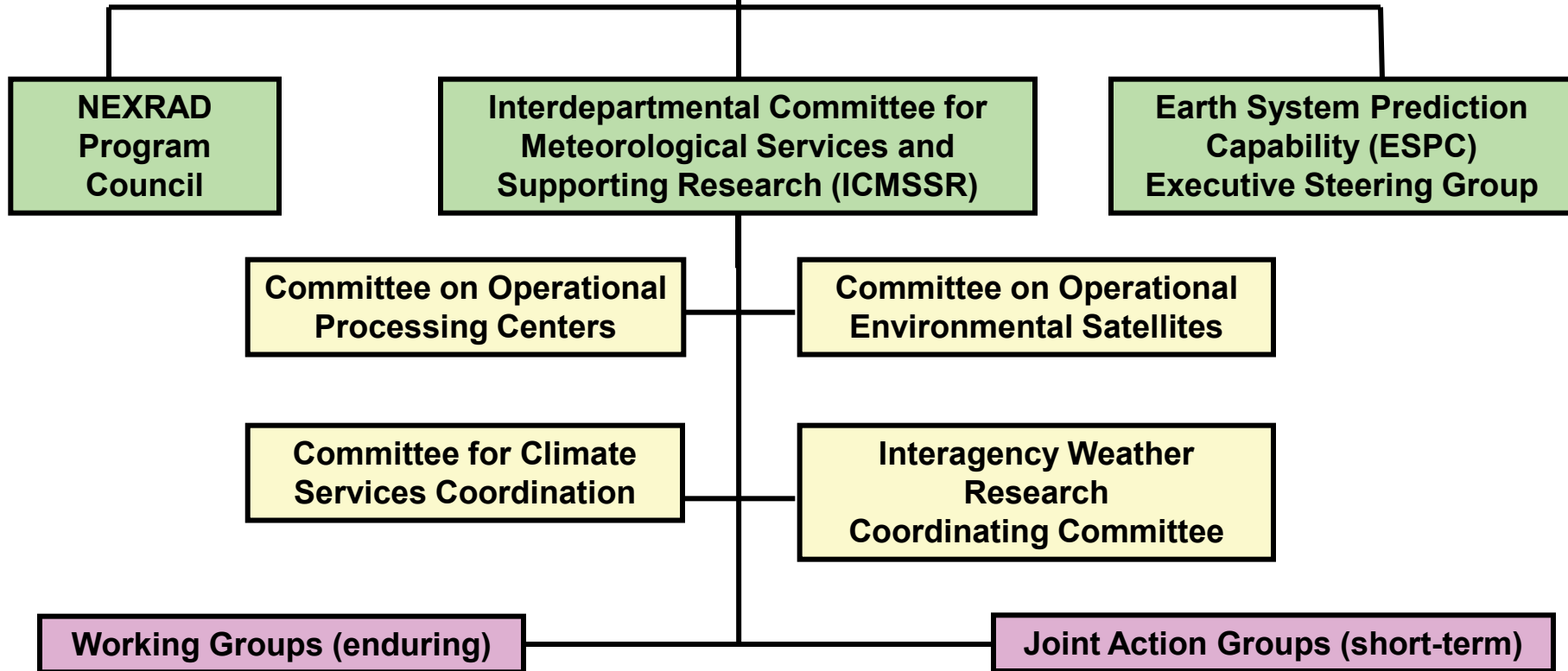
Bill Schulz
Federal Coordinator

Federal Weather Enterprise Infrastructure

	Current	Active
FCMSSR	1	1
ICMSSR & Councils	3	3
Committees	4	4
WGs	16	14
JAGs	4	4
TOTAL	28	26

Federal Committee for Meteorological Services and Supporting Research (FCMSSR)

