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***AIR AND SPACE
WEATHER OPERATIONS***

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This instruction implements Department of the Air Force (DAF) Policy Directive (DAFPD) 15-1, *Weather Operations*. This publication applies to all civilian employees and uniformed members of the Regular Air Force, United States Space Force (USSF), the Air Force Reserve, the Air National Guard (ANG), the Civil Air Patrol (CAP) when conducting missions as the official Air Force Auxiliary, and those who are contractually obligated to comply with DAF publications. This publication may be supplemented at any level, but all supplements that directly implement this publication must be routed to the Officer of Primary Responsibility (OPR) for coordination prior to certification and approval. Refer recommended changes and questions about this publication to the OPR using the DAF Form 847, Recommendation for Change of Publication; route DAF Forms 847 from the field through the appropriate functional chain of command. The authorities to waive wing/organization level requirements in this publication are identified with a Tier (“**T-0, T-1, T-2, T-3**”) number following the compliance statement. See DAFMAN 90-161, *Publishing Processes and Procedures*, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the requestor’s commander for non-tiered compliance items. Ensure all records generated because of processes prescribed in this publication adhere to AFI 33-322, *Records Management and Information Governance Program*, and are disposed in accordance with (IAW) the Air Force Records Disposition Schedule, which is in the Air Force Records Information Management System. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the DAF. Compliance with this publication and its attachments is mandatory.

SUMMARY OF CHANGES

This document has been substantially revised to include being renamed as an instruction, therefore must be completely reviewed. Changes include alignment with current DAF priorities, policies, and the 6 September 2024 Secretary of the Air Force Vision for Weather Operations. These changes maximize flexibility, authority, and autonomy of commanders responsible for integrating Air Force Weather capabilities, resources, and personnel into operations. Administrative updates, primarily updating reference information and scrubbing acronyms. Removal of unused definitions.

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Chapter 1

OVERARCHING PRINCIPLES

1.1. General. This publication describes how weather operators collect, analyze, predict, tailor, and integrate environmental information into commanders' decision cycles. Weather operations integrate into kinetic and non-kinetic operations at the strategic, operational, and tactical levels of warfare. Weather forces, as part of the joint team, deliver accurate, coherent, comprehensive, consistent, relevant, timely and standardized environmental information, products and services across the air, land, sea, space, and cyberspace domains to gain and maintain an advantage. Commanders utilize this advantage to integrate, synchronize, and direct operations thereby outmaneuvering the adversary more effectively and executing lethal actions. Air Force Doctrine Publication (AFDP) 3-59, *Weather Operations*, and Air Force Tactics, Techniques and Procedures (AFTTP) 3-4.15, *Weather Operations* further define how weather operators effectively collect, analyze, predict, tailor, and integrate environmental information.

1.1.1. Strategic Level. Air Force Weather's (AFW) strategic capability includes providing global long-term meteorological and environmental information in support of all elements of DAF, the US Army (USA), and select Intelligence Agencies requiring weather capabilities IAW Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3810.01G, *Meteorological and Oceanographic Support*. Some weather capabilities, such as numerical weather prediction (NWP), the continuum of long-range forecasting services, and space weather operations, performed by the 557th Weather Wing (557 WW), remain centralized because of their strategic nature and the computing resources required. These capabilities are available to Combatant Commands (CCMD) to support planning functions. Further, AFW personnel are aligned with USA and USAF Component Command staff to integrate weather capabilities into plans and exercise development, focusing on deliberate and contingency planning cycles, Operations Plan (OPLAN) and Branch Plan development.

1.1.2. Operational Level. AFW contributes to execution of campaigns at the operational level of warfare by providing data and information enabling theater-scale domain awareness to shape planning, targeting, and execution of major combat operations. This includes capturing impacts of the natural environment to friendly and adversary forces across multiple domains and within the electromagnetic spectrum. Air Operations Center (AOC) weather specialty teams (WSTs) integrate personnel with decision-making processes IAW Air Force Manual (AFMAN) 13-1AOC Volume 3, *Operational Procedures-Air Operations Centers*, to deliver decision advantage for the Joint Force Air Component Commander executing the Air Tasking Order (ATO) cycle to maximize effectiveness on targeting and weapons employment success to deliver lethality. The 557 WW's Operational Weather Squadrons (OWS) support AOCs by providing theater-scale domain awareness in characterizing the current and predicted state of the environment. Further, AFW personnel are embedded within Combined Space Operations Center (CSPOC) and Space Operations Command (SpOC) supporting USSF.

1.1.3. **Tactical Level.** AFW integrates at the tactical level by providing tailored, mission specific, environmental impacts to accomplish its aligned units' objectives. This level of effort is typically accomplished at the Operations Support Squadrons (OSS), Combat Weather Squadrons (CWS), Combat Weather Flights (CWF) aligned with Army organizations. Units do this by integrating into mission planning and execution processes and other installation centers such as the Emergency Operations Center (EOC) IAW Department of Air Force Instruction (DAFI) 10-2501, *Emergency Management Program*, or AR 525-27, Army Emergency Management Program.

1.2. Mission Integration. The ability to leverage weather effects remains a strategic asset and critical element to ensuring the safety and success of military operations. AFW operations integrated early in targeting and planning processes enable the DAF to project combat lethality, and leverage the past, current, and future state of the environment to gain an advantage over adversaries. Integration includes dissemination of environmental data into Command and Control (C2) networks and through common architectures and machine-to-machine interfaces. Weather personnel must understand all aspects of weather's effect on operations, including adversary operations, and communicate the operational risk these effects drive to commanders at all echelons.

Chapter 2

ORGANIZATIONAL ROLES AND RESPONSIBILITIES

2.1. Air Force Director of Weather (AF/A3DW). AF/A3DW will:

2.1.1. Provide AFW functional expertise to coordinate and advocate applicable priorities and requirements that provide meteorological and environmental support to the DAF, USA, USSF, and DoD Intelligence Agencies requiring weather capabilities IAW CJCSI 3810.01G.

2.1.2. Provide guidance, shape doctrine, develop policy, and standards for AFW operations integration with DAF, USA, USSF, unified commands, emergency response operations, and, as authorized, North Atlantic Treaty Organization (NATO), other allies, coalition partners, and DoD Intelligence Agencies requiring weather capabilities IAW Headquarters Air Force Mission Directive (HAFMD) 1-54, *Deputy Chief of Staff, Operations*.

2.1.3. Serve as the Functional Area Manager (FAM) for the AFW enterprise IAW DAFI 10-401, *Operations Planning and Execution*.

2.1.4. Develop, coordinate, and approve interservice, intra-service, interagency, and international support agreements as delegated by the AF/A3 IAW Department of the Air Force Policy Directive (DAFPD) 25-2, *Support Agreements*, DAFI 51-403, *International Agreements*, and AFI 25-201, *Intra-Service, Intra-Agency, and Inter-Agency Support Agreement Procedures*. The limited delegated authority for the DAF to develop, coordinate, and approve international agreements is detailed in DoDI 5530.03 *International Agreements*.

2.1.5. Guide AFW modernization through the development and implementation of mid- and long-range vision and strategy for the organization, equipment, manpower, and technology necessary to meet future DAF, USA, and DoD Intelligence Agencies weather requirements.

2.1.6. Liaise with USSF, SpOC, Headquarters Department of Army (HQDA), US Navy, DoD Intelligence Agencies, DoD Cyber Academies, interagency, international, industry, and academic partners to advance programs, requirements, and initiatives including numerical weather modeling, long-range forecasting, Antarctic monitoring, arctic forecasting, hydrology, artificial intelligence, information warfare (IW), electromagnetic spectrum and space weather forecasting, environmental sensing IAW HAFMD 1-54.

2.1.7. Serve as Career Field Manager for officer, enlisted and civilian career fields delegated by the Functional Authority, the AF/A3.

2.1.8. Provide career field-wide weather and environmental science officer, enlisted, and civilian training policy and guidance through applicable Career Field Education and Training Plan and Talent Management Frameworks.

2.1.9. Serve as Program Element Monitor (PEM) for the Air Force Weather Weapons System (AFWWS) financial portfolio IAW AFI 65-601 Volume 2, *Budget Management for Operations*.

2.1.10. Serve as a member of the Global Integrated Intelligence, Surveillance, and Reconnaissance Council of Colonels, Enterprise Information Technology (IT) Advisory Council and Centralized Asset Management Advisory Council.

2.1.11. Serve as the Air Force Weather Weapons System (AFWWS) Lead in the implementation of DoD/DAF cyber policies and USCYBERCOM/AFICYBER order compliance oversight.

2.1.12. Serve as the Functional Data Officer (FDO) to develop data policies, guidance, procedures, and standards related to AFW and establish related training. Manage and oversee compliance with these data policies to protect and manage data as a strategic asset. Serves as senior advisor to the AF Chief Data and Artificial Intelligence Office for all data matters within the weather enterprise, per *DoD Data Stewardship Guidebook* Section 2.2, AFI 17-140, *Cybersecurity Architecting*, section 2.5, and DAFI 90-7001, *Enterprise Data Sharing and Data Stewardship*.

2.1.13. Provide weather subject matter expertise to the Headquarters Air Force Inspector General (AF/IG), serve as pertinent oversight authority for AFW enterprise-wide inspection checklists in Management Internal Control Toolset (MICT) IAW DAFI 90-302, *The Inspection System of the Department of the Air Force*.

2.1.14. Serve as a Weather Safety Investigation Point of Contact, reviewing Air Force Safety Automated System (AFSAS) for weather findings during Safety Investigation Boards (SIBs) and update policy as required IAW DAFI 91-204, *Safety Investigations and Reports*.

2.1.15. Lead and manage Air Force Weather's IW integration efforts, collaborating with AF A2/6.

2.1.16. Serves as the OPR for AF/A3 for Air Force Weather capabilities per AFI 10-601, *Operational Capability Requirements Documentation and Validation*.

2.1.17. Serves as the OPR for AF/A3 regarding the training, organizing, and equipping of weather organizations responsible for providing weather support to emergency management related operations as defined in DoDI 6055.17, *DoD Emergency Management Program* and DAFI 10-2501.

2.1.18. Appointed as the Department of Defense (DoD) lead agent for the Next Generation Weather Radar (NEXRAD) program, pursuant to tri-agency Memorandum of Agreement with DoD, Department of Commerce and Department of Transportation, Interagency Operation of the Weather Surveillance Radar-1988, Doppler (WSR-88D), and future weather radar capabilities.

2.2. Major Commands (MAJCOMs). In addition, to the requirements in DAFFPD 15-1, *Weather Operations*, MAJCOM Weather Staffs will:

2.2.1. Organize weather personnel by developing and aligning respective units to measurable readiness criteria and current force presentation models (i.e. Air Force Force Generation (AFFORGEN) model), working with AF/A3DW FAM as identified in [para 2.1.3](#). Identify capability and training gaps, advocate for and maximize mission integration to support operational and tactical decision-making cycles to meet commander's intent.

2.2.2. Validate weather requirements from within their respective command and advocate appropriately through AFWWS Lead Command (ACC/A5W) IAW DAFFPD 10-9, *Lead Command/Lead Agent Designation and Responsibilities for United States Air Force Weapon Systems, Non-Weapon Systems, and Activities*. See [chapter 5](#) for further details on submitting weather capability shortfalls to ACC/A5W.

2.2.3. Engage in planning, programming, and budgeting for MAJCOM weather resources IAW AFI 65-601 Volume 2.

2.2.4. Coordinate with applicable contract offices to ensure contracted weather support is appropriately defined IAW AFI 64-102, *Installation Contracting*.

2.2.5. Provide weather subject matter expertise to the MAJCOM/IG, serving as pertinent oversight authority for inspection deficiencies against aligned weather organizations, and assist with evaluations of aligned weather organizations upon request IAW DAFI 90-302, *The Inspection System of the Department of the Air Force*.

2.2.5.1. Collaborate with AF/A3DW on policy related matters and updating MICT inspection checklists in support of MAJCOM/IG & AF/IG efforts IAW DAFI 90-302, *The Inspection System of the Department of the Air Force*. (See [para 2.1.13](#)).

2.2.6. Oversee the accuracy and currency of equipment accountability and readiness reporting in authoritative databases IAW DoD and DAF policies.

2.2.7. Coordinate with and/or serve as Weather Data Steward(s) to ensure the protection, sharing, and governance of weather data while maintaining compliance with legal and policy standards. Further, maintain data integrity, apply security controls, finalize data sharing agreements, and enhance data quality within the command. More specifically to conduct the following.

2.2.7.1. Establish weather data protection, sharing, and governance guidelines.

2.2.7.2. Maintain data names, definitions, data integrity rules, and domain values within the command.

2.2.7.3. Ensure compliance with legal and policy requirements, and conformance to data policies and standards.

2.2.7.4. Ensure application of appropriate security controls.

2.2.7.5. Negotiate and conclude data sharing agreements.

2.2.7.6. Analyze and improve data quality.

2.2.8. Appoint Data Managers and Data Custodians. Provide guidance to AFW Data Manager(s) the *DoD Data Stewardship Guidebook* Section 2.3 and DAFI 90-7001, *Enterprise Data Sharing and Data Stewardship*.

2.2.9. Develop processes to ensure weather considerations are captured in exercises with the appropriate weather assets and personnel to advise decision makers IAW AFI 10-204, *Air Force Service Exercise Program and Support to Joint and National Exercise Program*. Advocate to the maximum extent possible the use of real-world weather conditions during exercises and empower designated weather personnel with the ability to inject windows of opportunity and locations to best complete exercise objectives according to commander's intent.

2.2.10. Develop a process to review After Action Reports (AARs) following major exercises and deployments in which assigned forces participated for weather equities. Forward all AARs to applicable lead MAJCOM weather functional for exercises, or the supported Air Force or Army component Staff Weather Officer (SWO) for deployments, for inclusion into the Joint Lessons Learned Information System (JLLIS). Further guidance can be found in AFI 10-1302, *Air Force Lessons Learned Program*.

2.2.11. Adjudicate and validate requests for temporary or long-term weather support IAW **Chapter 5**. In certain circumstances, there may be no organic capability to provide WWA services. In these cases, unit commanders will identify and present the capability gap / mission need to their respective MAJCOM Functional who will then work with ACC/A3W.

2.2.12. ACC/A3W is AFTTP 3-4.15, *Weather Operations*, Volume Owner. To submit a Tactical Improvement Proposal IAW DAFMAN 11-260, *Tactics Development Program*, contact ACC/A3W.

2.2.13. ACC/A3W, ACC/A5W, 557 WW, Subordinate Authorizing Official (AF/A3DW), and AFLCMC/HBAW - Program Management Office for the AFWWS will establish and maintain a Cloud Management Plan (CMP) to execute roles and responsibilities in the AF Weather Virtual Private Cloud. This CMP will be reviewed no later than annually and re-signed upon the turnover of signatories.

2.2.14. Work with units to provide weather inputs applicable to the development/revision of weather support plans and other support documentation within their respective command. Further, serve as a conduit to disseminate best practices of weather operations integration across their respective command.

2.3. United States Space Force (USSF). The USSF Staffs will:

2.3.1. Provide all needed space weather data, models, and tools to support the DoD, the DoD Intelligence Agencies, and allies as defined in appropriate Memorandum of Agreement (MOA)/Memorandum of Understandings (MOUs). This is accomplished by SpoC, in concert with Space Systems Command (SSC) by managing the full life cycle of required space and ground based environmental observing systems, models, and operational tools. This may also be accomplished through the purchase or sharing of data, models, and tools with other U.S. government agencies, allied governments, or educational organizations.

2.3.2. Acquire, deliver, and sustain ground-based space environmental monitoring systems.

2.3.3. Develop capabilities to characterize and exploit space environmental impacts on space operations, systems, and services, to include Modeling and Simulation (M&S) activities for the space environment.

2.3.4. Sustain and maintain the optical and radio solar observing network operated by DoD.

2.3.5. Serve as environmental Space Domain Awareness Data Stewards to establish data protection, sharing, and governance guidelines; maintain data names, definitions, integrity rules, and domain values within the command; ensure compliance with legal and policy requirements, and conformance to data policies and standards; ensure application of appropriate security controls; and analyze and improve data quality per the per DoD Data Stewardship Guidebook Section 2.3 and DAFI 90-7001, *Enterprise Data Sharing & Data Stewardship*.

