

The Federal Plan for Meteorological Services and Supporting Research Fiscal Year 1999

U.S. DEPARTMENT OF COMMERCE/National Oceanic and Atmospheric Administration



OFCM

OFFICE OF THE FEDERAL COORDINATOR
FOR METEOROLOGY

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The Federal Plan for Meteorological Services and Supporting Research

FISCAL YEAR 1999

FEDERAL COORDINATOR
FOR
METEOROLOGICAL SERVICES AND SUPPORTING RESEARCH

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PREFACE

Since 1965, the Office of the Federal Coordinator for Meteorological Services and Supporting Research (OFCM) has developed a federal plan that articulates the provision of meteorological services and supporting research by agencies of the federal government. The plan provides Congress and the Executive Branch with a comprehensive document that reviews agency programs for Fiscal Year (FY) 1998 and documents proposed programs for FY 1999. Narratives, timelines, and schedules are current as of June 1998.

With this edition, we began an evolutionary effort to enhance the plan's format and presentation of information. While the overall content of the publication remains unchanged, we have shifted the focus from the federal coordination process to the services and programs within each federal agency. The Executive Summary was expanded to enable it to serve as a stand-alone report. Section 1 is now our feature article entitled *Aviation Weather: Taking a Leadership Role*. Section 2 summarizes the resources requested in the President's FY 1999 Budget and includes a comparison with those resources that Congress appropriated for FY 1998. Section 3 contains departmental and agency narratives on meteorological services and supporting research programs. Appendices A through E describe the OFCM's coordination, program, and planning activities; a list of acronyms and abbreviations; a table of previous feature articles; a World Weather Program summary; and a White Paper on Frequency (Radio Spectrum) Management.

As we embark on the 21st Century, the OFCM will restructure the interagency coordination process during FY 1999 to address the priorities, issues, and concerns expressed by the federal agencies. The Federal and Interdepartmental Committees for Meteorological Services and Supporting Research (inside-front cover) will continue to provide policy and program guidance to the OFCM, and the program council structure will remain unchanged. Radical change comes with the standing committee structure, and the committees will be tasked to take on increased strategic planning responsibilities. Working groups will be reduced in number and will cover broader areas of responsibility, and the joint action groups will be used to address specific, time-critical issues or to work short term projects. The restructured OFCM organization is shown on the inside-back cover.

We solicit your comments and feedback regarding improvements we've made to the federal plan. We also look forward to your suggestions to assist us in improving our web site--WWW.OFCM.GOV.

Samuel P. Williamson
Federal Coordinator for Meteorological
Services and Supporting Research

THE FEDERAL PLAN FOR METEOROLOGICAL SERVICES
AND SUPPORTING RESEARCH, FISCAL YEAR 1999

TABLE OF CONTENTS

Preface	ii
EXECUTIVE SUMMARY	vii
Section 1. Aviation Weather: Taking A Leadership Role	1-1
Section 2. RESOURCE INFORMATION AND AGENCY PROGRAM UPDATES	2-1
Agency Obligations for Meteorological Operations	2-1
and Supporting Research	
Department of Agriculture	2-1
Department of Commerce	2-1
Department of Defense	2-4
Department of the Interior	2-6
Department of Transportation	2-6
Environmental Protection Agency	2-7
National Aeronautics and Space Administration	2-8
Nuclear Regulatory Commission	2-8
Agency Funding by Budget Category	2-8
Agency Funding by Service Category	2-8
Personnel Engaged in Meteorological Operations	2-13
Interagency Fund Transfers	2-13
Facilities/Locations for Taking Meteorological Observations	2-15
Section 3. AGENCY METEOROLOGICAL SERVICES AND SUPPORTING RESEARCH PROGRAMS	
Department of Commerce Weather Programs	3-DOC-1
National Oceanic and Atmospheric Administration	3-DOC-1
National Weather Service	3-DOC-1
National Environmental Satellite, Data, and Information Service	3-DOC-6
Office of Oceanic and Atmospheric Research	3-DOC-18
National Ocean Service	3-DOC-26
Office of NOAA Corps Operations	3-DOC-27
Department of Defense Weather Programs	3-DOD-1
United States Air Force	3-DOD-1
United States Navy	3-DOD-9
United States Army	3-DOD-16
Department of Transportation Weather Programs	3-DOT-1
Federal Aviation Administration	3-DOT-1
Federal Highway Administration	3-DOT-9
United States Coast Guard	3-DOT-11