Federal Coordinator for Meteorology



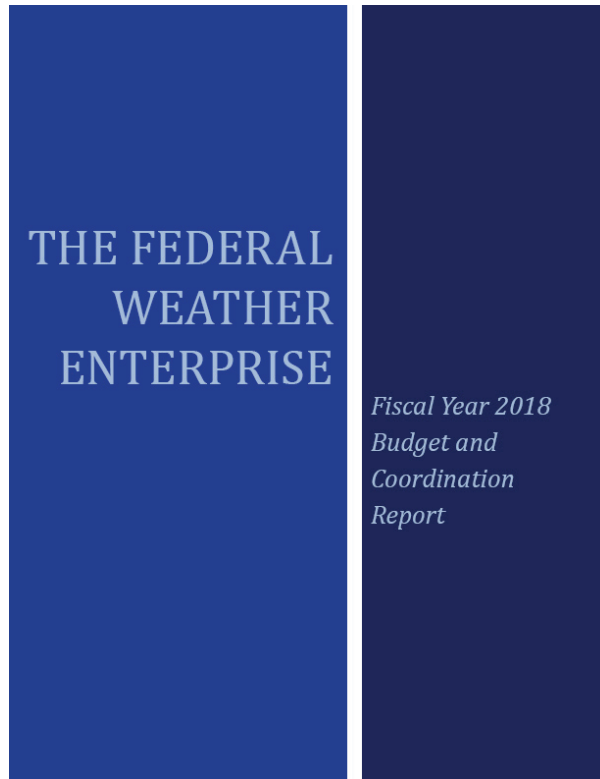
Federal Coordinator's Update

1. Released the “Federal Weather Enterprise Budget and Coordination Report.”
2. Working Group for Disaster Impact Assessments and Plans (WG/DIAP) responses during HARVEY and IRMA
3. Tropical Cyclone Operations and Research Forum/Interdepartmental Hurricane Conference 2018

New “FedPlan”: Budget and Coordination Report

FY18 Federal Weather Enterprise Budget and Coordination Report (“BCR”) posted to OFCM publically available web site on 22 September 2017.

- Replaces the annual “Fed Plan.”
- Reviewed by OMB, who provided edits and requested additional information.
- President’s Budget Request (PBR) for FY18 was submitted on 24 May 2017.
 - This BCR was the initial run to get the format understood by all
 - 90 days from PBR to OMB
 - Goal for FY19: To OMB by PBR plus two weeks.
- For FY19 edition, OFCM will consult with OMB to generate guidance on reporting and comparing FY18 CR numbers.
- **Compilation team will be formalized as a Working Group.**



New “FedPlan”: Budget and Coordination Report

TABLE 1 - Meteorological Services and Supporting Research*, in millions

Total			
Agency	FY16	FY17	FY18
Agriculture	82	75	85
Commerce/NOAA (Subtotal)	3704	3567	3086
NWS	1124	1122	1058
NESDIS	2351	2202	1815
OAR	163	175	143
NOS	32	32	32
OMAO	34	36	38
Defense (Subtotal)	303	248	301
Air Force	152	104	152
Navy	127	117	124
Army***	24	27	24
Homeland Security (Subtotal)	30	32	32
FEMA		2	2
USCG	30	30	30
Interior/BLM (Subtotal)	70	43	37
BLM	5	5	4
NPS	3	3	3
USGS	62	36	30
Transportation (Subtotal)	370	255	315
FAA	368	253	313
FHWA	2	2	2
EPA	7	6	3
NASA	651	641	622
NRC	2	1	1
DOE (Subtotal)	244	229	88
Science BER	238	229	88
NNSA	3	0**	0**
EERE/WFIP	3	0**	0**
DOS	3	0	0
Smithsonian	1	0**	0**
NSF	134	134	121
TOTAL	5601	5231	4690

THE FEDERAL WEATHER ENTERPRISE

*Fiscal Year 2018
Budget and
Coordination
Report*

New “FedPlan”: Budget and Coordination Report

TABLE 2 - Interagency Fund Transfers for Meteorological Operations and Supporting Research for FY2017, Estimated or Planned

