

**BY ORDER OF THE COMMANDER  
AIR FORCE SPACE COMMAND**

**AIR FORCE SPACE COMMAND  
MISSION DIRECTIVE 5-510**



**13 DECEMBER 2018**

**Mission Directive**

**SPACE WEATHER**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This mission directive (MD) implements policy and guidance in Air Force Policy Directive Air Force Instruction (AFI) 38-601, *Format and Content of Mission Directives*, AFI 38-101, Air Force Organization, AFI 33-360, *Publications and Forms Management*, AFMD5, *Air Force Space Command Mission Directive*, AFD 15-1, *Weather Operations*, AFI 15-128, *Air Force Weather Roles and Responsibilities*, AFMAN 15-129V1, *Air and Space Weather Operations – Characterization*, and AFMAN 15-129V2, *Air and Space Weather Operations – Exploitation*. Ensures that all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) AFMAN 33-363, *Management of Records*, and disposed of IAW the Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using Air Force (AF) Form 847, Recommendation for Change of Publication; route AF Forms 847 from the field through the appropriate functional's chain of command. This publication may not be supplemented or further implemented/extended. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the Publication OPR for non-tiered compliance items. This mission directive defines the mission, command, and responsibilities of the only Air Force Space Command (AFSPC) Weather Squadron. This publication does not apply to any Air Reserve Component or Air National Guard units.

**1. Mission.** The 45th Weather Squadron (45 WS) provides time-dominant and actionable environmental intelligence for air and space superiority operations, and test and evaluation activities conducted across the 15-million-square-mile Eastern Range. The squadron's

meteorological observations, mission-tailored forecasts, and hazardous weather watches, warnings and advisories shape daily operations and drive resource protective measures for more than 25,000 personnel and \$20 billion in assets at Patrick Air Force Base (PAFB), Cape Canaveral Air Force Station (CCAFS) and the Kennedy Space Center, Florida. The squadron is headquartered at PAFB; however, the unit conducts the majority of its operations from its multi-domain operations center at CCAFS. In addition to the 45th Space Wing (45 SW) and its subordinate squadrons, mission partners comprise the 920th Rescue Wing, the National Aeronautics and Space Administration (NASA), the US Navy's Strategic Systems Program Naval Ordinance Test Unit, the National Reconnaissance Office, the Department of State and a growing list of commercial space entities. Supported missions include, but are not limited to: Assured Space Access/Spacelift; Terrestrial Environmental Monitoring; Search and Rescue; Personnel Recovery; Space Launch/Landing Safety and Security Surveillance; Naval Strategic Systems Test and Evaluation; NASA Spacelift, Scientific and Engineering activities; Airborne Command and Control and Security Assistance Aviation Operations. Further, 45 WS personnel are integral members of the U.S. Lightning Advisory Panel and drive refinement of Launch/Flight Commit Criteria for Defense, Civil and Commercial space launch and landing operations. The 45 WS must be able to operate in varying threat level environments. Weather units are organized under the Deployment Indicator (DEPID) Code 9 Unit Type Code (UTC) of "XWJAA – WEA Air Weather."

**2. Command.** The squadron is assigned to the 45 SW. Resource management is provided by the Commander, Air Force Space Command (AFSPC/CC). The 45 WS Commander (45 WS/CC) is authorized to communicate, coordinate, and work with other units or agencies on matters relating to mission accomplishment, administrative or logistical support under applicable support agreements and letters of understanding.

**3. Responsibilities.** 45 WS/CC:

- 3.1. Leads the unit and executes duties as prescribed in AFI 1-2, *Commander's Responsibilities*, to accomplish the mission.
- 3.2. Leads the provision of operational weather support to the 45 SW and mission partners IAW applicable 15-series Air Force Instructions and Air Force Manuals.
- 3.3. Uses Air Force approved authoritative data sources and fielded weather capabilities. If a data or capability gap hinders effective or efficient mission accomplishment, seeks MAJCOM approval for exceptions to policy or guidance.
- 3.4. Coordinates with the 557th Weather Wing to develop, exercise and implement continuity of operations tactics, techniques and procedures.

DEANNA M. BURT, Brig Gen, USAF  
Director of Operations  
and Communications

**Attachment 1****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFMD5, *Air Force Space Command (AFSPC)*, 21 Aug 2015  
AFI 38-601, *Format and Content of Mission Directives*, 7 January 2015  
AFI 38-101, *Air Force Organization*, 31 January 2017  
AFI 33-360, *Publications and Forms Management*, 1 December 2015  
AFPD 15-1, *Weather Operations*, 12 November 2015  
AFI 15-128, *Air Force Weather Roles and Responsibilities*, 7 February 2011  
AFMAN 15-129V1, *Air and Space Weather Operations – Characterization*, 6 December 2011  
AFMAN 15-129V2, *Air and Space Weather Operations – Exploitation*, 7 December 2011

***Prescribed Forms***

This mission directive does not prescribe any forms.

***Adopted Forms***

AF Form 847, *Recommendation for Change of Publication*

***Abbreviations and Acronyms***

**AFI**—Air Force Instruction  
**AFPD**—Air Force Policy Directive  
**AFSPC**—Air Force Space Command  
**CCAFS**—Cape Canaveral Air Force Station  
**DEPID**—Deployment Indicator  
**IAW**—in accordance with  
**MD**—Mission Directive  
**NASA**—National Aeronautics and Space Administration  
**OPR**—Office of Primary Responsibility  
**PAFB**—Patrick Air Force Base  
**UTC**—Unit Type Code