2.4. Air Force Service Component Commands (AFSCC) and Army Service Component Command (ASCC). AFSCC and ASCC Weather Staffs will:

2.4.1. Coordinate with the Combatant Command (CCMD)/Joint Force Commander staff, Senior Meteorological and Oceanographic (METOC) Officer (SMO), Joint Meteorological and Oceanographic (METOC) Officer (JMO), and service component staff as necessary to provide weather inputs to achieve mission success and as applicable to the development/revision of war, exercise, and contingency plans.

2.4.2. Attend Boards and Working Groups and Operational Planning Teams as required to meet mission objectives according to the commander's intent. Refer to JP 3-0, *Joint Campaigns and Operations*, AFPD 3-0, *Operations*, for specific tasks.

2.5. 557th Weather Wing (557 WW). The 557 WW is the DAF's only special mission weather wing organized to collect, quality control, store, and deliver environmental and hydrologic information on the past, current, predicted, and projected (beyond 10 years) state of the natural environment across all warfighting domains, to include the electromagnetic operational environment. The 557 WW enables multi-domain decision advantage at all levels of warfare and can exploit weather information to create asymmetric advantages for the US and its Allies. Refer to ACCMD-557, *Mission Directive 557th Weather Wing*, for more details. 557 WW will:

2.5.1. Generate and provide a standardized and tailored set of environmental data and information (e.g., terrestrial, space, IW, long-range forecasting, hydrology, numerical weather model outputs, etc.) at multiple security enclaves available to a Combined-Joint All Domain Command and Control program of record where it can be discoverable by end-users.

2.5.2. Provide trusted data and products collected from other sources (e.g., space products, coalition/allied products, etc.) at security domains to meet end user requirements.

2.5.3. Operate the Solar Electro Optical Network (SEON) to assess the state of the space environment

2.5.4. Operate a centralized capability to conduct data saves as requested in support of SIBs, Accident Investigation Boards, and environmental weather anomalies IAW Table 8.1., IAW DAFI 91-204.

2.5.5. Develop and publish procedures to manage and assign temporary location identifiers (KQ IDs) for deployed units supporting real-world contingencies, deployed/in-garrison units providing support during exercises, classified operating locations, supplemental information at locations with an indigenous observation, and units that have requested, but not yet received a permanent location identifier.

2.5.6. Produce and publish Tropical Cyclone Threat Assessment Product (TC-TAP) information.

2.5.7. Be the focal point for the AFWWS Test and Evaluation and 557 WW-centric procedures. Evaluate CAF Tactics, Techniques, and Procedures (TTPs) and develop 557 WW specific AFWWS TTPs. Serve as the AFTTP 3-4.15 model manager for ACC/A3W. Integrate TTPs within the 557 WW and follow DAFMAN 11-260, *Tactics Development Program* procedures for nominating new TTPs or Tactic Improvement Proposals for approval and publication.

2.5.8. Develop, secure, operate and exploit high-resolution NWP capabilities, specialized modeling applications, tailored applications, and automated graphical depictions, including historical and future timescales of environmental conditions to support DAF, DoD, Interagency, and international partners.

2.5.9. Provide reachback weather operations for Air Force, Army, and National Guard units, regardless of Title 10 or 32 status, when there are no assigned weather personnel. Reachback services include Resource Protection (RP), Flight Weather Briefings (FWBs), and Terminal Aerodrome Forecasts (TAFs) for locations with a controlled airfield and no organic weather capabilities.

2.5.10. Conduct real-time software operations to generate mission-specific data and information at sufficient speed and scale to enhance Combatant Commander and mission partner information advantage.

2.6. Weather Units Aligned with Army Operations. The DAF is responsible for providing meteorological services to the United States Army. See AR 115-10/AFI 15-157, *Weather Support and Services for the US Army*, AFH 15-158, *Army Weather Operations* and JP 3-59, *Meteorological and Oceanographic Operations*, for further information.

2.7. 23d Special Operations Weather Squadron (23 SOWS). The 23 SOWS provides CCMDs with weather support tailored to meet mission requirements of United States Special Operations Command (USSOCOM), to include deployed Air Force and Army Special Operations Forces (AFSOF/ARSOF) without organic METOC capabilities. Detachment 1, 23 SOWS provides direct support to the Army's 160th Special Operations Aviation Regiment in-garrison, on-exercise, and deployed. The 23 SOWS is tasked by the Air Force Special Operations Command Commander.

2.8. 53d Weather Reconnaissance Squadron (53 WRS). The 53 WRS (Air Force Reserve Command (AFRC)) provides weather reconnaissance (WR) aircraft and crews C2 support and equipment and personnel capabilities in support of CCMD requirements. IAW AFMAN 11-202 Volume 3, *Flight Operations*, and AFMAN 11-2WC-130J Volume 3, *WC-130J Operations Procedures*, FCM Publication 12, *National Hurricane Operations Plan*, and FCM Publication 13, *National Winter Season Operations Plan*. These operations are managed as three different types of missions: Defense Support of Civil Authorities (DSCA), DoD support, and other outside agency support. 53 WRS will:

2.8.1. Provide support to the Department of Commerce for missions designated as DSCA, with the National Oceanic and Atmospheric Administration (NOAA) acting as the lead federal agency. These DSCA operations are conducted under the authority of the Chairman of the Joint Chiefs of Staff's DSCA Execution Order and fall under the tactical control of either USNORTHCOM or USINDOPACOM. As outlined in DAFI 10-801, *Defense Support to Civil Authorities*, AFRC Commander serves as the force provider for WR assets, including hurricane hunters.

2.8.2. Support DoD missions include environmental information collection requiring either airborne collection or deployment of collection sensors to support DoD research or operations.

2.8.3. Support other outside agency missions to include any agencies outside of the DoD requesting WR capabilities primarily for research purposes. These operations must be funded by the organization requesting capability and should provide a benefit to the DoD. Requests for support should be submitted to the AFRC weather branch for consideration.

2.8.4. Chief, Aerial Reconnaissance Coordination, All Hurricanes (CARCAH), 53 WRS OL-A, Miami, FL provides command and control and liaison support for WR DSCA operations. In this role, the CARCAH will:

2.8.4.1. Plan, organize, and coordinate all WR DSCA activities to meet interagency strategic and operational objectives to include the coordination of any WR requests for assistance regarding publishing in a WR Plan of the Day (POD). The POD is considered the validated and approved request.

2.8.4.2. Provide oversight of WR DSCA operations to include mission planning and execution, to include real-time adjustment of reconnaissance patterns based on the dynamic meteorological scenario, coordinating foreign overflight clearance, and a metrics program to measure operational demand and effectiveness.

2.8.4.3. Support data collection and dissemination operations through ensuring aircraft have threat situational awareness, data quality assurance, and act as the focal point for interagency data sharing.

2.8.4.4. Represent the WR functional capability on interagency working groups to align research and sensor integration programs as well as lead federal agency requirements with operational needs.

2.9. Air Operations Center (AOC) Weather Specialty Teams (WST). AOC WSTs will:

2.9.1. Integrate weather information into the full spectrum of operations and intelligence, providing environmental situation awareness and enabling decision advantage for commanders AFMAN 13-1AOC Volume 3.

2.9.2. Provide Weather Operations C2 for Air Component supporting units within the theater of operations and coordinate with Air Component Staff and CCMD SMO, or JTF JMO for multi-unit operations and exercises.

2.9.3. Process requests for new environmental data and information for common operating pictures through the Air Component chain of command for submission to Lead Command (i.e., ACC).

2.10. Air Force Operations Group (AFOG) Weather Branch. AFOG Weather Branch will:

2.10.1. Provide and/or arrange for global weather awareness to HQ DAF, HQDA, National Joint Operations Intelligence Center (NJOIC), and other organizations per applicable support agreements IAW Air Force Mission Directive (AFMD) 23, *Air Force Operations Group*.

2.10.2. Provide local weather updates on severe weather for the Pentagon Reservation.

2.11. Installation Level Active-Duty Weather Units (WeatherFlights/Detachments/Operating Locations) (commonly referred to as WFs/Dets/OLs). WFs/Dets/OLs' purpose is to integrate environmental impacts into every phase of end-user operations, from planning to execution. WFs/Dets/OLs assess the mission environment to determine environmental threats and opportunities, and where possible, identify alternatives to accomplish mission objectives according to commander's intent. WFs/Dets/OLs must educate themselves on the environmental impacts of the platforms and weapons systems they support. Organizations supporting Air Force platforms should review AFTTP 3-1 and 3-3 for Mission Design Series-specific information. Though each unit has unique characteristics and functions based on its parent/host unit's mission, geographic location and level of command, core roles, responsibilities, processes, and procedures are largely the same. WFs/Dets/OLs will:

2.11.1. If equipped with upper air observing equipment, provide upper air observations as defined in Federal Meteorological Handbook No. 3 (FMH-3), *Rawinsonde and Pilot Balloon (Pibal) Observations* to support garrison/deployed operations.

2.11.2. Assist installation/garrison commanders in assessing the effects of weather on existing and planned infrastructure and facilities, and natural infrastructure IAW DAFI 32-1015, *Integrated Installation Planning*. Further, assist installation planners with providing Engineering Weather Data (EWD) from 14th Weather Squadron (14 WS) IAW Unified Facility Code (UFC) 3-201-01, *Engineering Weather Data*, to assist with building design and planning. Advise the installation/garrison commander of adverse weather conditions that may cause an impact to the base, personnel, or assets on the base. When activated, participate in Crisis Action Teams, and or Wing Operations Center (WOC) with environmental awareness and operational impact assessment IAW DAFI 10-2501, *Emergency Management Program*, or AR 525-27.

2.11.3. If responsible for airfield weather services, will produce, disseminate, amend, and verify TAFs during published air-traffic controlled (ATC) hours of operation IAW procedures in **Chapter 3**.

2.11.4. Issue all required RP products for their host installation/aerodrome complex and supported parent/tenant unit missions and resources IAW procedures in **Chapter 3** and as documented in local weather support agreements and documents.

2.11.5. Pattern duties at home station to mirror those described in Unit Summary Statements and other FAM-related guidance for Unit Type Codes (UTCs) postured at that unit. For those units providing environmental support and using KQ identifiers, utilize 557 WW prescribed procedures as mentioned in **para 2.5.5** and be familiar with the applicable security classification guidance.

2.11.6. Coordinate with host/parent and supported units on required environmental inputs to C2 applications. This includes, but is not limited to, working proactively with the installation Civil Engineering, Intelligence units or Installation Management Command/Directorate of Public Works, Command Posts, to ensure that the most accurate meteorological data from trusted and secured sources is input into installation common operating pictures.

2.11.7. Integrate with installation EOCs to provide environmental data IAW, DAFI 10-2501, or AR 525-27.

2.11.8. Understand commander's intent, mission essential tasks, and environmental sensitivities/limitations of weapon systems and their associated missions. Apply multi-service and service-aligned TTPs into the operational training of units, scenario-based virtual and constructive training, and live-fly exercise desired learning objectives IAW exercise level and complexity. Use information obtained from supported units or derived from authoritative sources, (i.e., AFMAN 11-202 Volume 3, Air Land Sea Space Application Center, and 561st Weapons Squadron).

2.11.9. Provide a WF/Det installation site manager and maintain AFWWS site information directories for contact information, airfield special and local observing criteria, TAF specification and amendment criteria, and WWA specification and lead time criteria.

2.12. Air National Guard (ANG) CWF. The primary mission of ANG CWFs while in Inactive-Duty Training (IDT) or Title-32 (Active-Duty Training) status is to train all assigned weather personnel to support aligned ANG and/or Army National Guard (ARNG) users upon their federal mobilization. ANG personnel may support rotational taskings on a volunteer basis. Deployable ANG personnel must be trained and equipped to the same level as their Regular Air Force (RegAF) counterparts. ANG personnel must train and keep current with readiness requirements to support mobilization requirements as formally tasked by the RegAF component and any state-level requirements levied by their respective Governors, which is funded with State Active Duty resources.

2.13. Weather Organizations Supporting Space Launch, Missile, and Test Operations (45 WS & 30 OSS). Weather organizations supporting Space Launch, Missile, and Test Operations provide weather observations, forecasts, watches, observed weather warnings/advisories, specialized weather information for launch sites, specified ranges, and abort landing sites. These units will:

2.13.1. Provide operational, mission specific, and Launch Weather Officer support to DoD, National Aeronautics and Space Administration, other U.S. government and commercial users performing space launch, landing, recovery, or ballistic missile test operations at the Eastern or Western Range, to include generating and disseminating customer-specific products as tasked by their parent chain of command.

2.13.2. Coordinate with program support managers, range safety, and range coordinators, at a minimum, for determination of weather requirements for all phases of launch.

2.13.3. Space Delta 5 WST. The Delta 5 WST is integrated with the Combat Operations Division of the Combined Space Operations Center (CSpOC) at Vandenberg Space Force Base, CA. They are responsible for providing space and terrestrial weather support to enable C2 of Combined Forces Space Component Command operations.

2.14. Research, Development, Test, and Evaluation Meteorologists (RDT&E Mets). Personnel serving as RDT&E Mets provide specialized weather and environmental science capabilities focused on DAF research, technology development, acquisition, and sustainment activities. RDT&E Mets integrate with requirements managers, program managers, and other system experts to ensure successful identification and mitigation of weather and environmental threats during the acquisition lifecycle of DAF and Joint/Allied/Coalition systems, subsystems, or end items. Expertise is provided during all phases of a system's lifecycle to ensure effective acquisition and sustainment of systems to satisfy valid warfighter capability needs, to

include (but not limited to) any mission generation, mission watch or RP activities that may occur at test sites or specified ranges. Weather organizations influencing DAF acquisition activities are responsible for the following, IAW their assigned unit's mission:

2.14.1. When tasked, serve as SME to Sponsor Point of Contact and Technical Point of Contact (TPOC), develop or assist TPOC in authoring Small Business Innovation Research and/or Small Business Technology Transfer topic solicitations, and assist TPOC in evaluating proposals.

2.14.2. Work with RDT&E Mets and 557 WW to help provide projective environmental data that will inform future technology development, acquisition, and sustainment activities.

2.15. Units Assigned Weather Equipment (Fixed-base and Tactical). Weather units will:

2.15.1. Coordinate and establish outage reporting procedures for both Partially Mission Capable (PMC) and Non-Mission Capable (NMC) equipment with their aligned garrison/deployed maintenance unit. The WF Commander should also establish procedures for weekly verification from garrison/deployed maintenance unit on PMC and NMC equipment outages.

2.15.2. Report outages and maintenance actions on equipment not maintained by Radar, Airfield and Weather Systems (RAWS) work centers. Guidance is provided in DAFI 21-103, *Equipment Inventory Status and Utilization Reporting*, DAFMAN 17-1203.

2.15.3. Manage accountability of equipment, not maintained by RAWS work centers, as Defense Property Accountability System Property Custodian as defined in DAFMAN 17-1203 and DoDI 5000.64_DAFI 23-111.

2.16. Weather Support Documentation. Active-Duty Weather leadership will interface with their supported agencies to ensure planning and execution processes for their applicable weather services are documented in respective supported unit operations plans, contingency plans, MOAs/MOUs, host-tenant support agreements, Emergency Management (EM) plan(s), airfield local operating procedures, Weather Support Document (WSD), and the Installation Development Plan (IDP). Additional IDP guidance is provided in DAFI 32-1015. Further, units will develop processes to document best practices and share these with their respective MAJCOM Weather Staffs (see [para 2.2.14.](#)).

2.16.1. **After Action Reports (AARs).** Units will complete AARs following major exercises and deployments. Forward all AARs to the functional authority (MAJCOM, Service Component Command), for inclusion into JLLIS (see [para 2.2.10.](#)). Further guidance can be found in AFI 10-1302, *Air Force Lessons Learned Program*.