Transferred			
From:	To:	Amount (M)	Purpose
DOC/NOAA			
NESDIS	NASA	1582.72	JPSS program management, systems engineering, mission assurance services. Performance measure baseline validation reviews, and procurement and development for PFO. McMurdo ground station use. NOAA Satellite Observing System Architecture study. DSCOVR sustaining engineering support. GOES-R Series spacecraft, instruments and launch vehicles.
NESDIS	DOD	2.90	GOES-R technical and satellite support for satellite development programs
NESDIS	NTIA	2.30	Satellite Ground Services assistance with acquisition of a Radio Frequency Interference Monitoring System
NWS	NASA	2.56	Occupancy services provided by Stennis Space Center
DOD			
Air Force	DOC/NOAA/NWS	7.88	DAPE, DOMSAT, JPSS, MDCRS, NEXRAD (NWS PME/DPEM)
Air Force	NASA	0.95	Land Information System work
Navy	NSF	4.00	Very Long Baseline Array (VLBA) operation
Army/ATEC	NCAR	2.44	4DWX Model Support
USACE	DOI/USGS	2.07	Hydro-meteorological collection
DOT			
FAA Weather	DOC/NOAA/NWS	17.00	IAA-Center Weather Service Unit
FAA Weather	DOC/NOAA/NWS	11.00	IAA-ASOS/ALDARS

THE FEDERAL WEATHER ENTERPRISE

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Working Group for Disaster Impact Assessments and Plans: Weather and Water Data (WG/DIAP)

Hurricanes Harvey and Irma Responses

Notifications: WG/DIAP alerted by group email: diap.alerts@noaa.gov with brief descriptions of HARVEY and IRMA; preliminary data collection plans and timelines; and a date/time for the first coordination conference call.

Conference Calls and Email Communications: Conference calls convened daily, supplemented by continuous email exchanges, to share response plans and facilitate group discussion on deployment activities.

- Targeted deployment zones and timelines
- Positioning/tracking/pre-staging of mobile sensors and identification of stationary systems
- Deployment issues (e.g. mobile sensor positioning, clearance/authorization, transportation, sensor recovery)
- Response actions changes due to track, intensity, and differing characteristics of each storm.

Working Group for Disaster Impact Assessments and Plans: Weather and Water Data (WG/DIAP)

Timeline:

7 to 5 days prior to forecast landfall

- **WG/DIAP members began tropical activity evaluations and pre-planning.**

5 to 3 days prior to forecast land fall

- **Daily conference calls supplemented by group email exchanges to share common situational picture and discuss deployment plans**

3 to 1 day (72-24 hrs.) prior to forecast landfall

- **Daily conference calls continued supplemented by group email exchanges**
- **Mobile sensors deployed**
- **Members confirmed deployment plans and deployment locations**

1 to 10 days following landfall

- **Sensor recovery, data post-processing**
- **Collected data uploaded to members' online databases**
- **Data also sent to NESDIS/NCEI for archiving.**
- **Post-storm assessment activities (e.g. NIST, NOS/RSD)**

Working Group for Disaster Impact Assessments and Plans: Weather and Water Data (WG/DIAP)

Benefits:

- **User agencies/entities gain awareness of unique interagency data collection activities**
- **Opportunities arise for data sharing/complementary post-storm assessments and studies**
- **Unique and targeted sources of supplementary data at no additional federal cost (participants use their own funding sources).**
- **Practice for eventual COASTAL act collection protocols**

HARVEY and IRMA Responses

System or Capabilities

HARVEY and IRMA Responses		System or Capabilities	
USGS			
		Storm-tide network, Rapid Gauges	
		Riverine Flood, Stream gauges	
DOC/NOAA			
NOS/OCM		Pre-storm inundation maps and exposure analysis	
		Pre-storm LIDAR and Digital Elevation Models	
NOS/CO-OPS		Storm QuickLooks Product - post storm graphic	
NOS/RSD		Hi-res Imagery - post storm	
		Base line pre event oblique imagery	
		Collected imagery	
NWS		COASTAL Act Data Protocol	
		NWS Operations Center	
NESDIS/NCEI		Data Archive	
DOC/NIST			
Leader, Structures Group		Post-storm Investigative Teams	
Dir. Disaster & Failure Studies Pgm			
Director (Acting) National Windstorm Impact Reduction Program (NWIRP)		Coordination of Federal Post-Windstorm Investigations	
NSF			
Program Director Physical and Dynamic Meteorology GEO Directorate			
Program Director Physical and Division of Civil, Mechanical & Manufacturing Innovation Meteorology ENG Directorate		Grants via Rapid Response Research funding mechanism (RAPID)	
Digital Hurricane Consortium/American Association for Wind Engineering			
Civil and Coastal Engineering /University of Florida		FCMP instrumented towers - wind and rain monitors	
University of Notre Dame		Wave and Storm Surge	
Texas Tech University		Stick Nets	
Oklahoma University		C-band dual-pol Radars	
Purdue University		Portable Integrated Precipitation Systems	
University of Alabama Huntsville		X-band dual pol Mobile Radar, Atm profiling sys	
Center for Severe Weather Research - Boulder (CSWR)-Colorado		Mobile Radar, mesonets, pods	
USACE			
ERDC/Coastal & Hydraulics Lab		In place gauges (wind, waves and water levels)	