Department of Agriculture	3-USDA-1
Department of Energy	3-DOE-1
Department of the Interior	3-DOI-1
Department of State	3-DOS-1
Environmental Protection Agency	3-EPA-1
Federal Emergency Management Agency	3-FEMA-1
National Aeronautics and Space Administration	3-NASA-1
Nuclear Regulatory Commission	3-NRC-1

APPENDICES

A. FEDERAL COORDINATION AND PLANNING	A-1
Mission and Staffing of the Office of the Federal Coordinator for Meteorology	A-1
Coordination of Multiagency Programs	A-2
Federal Committee for Meteorological Services and Supporting Research	A-2
Program Councils	A-3
National Aviation Weather Program Council	A-3
Joint Action Group for Aviation Weather	A-3
Committee for Aviation Services	A-3
Joint Action Group for Volcanic Ash	A-3
National Space Weather Program Council	A-3
Committee for Space Weather	A-4
Planning Committee Activities, and Publications	A-4
Interdepartmental Committee for Meteorological Services and Supporting Research	A-4
Committee for Environmental Services, Operations, and Research Needs	A4
Working Group for Environmental Service and Requirements	A4
Working Group for Hurricane and Winter Storm Operations and Research	A4
Satellite Telemetry Interagency Working Group	A5
Working Group for Natural Disaster Reduction/Post-Storm Data Acquisition	A5
Committee for Operational Processing Centers	A6
Committee for Environmental Information Systems and Communications	A6
Working Group for Communications Interfaces and Data Exchange	A7
Working Group for Meteorological Codes	A7
Committee for Integrated Observing Systems	A7
Working Group for Atmospheric Observing Systems	A7
Working Group for Coastal Marine and Ocean Observing Systems	A8
Committee for Cooperative Research	A8
Committee for Climate Monitoring and Services	A8

Related Federal Meteorological Coordination	A-9
Federal Meteorological Handbooks	A-9
Meteorological Publications	A-9
Interdepartmental Hurricane Conference	A-9
Surface Transportation - Road/Weather Information Systems	A-9
Committee for the Environment and Natural Resource/Subcommittee for Natural Disaster Reduction	A-10
World Weather Program	A-10
Frequency (Radio Spectrum) Management	A-10
B. Acronyms and Abbreviations	B-1
C. Listing of Previous Feature Articles	C-1
D. World Weather Program	D-1
E. White Paper on Frequency (Radio Spectrum) Management	E-1

LIST OF TABLES

ES-1 Federal Budget for Meteorological Operations and Supporting Research, FY 1999	vii
2.1 Meteorological Operations and Supporting Research Costs, by Agency	2-2
2.2 Agency Operational Costs, by Budget Category	2-9
2.3 Agency Supporting Research Costs, by Budget Category	2-10
2.4 Agency Operational Costs, by Service	2-11
2.5 Agency Supporting Research Costs, by Service	2-12
2.6 Personnel Engaged in Meteorological Operations	2-14
2.7 Interagency Fund Transfers for Meteorological Operations and Supporting Research	2-15
2.8 Facilities/Locations for Taking Meteorological Observations	2-16
3-1 Projected Satellite Launch Schedule	3-DOC-10
A-1 Current Publications of OFCM	A-11

LIST OF FIGURES

ES-1 Agency Percent of Total Federal Budget for Meteorological Operations and Supporting Research, FY 1999	viii
ES-2 Agency Percent of Federal Budget for Meteorological Operations, FY 1999	viii
ES-3 Agency Percent of Federal Budget for Supporting Research, FY 1999	viii
NASA-1 TRMM Slicing Through Clouds of Tropical Cyclone Susan	3-NASA-6
NASA-2 Line of Severe Thunderstorms Moving Across Florida	3-NASA-6
NASA-3 Rainfall Captured Simultaneously by TRMM and SSM/I	3-NASA-7
NASA-4 TRMM Observes El Niño Rainfall Patterns	3-NASA-9

The Federal Plan for Meteorological Services and Supporting Research Fiscal Year 1999

EXECUTIVE SUMMARY

For Fiscal Year (FY) 1999, the President's budget requests \$2.60 billion for meteorological services and supporting research. Of the total requested, \$2.21 billion is designated for operations and \$390 million for supporting research. Table ES-1 lists a breakout of the FY 1999 budget proposal.

Consistent with previous year's requests, the Departments of Commerce (DOC), Defense (DOD), and Transportation (DOT) are projected to receive 91 percent of the funds. The overall distribution among these three departments remains the same with DOC accounting for the largest portion at 52.9 percent, DOD with 20.2 percent, and DOT with 17.9 percent. The remaining 8.5 percent are distributed among the other federal agencies.