Chapter 3

INSTALLATION AND AIRFIELD SERVICES INTEGRATION

3.1. General. Installation and airfield weather services consist of weather observing, Meteorological Watch (METWATCH) and RP, (TAFs), and Weather Watches, Warnings, and Advisories (WWAs). The Senior Airfield Authority (SAA) coordinates airfield weather services and support responsibilities when weather organizations supporting flying organizations from multiple Services (e.g., Navy and Air Force) are located at a base. Note: Unless specified, this applies to active-duty units only.

3.2. Weather Observing. Units responsible for the airfield observation evaluate conditions, prepare, and disseminate routine, local, and special weather observations. Guidance on recording and disseminating observations can be found in AFMAN 15-111, *Surface Weather Observations* and MAJCOM supplements, as applicable.

3.2.1. Coordinate with base operations leaders to issue Notices to Airmen (NOTAMs) for temporary changes to observing capabilities at an airfield (e.g., system outages, deficiencies) IAW DAFMAN 13-204 Volume 1, *Management of Airfield Operations*, and DAFMAN 13-204 Volume 4, *Radar, Airfield, and Weather Systems*. **(T-2)**

3.3. METWATCH/ RP. This is a deliberate process for monitoring environmental conditions in the land, air, and space domains. METWATCH identifies when and where sensed conditions significantly diverge from forecast conditions which may drive the need to update or amend forecasts and notify end users (as necessary). Units will:

3.3.1. Establish and maintain a prioritized threat-based METWATCH process for all locations for which it is responsible for characterizing environmental conditions or issuing resource protection notices (e.g., WWAs FWB, MEFs), and employ risk management steps to identify weather threats impacting operations and maximize effectiveness of resources. **(T-2)**

3.3.2. Evaluate forecast reasoning and amend forecasts based on specification and amendment criteria when weather conditions cross thresholds. **(T-2)**

3.4. TAFs. A TAF provides official meteorological information for flight planning and C2 activities for a specific aerodrome. These processes focus on uniformity, production, and quality assurance of final products according to locally developed guidance. AFMAN 15-124, *Meteorological Codes*, defines compliance and dissemination guidance.

3.4.1. TAFs will be accomplished by units responsible for DAF and Army airfield weather services IAW with roles and responsibilities in **Chapter 2**. TAFs must be discoverable and disseminated via enterprise capabilities. TAFs will be produced, disseminated, amended and verified as required by local WSD, higher headquarters mission type orders, this document, or MOA/MOU. **(T-2)**

3.4.2. TAF Processes and Procedures. Units producing a TAF will:

3.4.2.1. Employ risk management practices when using an application to create and publish numerical model based terminal aerodrome forecasts. All TAFs are required to meet specification criteria requirements and amend IAW **Attachment 2**. **(T-2)**

3.4.2.2. Develop a TAF production cycle for locations and coordinate TAF issue times with supported units. Issue TAFs during controlled airfield hours, at a minimum of every 8 hours and within 15 minutes of the issue times that were previously coordinated with supported units. **(T-2)**

3.4.2.3. Issue TAFs valid for a 30-hour period. **(T-1)**

3.4.2.4. Disseminate TAF-coded forecasts for limited operation airfields IAW local unit requirements. **(T-2)**

3.4.2.5. Coordinate with base operations leaders to issue NOTAMs for temporary changes to TAF services at an airfield (e.g., switching to limited duty TAF due to personnel shortages) IAW DAFMAN 13-204 Volume 1, *Management of Airfield Operations*, and DAFMAN 13-204 Volume 4, *Radar, Airfield, and Weather Systems*. **(T-2)**.

3.4.2.6. Specify the onset, duration, and intensity for the standard criteria in **Attachment 2** throughout the valid period of the forecast. During airfield-controlled hours, amend TAFs when conditions do not match specified conditions within **Attachment 2**. **(T-2)**

3.4.2.7. Specify and amend ceiling and visibility categories for Army or Air Force flight planning criteria throughout the valid period of the forecast. Use the lower of the two conditions to determine the ceiling and visibility amendment category. **(T-2)**

3.4.2.7.1. Use ceiling and visibility specification criteria in **Attachment 3** for TAF-coded forecasts issued for Army airfields. **(T-2)**

3.4.2.7.2. Use ceiling and visibility specification criteria in **Attachment 4** for TAF-coded forecasts issued for Air Force airfields. **(T-2)**

3.4.2.8. Establish weather operations trend data from standard display systems (e.g., Airfield Sensor Displays) to determine the prevailing conditions. Prevailing conditions are those that persist for at least 30 consecutive minutes. Conditions occurring once during a specified time-period for less than 30 consecutive minutes or occurring for an aggregate total of less than 30 minutes of every hour are temporary. During periods of rapidly changing ceilings or visibilities crossing multiple categories, consider conditions occurring for the greatest aggregate total during the full hour the predominant condition for that hour. **(T-2)**

3.4.2.9. Coordinate and document unit back up TAF production and dissemination procedures in the Continuity of Operations (COOP)/Primary, Alternate, Contingency, and Emergency (PACE) plans. Establish plans to provide temporary assumption of METWATCH, to include TAF issue/amend authorities in the enterprise production applications during transition to or from an Alternate Operating Location (AOL) or for other unforeseen/emergency circumstances that precludes the local weather unit from performing their assigned duties. Any transfers of TAF responsibilities will require coordination through MAJCOMs and/or component functionals coordination. **(T-2)**

3.5. WWAs. Weather organizations responsible for local area METWATCH will produce, disseminate, amend, and verify WWAs to inform key decision makers and personnel of potential and observe weather conditions that require protective actions. Those responsible weather units will:

3.5.1. Issue WWAs for host installation/aerodrome complexes and supported parent/tenant unit missions and resources (See [Attachment 6](#) for examples) as agreed upon and documented in local support agreements. **(T-3)**

3.5.2. In certain circumstances, there may be no organic capability to provide WWA services. In these cases, unit commanders will identify and present the capability gap / mission need to their respective MAJCOM/Service Component for resolution by ACC (Lead Command). **(T-2)**

3.5.3. DAF or Army locations (e.g., airfields, high use ranges, drop zones, missile fields) where no weather personnel are assigned to provide RP/WWA services will coordinate with their respective MAJCOM equivalent for reach back weather operations. Further details are discussed on reachback support in [Chapter 5](#). **(T-2)**

3.5.4. ANG-managed locations staffed by U.S.C. Title 5 and contracted personnel, that only perform “eyes forward” and observed WWA functions, requiring additional weather capability will make requests to through their command chain to the National Guard Bureau (NGB), who will work with ACC/A3W. **(T-2)**

3.5.5. Installations manned exclusively by DAF and Army civilian or contract weather support and foreign bases where neither the DAF nor Army are designated as the SAA, but DAF or Army assets are operating or located, will have the owning command authority requiring weather capability contact ACC/A3W. **(T-2)**

3.5.6. Deployed SOF operators without organic weather personnel should contact 23 SOWS for weather capability. **(T-2)**

3.6. Support of Unit Radar Committee (NOAA Led).

3.6.1. Unit Radar Committee (URC). AF Weather organizations designated as the DoD/DAF URC voting member will attend, either in person or virtually, the URC meetings to address requirements and operational concerns as directed in the tri-agency NEXRAD MOA IAW the following procedures. **(T-0)**

3.6.1.1. The WF supporting an installation that is responsible for maintenance of a WSR-88D and has responsibility for issuing host installation WWAs is the designated DAF representative/voting member of the URC for the NEXRAD site. **(T-1)** If the DAF weather organization that owns the DoD NEXRAD is not responsible for issuing host installation WWAs, then the designated DAF representative/voting member of the URC for the DoD NEXRAD site is the nearest to using installation-level DAF Weather organization with responsibility for issuing host installation-level WWAs. **(T-1)** If none of the above exist, AF/A3DW will coordinate with the parent MAJCOM to designate the DAF representative/voting member for the URC. **(T-0)**

3.6.1.2. If the Unit also controls the Master System Control Function of a DAF-owned NEXRAD, that unit will coordinate the URC meetings, as required, according to the Tri-Agency NEXRAD MOA. **(T-0)**

3.6.1.3. For non-DoD NEXRAD sites, the installation-level DAF weather organization operates 24 hours, 7 days a week and has responsibility for host installation WWAs will be the designated DAF representative/voting member of the URC for the NEXRAD site. **(T-1)** If no 24/7 installation-level DAF weather organization with host installation WWA responsibility exists, then DAF representative/voting member of URC for non-DoD NEXRADs will be the installation-level DAF Weather organization with responsibility for issuing host installation WWAs that are located nearest to the non-DoD NEXRAD site. **(T-1)**

3.6.1.4. If no installation-level DAF weather organization with host installation WWA responsibility exists, then the DAF representative / voting member of the URC for non-DoD NEXRAD will be designated by the parent MAJCOM per coordination with AF/A3DW. **(T-2)**

3.7. Emergency Management Integration. Active installation-level units will integrate and routinely collaborate with installation staff (EM, Fire Emergency Services, and Bioenvironmental Engineering (BEE) to serve as weather SMEs IAW DAFI 10-2501, and DAFI 10-2503, *Chemical, Biological, Radiological, Nuclear (CBRN) Defense Program*. **(T-0)**

3.7.1. Perform CBRN operations IAW DAFI 10-2501 and DAFI 10-2503, and for Army installations IAW AR 525-27 and Field Manual (FM) 3-11, *Chemical Biological, Radiological, and Nuclear Operations*. **(T-1)**

3.7.2. Gain familiarization with the CBRN plume models utilized by these emergency support functions (ESF) (e.g., Joint Effects Model, Area Locations of Hazardous Atmosphere, Computer Aided Management of Emergency Operations, etc.), their Tactical Decision Aid outputs, and integrate into installation commanders' decision cycles. **(T-1)**

3.7.3. Provide Chemical Downwind Message/Effective Downwind Message upon request from installation emergency management (EM), the installation emergency operations center or other disaster response/management personnel IAW, DAFI 10-2501. **(T-1)**

3.7.4. Coordinate with installation EM personnel on their needs for river flood, flash flood, fire weather (red flag), coastal flood, and tsunami watches and warnings and provide expert advice to connect C2 systems with trusted data from AFW enterprise data services. **(T-3)** Collect requirements for C2 systems that cannot integrate AFW enterprise data and send them directly to your respective MAJCOM for consideration. **(T-2)**

3.7.5. Provide tropical cyclone (TC) forecasts and impacts to commanders in supported organizations, as required, for mission execution decisions and to determine or recommend a Tropical Cyclone Condition of Readiness (TCCOR) and/or Hurricane Conditions of Readiness (HURCON). **(T-1)**

3.7.6. Not deviate from the official track and intensity in forecasts from the tropical cyclone forecast centers (e.g., National Hurricane Center, Central Pacific Hurricane Center, and Joint Typhoon Warning center), but have leeway to depict weather impacts to supported installations based on localized effects **(T-1)**.

3.7.7. Review weather specific OPREP procedures for their chain of command within AFMAN 10-206, *Operational Reporting*. Create procedures to perform coordination with their own command post to support all Chain of Commands (CoCs) OPREPS related to environmental incidents. **(T-1)**

3.8. Safety Investigation Boards (SIBs). When any aircraft or ground mishaps occur requiring a weather data save IAW DAFI 91-204, *Safety Investigations and Reports*, weather units will:

3.8.1. Save all applicable and available terrestrial and space weather data. **Coordinate** with applicable units (e.g., 557 WW, 618 AOC (Tanker Airlift Control Center (TACC)/WXD) if necessary. **(T-2)**

3.8.2. Some examples of data include the following but are not limited to:

3.8.2.1. Meteorological Satellite (METSAT) imagery (e.g., Visible, Infrared, Water Vapor).

3.8.2.2. Radar data files or images if available (e.g., Base Reflectivity, Velocity-Azimuth Display Winds, Echo Tops, Composite Reflectivity, Base Velocity).

3.8.2.3. Upper air package.

3.8.2.4. Aviation hazard charts and information (e.g., thunderstorm, lower and upper-level turbulence, icing, etc.).

3.8.2.5. Pilot Reports (PIREPs), Aircraft Reports (AIREPs), significant meteorological information (SIGMETs).

3.8.2.6. TAFs and observations for departure point, destination, and any alternate(s).

3.8.2.7. Weather warnings, watches, and advisories.

3.8.2.8. Upper air soundings enroute and nearest the mishap site.

3.8.2.9. Briefing material provided to the mishap aircrew (e.g., DD Form 175-1, *Flight Weather Briefing*, mesoscale tailored graphics).

3.8.3. Gather and retain the saved data until requested. Send the data to the valid requesting organization (accident investigation board, safety investigation board, etc.). **(T-1)**

3.8.4. Be prepared to work with MAJCOM Weather Functionals, who will also work closely with AF/A3DW on any weather findings during SIBs as policy may need to be updated (see [para 2.1.14](#)). **(T-2)**

Chapter 4

MISSION INTEGRATION

4.1. General. This chapter identifies multiple specified and implied tasks that need to be executed to ensure proper integration of weather personnel and information into the planning phase of operations. Note: Unless specified, this applies to active-duty units only.

4.2. MISSIONWATCH. Is the deliberate process for monitoring terrestrial weather or the space environment for specific mission-limiting environmental factors or exploitable opportunities. Weather units integrated with supported end-users should have a keen understanding of mission-critical thresholds and mission profiles. This understanding allows forecasters to continuously monitor ongoing missions for any potential threshold-crossing weather parameters and allow forecasters to quickly notify C2 elements of these changes. The MISSIONWATCH process identifies and alerts decision makers to changes that will enable mission success.

4.3. Flight Weather Briefing (FWB) Responsibilities. Units providing FWB support need to be familiar with Lead Weather Unit (LWU) roles and responsibilities as discussed in para [4.8-4.11](#). Units responsible for FWB support should utilize all means available to ensure proper MISSIONWATCH is provided to air crews with the understanding some missions lack the capability to communicate between aircrews and forecasters.

4.3.1. Joint Base Weather Teams. DAF WFs on Joint Bases, where the DAF/Army, and Navy is the supporting Service, will provide FWB support to DoD missions IAW the Joint Base MOA/MOU or an inter-Service agreement. **(T-1)**

4.3.2. DAF WF/Dets responsible for aviation weather services at airfields operated by DAF/Army (garrison and deployed) will:

4.3.2.1. Provide FWB support to DAF/Army aircrews based on their installation as defined in applicable WSD, IDP, support agreements, MOAs/MOUs, etc. **(T-3)** For deployed operations, weather units deployed with their aircrew units (i.e., 3-series MDS UTC or Army UTC) are responsible for providing FWB support. **(T-2)**

4.3.2.2. Provide FWB support, when requested, to DAF/Army transient air crews taking off from the local airfield. Coordinate with the aircrew's designated/aligned weather unit to coordinate MISSIONWATCH responsibilities. **Note:** WFs/Dets are not required to have personnel on duty solely to provide briefings for transient aircrews. **(T-2)**

4.3.2.3. Provide flight weather briefings to CAP members while on Title 10 orders. Advise CAP members performing official flight duties outside of normal operating hours of remote and self-briefing capabilities. **Note:** WFs/Dets are not required to have personnel on duty solely to provide briefings for CAP flying activities. **(T-2)**

4.3.2.4. MAJCOMs will submit weather requirements requests for enduring flight weather briefing services with HQ ACC/A3W. **(T-2)**

4.4. FWB Procedures. Units providing FWB support will:

4.4.1. Use MAJCOM-approved briefing systems (AFW enterprise Mission Management, Electronic Flight Bag (**Note:** Foreflight® is a component of the military electronic flight bag), Global Decision Support System, Flight Weather Briefer, etc.), DD Form 175-1, computerized equivalent, or verbal briefings as the standard tool for delivering flight weather briefings. If using a DD Form 175-1, complete IAW procedures outlined in **Attachment 9** of this instruction. **(T-2)**

4.4.1.1. Army Specific. For all Instrument Flight Rules (IFR) flights and/or Visual Flight Rules cross-country flights, the weather forecast will be void one hour and 30 minutes from the time the forecast is received provided the aircraft has not departed IAW AR 95-1, *Aviation Flight Regulations*. **(T-1)**

4.4.2. When producing any mission execution weather product, clearly annotate the type of altitude used, above ground level (AGL) or mean sea level (MSL). If only one type of altitude is used, clearly state "All heights in AGL (or MSL)". If using AGL for ceilings and MSL for hazards, clearly state "AGL" or "MSL" as appropriate next to the height given or in each applicable section of the product or brief. **(T-1)**

4.4.3. Procedures on how to document, maintain, and retain FWBs can be found in the DAF Records Disposition Schedule and AFI 33-322, *Records Management and Information Governance Program*.