Federal Coordinator's Update

- Tropical Cyclone Operations and Research Forum/Interdepartmental Hurricane Conference 2018
 - Florida International University, 13-15 March 2018 (first time at this venue)
 - Agenda in draft
 - Challenges encountered in 2017 season
 - GOES-16 data usage
 - Joint Hurricane Testbed updates
 - Modeling and Observing System issues
 - Supplemental funding requests forthcoming. (NSF, ONR, NWS/OAR)
 - National Hurricane Operations Plan working group meets during TCORF



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Weather Act of 2017 § 402

402. Interagency weather research and forecast innovation coordination

(a) Establishment

The Director of the Office of Science and Technology Policy shall establish an Interagency Committee for Advancing Weather Services to improve coordination of relevant weather research and forecast innovation activities across the Federal Government. The Interagency Committee shall—

- (1) include participation by the National Aeronautics and Space Administration, the Federal Aviation Administration, National Oceanic and Atmospheric Administration and its constituent elements, the National Science Foundation, and such other agencies involved in weather forecasting research as the President determines are appropriate;
- (2) identify and prioritize top forecast needs and coordinate those needs against budget requests and program initiatives across participating offices and agencies; and
- (3) share information regarding operational needs and forecasting improvements across relevant agencies.

(b) Co-Chair

The Federal Coordinator for Meteorology shall serve as a co-chair of this panel.

(c) Further coordination

The Director of the Office of Science and Technology Policy shall take such other steps as are necessary to coordinate the activities of the Federal Government with those of the United States weather industry, State governments, emergency managers, and academic researchers.

Implementing Weather Act of 2017 § 402

Challenge: The 2017 Weather Act directs OSTP to establish “an Interagency Committee for Advancing Weather Services (ICAWS),” with duties including identifying, prioritizing, and coordinating top forecast needs, and sharing needs and improvements across agencies.

Recommendations:

- Use a similar construct as that used in 1962 when OMB was tasked by law to produce an annual meteorological services budget report – have EOP (OMB) assign the task to an existing relevant agency (DoC).
- Since the FCMSSR and the supporting Federal weather enterprise coordination structure cover most ICAWS duties, assign the duties formally to FCMSSR, without creating another organizational entity.
- Have OSTP leadership issue this plan; adjust the FCMSSR charter to accommodate.

Proposed Action:

- FCMSSR approve the draft outline (provided in read-aheads) for forwarding to OSTP as the recommendation of the Federal weather enterprise. Upon OSTP leadership approval, EOP/OSTP will finalize a document requesting the Department of Commerce designate FCMSSR as responsible for the duties assigned to ICAWS.
- Modify FCMSSR charter as required.

Implementing Weather Act of 2017 § 402

Draft guidance from OSTP:

GUIDANCE

In lieu of establishing a new committee, the **Acting Director**, OSTP, seeks to designate the FCMSSR as the committee that will complete the responsibilities specified in PL 115-25 Section. The Acting Director seeks concurrence from the Department of Commerce on this designation and requests that the FCMSSR Charter be modified accordingly.