In comparison to the \$2.38 billion appropriated in FY 1998, the FY 1999 request represents an increase of 8.9 percent. DOC's request represents an increase of 14.7 percent, DOD's an increase of 0.7 percent, and DOT's an increase of 7.2 percent. The overall rise in DOC is largely

attributable to the 41.5 percent increase for satellite systems acquisition and special programs under the operations category. The DOD increase is attributable to a 64.4 percent increase in DMSP research and development. DOT's increase is associated with gains in costs for operations support and systems acquisition.

The budget requests for the National Aeronautics and Space Administration and the Nuclear Regulatory Commissions reflect increases near one percent, the Department of Agriculture a small decrease of 0.2 percent, and the remaining agencies little or no change. Figure ES-1 depicts each agency's proportion of the requested FY 1999 federal budget for meteorological operations and supporting research. Each agency's portion of the requested funding for meteorological operations is shown in Figure ES-2. Of the \$2.21 billion requested for meteorological operations, DOC, DOD, and DOT account for slightly over 99 percent of the funds. Overall, operational costs increased by 10.5 percent. Figure ES-3

depicts each agency's portion of the requested proposed federal supporting research budget. Unlike operations, DOC, DOD, and NASA account for the major share (91 percent) of the supporting research budget. Across the agencies, requests for supporting research funds increased by less than 1 percent.

All agencies project a personnel total of 14,995 full-time equivalent (FTE) to be employed in federal meteorological operations in FY 1999. This figure represents a decrease of 1.6 percent from the 15,242 FTE employed in FY 1998.

Major Programs of DOC, DOD, and DOT

Next Generation Weather Radar (NEXRAD). The NEXRAD Program which began in FY 1981 was responsible for procurement, installation, and operation of the Weather Surveillance Radar-1988 Doppler (WSR-88D). The first limited production WSR-88D system was installed at Oklahoma City, Oklahoma in

TABLE ES-1 FEDERAL BUDGET FOR METEOROLOGICAL OPERATIONS AND SUPPORTING RESEARCH, FY 1999 (in thousands of dollars)

Agency	Operations	% of TOTAL	Supporting Research	% of TOTAL	TOTAL	% of TOTAL
Agriculture	\$12,600	0.6	\$15,500	4.0	\$28,100	1.1
Commerce	1,303,450	59.0	70,768	18.1	1,374,218	52.9
Defense	438,228	19.9	87,013	22.3	525,241	20.2
Interior	800	0.0	0	0.0	800	0.0
Transportation	448,648.2	20.4	139,548	3.6	462,603	17.9
EPA	0	0.0	5,700	1.5	5,700	0.2
NASA	2,963	0.1	197,095	50.5	200,058	7.7
NRC	110	0.0	0	0.0	110	0.0
TOTAL	2,206,799	100.0	390,031	100.0	2,596,830	100.0