4.5. Remotely Piloted Aircraft (RPA) Missions. Units aligned with RPA C2 activities, may be requested to conduct METWATCH of Remote Split Operations (RSO) satellite up-link/down-link locations for mission-impacting land, air, and space domain environmental conditions with the potential to disrupt or degrade on-orbit communications links. Weather personnel supporting RSO missions may be requested to issue specialized notifications of observed or forecast impacts on operations as agreed upon with the C2 authority IAW RPA Support Roles and Responsibilities:

4.5.1. Weather units aligned with RPA C2 center activities will provide or arrange for RPA weather support during the planning, execution, and assessment phases of supported operations. **(T-1)**

4.5.2. Weather support to Group 3-5 RPA without a designated weather support organization must obtain their own organic weather support by following the formal GFM process to Request for Forces (RFF) the capability. **(T-2)**

4.5.3. MQ-9 Weather Support.

4.5.3.1. The Persistent Attack and Reconnaissance Operations Center (PAROC) is designated the LWU for conventional MQ-9s operating via RSO, regardless of where the RPA is physically operating; see **Table 4.1.**, Prioritized Rules for Determining the LWU. The PAROC will:

4.5.3.1.1. Generate impact assessments based on MQ-9 mission-limiting weather thresholds applied to trusted environmental characterizations to identify Criteria Event/No Criteria Event weather recommendations affecting mission planning, weather recall, or dynamic re-tasking of an airborne RPA. **(T-1)**

- 4.5.3.1.2. Use real-time data (e.g., pilot reports, full motion video, high resolution satellite imagery, weather radar data, lightning data, current observations and forecasts for Launch and Recovery Elements (LREs)) to ensure decision makers have the most current, accurate, and consistent information available. **(T-1)**
- 4.5.3.1.3. Conduct METWATCH of RSO satellite up-link/down-link locations for mission-impacting land, air, and space domain environmental conditions with potential to disrupt or degrade on-orbit communications links. **(T-1)**
- 4.5.3.1.4. Provide operational expertise and coordinate with the 557 WW to assess the potential impact of the environment on lost-link events. **(T-1)**
- 4.5.3.1.5. Coordinate forecasts with WFs providing tactical-level support to mission control elements (MCEs), 557 WW, WFs supporting LREs, and AOC WSTs. In addition, the PAROC will inform all weather organizations involved in the mission when RPA operations are affected by weather as soon as practical to ensure combat forces at all echelons receive and disseminate consistent information. **(T-1)**
- 4.5.3.2. WFs supporting MQ-9 MCEs will:
- 4.5.3.2.1. Have knowledge of complete mission profiles (e.g., current, planned, and contingency ground tracks and target/collection areas) and generate route specific (location, time, flight level) information for local commanders using trusted data and information from the PAROC and supporting 557 WW unit(s). **(T-1)**
- 4.5.3.2.2. Integrate output from electromagnetic and electro-optical tactical decision aids for all weapons and/or sensors based on planned employment TTPs into decision briefings to mission commanders. **(T-1)**
- 4.5.3.2.3. Integrate trusted environmental characterizations and current information (e.g., high resolution satellite imagery, weather radar data, and lightning data) with Tactical Situation displays to enhance pilot environmental situational awareness. **(T-1)**
- 4.5.3.2.4. Conduct MISSIONWATCH for RPA in their supported area(s) of operation and detect weather conditions that exceed flight-manual limits. If mission-limiting weather is occurring or forecast to occur, provide RPA pilots with weather mitigation strategies, and contact the PAROC to notify them of the weather impacts on the affected mission. **(T-1)**
- 4.5.3.3. If requested, WFs supporting MQ-9 LRE will:
- 4.5.3.3.1. Include critical MQ-9 mission-limiting weather thresholds as determined by the PAROC on all MWP's for LRE and divert locations. If there are no direct/dedicated LRE weather personnel (i.e., weather personnel collocated with the LRE whose primary duty is to support RPA), support will be provided by 557 WW as coordinated and requested by the PAROC. **(T-1)**
- 4.5.3.3.2. Provide airfield support, LRE forecasts, observed advisories, and "eyes forward" support in the terminal area for other weather organizations supporting RPA operations. The MQ-9 terminal area typically extends out to 25 nautical miles (nm). If an LRE pilot requests weather beyond this distance, consult current WPs, MCE/WF, or the PAROC for conditions outside the terminal area. **(T-1)**

4.5.4. RQ-4 Support.

4.5.4.1. The Global Hawk Operations Center (GHOC) is designated the LWU for worldwide RQ-4 operations; see [Table 4.1.](#), Prioritized Rules for Determining the LWU. WFs supporting the GHOC will:

4.5.4.1.1. Integrate within the GHOC to support mission commander decision making, mission planning, mission execution forecast production, and MISSIONWATCH. Weather personnel will be integrated with decision makers and RQ-4 pilots in command during all phases of flight. **(T-1)**

4.5.4.1.2. Generate impact assessments for RQ-4 routes containing mission specific environmental impacts to RQ-4 operations based on trusted data. **(T-1)**

4.5.4.1.3. Use real-time data (e.g., pilot reports, full motion video, high resolution satellite imagery, weather radar data, lightning data, current observations for LREs) to ensure decision makers have the most current, accurate, and consistent information available. **(T-1)**

4.5.4.1.4. Conduct METWATCH of RSO satellite up-link/down-link locations for mission-impacting land, air, and space domain environmental conditions with potential to disrupt or degrade on-orbit communications links. Weather operators may issue alerts, watches, warnings, or advisories as agreed upon with the C2 authority. **(T-1)**

4.5.4.1.5. Provide operational expertise and coordinate with the 557 WW to assess the potential impact of the environment on lost-link events. **(T-1)**

4.5.4.1.6. Coordinate forecasts with WFs supporting LREs, 557 WW, and AOC WSTs. **(T-1)** In addition, the GHOC will inform all weather organizations involved in the mission when RPA operations are affected by weather as soon as practical to ensure combat forces at all echelons receive and disseminate consistent information. **(T-1)**

4.5.4.1.7. Integrate trusted environmental characterizations and current information (e.g., high resolution satellite imagery, weather radar data, and lightning data) with pilot situational displays to enhance environmental situational awareness. **(T-1)**

4.5.4.1.8. Conduct MISSIONWATCH and detect weather conditions that exceed flight-manual limits. If mission-limiting weather is occurring or forecast to occur, provide pilots with weather mitigation strategies. **(T-1)**

4.5.4.2. If requested, WFs supporting RQ-4 LREs will:

4.5.4.2.1. Include critical RQ-4 mission-limiting weather thresholds as determined by the GHOC on all WPs for LRE and divert locations. If there are no direct/dedicated LRE weather personnel (i.e., weather personnel collocated with the LRE whose primary duty is to support RPA), support will be provided by 557 WW as coordinated and requested by the GHOC. **(T-1)**

4.5.4.2.2. Provide airfield support, LRE forecasts, observed advisories, and "eyes forward" support in the terminal area for other weather organizations supporting RPA operations. The RQ-4 terminal area typically extends out to 150-250 nm. If an LRE pilot requests weather beyond this distance, consult current WPs, MCE/WF, or the GHOC for conditions outside the terminal area. **(T-1)**

4.5.5. Army UAS Support.

4.5.5.1. Guidance on how SWOs aligned to echelons with UAS capabilities will provide support can be found in AR 115-10/AFI 15-157 (IP), *Weather Support and Services for the US Army*, and Air Force Handbook 15-158, *Army Weather Operations*. (T-1)

4.5.5.2. SWOs will coordinate with respective Army G-2/3 and S-2/3 sections to determine environmental impacts on UAS operations and methods of delivery for generated weather products. Products provided will be consistent with the procedures identified in **Chapter 3**. (T-2)

4.5.6. ANG MQ-9 WFs. The primary mission of ANG RPA WFs while in IDT or Title-32 (Active-Duty Training) status is to train all assigned weather personnel to support aligned ANG Attack Squadrons upon their federal mobilization. ANG RPA WF's will:

4.5.6.1. Maintain and follow a MOU to coordinate RPA MISSIONWATCH responsibilities between ANG OSS/OSW units. (T-2)

4.5.6.2. Coordinate mission impacting weather with LWU prior to launch or early return to-base. (T-2)

4.5.6.3. Units aligned with Field Training Units (FTUs) and/or LREs will be LWUs for associated aircraft and provide support to aligned MQ-9 assets as outlined in para4.5.3.3.1. (T-2)

4.6. PIREPs/AIREPs. Weather personnel will:

4.6.1. Develop and implement procedures to request timely PIREPs/AIREPs from aircrew. Collect meteorological elements of operational significance to flying or surface activities, and assist local flying operations (e.g., turbulence, icing, cloud bases or tops when departing/arriving, in-flight visibility at low levels, upper winds, valley fog, etc.) and assist local flying operations. (T-2)

4.6.2. Encode PIREPs per AFMAN 15-124.

4.6.3. Encode AIREPs IAW local procedures. (T-2)

4.6.4. Disseminate all urgent PIREPs/Special AIREPs locally and longline IAW duty priorities. (T-2)

4.6.5. Disseminate all routine PIREPs/AIREPs locally and longline unless two or more reports have substantially the same information. (T-1) In this case, disseminate only the most recent. The remarks section will indicate the number of reports of the same phenomenon and the time interval in which they were received (e.g., "3 RPTS last five minutes," "NUMEROUS ACFT"). (T-2)

4.7. Coordinated Weather Operations. Coordinated weather operations ensure planners and decision-makers at every level receive consistent, comprehensive, standardized, and relevant weather information. Weather organizations will coordinate weather information with all supporting weather units for missions involving more than one unit or service. (T-1)

4.7.1. **Control Weather Products (CWPs).** CWPs represent the official mission forecast and are defined by the LWU. All weather units supporting a mission as defined in **Table 4.1** will utilize CWPs to ensure mission forecast consistency. Supporting units will not deviate from the mission-specific, critical weather thresholds specified in CWPs without prior coordination with the LWU. Further, the METOC Production Centers will often be utilized frequently across CCMD's to support cross-organizational support requirements. **(T-2)**

4.8. Mission Execution Forecast Process (MEFP). The MEFP is an organized and systematic process to provide decision-quality environmental information to mitigate risks and exploit asymmetric capabilities in the Military Decision-Making Process (MDMP). The MEFP specifies how to apply environmental information to mitigate mission limitations and meet operational requirements. Weather units develop processes and procedures to establish meteorological situational awareness and apply environmental weather for the parent/host unit's decision cycle. Weather leaders are encouraged to reach out to their respective MAJCOMs as well as other units to determine how to build processes such as the MEFP.

4.9. Lead Weather Unit (LWU) Determination. When two or more military units operate together and share the same air/battlespace (e.g., air refueling routes, military operating areas, drop zones), the LWU, identified using the rules in **Table 4.1**, coordinates overall weather services for the supported mission(s) and is the liaison between supporting weather units. **(T-2)**

Table 4.1. Prioritized Rules for Determining the LWU.

Rule	Type of Mission	Designated LWU
1.	Joint Missions	JMO-designated LWU for a Joint Operation in an Operation Order / Exercise Directive, or Fragmentary Order.
2.	Global Power – ability to hold at risk or strike any target anywhere, assert national sovereignty, safeguard joint freedom of action, and create swift, decisive, precise effects (i.e., fighters, bombers)	Weather unit providing the overall mission C2 element with weather information. Note: The C2 element for GLOBAL POWER mission is typically delegated to the wing-level.
3.	CORONET - group of fighters assigned one or multiple tankers	Weather unit providing the ACC C2 element with weather information. Note: Normally the ACC AOS/WX
4.	Global Reach - ability to project military capability responsively—with unsurpassed velocity and precision—anywhere, and provide mobility to rapidly supply, position, or reposition joint forces.	Weather unit integrated with the AMC C2 Element Note: Normally the 618 AOC (TACC)/WXD

5.	Air Refueling (Training)	Weather unit servicing the lead receiving aircraft unit.
6.	Unmanned AF/Army Aircraft (Service-tasked and training)	Weather unit assigned to the Unmanned Aircraft Operational-Level C2 element (e.g., PAROC, Global Hawk Operations Center).
7.	Joint Airborne/Air Transportability Training (JA/ATTs) & Drop Zone(DZ)	Weather unit servicing the lead airlift aircraft unit. Risk is higher when DZ is for people so therefore the LWU should be whoever is directly advising the GFC or the jump lead on go/no-go conditions.
8.	Landing Zones (LZ) & Land Maneuver	Weather unit attached to the lead Army unit.
9.	Special Operations	LWU depends on the nature of the operation as directed by the appointed JMO.
10.	Multinational	Missions with multiple alliance/coalition METOC units should follow multinational doctrine and procedures ratified by the U.S.
11.	Persistent Attack and Reconnaissance Operations Center (PAROC)	Designated the LWU for Non-SOF/SOF MQ-9s operating via RSO, regardless of where the RPA is physically operating
12.	Large Force Exercise	Wing/Unit-designated for a Combat Training Exercise in an EXORD for Designated LWU.
13.	Other	For missions not defined above, units will coordinate between each other to determine the LWU. If units are unable to come to a consensus, elevate to the MAJCOM or component staff, as appropriate, to resolve.

4.10. METOC Production Centers (MPC). MPCs (Table 4.2.) are service-retained organizations that, when designated by a SMO or JMO, provide trusted global and regional METOC data and information as a baseline for designated forecast units to fulfill CCMD and component requirements. Weather personnel will route weather support requirements through their operational chain for tasking to the below MPCs for additional METOC capabilities and support. (T-2)

Table 4.2. MPCs.

MPC	Force Provider	METOC Capabilities and Support
557 WW (Operational Weather Squadrons (OWSs), 2d Weather Squadron (2 WS), 16 WS, and 14 WS)	USAF	Global and regional graphical weather forecast, specialized environmental information, space weather and EMS products and services, historical, mid-, and long-term forecast products and services, hydrology products and services, numerical weather modeling and visualization products and services, hydrology products and services, numerical weather modeling and visualization products and services, data collection, quality control, storage, and dissemination services.
23 SOWS	USAF	Global and regional weather support deployed USSOCOM forces without organic METOC capability.
Fleet Numerical Meteorology and Oceanography Center	USN	Global and regional METOC, ensemble model, wave, sea surface temperature, sea anomaly forecast products
Joint Typhoon Warning Center	USN	Tropical cyclone analysis and forecast products for INDOPACOM and Western Indian Ocean
Naval Oceanographic Office	USN	Global Tailored global oceanographic, hydrographic, bathymetric, geophysical, and acoustic products and services

4.11. Joint Operational Area Forecast (JOAF). JOAFs are the official baseline METOC forecast that informs the Joint Force Commander coordinated battle plan for operational planning and mission execution within the joint operations area. They are the primary mechanism to ensure METOC consistency across an operation. JOAFs are typically produced by the JMO-specified MPC at the direction of the JMO. Components and weather teams will use the JOAF and our other LWU CWP products as the point of departure to tailor METOC information and to develop tailored mission execution forecasts.

Chapter 5

REQUESTS FOR SUPPORT & WEATHER CAPABILITIES

5.1. General. Weather units must prioritize and optimize internal resources and existing products to meet current and emergent mission needs. When organic capability or capacity is deemed insufficient and local mitigation is not possible, units will engage their CoC for resolution. The weather unit, through their CoC, will work with their respective MAJCOM Functional or Service Component Command (SCC) and CCMD to leverage institutional processes to determine appropriate sourcing solutions.