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New Federal Coordination Documents

Old:



- Single publication
- Produced annually
- 200+ pages
- Multiple detailed spreadsheets
- Released in October
- No formal review

New :



First publication (proposed):

- Strategic Plan
- Published every four years
- Composed by interagency group
- Approved by FCMSSR



Second publication (published):

- Annual Report
- Smaller (~50 pages)
- Few tables (satisfies PL 87-843)
- **Progress towards Strategic Goals and Objectives (Agencies, Committees)**
- Released in March (normally, but not FY18 version)
- OMB Review

Strategic Plan: Proposed Way Ahead

Proposed Actions:

- **Approve Strategic Plan for forwarding to the FCMSSR for final approval.**
- **Upon FCMMSR approval, direct Federal Weather Enterprise Committees and Working Groups to ready a report of ongoing actions and existing plans within their subject matter areas that support the objectives of the Strategic Plan. Individual agencies will be given opportunity to add and/or comment.**
- **Include these summaries in FY19 Annual Report. (Rekurs annually.)**
- **ICMSSR (OFCM) conduct gap analysis and issue directions to Committees/Working Groups as appropriate.**
- **Beginning CY20, revise/review Strategic Plan (via Joint Action Group), issue in CY21 for FY 22-26.**

Draft Strategic Plan for Federal Weather Enterprise Coordination

Through interagency collaboration and cooperation, including both formal and informal partnerships:

1. Improve the resolution, frequency, information content, and sustainability of global observing capabilities.
2. Make Federal forecasting processes more resilient for all relevant time and spatial scales.
3. Improve interagency collaboration to support effective and consistent decision-support products, information, and services.
4. Conduct productive, synergistic interagency research efforts.
5. Develop, recruit, and sustain a diverse Federal weather workforce.
6. Coordinate messaging about FWE priorities and needs.

Strategic Plan:

DRAFT Goals and Objectives

- 1. Improve the resolution, frequency, information content and sustainability of global observing capabilities.**
 - a) Enable interagency discussions of observation system acquisition at the capability planning stage.**
 - b) Provide forums to discuss and promote deployment and sustainment of common-use systems through formalized interagency processes.**
 - c) Coordinate data formatting, processing, communication, management and stewardship standards to optimize the exchange, timeliness, usability and value of earth observations.**
 - d) Coordinate the development of new observing technology and technology to extract information from observations.**

Strategic Plan:

DRAFT Goals and Objectives

2. **Make Federal forecasting processes more resilient for all relevant time and spatial scales.**
 - a) **Strengthen interoperability among interagency forecasting centers in producing accurate, timely, and precise weather products, information and services.**
 - b) **Ensure interagency utility (data types, precision, web services etc.) of short-term to long-term forecasts.**
 - c) **Support agency efforts to plan and develop the cooperative use of processing resources to increase the Nation's computing power for enhancing data assimilation and modeling systems.**

3. **Improve interagency collaboration to support effective and consistent decision-support products, information and services.**
 - a) **Coordinate interagency outreach efforts to identify weather and water related information needs for decision making and risk management.**
 - b) **Improve the consistency of decision support and risk management products, information and services across the FEW.**
 - c) **Crossfeed processes and lessons learned between agencies to improve decision support tools.**

Strategic Plan:

DRAFT Goals and Objectives

- 4. Conduct productive, synergistic interagency research efforts.**
 - a) Exercise leadership in coordinating U.S. efforts in international weather research priorities including the current WMO Grand Challenges.**
 - b) Foster interagency collaboration of research initiatives starting at the planning stage.**
 - c) Support efforts among FWE participants to coordinate task definition and sponsorship of National Academies research initiatives.**
 - d) Expand interagency use of data and information for research.**
- 5. Develop, recruit, and sustain a professional diverse federal workforce.**
 - a) Coordinate OPM definitions and requirements for meteorology-related positions to ensure appropriate education and experience of the FWE workforce.**
 - b) Coordinate opportunities to leverage outreach, including education efforts, recruiting, and diversity inclusion initiatives.**
 - c) Crossfeed information on career path planning, training opportunities, diversity and inclusion, professional development, and retention programs.**

Strategic Plan:

DRAFT Goals and Objectives

- 6. Coordinate messaging about FWE priorities and needs.**
 - a) Coordinate input about FWE priorities to the Executive and Legislative branches, including communicating these priorities to federal agencies that are not FWE participants.**
 - b) Coordinate messaging about FWE priorities to academia, professional and industry associations, non-federal government entities, and the general public.**

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Open Discussion

Wrap-Up

- OFCM will document any new Action Items and provide the meeting Record of Action within two weeks.
- Next FCMSSR meeting proposed for **Tuesday 24 April 2018**
- **Wrap-Up (Chair)**