EXECUTIVE SUMMARY

TOTAL = \$2.60 BILLION

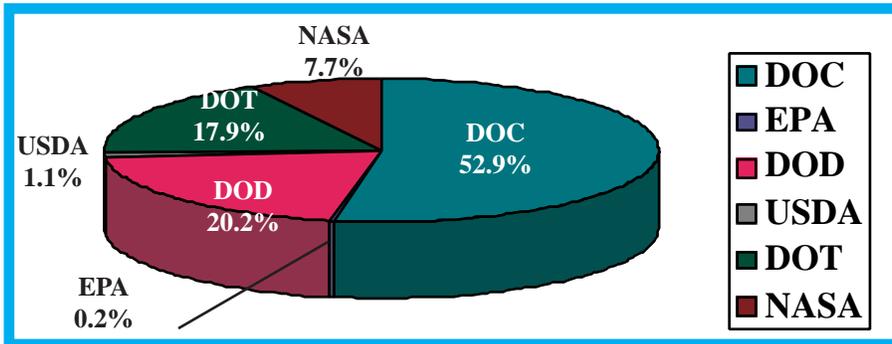


FIGURE ES-1: AGENCY PERCENT OF TOTAL FEDERAL BUDGET FOR METEOROLOGICAL OPERATIONS AND SUPPORTING RESEARCH, FY 1999

TOTAL = \$2.21 BILLION

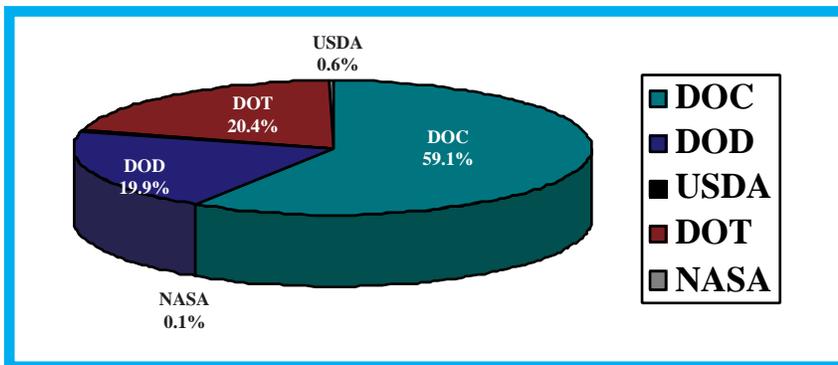


FIGURE ES-2 AGENCY PERCENT OF FEDERAL BUDGET FOR METEOROLOGICAL OPERATIONS, FY 1999

TOTAL = \$390 MILLION

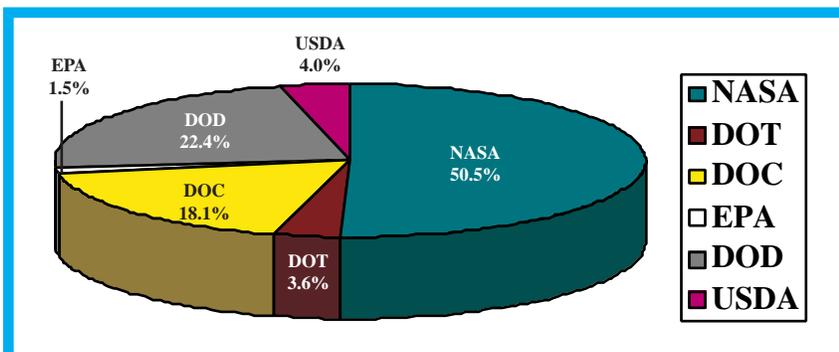


FIGURE ES-3 AGENCY PERCENT OF FEDERAL BUDGET FOR SUPPORTING RESEARCH, FY 1999

May 1990 and commissioned 4 years later in February 1994. The original program plan called for a total of 161 radars. In response to a National Research Council report, three additional radars were added and raised the total to 164 radar sites. The last system in the basic procurement schedule was installed in June 1996.

By agency, as of June 1998, the DOC/National Weather Service had commissioned 120 sites, the DOD/USAF had commissioned 19 sites, and the DOT/FAA had commissioned 11 sites. DOD has three systems at Keelser AFB, Mississippi, for training; DOC/NWS has one each at the National Reconditioning Center, and NWS Training Center in Kansas City, Missouri and at the Operational Support Facility, Oklahoma City, Oklahoma.

Automated Surface Observing System (ASOS). The ASOS program, began in 1983, as a joint development effort between the DOC, DOD, and DOT/FAA. Installation of ASOS units started in 1991. As of June 1998, a total of 993 units have been purchased. The NWS has purchased 314 units, and accepted 314 units, and commissioned 295 sites. The FAA has purchased 569 units, accepted 554 units, and commissioned 333 sites. The Navy has purchased 76 units, accepted 76 units, and commissioned 76 sites. The Air Force has purchased 34 units, accepted 32 units, and commissioned 31 sites. Collectively, a total of 727 ASOS sites have been commissioned.

Automated Weather Information Systems (AWIS).

The DOC, DOD, and DOT require AWISs to facilitate the collection, processing, and interpretation of meteorological data. AWISs are being procured to provide an automated, high-speed, user-friendly man/machine interface to access and process large volumes of sophisticated meteorological data. AWIS supports the timely production of accurate and geographically precise warnings, forecasts, and special tailored products. They also provide the communications capability for expeditious product dissemination.

Major agency systems classified as AWISs are: NOAA's Advanced Weather Interactive Processing System (AWIPS), the FAA's Weather and Radar Processor (WARP), the Air Force's Automated Weather Distribution System (AWDS), and the Navy's Navy Integrated Tactical Environmental Subsystem (NITES).

In February 1997, the Secretary of Commerce approved the limited deployment of AWIPS. This decision authorized NOAA to procure and deploy 21 systems. The group of 21 limited deployment systems were installed in November 1997 through March 1998. A second group of 19 limited deployment systems were installed in June through August 1998. On April 9, 1998, the Secretary authorized full scale production and deployment of AWIPS, through Build 4.2, for the remaining 95 systems. Installation of these systems will begin in September 1998 with completion by June 1999. Commissioning of AWIPS is not expected to begin until January 2000.