5.2. Emergent and Exercise Requirements.

5.2.1. General. In accordance with the Secretary of Defense's FY Global Force Management Implementation Guidance (GFMIG) and CJCSM 3130.06, *Global Force Management Allocation Policies and Procedures*, weather units will coordinate with their SCCs and CCMDs to request forces or capabilities for emergent requirements that cannot be met with currently assigned and/or allocated forces. When requests are for emergent requirements in support of joint and service exercises, force or capability requirements are to be sourced IAW CJCSI 3500.01, *Joint Training Policy for the Armed Forces of the United States*.

5.2.2. Request for Forces (RFF). Whenever assigned or allocated forces are unable to effectively execute CCMD-named operations, exercises, or contingency missions, weather units will coordinate with parent SCC and CCMD to comply with the GFM RFF process to request additional sourcing of forces or capabilities. Reference CJCSM 3130.06 for further details. **(T-0)**

5.2.3. Request for Support (RFS). For emergent requirements not requiring GFM sourcing, or for requirements outside the scope of [para 5.2.2](#), weather units will develop and submit an RFS formatted as a 5-paragraph order through their local CoC to be approved and routed via their supporting operations centers for action. This order will be developed and submitted IAW latest Air Force guidance (<https://www.doctrine.af.mil/home/five-paragraph-tool/>). When appropriate, and in lieu of a 5-paragraph order, the request may be submitted via the Joint Training Tool (JTT) after approval from the CoC. JTT is the authoritative database for joint and service exercises and will be used with the Joint Operation Planning and Execution System to obtain Contingency, Exercise, and Deployment (CED) orders. An example would be SCC that has weather support requirements to fulfill an exercise and/or training event. RFSs are not tracked in Joint Capabilities Requirements Manager and are intended for limited duration and/or scope. Units fulfilling any RFSs are tasked via such orders-based tasking through their CoC. All requirements directly supporting named exercises at any echelon must be defined, coordinated, and routed using the JTT for tracking, sourcing, and visibility management. **(T-0)**

5.3. Other Service Requests. For weather support requests from other services (e.g., US Navy), units will route requests through their leadership to AF/A3DW for inter-service level agreement support. **(T-1)**

5.4. Terrestrial Weather Capabilities.

5.4.1. **Weather Requirements Requests (WRR).** For data, equipment, hardware, or software capabilities not available within the AFWWS, units will submit the operational requirement through their CoC to their MAJCOM functional team. MAJCOMs validate the request and develop the WRR for submission to HQ ACC/A5W for final validation. Requests must be traceable to understood roles, missions, functions, and operations. Lead Command will include validated WRRs in annual resourcing programs for prioritization and funding IAW established Joint Capabilities Integration and Development System / Integrated Priority List processes. **Note:** WRR submission does not guarantee approval/funding. Service components submitting Joint Urgent/Emergent Operational Needs statements follow a separate process. Army-related requirements will be submitted through HQ AF/A3DW IAW AR 115-10/AFI 15-157 (IP). (T-1)

5.5. Space Weather Capabilities.

5.5.1. Current space weather support relies on 2 WS and the Space Domain Awareness Environmental Toolkit for Defense (SET4D). 2 WS provides tailored SME products/services. SET4D offers routine exploitation capabilities. Requests for additional SET4D capabilities can be submitted via the application's "contact us" link. Other space weather needs can be submitted to 2 WS as an RFS (see [para 5.2.3](#)).

5.5.2. Extensive capability shortfalls are overseen by HQ USSF/S5R, supported by SMEs at field commands, direct reporting units, and USSF staff. SpOC can connect users with HQ USSF/S5R and assist with space weather capability questions.

5.5.3. Requests for modifications to existing USSF capabilities/systems can be submitted to SpOC or through the WRR process via ACC/A5W, which will route the request to SpOC. SpOC will coordinate with HQ USSF, USSF/SSC, ACC/A5W, and other DAF organizations to fulfill the requirements.

5.6. Foreign Military Operations Support. Units receiving support requests from foreign entities should direct those entities to request support from the Joint Staff or applicable CCMD.

5.7. Contractor Data Exchange/Mission Support. Requests for support resulting in data/services to contractor-owned/operated entities, or for contractor-operated mission support, must be staffed through the supported higher headquarters (e.g., CCMD, MAJCOM, HAF) and validated by contracting and legal offices. (T-1) Confirm DoD responsibility with the local contracting office before providing support. If the contract or associated documents do not directly specify the DoD will provide support, the supporting weather organization will not provide support unless the contract is modified. (T-3)

ADRIAN L. SPAIN, Lt Gen, USAF
Deputy Chief of Staff, Operations

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

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DAFI 10-2503, *Chemical, Biological, Radiological, Nuclear (CBRN) Defense Program*, 6 October 2023

DAFI 21-103, *Equipment Inventory, Status and Utilization Reporting*, 23 July 2025

DAFI 32-1015, *Integrated Installation Planning*, 11 April 2025

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DAFI 91-204, *Safety Investigations and Reports*, 10 March 2021

DAFI 90-302, *The Inspection System of the Department of the Air Force*, 25 July 2025

DAFI 90-7001, *Enterprise Data Sharing and Data Stewardship*, 22 April 2021

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Prescribed Forms

DAF Form 3806, *Weather Watch Advisory Log*

DAF Form 3807, *Watch/Warning Notification and Verification*

Adopted Forms

DAF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

AAR—After Action Report

ACC—Air Combat Command

AFFORGEN—Air Force Force Generation Model

AFI—Air Force Instruction

AFOG—Air Force Operations Group

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AFSOF—Air Force Special Operations Force

AFMD—Air Force Mission Directive

AFW—Air Force Weather

AFWWS—Air Force Weather Weapons System

AFTTP—Air Force Tactics, Techniques, and Procedures

AGL—Above Ground Level

AIREP—Aircraft Report

AMC—Air Mobility Command, Army Materiel Command

ANG—Air National Guard

AOL—Alternate Operating Location

AR—Army Regulation

ARNG—Army National Guard

ARSOF—Army Special Operations Force

ASCC—Army Service Component Command

ATC—Air Traffic Control

C2—Command and Control

CAP—Civil Air Patrol

CARCAH—Chief, Aerial Reconnaissance Coordination, All Hurricanes

CBRN—Chemical, Biological, Radiological, Nuclear

CCMD—Combatant Command

CFP—Computer Flight Plan

CMP—Cloud Management Tool
CONUS—Continental United States
COOP—Continuity of Operations Procedures
CSpOC—Combined Space Operations Center
CWF—Combat Weather Flight
CWP—Control Weather Products
Det—Detachment
DLT—Desired Lead Time
DoD—Department of Defense
DSCA—Defense Support of Civil Authorities
DTG—Date-Time Group
DZ—Drop Zone
EMS—Electro-magnetic spectrum
ESF—Emergency Support Function
EWD—Engineering Weather Data
FAA—Federal Aviation Administration
FM—Field Manual
FWB—Flight Weather Brief
GCC—Geographic Combatant Command
GFM—Global Force Management
GFMIG—Global Force Management Implementation Guidance
GHOC—Global Hawk Operations Center
HAFMD—Headquarters Air Force Mission Directive
HQDA—Headquarters Department of the Army
IAW—in accordance with
ICAO—International Civil Aviation Organization
IDT—Inactive-Duty Training
IDP—Installation Development Plan
IFR—Instrument Flight Rules
IMCOM—Army Installation Management Command
IW—Information Warfare
JA—Joint Airborne

JMO—Joint Meteorological and Oceanographic Officer
JOAF—Joint Operational Area Forecast
JOPEs—Joint Operational Planning and Execution System
JTT—Joint Training Tool
KQ ID—“KQ” Temporary Location Identifier
LRE—Launch and Recovery Element
LWU—Lead Weather Unit
LZ—Landing Zone
M&S—Modeling and simulation
MAJCOM—Major Command
MCE—Mission control element
MDMP—Military Decision-Making Process
METOC—Meteorological and Oceanographic
METSAT—Meteorological Satellite
METWATCH—Meteorological Watch
MICT—Management Internal Control Toolset
MOA—Memorandum of Agreement
MOU—Memorandum of Understandings
MSL—Mean Sea Level
NEXRAD—Next Generation Weather Radar
NMC—Non-Mission Capable
NOAA—National Oceanic and Atmospheric Administration
NOTAM—Notice to Airmen
NWP—Numerical Weather Prediction
OCONUS—Outside of the Contiguous United States
OPLAN—Operation Plan
OPORD—Operation Order
OSS—Operations Support Squadron
OWS—Operational Weather Squadron
PAROC—Persistent Attack and Reconnaissance Operations Center
PEM—Program Element Monitor
PIREP—Pilot Report

PMC—Partially Mission Capable
PMSV—Pilot to Metro Service
POD—Plan of the Day
RAWS—Radar, Airfield and Weather Systems
RDT&E—Research, Development, Test, and Evaluation
RFF—Request for Forces
RFS—Request for Support
RMF—Risk Management Framework
RP—Resource Protection
RPA—Remotely Piloted Aircraft
RSC—Runway Surface Condition
RSO—Remote Split Operations
SAA—Senior Airfield Authority
SCC—Service Component Command
SEON—Solar Electro-Optical Network
SET4D—Space Domain Awareness Environmental Toolkit
SIGMET—Significant Meteorological Information
SMO—Senior METOC Officer
SpOC—Space Operations Command
SSC—Space and Systems Command
SWO—Staff Weather Officer
TACC—Tanker Airlift Control Center
TAF—Terminal Aerodrome Forecast
TEMPO—Temporary
TPOC—Technical Point of Contact
TTP—Tactics, Techniques, and Procedures
UFC—Unified Facility Code
USN—United States Navy
USSF—United States Space Force
UTC—Unit Type Code, Coordinated Universal Time
WF—Weather Flights
WOC—Wing Operations Center

WP—Weather Product

WR—Weather Reconnaissance

WRR—Weather Requirements Request

WS—Weather Squadron

WSD—Weather Support Document

WST—Weather Specialty Team

WW—Weather Wing

WWA—Warning, Watch, Advisory

Terms

Air Force Force Generation Model—New model the Air Force uses to deploy Airmen and Air Force assets.

Aircraft Report—A routine, often automated report of in-flight weather conditions.

Centralized Asset Management—System for managing and executing sustainment funding for the Air Force's equipment.

Combined Joint All Domain Command and Control—DoD strategy that aims to create a globally integrated, data-driven network for military operations across all domains (land, sea, air, space, and cyberspace).

Coronet—Mission where airspace designated for refueling aircraft that need to travel large distances, either over land or oceans, moves with the group of aircraft (i.e., a moving Air Refueling track).

Desired Lead Time—Customer defined time (in minutes) the supported organization requires a WWA to be issued, to complete protective actions prior to the onset of hazardous weather phenomenon.

Defense Support of Civil Authorities—Support provided by U.S. military forces to civilian authorities in the U.S. homeland during domestic emergencies, law enforcement support, and other domestic activities. This support is provided in response to requests from civil authorities and upon approval from appropriate authorities.

Engineering Weather Data—Collection of long-range environmental information used for planning and designing buildings, equipment, and other facilities. It provides a range of data, including design values for temperature and humidity, along with other relevant parameters like wind and snow load, to help engineers understand the weather conditions at specific locations.

Forecast Weather Advisory—A weather advisory issued when the supported user requires advance notification of an impending weather condition with sufficient time to allow for protective actions.

Global Force Management—Process that determines which Air Force units and resources are allocated to support the National Defense Strategy and CCMD requirements.

Global Force Management Implementation Guidance—Critical document within the DoD that provides detailed guidance on how to implement the GFM framework.

Installation Development Plan—An umbrella document encompassing all sub-plans required to ensure future investments in natural and built infrastructure meet goals and objectives for future development. The IDP is the DAF equivalent of the Master Plan. Weather is often integrated into the IDP IAW DAFI 32-1015, *Integrated Installation Planning*.

International Civil Aviation Organization—A United Nations organization specializing in international aviation and navigation.

ICAO Identifier—A specifically authorized 4-letter identifier assigned to a location. The ICAO is not to be confused with the Routing Identifier used by the Automatic Digital Weather Switch to transmit addressed messages including Automated Response to Queries. Routing IDs may not always match a station ICAO and can have five characters.

Issue Time—The time when an agency is notified of a watch, warning, or advisory. When more than one agency is notified, the issue time is the time the last agency is notified. Follow-up notifications are not considered when determining issue time.

Information Warfare—Use of military capabilities within the information environment to deliberately affect adversary human and system behavior, while preserving friendly freedom of action during cooperation, competition, and conflict.

Joint Capabilities Requirements Manager—Web-based tool used by the DoD for global force management.

Joint Training Tool—Web-based, cloud-enabled, and enterprise-wide tool that supports joint training and exercises across various levels of the military, from CCMDs to tactical units.

Joint Operation Planning and Execution System—Standardized system used by the U.S. military to plan and execute joint operations. It's a combination of policies, procedures, and automated data processing designed to provide a framework for joint planning and execution at all levels.

KQ Temporary Location Identifier—Location identifiers (similar but NOT ICAOs) beginning with KQ used by deployed units supporting real-world contingencies; deployed/in-garrison units providing support during exercises; classified operating locations; and units that have requested, but not yet received a permanent location identifier.

Launch and Recovery Element—Deployed personnel based at a forward location who are responsible for the launch, recovery, and ground support of an RPA.

Lead Weather Unit—The weather unit has overall responsibility for coordinating air and space weather support and providing or arranging forecasts for the CWP.

Mesoscale—Systems which vary in size horizontally from 1 to 500 nautical miles (2 to 926 kilometers) and have a duration from tens of minutes to several hours (e.g., low level jets, squall lines, thunderstorms, clear air turbulence, or land-sea breezes).

Meteorology and Oceanography—It refers to the branch of military science that deals with the study and application of weather and oceanographic conditions to support military operations.

METWATCH—This is a deliberate process for monitoring environmental conditions in the land, air, and space domains to identify when and where sensed conditions significantly diverge from forecast conditions to determine course(s) of actions to update or amend forecasts and notify end users (as necessary).

Management Internal Control Toolset—Web-based program used for self-assessment of Air Force program management and compliance with higher headquarters directives.

Mission Profile—describes a mission's operating platform(s), route, flight level(s), weapons systems, equipment, target(s), TTPs, and timing.

MISSIONWATCH—A deliberate process of monitoring terrestrial weather or the space environment for specific mission-limiting environmental factors that may adversely impact missions in execution. WFs and WSTs perform the MISSIONWATCH process with the intent to identify previously unidentified environmental threats and alert decision-makers at the operational unit and/or airborne mission commanders, enabling dynamic changes to mission profiles that may mitigate the environmental threat and optimize the chance of mission success.

Numerical Weather Prediction—The processes involved in representing the atmospheric system with fundamental mathematical equations, which can be solved in discrete time steps to achieve a numerical forecast of the parameters (e.g., pressure, temperature, humidity) used to define the state of the atmosphere.

Observed Weather Advisory—A weather advisory issued when a particular weather event first occurs, and the supported user does not require advanced notification of the observed weather phenomenon.

Observed Weather Warning—A weather warning issued when a particular weather event first occurs, and the supported user does not require advanced notification of the observed weather phenomenon.

Operational Weather Squadron (OWS)—A multi-disciplined unit conducting operations to provide trusted environmental data and information in the land, air, and space domains to satisfy enterprise and combatant command mission needs.

Program Element Monitor—Designated individual at the Air Staff level who oversees the Planning, Programming, Budgeting, and Execution (PPBE) process for specific program elements.

Pilot Report—A report of in-flight weather provided by an aircrew member for use over the United States and Canadian airspace.

Reachback Support—The ability to access expertise, resources, or support from a geographically distant location, often a headquarters or specialized center, to assist personnel in the field or at a forward location.

Remote Split Operations—Remote Split Operations refers to the geographical separation of the LRE crew from the mission crew who employ the aircraft at a location other than where the aircraft is based. Advantages of this construction are typically reduced forward footprint, more rapid deployment, and potential flexibility in asset allocation between other Joint Operational Areas. However, this construction also presents unique C2 challenges. Command relationships and tasking and support authorities must be clearly articulated and understood by all participating forces. (Ref JP-3-30, *Joint Air Operations*)

Request for Forces—Formal process used to request the deployment of Air Force personnel or resources to support a particular mission or operation.

