

SECTION 1

EXECUTIVE SUMMARY

The President's FY 1997 Budget requests \$2.50 billion for meteorological services and supporting research. This request represents an increase of 0.4 percent from the \$2.42 billion appropriated for FY 1996. Of the total, \$2.132 billion will be for operations and \$370 million for supporting research. The FY 1997 budget proposal, by agency, is shown in Table 1.1.

The Departments of Commerce (DOC), Defense (DOD), and Transportation (DOT) are projected to receive approximately 92 percent of the funds. In FY 1997, funding levels required to support major systems acquisitions of automated surface observing systems and Doppler weather radars are decreasing in the three Departments. DOT's budget request decreases almost 18 percent. Overall, DOC realizes nearly a 14 percent increase principally for operating its satellite programs and support to Advanced Weather Interactive Processing Systems (AWIPS) system development. Funding levels for the DOD continue to decline as "downsizing" activities linger. The Air Force's budget request decreases by 5.3 percent while the Army's decreases by 20.6 percent. The Navy receives a small 4.2 percent increase.

The National Aeronautics and Space Administration (NASA) realizes a small increase of 1.9 percent in supporting research but incurs a decrease of nearly 20 percent in operations. Also, the operations budget for the Bureau of Land Management within the Department of Interior is reduced by 31.6 percent.

Notwithstanding these reductions in several of the agencies and the overall reduction-oriented budget environment, the federal meteorological community has requested an increase of 8.4 percent from the FY 1996 funding levels appropriated for meteorological services and supporting research.

Table 1.1. Federal Budget for Meteorological Operations and Supporting Research, FY 1997 (in thousands of dollars)

Agency	Operations	% of TOTAL	Supporting Research	% of TOTAL	TOTAL	% of TOTAL
Agriculture	\$12,105	0.6	\$15,467	4.2	\$27,572	1.1
Commerce	1,230,276	57.7	84,498	22.8	1,314,774	52.6
Defense	425,141	19.9	93,729	25.3	518,870	20.7
Interior	800	0.0	0	0.0	800	0.0
Transportation	459,777	21.6	5,873	1.6	465,650	18.6
EPA	0	0.0	6,700	1.8	6,700	0.3
NASA	3,453	0.2	163,800	44.3	167,253	6.7
NRC	289	0.0	0	0.0	289	0.0
TOTAL	2,131,841	100.0	370,067	100.0	2,501,908	100.0