The FAA's Weather and Radar Processor (WARP) will greatly enhance the dissemination of aviation weather information throughout the NAS. WARP will automatically create unique regional, WSR-88D-based, mosaic products and send these products, along with other time-critical weather information, to controllers through the Advanced Automation System (AAS) as well as to pilots via the aeronautical data link.

The Air Force is modernizing and improving strategic, operational, and combat level systems. Modernization programs include the Tactical Observing and Forecasting System (TOFS) which provides a single system for both garrison and deployed operations. TOFS will replace AWDS and consists of two components: the Tactical Forecast System (TFS) and the Manual Observing System (MOS). TOFS will serve as an in-garrison system as well as a deployable "first-in" combat weather forecast capability. MOS is a single-person portable observing system containing essential, basic observing equipment.

The Navy continues procurement or upgrades of the five subsystem to the Naval Integrated Tactical Environmental System (NITES). These subsystems include: NITES I Tactical Environmental Support System (TESS/NC), NITES II - Joint TESS Remote Workstation (J-TRWS) and Joint METOC Segment (JMS), NITES III - METOC Integrated Data Display System (MIDDS), NITES IV - Interim Mobile Oceanography Support System (I-MOSS), and NITES V - Allied Environmental Support System (AESS).

Other Agency Programs

For FY 1999, the Department of Agriculture (USDA) requested \$28.1 million for meteorological operations and supporting research. Operationally, the USDA supports specialized weather observation networks and also conducts an active supporting research program to ensure an abundance of high-quality agricultural commodities while minimizing the adverse effects of agriculture on the environment.

The Department of Interior's (DOI) FY 1999 request is \$800,000 primarily to support the Bureau of Land Management's remote automatic weather station (RAWS) program.

The budget request for the Environmental Protection Agency (EPA) remains level at \$5.7 million to provide user-appropriate and scientifically credible air-quality meteorological programs to support regulatory applications.

For FY 1999, NASA's request is \$200 million primarily for supporting research associated with the Office of Earth Science program. These funding levels are composed of the estimated meteorology share of the supporting research and analysis programs, to include the Earth Observing System (EOS) and Earth Probe instruments, EOS science, and the EOS Data and Information Systems (EOSDIS). Included in NASA's request is \$26 million for special programs under the category of aviation weather supporting research.

The Nuclear Regulatory Commission's (NRC) request for \$110,000 is mainly for operations. The NRC will dedicate these funds to obtain and analyze meteorological data and information related to the safe operation of nuclear facilities, and the protection of the environment, public health, and safety.

An article titled, "Data Continuity in the Meteorological and Climatological Record" appears in Section 4. The article discusses some of the problems associated with data continuity.

Federal Coordination Activities

In response to a National Research Council report and recommendation, the National Aviation Weather Program Council (NAWPC) tasked the Aviation Weather Joint Action Group (JAG) to prepare a strategic plan for aviation weather. The JAG completed and subsequently dis-

tributed The National Aviation Weather Strategic Plan (August 1997). As a follow up to the strategic plan, the JAG is currently drafting an initiatives document.

On January 26-30, 1998, OFCM hosted the 52nd Interdepartmental Hurricane Conference (IHC) in Clearwater Beach, Florida. The 53rd IHC is scheduled for February 8-12, 1999 in Biloxi, Mississippi. The Air Force Reserve's 53rd Weather Reconnaissance Squadron will also serve as hosts for some of the activities and events.

The FY 1999 featured article is entitled "Aviation Weather: Taking a Leadership Role" and was provided by the Federal Aviation Administration.

In an effort to identify opportunities, challenges, and priorities for the 21st Century, the Federal Coordinator initiated an across-the-board review of meteorological programs, services, and activities within

the federal agencies. Employing an inclusive approach, the review consisted of: (a) identifying priority areas, issues, and problems within each agency; (b) soliciting agency ideas to improve the effectiveness of interagency coordination and cooperation; and (c) consolidating the inputs. The Federal Coordinator's outreach included personal visits with each agency's representative to both the Federal and Interdepartmental Committees for Meteorological Services and Supporting Research (FCMSSR and ICMSSR, respectively), former Federal Coordinators, as well as other key leaders from federal agencies, the private sector/universities, and other OFCM affiliations. The preliminary findings, conclusions, and recommendations were presented to the ICMSSR in July and accepted in August 1998. OFCM will seek FCMSSR endorsement at the next meeting scheduled for September, 1998.