Request for Support—Formal document used to request assistance or support from other Air Force units or organizations. It outlines a specific need and requests resources, personnel, or services to address that need.

Solar Electrooptical Network—System that monitors solar activity 24 hours a day, providing crucial information about the sun and its potential impacts.

Service Component Command—The military command within a unified CCMD that represents a specific service, like the Army, Navy, or Air Force, and is responsible for the planning, execution, and support of that service's forces within the CCMD's area of responsibility.

Severe Thunderstorm—A thunderstorm presenting a threat to lives or property that requires agencies to enhance RP measures. Generally, thunderstorms producing hail greater than or equal to ¾ inch (½ inch) diameter and/or surface wind greater than or equal to 50 knots (45 knots) on Air Force (Army) installations.

Severe Weather—Any weather condition that poses a hazard to property or life.

Severe Weather Action Plan—Actions taken by a weather unit to enhance the unit's response capability during a severe weather event. Actions include, but are not limited to, recalling personnel or reallocating resources from other tasks to provide focused support during a severe weather event.

Space Domain Awareness (SDA) Environment Toolkit for Defense—Initiative for the USSF to enhance its space domain awareness capabilities, including monitoring and understanding the space environment.

Talent Management Framework—Deliberate plan to develop the skills and expertise needed by personnel to ensure the right assignment matches to achieve long-term mission objectives. It highlights key training and education points, functional area requirements, and special experience needs to ensure we develop a more ready and lethal force able to provide critical environmental intelligence conducting DoD operations.

Terminal Aerodrome Forecast—A coded weather bulletin providing the official forecast information for an aerodrome complex to facilitate flight planning and command and control activities.

Transient Aircraft or Aircrew—An aircraft or crew passing through an airfield, typically single-stop that departed one location and is enroute to another location or airspace. They are designated to operate from the location.

Valid Time—Time in which weather watches, warnings, and/or advisories are in effect. Valid times start when meteorological phenomena are expected to begin. Valid times end when phenomena are/are expected to cease.

Weather Advisory—A special WP to alert an end user of the occurrence of, or imminent occurrence of weather conditions impacting operations.

WF/Detachments—WFs, detachments, and operating locations whose primary purpose is to facilitate exploitation of the environment through integration at every step of the operations planning and execution process. The WF/Dets may be located with the supported unit on an Air Force base, Army post, remotely located in another weather unit, or at a deployed location.

Weather Product—WPs are generated by weather personnel for weather personnel or for non-weather personnel to use for planning purposes. WPs include, but are not limited to, JOAFs, air refueling forecasts, air combat maneuver/training area forecasts, IFR military training route forecasts, drop/landing zone (DZ/LZ) forecasts, training range forecasts, and control forecasts for an operation with multiple missions.

Weather Support Document—Unit specific document that outlines the procedures, responsibilities, and policy for integrating weather support with the warfighter.

Weather Warning—A special WP to facilitate RP decisions. Weather Warnings alert designated agencies to the imminent or actual occurrence of weather conditions of such intensity as to pose a hazard to life or property for which the agency must take immediate protective actions.

Weather Watch—A special WP to facilitate RP decisions. Weather Watches provide advance notice to designated agencies of the existence of a potential for weather conditions of such intensity as to pose a hazard to life or property for which the agency should consider taking protective measures.

Attachment 2

GENERAL TAF SPECIFICATION AND AMENDMENT CRITERIA

Table A2.1. General TAF Specification and Amendment Criteria.

Rule	Phenomena	Criteria	Source	Notes, Examples or Applications
1	Surface Winds	<p>Wind Speed: The difference between the predominant wind speed and the forecast wind speed is ≥ 10 knots</p> <p>Wind Gusts: The difference between observed gusts and the forecast is ≥ 10 knots</p> <p>Wind Direction: A change > 30 degrees when the predominant wind speed or gusts are expected to be 15 knots or greater</p>		<p>IF: Forecast winds 23018G25KT THEN: Amend if predominant winds equal or exceed 28 knots, or if observed gusts equal or exceed 35 knots Amend if predominant winds are 8 knots or less or gusts do not meet 15 knots Amend for prevailing wind directions outside of the arc extending from 200 through 260 degrees</p>
2	Icing, not associated with thunderstorms, from the surface to 10,000ft Above Ground Level (AGL)	The beginning or ending of icing first meets, exceeds, or decreases to less than moderate (or greater) thresholds and was not specified in the forecast	AFMAN 11-202 Vol. 3, AR 95-1, and AFH11-203v 1	
3	Turbulence (for weather category II aircraft), not associated with thunderstorms from the surface to 10,000 ft AGL	The beginning or ending of turbulence first meets, exceeds, or decreases below moderate or greater thresholds and was not specified in the forecast	AFMAN 11-202 Vol. 3, AR 95-1, and AFH11-203v 1	

Rule	Phenomena	Criteria	Source	Notes, Examples or Applications
4	Weather Warning Criteria	<p>Occur, or are expected to occur during the forecast period, but were not specified in the forecast</p> <p>Specified in the forecast but are no longer expected to occur during the forecast period</p>		<p>Note: Watches are exempt from this requirement. Forecasters may specify watch criteria in the TAF when, in their judgment, the specific nature of the threat dictates</p>
5	Altimeter Setting	<p>Altimeter setting meets or exceeds 31.00 INS and was not specified in the forecast</p> <p>The altimeter setting, if above, drops below 31.00 INS and was not specified during the forecast period</p> <p>The altimeter setting drops below 28.00 INS and was not specified in the forecast</p> <p>Altimeter setting, if below 28.00 INS, increases above 28.00 INS and was not specified in the forecast</p>	AFMAN 11-202 Vol. 3	
6	Forecast Weather Advisory Criteria	<p>Occur, or are expected to occur during the forecast period, but were not specified in the forecast</p> <p>Specified in the forecast but are no longer expected to occur during the forecast period</p>		<p>Note: Advisories issued for an area not including the terminal aerodrome forecast area are exempt from this policy</p>
7	Thunderstorms	Incorrect forecasts start or end time	AFMAN 11-202 Vol. 3 and AR95-1	

Rule	Phenomena	Criteria	Source	Notes, Examples or Applications
8	Specification of Temporary Conditions	Forecast conditions specified as temporary become predominant conditions Forecast conditions specified as temporary do not occur during the hour as forecast Forecast conditions specified as temporary are no longer expected to occur	AFMAN 11-202 Vol. 3 and AR95-1	
9	Changes to Predominant Conditions (BECMG or FM group)	Forecast change conditions occur before the beginning of the specified period of change and are expected to persist Forecast change conditions do not occur within 30 minutes after the specified time Forecast change conditions are no longer expected to occur		
10	Representative Conditions	Forecast conditions are not considered representative of existing or forecast conditions and amending the forecast improves safety, flight planning, operations efficiency, or assistance to in-flight aircraft		

Attachment 3

ARMY AIRFIELD CEILING AND VISIBILITY SPECIFICATION AND AMENDMENT CRITERIA

Table A3.1. Army Airfield Ceiling and Visibility Specification and Amendment Criteria.

Rule	Category	Ceiling	Visibility	Source
1	D	Greater Than or Equal to (GTE) 1500ft	Visibility GTE 4800 meters (M) (3 statute miles [SM])	Aircrew must file for an alternate if conditions are less than 1500M/3SM IAW AR 95-1
2	C	Less Than (LT) 1500ft but GTE lowest published landing minimum plus 400ft	Visibility LT 4800M (3SM) but GTE lowest published landing minimum plus 1600M/1SM	Airfield weather conditions must equal or exceed these criteria to qualify as an alternate when flight filing IAW AR 95-1
3	B	LT lowest published landing minimum plus 400ft but GTE lowest published landing minimum	LT lowest published landing minimum plus 1SM (1600M) but GTE lowest published airfield landing minimum	Airfield does not qualify as an alternate for flight planning but is still suitable for arrival providing a suitable alternate is available IAW AR 95-1
4	A	LT lowest published airfield landing minimum	LT lowest published airfield landing minimum	Airfield is not a suitable destination IAW AR 95-1
<p>Note 1. Forecasts specify when conditions decrease to less than, or if below, increase to equal or exceed the categories in the table.</p> <p>Note 2. Forecast category is determined by the lower of the ceiling or visibility value.</p> <p>Note 3. Use predominant conditions to determine forecast category (i.e., not tempo or varying).</p> <p>Note 4. For locations Outside the Continental United States (OCONUS), 5000M and 1500M may be substituted for 4800M and 1600M respectively, based on the host-nation practice. Substitutions should be documented in local support plans and operating procedures.</p>				

Attachment 4

DAF AIRFIELD CEILING AND VISIBILITY SPECIFICATION AND AMENDMENT CRITERIA

Table A4.1. DAF Airfield Ceiling and Visibility Specification and Amendment Criteria.

Rule	Category	Ceiling	Visibility	Source:
1	E	GTE 2000ft	GTE 4800M (3SM)	Aircrew must file for an alternate if forecast conditions are less than 2000/3 IAW AFMAN 11-202 Vol 3
2	D	LT 2000ft but GTE 1000ft	LT 4800M (3SM) but GTE 3200M (2SM) or lowest published visibility minima, whichever is greater	Airfield qualifies as an alternate IAW AFMAN 11-202 Vol 3
3	C	LT 1000ft and GTE lowest published landing minimum plus 500ft	LT 4800M (3SM) but GTE 3200M (2SM) or lowest published visibility minima, whichever is greater	Airfield qualifies as an alternate IAW AFMAN 11-202 Vol 3
4	B	LT the lowest published landing minimum plus 500 ft and GTE the lowest published landing minimum	LT 3200M (2SM) but GTE the lowest published airfield landing minimum	Airfield does not qualify as an alternate for flight planning but is still suitable for arrival provided a suitable alternate is available IAW AFMAN 11-202 Vol 3
5	A	LT the lowest published airfield landing minimum	LT the lowest published airfield landing minimum	Airfield is not a suitable destination IAW AFMAN 11-202 Vol 3

Note 1. Forecasts specify when conditions decrease to less than, or if below, increase to equal or exceed the categories in the table.

Note 2. Forecast category is determined by the lower ceiling or visibility value.

Note 3. Use prevailing surface visibility to determine forecast category.

Note 4. For OCONUS locations, 5000M and 3000M may be substituted for 4800M and 3200M respectively, based on the host-nation practice.

Note 5. For DAF operations, Category A minima may be replaced with pilot weather categories in MAJCOM supplements to AFMAN 11-202v3.

Note 6. Air Force rotary wing criteria may be substituted when rotary wing aircraft are the primary aircraft assigned at the TAF location as stated in AFMAN 11-202v3.

Attachment 5

DUAL-USE CIV/MIL AIRFIELD, OBSERVATION, AND WWA RESPONSIBILITIES**Table A5.1. Dual-Use Civ/Mil Airfield, Observation, and WWA Responsibilities.**

Location	Airfield Observation	Airfield Forecast	Observed WWA	Forecast WWA
Albuquerque International Airport/Kirtland AFB	FAA	NWS	OWS	OWS
Charleston IAP/JB Charleston AFB	FAA	NWS	WF/Det (during duty hours; OWS when closed)	OWS
Colorado Springs Municipal Airport/Peterson Space Force Base	FAA	NWS	WF/Det	WF/Det
Eglin AFB/Destin-Ft Walton General Airport	WF/Det	WF/Det	WF/Det	WF/Det
Killeen-Ft Hood Regional Airport	WF/Det	WF/Det	WF/Det	WF/Det
Joint Base Pearl Harbor-Hickam/Honolulu IAP	NWS	NWS	WF/Det	WF/Det
Rickenbacker IAP/Rickenbacker JRB	FAA	NWS	OWS	OWS
Scott AFB – Mid America Regional Airport	WF/Det	WF/Det	WF/Det	WF/Det
Wichita Falls Regional Airport/Sheppard AFB	WF/Det	WF/Det	WF/Det	WF/Det

Attachment 6

EXAMPLE WEATHER WATCH AND WARNING CRITERIA

Table A6.1. Example Weather Watch and Warning Criteria.

Weather Threat	Threshold	Impact	Default Lead-time (See Note 1)
Tornado	Tornado, Waterspout, or Funnel cloud (detected by radar or visually observed) AND threatening warned location / aerodrome complex	Immediate threat of catastrophic damage to personnel and property	15-minute advance notice of onset and duration of tornadic thunderstorm activity See Note 2
Severe Thunderstorm	Damaging Wind GTE, the specified thresholds and associated with thunderstorms AF: 50 kts Army: 45 kts -AND/OR- Damaging Hail GTE, the specified thresholds at the warned location/aerodrome AF: ¾” Army: ½”	Immediate threat to exposed personnel High risk of damage to facilities and exposed aircraft and equipment	1 hour advance notice of severe thunderstorm onset, duration, and intensity See Note 2
Moderate Thunderstorm	<u>Strong Winds</u> GTE 35 kts and LT severe criteria associated with thunderstorms -AND/OR- <u>Large Hail</u> GTE ¼” and LT severe criteria at the warned location/aerodrome	Increased risk to exposed personnel Increased risk of damage to unsecured property Increased risk of flight line activities and damage to exposed aircraft or vehicles	1 hour advance notice of thunderstorm onset, duration, and intensity See Note 2

Weather Threat	Threshold	Impact	Default Lead-time (See Note 1)
Strong Winds	Surface Winds not associated with Thunderstorms GTE 35 kts and LT severe threshold	<p>Increased risk to exposed personnel</p> <p>Increased risk of damage to unsecured property</p> <p>Increased risk of flight line activities and damage to exposed aircraft or vehicles</p>	1 hour advance notice of onset, duration, and intensity
Damaging Winds	Surface winds not associated with thunderstorms GTE the specified thresholds. AF: 50 kts Army: 45 kts	<p>Immediate threat to exposed personnel</p> <p>Increased risk of damage to facilities and equipment</p>	<p>1 hour advance notice of onset, duration, and intensity of wind event</p> <p>See Note 2</p>

Weather Threat	Threshold	Impact	Default Lead-time (See Note 1)
Freezing Precipitation	Liquid precipitation of any type and intensity that freezes on contact and produces a glaze ice on exposed surfaces	<p>Range of impacts dependent on precipitation type and intensity</p> <p>Examples: Light freezing drizzle increases the risk of unsafe driving conditions and disrupts flight line or maneuver activities Effects can be mitigated</p> <p>Moderate or greater intensity freezing rain (ice storm) poses significant risk of damage to facilities and rapidly creates hazardous conditions for personnel and vehicle movement that cannot easily be mitigated</p>	<p>1 hour advance notice of onset</p> <p>See Note 2</p>

Weather Threat	Threshold	Impact	Default Lead-time (See Note 1)
Heavy Snow	2" of new snowfall accumulating in LT 12 hours	Disrupts personnel movement or flight line activities	<p>1 hour advance notice of the period meeting or exceeding the heavy snow threshold</p> <p><u>Ex:</u> It is determined that 2" in a 6-hour period poses a threat to the installation. The responsible unit provides 1-hour advance notice of the onset for a snow event(s) meeting the threshold. (e.g., Issue the warning at 11Z when snow is expected to start falling at 12Z and accumulate GTE 2" by 18Z.)</p> <p>The warning text indicates maximum expected snowfall accumulation during the period specified in the warning.</p>
Blizzard	<p>All the following must occur:</p> <p>a) Surface visibility less than or equal to (LTE) ¼SM (400M)</p> <p>b) Falling and/or snow blowing</p> <p>c) Wind (sustained or gusts) GTE 30 kts</p> <p>d) Duration GTE 3 hours</p>	<p>Imposes significant risk to personnel movement</p> <p>Significant risk to maneuvering or flight line activities</p>	1 hour advance notice of onset, duration, and character (persistent or intermittent) of conditions meeting or exceeding threshold

Weather Threat	Threshold	Impact	Default Lead-time (See Note 1)
Heavy Rain	2" of liquid precipitation accumulating in LT 12 hours	<p>Increased threat of flash flooding or systemic flooding posing credible threat to unprotected resources and personnel</p> <p>Disrupts flight line and maneuver activities</p> <p>Imposes increased risk on personnel movement</p>	<p>1 hour advance notice of the start of the period meeting or exceeding the heavy rain threshold</p> <p>The warning indicates onset, duration, and anticipated maximum rainfall accumulation</p>
Sandstorm	Winds carrying sand particles from the surface up to 50 feet above the surface, prevailing visibility GTE 5/16 but LT 5/8SM (500 to 1000M). For prevailing visibility of LT 5/16SM (500M), the storm is considered a heavy sandstorm	Disrupts personnel movement and aviation operations	1 hour advance notice of the period meeting or exceeding threshold
Dust storm	Winds carrying dust particles from the surface to approximately ten thousand feet above the surface, prevailing visibility GTE 5/16 but LT 5/8SM (500 to 1000M). For prevailing visibility of LT 5/16SM (500M), the storm is considered a heavy dust storm	Disrupts personnel movement and aviation operations	1 hour advance notice of the period meeting or exceeding threshold
Lightning	Lightning within 5NM or locally defined.	Immediate threat to exposed personnel	As observed

Note 1. Lead-time requirement is determined by the affected installation. Use default lead-times when a local requirement is not specifically stated or researched.