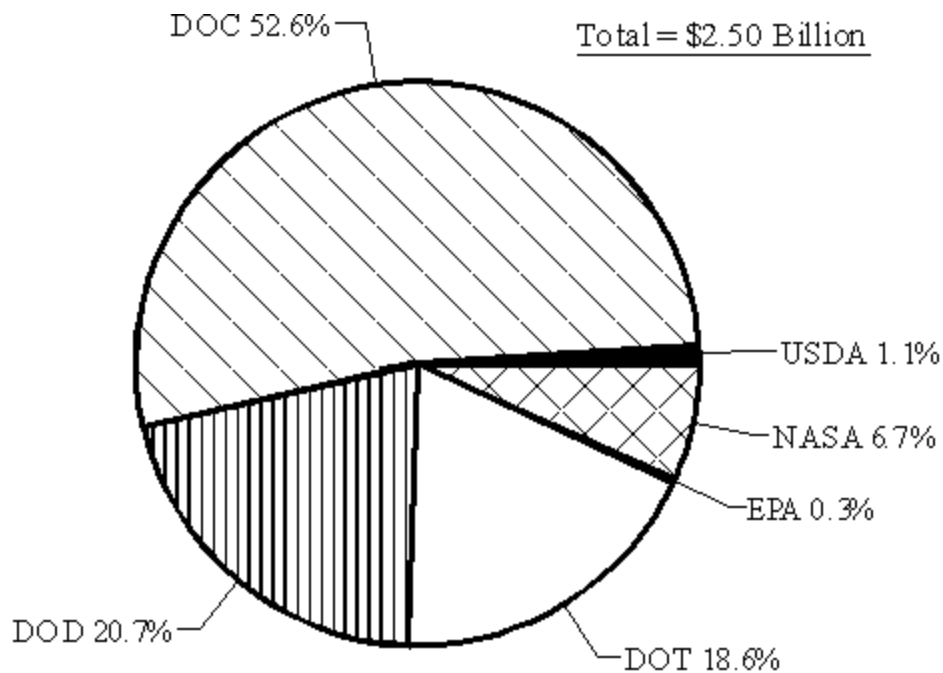


Figure 1.1 Agency Percent of Total Federal Budget for Meteorological Operations and Supporting Research, FY 1997

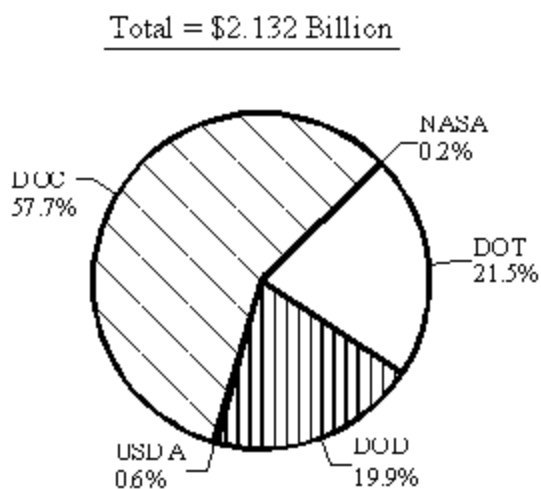


Figure 1.2 Agency Percent of Federal Budget for Meteorological Operations, FY 1997

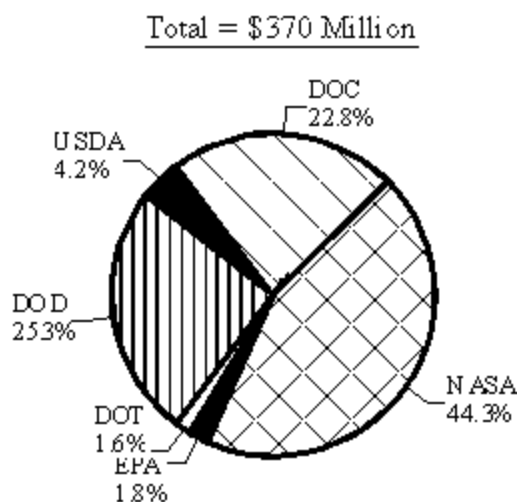


Figure 1.3 Agency Percent of Federal Budget for Supporting Research, FY 1997

Figure 1.1 depicts each agency's proportion of the proposed FY 1997 federal budget for meteorological operations and supporting research. As in previous years, the DOC budget accounts for 52.6 percent of the total, DOD--20.7 percent, DOT--18.6 percent, and the remaining federal agencies 8.1 percent. Each agency's portion of the proposed funding for meteorological operations is shown in Figure 1.2. Nearly 99 percent of the federal budget for operations is allocated for spending within DOC, DOD, and DOT. Figure 1.3 depicts each agency's portion of the proposed federal supporting research budget. Unlike operations, the majority of the supporting research budget is directed to NASA, DOD, and DOC.

The agencies project a total of 16,214 full-time equivalent (FTE) personnel to be employed in federal meteorological operations in FY 1997. This figure represents a decrease of 2.7 percent from the 16,662 FTE personnel employed in FY 1996.

Major Programs of DOC, DOD, and DOT

The required funding for major weather system acquisition programs for DOC, DOD, and DOT is lower than the previous year's level. However, the President's Budget still provides sufficient funding support to continue modernization efforts in FY 1997.

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 May 1990. Four years later, in February 1994, the Oklahoma City NEXRAD became the first WSR-88D to be officially commissioned. In July 1996, the WSR-88D program achieved a major milestone when the last unit from the original order was installed atop the Santa Ana Mountains to cover the areas surrounding San Francisco and Monterey Bay in California.