Note 2. Installation policy directs severe weather action plan activities.

Attachment 7**INSTRUCTIONS FOR COMPLETING DAF FORM 3807, WATCH/WARNING NOTIFICATION AND VERIFICATION**

A7.1. General Instructions. Unit leaders may use these instructions as guidance in preparing local procedures for logging weather watches and warnings. Enter all times in UTC.

A7.1.1. **Block 1. Number** . Enter the locally specified number, or numbers when a watch and corresponding warning have different numbers (e.g., Watch # A4-008, WW # 4-002).

A7.1.2. **Block 2. Location** . Enter the location (installation or area) for which the watch/warning is valid.

A7.1.3. **Block 3. Date** . Enter the issue date of the watch/warning.

A7.1.4. **Block 4. Issued By** . Enter the name or initials of the individual who issues the watch/warning.

A7.1.5. **Block 5. Verified By** . Enter the name or initials of the individual who verifies the warning.

A7.1.6. Block 6. Criteria:

A7.1.6.1. **Watches/Warnings Are Issued for The Following.** Enter the watch/warning criteria.

A7.1.6.2. **Desired Lead Time (DLT).** Enter the desired lead-time.

A7.1.6.3. **Valid Period.** Enter the valid period of the watch/warning on the appropriate line (opposite the criteria for which the watch/warning is issued). The ending time for observed lightning will reflect the estimated duration.

A7.1.6.4. **Forecast.** Enter the specific value or category forecast if different than that listed in the watch/warning criteria block. For example, if the threshold is for winds greater than 35 knots, but the forecast is for 40 knots, specify 40 knots in this block.

A7.1.6.5. Verification.

A7.1.6.5.1. **Occurred.** Enter the time the weather element first occurred within the area covered by the warning. For WVs issued for winds 50 knots or greater, or hail 3/4 inch or greater that do not occur within the area covered by the warning but DO occur within 10 nautical miles, use the time the event occurred within 10 nautical miles. If the weather element did not occur, leave blank and indicate the nonoccurrence in the Did Not Occur block.

A7.1.6.5.2. **Did Not Occur.** Check those weather elements that did not occur.

A7.1.6.5.3. **Lead-Time.** Enter the actual lead-time of each verified weather element. In cases where a warning downgrades an earlier warning that did not verify (with no break in coverage), compute actual lead-time using the issue time of the earlier warning.

A7.1.6.5.4. **Timing Error.** Enter timing error when computing lead time.

A7.1.6.6. **Text.** Enter the text and valid period of the watch or warning as disseminated to customers as well as any extension information. Forecasters should use pre-formatted, standardized text templates for watches and warnings to expedite the notification and dissemination process. For example:

Figure A7.1. Text Templates for Watches and Warnings.

**THUNDERSTORMS WITH ____ WINDS AND ____ INCH HAIL OR
WINDS ____ KNOTS NOT ASSOCIATED WITH THUNDERSTORMS**

A7.1.6.7. Block 7. Dissemination:

A7.1.6.7.1. **Agency.** List all agencies notified of the watch or warning. Include the primary dissemination system and all agencies not on the primary dissemination requiring notification. Some agencies on the primary dissemination system may require a backup call to verify receipt (indicated by an *); do not use the time of backup calls in verification statistics.

A7.1.6.7.2. **Contact.** List primary and secondary means of contacting the agencies, for example, N-TFS/x1234.

A7.1.6.7.3. **Agency Criteria.** Mark the watch/warning criteria for each agency.

A7.1.6.7.4. **Watch Issued.** Enter the dissemination/notification time, the initials of the forecaster issuing the watch, and the initials of the person receiving the watch if that agency requires a backup call or is not on the primary dissemination system.

A7.1.6.7.5. **Watch Cancelled.** Enter the dissemination/notification time, the initials of the forecaster cancelling the watch, and the initials of the person receiving the cancellation if that agency requires a backup call or is not on the primary dissemination system. If the watch runs full term, enter an appropriate remark such as "allowed to expire" or "ATE."

A7.1.6.7.6. **Warning Issued.** Enter the dissemination/notification time, the initials of the forecaster issuing the warning, and the initials of the person receiving the warning if that agency requires a backup call or is not on the primary dissemination system.

A7.1.6.7.7. **Warning Cancelled.** Enter the dissemination/notification time, the initials of the forecaster cancelling the warning, and the initials of the person receiving the cancellation if that agency requires a backup call or is not on the primary dissemination system. If the warning runs full term, enter an appropriate remark such as "allowed to expire" or "ATE."

A7.1.6.8. **Block 8. Remarks** . Use for miscellaneous information.

A7.1.6.9. **Block 9. Pertinent Observations** (back of form). List all pertinent observations or data points, both "official" and "unofficial," that aid in verification and/or justification of watches and warnings. Forecasters may include any observational data they deem relevant that assisted in the issuance, verification, or cancellation process. Examples include (but are not limited to) radar information, off-duty observer reports, and locally reported weather conditions.

A7.1.6.10. **Block 10. Forecast Review and Comments** (back of form). Forecast review section also referred to as weather product review in this publication, is used for forecast review information. AFW leaders can use this space to include written comments on weather forecasts and warnings.

Attachment 8**INSTRUCTIONS FOR COMPLETING DAF FORM 3806, WEATHER WATCH
ADVISORY LOG**

A8.1. General Instructions. Unit leaders may use these instructions as guidance in preparing local procedures for logging forecast and observed weather advisories (WA). Enter all times in UTC.

A8.1.1. **Date.** Enter the month and year.

A8.1.2. **Issued.** Enter the issue Date-Time Group (DTG).

A8.1.3. **Valid.** Enter the valid time of the WA. Leave blank for observed WAs.

A8.1.4. **Terminal or Area.** Enter the installation or area for which the advisory is being issued. Enter the locally assigned WA number (e.g., WA # 05-A05).

A8.1.5. **Text.** Enter the text of the advisory.

A8.1.6. **Dissemination.** Use this section to enter information for the initial issuance, extensions, and cancellations of WAs. If the WA is allowed to expire, enter a remark such as "allowed to expire" or "ATE" in one of the time blocks. Use the Remarks block or back of the form if needed.

A8.1.6.1. **Agency.** Enter the agencies notified of the WA. Include the primary dissemination system and all agencies not on the primary dissemination system that must be notified. **Note:** Minimize individual notification calls to no more than three.

A8.1.6.2. **Time.** Time agency is notified.

A8.1.6.3. **Initials.** Enter the initials of the individual receiving the WA information, if required. This is normally used for agencies, not on the primary dissemination system and for follow-up calls.

A8.1.6.4. **Forecaster.** Enter the name or initials of the forecaster issuing, extending, or canceling the WA.

A8.1.7. **Remarks.** Use as required.

A8.1.8. **Verification.** Verify all forecast WAs either objectively or subjectively as determined by unit leaders. For WAs containing multiple phenomena, verify each phenomenon separately.

A8.1.8.1. **Occurred.** Check "Yes, No, or Not Applicable."

A8.1.8.2. **Lead-Time.** Enter the actual lead-time. Lead-time is not required for observed WAs, downgrades of previously verified WAs or WAs with no break in coverage, or extensions unless the WA has not yet verified. In cases where a WA downgrades an earlier warning or advisory that *DID NOT* verify (with no break in coverage), compute the lead-time using the issue time of the earlier warning or advisory.

A8.1.8.3. **Timing Error.** Enter the calculated timing error, if required.

A8.1.8.4. **Verified By.** Enter the initials of the individual verifying the advisory.

A8.1.8.5. **Comments/Remarks.** Enter enough meteorological reasoning and information, such as observations, radar reports, and PIREPs/AIREPs, to verify and/or justify the WA. This includes information to verify the WA objectively or subjectively.

Attachment 9

DD FORM 175-1, FLIGHT WEATHER BRIEFING INSTRUCTIONS

A9.1. General Instructions. Unless directed by MAJCOMs, higher headquarters, or local operating procedures, all entries in the individual blocks except for date, aircraft type, callsign, and forecaster name/initials are at the discretion of the briefer, based on aircrew requirements and the weather situation. Entries on the DD Form 175-1 or equivalent briefing form must be horizontally and vertically consistent and show sound meteorological reasoning. For example, if a weather warning or advisory for surface wind is indicated in block 11, the surface wind forecast in block 9 should reflect the warning or advisory wind criteria, along with the warning or advisory number entered in block 13. Enter all times in UTC, all winds in five digits (six for wind speeds over 99 knots) and record all heights in hundreds of feet with the surface level as "SFC."

A9.2. PART I - TAKEOFF DATA. Enter the general forecast for takeoff 1 hour on either side of the estimated time of departure (ETD). See [Figure A9.1](#) for an example of Part I.

A9.2.1. Block 1. **DATE.** Enter the UTC departure date in the format needed for operational use and communication with C2 systems (e.g., DD MMM YYYY, YYYY MM DD).

A9.2.2. Block 2. **ACFT TYPE/NO.** Enter aircraft type (F22, B52, C5) and radio call sign, mission number, or the last three digits of the tail number.

A9.2.3. Block 3. **DEP PT/ETD.** Enter the departure location identifier (ICAO ID) and estimated time of departure. Enter departure grid point or latitude/longitude for locations that do not have location identifiers.

A9.2.4. Block 4. **RWY TEMP.** Enter the runway temperature (prefixed with a —+|| or —-|| as applicable) and designate degrees Celsius or Fahrenheit used.

A9.2.5. Block 5. **DEW POINT.** Enter the runway temperature (prefixed with a —+|| or —-|| as applicable) and designate degrees Celsius or Fahrenheit used.

A9.2.6. Block 6. **TEMP DEV.** Enter in degrees Celsius unless requested in Fahrenheit. For USAF flights, enter "Temp Dev" as the difference between the forecast temperatures for climbing and the US Standard Atmosphere temperature. For Navy/Marine flights, the difference between forecast runway temperature (prefixed with a —+|| or —-|| as applicable) and US Standard Atmosphere temperature corresponding to field elevation.

A9.2.7. Block 7. **PRES ALT.** Enter the pressure altitude in feet with algebraic sign. Primarily used by USAF aviators.

A9.2.8. Block 8. **DENSITY ALT.** Enter in feet with algebraic sign. Primarily used for rotary wing operation and Army Aviators.

A9.2.9. Block 9. **SFC WIND.** Enter the surface wind direction in magnetic for missions departing your airfield, and in true direction for missions departing another airfield. Designate "M" for magnetic or "T" for true. Enter surface wind direction to the nearest 10 degrees in three digits and surface wind speed (including gust) in two or three digits. Ensure wind entries use a minimum of 5 digits (3 digits for direction and 2 digits for speed). Surface winds will have 2 digits to represent gusts, while winds aloft will use 3 digits for speed when winds exceed 99 knots. Enter "VRB" for a forecast variable wind direction and "CALM" when the winds are forecast calm.

A9.2.10. Block 10. **CLIMB WINDS.** Enter the true direction. Enter a representative wind (or winds) from takeoff to cruise altitude. Enter the wind direction to the nearest 10 degrees in three digits and wind speed in two or three digits to the nearest 5 knots. Enter climb winds in layers if there are significant differences (wind speed changes of greater than or equal to 20 knots and/or wind direction changes greater than or equal to 30 degrees and the wind speed is expected to be over 25 knots) from one stratum to another.

A9.2.11. Block 11. **LOCAL WEATHER WATCH/WARNING/ADVISORY.** Enter any known forecast/observed weather watch, warning, or advisory valid for ETD +/-1 hour. When we have a watch, warning, and advisory information about a location are not available (e.g., remote briefing), enter "Check with local flight agencies." Inform the aircrew that the status of local weather watches, warnings, and/or advisories is undeterminable, and recommend they check with the local ATC or airfield operations for any weather watches, warnings, or advisories that may be in effect.

A9.2.12. Block 12. **Runway Surface Condition (RSC)/Runway Condition Reading (RCR).** Enter the latest reported Runway Surface Condition/Runway Condition Reading (RSC/RCR) for the departure airfield, if available (e.g., WR//, RCRNR, IRPSR10, P DRY). When RSC/RCR is not available, enter "N/A."

A9.2.13. Block 13. **REMARKS/TAKEOFF ALTN FCST.** Enter remarks on weather that will affect takeoff and climb (e.g., inversions, icing, turbulence, low level wind shear). Ensure the contents of the briefing and the local TAF are consistent. If requested, enter a forecast for the specific takeoff alternate and time.

Figure A9.1. Example Part I - Takeoff Data.

FLIGHT WEATHER BRIEFING							
PART I - TAKEOFF DATA							
1. DATE	2. ACFT TYPE/NO.	3. DEP PT/ETD	4. RWY TMP	5. DENPOINT	6. TEMP DEV	7. PRES ALT	8. DENSITY ALT
20 Mar 02	C130/CATS01	KOFFM410 Z	-2 °F/C	-3 °F/C		41130 FT	FT
9. SFC WIND 29012G18	M T	10. CLIMB WINDS 24025 (SFC-060) 21035 (060-100)	11. LOCAL WEATHER WATCH/WARNING/ADVISORY 03-10 SNOW 4 - 6 INCHES VALID 20H200Z TO 20I2000Z			12. RSC/RCR LSR15	
13. REMARKS/TAKEOFF ALTN FCST MDT RIME ICG 005-140 DURGC KOFF							
TAKE OFF ALTN KSUX VALID 1410-1540Z 00012 4 -SN OVC010 ALSTG 29.95 TEMPO 1 SN OVC009							

A9.3. PART II – ENROUTE & MISSION DATA. Enter data for the duration of the specific mission and the entire route of flight. Brief hazards for the specific mission (if applicable) and enroute generally within 25 miles either side of the route and within 5,000 feet above and below the planned flight level. Insert or attach forecasts for drop zones, ranges, air-refueling areas, or low-level routes, etc., as applicable to the specific mission. See [Figure A9.2](#) for an example of Part II.

A9.3.1. Block 14. **FLT LEVEL/WINDS/TEMP.** Enter planned flight level in hundreds of feet in three digits (e.g., "280" for 28,000 feet, "080" for 8,000 feet). Enter true wind direction at flight level in tens of degrees and speed to the nearest 5 knots. Enter forecast flight level temperature in degrees Celsius (prefixed with a —+| or —-| as applicable). If there are significant wind speed and direction changes, break the forecast into legs (e.g., BLV-MXF 27045/-45). Otherwise, brief a representative wind and temperature for the entire route (e.g., 32040/-38). If a computer flight plan (CFP) is available, review it for accuracy before briefing aircrews. If accurate, enter "See CFP" in this block. Check "See Attached" if it provides a CFP or specific wind charts.

A9.3.2. Block 15. **SPACE WEATHER.** Check the appropriate block indicating the Frequency (FREQ), Global Positioning System (GPS), and Radiation (RAD) as applicable to the specific mission. Indicate the boundaries of the degradation in the space provided in block 15, (e.g., Ultra High Frequency 20N180W to Paya Lebar). When using the High-Altitude Radiation Dosage Chart, 3.0 - <10.0 mRem/hour is marginal and 10.0 or greater mRem/hour is severe per BEALEAFBI 15-178. A second option is to simply check the appropriate blocks and attach the applicable Space Weather charts to the DD Form 175-1. Indicate there are attachments by writing —SEE ATTACHED in block 15 and check —Yes in block 34.

A9.3.3. Block 16. **SOLAR/LUNAR.** Enter the location specified by the aircrew, Beginning Morning Nautical Twilight (BMNT), Sunrise, Sunset, Ending Evening Nautical Twilight (EENT), Moonrise (MR), Moonset (MS), and Percent Moon Illumination (ILLUM).

A9.3.4. Block 17. **CLOUDS AT FLT LEVEL.** Check the appropriate block. "Yes" implies flight in cloud at least 45 percent of the time; "No" implies the flight will be in cloud less than 1 percent of the time; and "In and Out" implies the flight will be in cloud between 1 percent and 45 percent of the time.

A9.3.5. Block 18. **OBSCURATIONS AT FLT LEVEL RESTRICTING VISIBILITY.** Check the appropriate block. If "Yes," enter the type of forecast obscurations that could potentially restrict the in-flight visibility along the planned route or mission flight level (e.g., fog, haze, smoke, etc.). Specify the intensity and location if applicable.

A9.3.6. Block 19. **MINIMUM CEILING.** Enter the lowest ceiling enroute and for the specific mission (if applicable) in hundreds of feet **AGL**, and the geographical location (e.g., "060 ft BLV-MXF"). If the minimum ceiling is over hilly or mountainous terrain, or in thunderstorms, so indicate, e.g., "010 feet BOSTON MTS," or "020 feet SW KY TSTMS."

A9.3.7. Block 20. **MAXIMUM CLOUD TOPS.** Enter maximum tops of cloud layers (exclusive of thunderstorm tops) with more than 4/8 coverage in hundreds of feet **MSL** and the geographical location.

A9.3.8. Block 21. **MINIMUM FREEZING LEVEL.** Enter the height and geographical location of the lowest freezing level enroute and for the specific mission (if applicable) in hundreds of feet **MSL**. If the lowest freezing level is at the surface, enter "SFC" and geographical location.

A9.3.9. Block 22. **THUNDERSTORMS.** Enter the name and DTG of the thunderstorm product used, or FCSTR if supplementing trusted and authoritative information from outside sources (e.g. radar summary, satellite imagery, NWS or foreign weather service In-Flight Weather Advisories). Enter the type, extent, maximum tops, and geographical location of thunderstorms affecting the route or specific mission. The extent percentages on the DD Form 175-1 directly correspond to the Maximum Instantaneous Coverage (MIC) depicted on 557 WW thunderstorm products. Never use the terms "cumulonimbus" or "—CB." Instead, use "thunderstorm."

A9.3.10. Block 23. **TURBULENCE** (independent of thunderstorms). Enter the name and DTG of the authoritative turbulence forecast used or FCSTR if supplementing trusted and authoritative data from outside sources. (e.g. NWS or foreign In-Flight Weather Advisories). Enter the type, intensity, levels, and locations of turbulence affecting the route or specific mission.

A9.3.11. Block 24. **ICING** (independent of thunderstorms). Enter the name and DTG of the authoritative icing forecast used or FCSTR if supplementing trusted and authoritative information from outside sources (e.g., NWS or foreign In-Flight Weather Advisories). Enter the type, intensity, levels, and locations of icing affecting route or specific missions. **Note:** In-Flight Weather Advisories are advisory in nature and should be used as guidance when preparing the enroute forecast. They must be carefully evaluated and tempered with all available data (e.g., radar, PIREPs, upper air soundings, online resources) to determine the potential effects on the specific mission and aircraft. Even if not used as the basis for the forecast, weather personnel must alert aircrews to all existing In-Flight Weather Advisories that affect their mission. If the weather briefer disagrees with the advisory, annotate the fact in the "Remarks" section of the DD Form 175-1 or equivalent. Whether or not the condition described is potentially hazardous to a particular flight is for the pilot to evaluate based on experience, the mission, and the operational limits of the aircraft. See FAA *Aeronautical Information Manual* for detailed information on NWS In-Flight Weather Advisories.

A9.3.12. Block 25. **PRECIPITATION.** Enter the type, intensity, character, and geographical location of precipitation areas affecting the route or specific mission. This block is for precipitation encountered at flight level, not at the surface.

Figure A9.2. Example Part II – Enroute and Mission Data.

PART II - ENROUTE & MISSION DATA														
14. FLT LEVEL/WINDS/TEMP <input type="checkbox"/> SEE ATTACHED 100MSL 21035/-10				15. SPACE WEATHER UHF 20N180W to Paya Lebar				16. SOLAR/LUNAR		LOCATION				
				NO IMPACT MARGINAL SEVERE				BMNT 0600 Z						
				FREQ		<input checked="" type="checkbox"/>		SR 0628 Z	MIR 2023 Z					
				GPS	<input checked="" type="checkbox"/>			SS 1836 Z	MS 0755 Z					
				RAD	<input checked="" type="checkbox"/>			EENT 1904 Z	ILLUM 92 Z					
17. CLOUDS AT FLT LEVEL <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IN AND OUT				18. OBSCURATIONS AT FLT LEVEL RESTRICTING VISIBILITY <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO TYPE										
19. MINIMUM CEILING - LOCATION 003 Em NE FT AGL				20. MAXIMUM CLOUD TOPS - LOCATION 280 NE, IA, Sm SD FT MSL				21. MINIMUM FREEZING LVL - LOCATION SFC - RTE FT MSL						
22. THUNDERSTORMS ODLA 24/1500			23. TURBULENCE FCSTR			24. ICING 15 OWS 20/12Z			25. PRECIPITATION FCSTR					
<input checked="" type="checkbox"/> NONE	<input type="checkbox"/> AREA	<input type="checkbox"/> LINE	<input type="checkbox"/> NONE	<input type="checkbox"/> IN CLEAR	<input type="checkbox"/> IN CLOUD	<input type="checkbox"/> NONE	<input type="checkbox"/> RIME	<input type="checkbox"/> MIXED	<input type="checkbox"/> CLEAR	<input type="checkbox"/> NONE	<input type="checkbox"/> DRIZZLE	<input type="checkbox"/> RAIN	<input type="checkbox"/> SNOW	<input type="checkbox"/> PELLET
ISOLATED 1 - 2%			LIGHT			TRACE			LIGHT					
FEW 3 - 15%			MODERATE			LIGHT			MODERATE			<input checked="" type="checkbox"/>		
SCATTERED 16 - 45%			SEVERE			MODERATE			HEAVY					
NUMEROUS - MORE THAN 45%			EXTREME			SEVERE			SHOWERS					
HAIL, SEVERE TURBULENCE & ICING, HEAVY PRECIPITATION, LIGHTNING & WIND SHEAR EXPECTED IN AND NEAR THUNDERSTORMS.						LEVELS			LEVELS			FREEZING		
						080-120			SFC - 140			LOCATION		
LOCATION						LOCATION			LOCATION			LOCATION		
NE, IA, Sm SD						NE, IA, Sm SD			NE, IA, Sm SD			NE, IA, Sm SD		

A9.4. PART III - AERODROME FORECASTS. Brief the worst conditions expected to prevail during the valid period for both destination and alternate. Ensure the air crew is briefed on, and fully understand, the entire weather situation at the destination and alternates. The need for and the selection of an alternate is a pilot decision. However, weather technicians need to be familiar with the basic USAF, Army, and Navy/Marine provisions for alternate selection. Refer to AFMAN 11-202V3, 95-1, or OPNAVINST 3710.7, *NATOPS General Flight and Operating Instructions* for specific alternate requirements. Enter forecasts for subsequent stops and alternates on request, but advise the pilot that updates are necessary. Brief destination forecasts in terms the air crew understands and prefers. See [Figure A9.3](#) for an example of Part III.

A9.4.1. Block 26. **DEST/ALTN.** Enter the appropriate station identifier (ICAO) for the destination (DEST) or alternate (ALTN) aerodrome forecast. Designate DEST or ALTN used. Place conditions described by a temporary (TEMPO) group on the next line, line through DEST/ALTN, and enter TEMPO in the block. **Note:** PGS/S-developed briefings place TEMPO groups on the same line. Place local hazard forecasts from the TAF in the Remarks section. For Army multi-stop missions, where the forecast for all stops is similar, enter "A/S" (for "all stops"), enter the worst conditions expected along the route, and identify the location having the worst condition. These entries imply conditions at all other stops are the same, or better.

A9.4.2. Block 27. **VALID TIME.** For USAF and Navy/Marine missions, enter valid time as 1 hour either side of ETA. For flights less than 1 hour, the valid period will be ETD to ETA plus 1 hour. Briefings for Army missions require a valid time from ETA through 1 hour after ETA. For "A/S" entries, valid times are determined from original ETD to last stop ETA plus 1 hour.

A9.4.3. Block 28. **SFC WIND**. Enter true wind direction if the destination is an airfield other than your own. If the flight departs from and terminates at your own airfield with no intermediate stops, enter the wind direction magnetic. Designate "M" for magnetic or "T" for true. Enter the wind direction to the nearest 10 degrees, and speed (including gusts) to the nearest whole knot. For "A/S" missions, enter the highest wind speed expected (including gusts) and the location.

A9.4.4. Block 29. **VSBY/WEA**. Enter the lowest prevailing visibility and weather expected during the valid period. Represent in statute miles for CONUS and overseas US locations, and in meters for other overseas locations, unless otherwise specified by the aircrew.

A9.4.5. Block 30. **CLOUD LAYERS**. Enter the lowest prevailing sky condition expected during the valid period. Weather briefers must fully evaluate all NWS probability groups (i.e., PROB30/40%) and indigenous variations of the TAF code. If necessary, use the Remarks section to record the briefer's assessment and translation of these conditions.

A9.4.6. Block 31. **ALTIMETER/RWY TEMP/PRES ALT**. Enter the lowest altimeter setting expected during the valid period in all cases except those in which it is impossible to obtain or determine. Enter the forecast temperature (RWY TMP) and designate degrees Celsius or Fahrenheit used (prefixed with a + or - as applicable). Enter the forecast pressure altitude (PRES ALT) for the arrival time at the destination. Replace Density Altitude (DA) upon request from the pilot in command.

Figure A9.3. Example PART III – AERODROME FORECASTS.

PART III – AERODROME FORECASTS							
26. DEST/ALTN	27. VALID TIME	28. SFC WIND	29. VSBY/WEA	30. CLOUD LAYERS	31. ALTIMETER	RWY TEMP	PRES ALT
DEST/ALTN KOFF	ZTO Z 1705 – 1905	04012G18 M	1/2 SN T	OVC005	INS 29.70	*FC -1	FT +1150
DEST/ALTN KSUX	ZTO Z 1735 – 1935	06014 M	6 -SN T	OVC012	INS 29.80	*FC	FT
DEST/ALTN TEMPO	ZTO Z	M	1 -SN BR T	OVC005	INS	*FC	FT
DEST/ALTN KRDR	ZTO Z 1900 – 2000	06009 M	7 T	SCT060 BKN090	INS 30.04	*FC	FT
DEST/ALTN	ZTO Z	M			INS	*FC	FT
DEST/ALTN	ZTO Z	M			INS	*FC	FT

A9.5. PART IV - COMMENTS/REMARKS. See [Figure A9.4](#) for an example of part IV.

A9.5.1. Block 32. **BRIEFED RSC/RCR**. Check the appropriate block and enter the latest available RSC/RCR value briefed to the aircrew for the destination and the alternate in the Remarks section. If unavailable, annotate "N/A".

A9.5.2. Block 33. **PILOT TO METRO SERVICE (PMSV)**. Enter the PMSV frequency and/or phone patch number of the weather unit providing the briefing. If PIREPs are requested for specific areas, enter the areas in Remarks (e.g., Request PIREP DURGC).

A9.5.3. Block 34. **ATTACHMENTS**. Check the appropriate block indicating if attachments are provided with the briefing.

A9.5.3.1. Block 35. **REMARKS.** Enter any other significant data (e.g., data for which there was insufficient space in other blocks and specialized mission forecasts, such as low-level mission areas, air refueling, or gunnery/bombing ranges, etc.) Weather briefings provided electronically (e.g., faxed, posted on webpage, or e-mailed) must include the following statement: **"Call (ICAO) at DSN ###-#### or commercial (###) ###-#### for a weather update."** Also include information on how the air crew can get weather support at the next location. For example: "For Wx updates/briefs at Eglin AFB, call DSN XX-XXX or toll free at 1-XXX-XXX-XXXX."

Figure A9.4. Example Part IV - Comments/Remarks.

PART IV - COMMENTS/REMARKS									
32. BRIEFED RSC/ROR	X	YES	NOT AVAILABLE	33. PMSI KOFF 342.5	34. ATTACHMENTS	YES	X	NO	
35. REMARKS Request PIREP DURGC MOT RIME ICG 050-100 DURGD KOFF. KRDR DRY				Call Eglin AFB at DSN ###-#### or commercial (###) ###-#### for a weather update.					

A9.6. PART V – BRIEFING RECORD. See [Figure A9.5](#) for an example of Part V.

A9.6.1. Block 36. **WX BRIEFED TIME.** If briefed in person/verbally, enter time briefed. If sent electronically and not verbally briefed, enter time brief was faxed, posted on a webpage, local LAN, or passed to a central dispatch facility (TACC, AOC Air Mobility Division, etc.) and append an "E" in front of the time (e.g., E1015Z). If the crew calls later for a verbal briefing, put a solidus after the "E" time and enter the verbal brief time (e.g., E1015Z/1035Z).

A9.6.2. Block 37. **FLIMSY BRIEFING NUMBER.** If a flight weather briefing folder, flimsy, or CFP was prepared for this mission, enter the folder, flimsy, or CFP identification number.

A9.6.3. Block 38. **BRIEFER’S INITIALS.** Enter the initials of the weather briefer or the forecaster preparing and disseminating the briefing.

A9.6.4. Block 39. **NAME OF PERSON RECEIVING BRIEFING.** (Remote briefings only). If available, enter receiver’s name and, if applicable, military grade.

A9.6.5. Block 40. **VOID TIME.** (Army and Navy/Marine Corps only). Army: Add 1:30 to the "Weather Briefed" time. For Army briefings sent electronically, calculate the void time from the "E" time. If the crew calls later for a verbal briefing, recalculate the void time from the verbal briefing time and enter the new void time after the first time (e.g., 1145Z/1205Z). Navy/Marines: Add 1/2 hour to ETD. **Note:** Navy and Marine Corps aircrew are required to receive a flight weather briefing within 3 hours of ETD. Adjust the void time if the ETD changes.

A9.6.6. Block 41. **EXTENDED TO/INITIALS.** (Army and Navy/Marine Corps Only). When an Army or Navy/Marine pilot asks for an extension, recheck all weather entries, rebrief, and indicate the required changes (i.e., highlight/bold if electronic, different colored ink if paper) and enter the initials of the forecaster providing the extension. Extensions follow the same rule as for void times.

A9.6.7. Block 42. **WX REBRIEFED TIME/INITIALS.** (Not required for Army, Army equivalent is "Extended To") If weather rebriefed is different than originally briefed, indicate the changes to original weather entries as specified in Block 41 and enter the rebriefing time and initials of the forecaster providing the rebrief.

A9.6.8. Block 43. **WX DEBRIEF TIME/INITIALS.** Enter the time the aircrew debriefed and the initials of the forecaster receiving the debriefing.

Figure A9.5. Example Part V – Briefing Record.

PART V – BRIEFING RECORD			
36. WX BRIEFED TIME E1329M345 Z	37. FLIMSY BRIEFING NO.	38. FORECASTER'S INITIALS LM	39. NAME OF PERSON RECEIVING BRIEFING
40. VOID TIME 1459M515 Z	41. EXTENDED TO / INITIALS Z	42. WX REBRIEFED TIME / INITIALS Z	43. WX DEBRIEF TIME / INITIALS 1930/SB Z

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