As of August 1996, 106 WSR-88D units have been commissioned as an official site on the national network of weather radars. The WSR-88D was developed to meet the requirements of DOC, DOD, and DOT for improved capability to detect and maintain surveillance of hazardous weather.

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 August 1996, a total of 868 units have been purchased. The NWS has purchased, installed, and accepted 245 units. The FAA has purchased 537 units, installed 421 units, and accepted 413 units. The Navy has purchased 86 units, installed 59 units, and accepted 48 units. Collectively, the NWS and FAA have commissioned 297 units--NWS 205 and FAA 92.

In July 1996, the ASOS Program Office successfully implemented software modifications to change the observation code format from Surface Aviation Observation (SAO) or Airways to METAR.

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 Naval Oceanographic Data Distribution and Expansion System (NODDES) and Navy Integrated Tactical Environmental Subsystem (NITES).

Other Agency Programs

For FY 1997, the Department of Agriculture's (USDA) budget request for meteorological operations and supporting research is \$27.57 million. 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 (DOI) is requesting \$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) decreases to \$6.7 million to provide user-appropriate and scientifically credible air-quality meteorological programs to support regulatory applications.

NASA's total funding request of \$167.3 million is primarily for supporting research focused within the Mission to Planet Earth (MTPE) 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).

The Nuclear Regulatory Commission's (NRC) request of \$289,000 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

The National Space Weather Program (NSWP) published (August 1995) *The National Space Weather Program: Strategic Plan*. The Working Group for Space Environmental Forecasting is finalizing a draft of a NSWP Implementation Plan which will cover research, modeling, and observation requirements, and provide guidance on priorities, agency roles and responsibilities, and program management. The projected publication date for the Implementation Plan is late 1996.

In November 1995, the Ad Hoc Group for FMH-1 (AHG/FMH-1) finalized the fifth edition of Federal Meteorological Handbook No. 1, *Surface Weather Observations and Reports*. The latest edition, published in December 1995, reflects the United States implementation of the World Meteorological Organization's (WMO) Aviation Routine Weather Report (METAR) and Aviation Selected Special Weather Report (SPECI) code formats for surface weather observations.

In late 1995, the Working Group for Meteorological Codes (WG/MC) finalized the list of United States exceptions to three WMO codes--METAR, SPECI, and Aerodrome Forecast (TAF). These new code formats were implemented in the United States on July 1, 1996, at 0800 Greenwich Mean Time/Coordinated Universal Time (UTC).

The Ad Hoc Group for Mobile Meteorological Equipment (AHG/MME) published (December 1995) a revised *Federal Directory of Mobile Meteorological Equipment and Capabilities* which catalogues both current mobile systems or capabilities and those programmed to be available in the near future.

In March 1996, the Office of the Federal Coordinator for Meteorology hosted the 50th Interdepartmental Hurricane Conference (IHC) in Miami, Florida. A combination of a near-record hurricane season, celebration of the 50th conference, and concern about certain weather reconnaissance issues made for a full agenda and unusually large attendance (134 representatives from DOC, DOD, and DOT). Special events to celebrate the 50th conference included historical presentations on hurricane forecasting and

aircraft reconnaissance, a look into the future of hurricane forecasting, and former Federal Coordinator Bill Barney's review of weather and its impact over the years.

The Working Group for Cooperative Support and Backup completed and published (May 1996) section one of the totally revised *Federal Plan for Cooperative Support and Backup Among Operational Processing Centers*. The revised plan details the mission and operations descriptions plus the general cooperative support and backup requirements of the operational processing centers.

The Working Group for Marine Environmental Services (WG/MES) published (June 1996) the *Federal Plan for Marine Environmental Data, Services, and Supporting Research* which defines a responsive national policy for marine environmental services. The plan will serve as a mechanism for interagency cooperation in marine data collection efforts.

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