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SECRETARY OF THE AIR FORCE**

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RISK MANAGEMENT

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This instruction implements the Risk Management (RM) guidance within Air Force Policy Directive (AFPD) 90-8, *Environment, Safety, and Occupational Health Management and Risk Management*. It provides an overarching framework for Air Force Risk Management (AF RM) and establishes the requirement to integrate and sustain RM throughout the Air Force (AF) as a risk reduction process. AF RM also assists leaders in identifying and controlling safety and health hazards to make informed decisions. It assigns responsibilities for AF RM process elements and contains process management information for the Safety and Occupational Health program. It applies to all Regular Air Force, Air Force Reserve (AFR) and Air National Guard (ANG) military and civilian personnel. For the purposes of this instruction, ANG and AFR are included in all references to Major Commands (MAJCOMs). This Air Force Instruction (AFI) may be supplemented at any level, but all supplements must be routed to the Air Force Chief of Safety (AF/SE), usaf.pentagon.af-se.mbx.af-se-workflow@mail.mil for coordination prior to certification and approval. Refer recommended changes and questions about this publication to the Office of Primary Responsibility using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional's chain of

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(ACC) AFI 90-802, Risk Management, is supplemented as follows: This publication applies to HQ ACC and subordinate units. It applies to ACC gained AF Reserve Command and Air National Guard units or members. This publication authorizes the use of ACC Form 167, *ACC Risk Management (RM) Worksheet*, for standardization and use throughout ACC. It is a comprehensive worksheet that will guide any RM activity through all five (5) steps of the RM process. Ensure all records generated as a result of processes prescribed in this publication adhere to AFI 33-322, *Records Management and Information Governance Program*, and disposed IAW the Air Force Records Disposition Schedule which is located in the Air Force Records Information Management System. Contact supporting records managers as required. We welcome your comments and recommendations on ways to better improve this product. Send comments and suggested improvements on DAF Form 847, *Recommendation for Change of Publication*, through command channels to HQ ACC/SE, acc.sef@us.af.mil. Submit requests for waivers to the requestor's commander for non-tiered compliance items. This publication may be supplemented at any level, but all Supplements must be routed to the OPR of this publication for coordination prior to certification and approval.

SUMMARY OF CHANGES

This document has been substantially revised and must be completely reviewed. All references to the term "Program" have been replaced with the term "Process" to support the premise that RM is a systemic process and tool to enhance risk mitigation practices in order to prevent the accidental loss of personnel, facilities, weapon systems and equipment during peacetime and wartime, rather than simply a program to be managed. Several revisions were made to standardize the Air Force RM Process with sister services RM processes, terms and applications. Primary changes include references to the ABCD RM Model have been deleted and Significant Mishap or Event has been defined. Adds Tier/Waiver requirements IAW AFI 33-360.

(ACC) This document is substantially revised and must be completely reviewed. This supplement has been revised to align with changes in the parent instruction.

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Chapter 1

AIR FORCE RISK MANAGEMENT (AF RM) OVERVIEW

1.1. Risk Management Definition. RM is a decision-making process to systematically evaluate possible courses of action, identify risks and benefits, and determine the best courses of action for any given situation. Additionally, RM stands as one of the four pillars of the Air Force Safety Management System found in AFI 91-202, *The US Air Force Mishap Prevention Program*. As such, RM enables commanders, functional managers, supervisors and individuals to maximize capabilities while limiting risks through application of a simple, systematic process appropriate for all personnel and functions in both on and off-duty situations. Appropriate use of RM increases an organization's and individual's ability to safely and effectively accomplish their mission and activity while preserving lives and limited resources.

1.2. Risk Management Tenets.

- 1.2.1. Risk is inherent in all missions, operations and activities, both on and off-duty.
- 1.2.2. Risk may be effectively mitigated if understood and appropriate action is taken.
- 1.2.3. All personnel are responsible for utilizing RM concepts, tools and techniques.
- 1.2.4. The RM process outlined herein applies to risk-related decisions when such decisions are not governed via separately established requirements and guidelines, e.g., statutes, regulations, technical orders, and Department of Defense (DoD) or Air Force policy and guidance that address personnel health and safety or environmental matters and dictate particular decisions or outcomes within these requirements and guidelines.

1.3. Risk Management Goals.

- 1.3.1. Enhance mission effectiveness at all levels, while preserving assets and safeguarding health and welfare.
- 1.3.2. Create an Air Force cultural mindset in which every Airman, leaders at all levels and all AF civilian employees are trained and motivated to manage risk in all their on and off-duty activities.
- 1.3.3. Integrate RM into mission and activity planning processes, ensuring decisions are based upon risk assessments of the operation or activity.
- 1.3.4. Identify opportunities to increase Air Force warfighting effectiveness in all environments, and ensure success at minimal cost of resources. Institutionalize the RM process, making it an inherent part of all military operations to address safety, occupational and environmental health risks.

1.4. Risk Management Foundations.

- 1.4.1. Essential concepts of AF RM.
 - 1.4.1.1. RM is a comprehensive system for improving individual and organizational performance in all functional areas, operations and activities, both on and off-duty.
 - 1.4.1.2. RM should be tailored to meet the unique mission needs and operational requirements of each organization and personnel within the organization.

1.4.1.3. RM provides the process and tools to develop and enhance awareness and understanding of activities and behavior of personnel both on and off-duty with the potential of injury, damage and/or mission degradation. These processes and tools help create effective risk assessments that identify potential hazards and effective strategies to mitigate or eliminate the hazards.

1.4.1.4. Effective RM has the added advantage of not only identifying risks, but also identifying areas where regulatory guidance or standard operating procedures may be overly restrictive or inconsistent with mission or activity requirements. In this event, a comprehensive risk assessment may be used to support solicitation of waivers, variances, or changes, but will not in itself constitute authority to violate or deviate from any directive, policy, standard or other applicable regulatory guidance.

1.4.1.5. RM provides decision makers with the tools and strategies necessary to make the appropriate decision for a given set of circumstances.

1.4.2. RM does not:

1.4.2.1. Inhibit flexibility, initiative or accountability in any chosen course of action.

1.4.2.2. Remove risk altogether or support a Zero-Defect mindset.

1.4.2.3. Take the place of training, practice, drills, rehearsals, tactics, techniques and procedures associated with a specific event or action.

1.4.2.4. Override or supersede compliance with federally mandated Department of Defense guidance, Occupational Safety and Health Administration standards, federal environmental cleanup standards, AF standards and criteria, or any risk-based statutory and regulatory requirements that apply and dictate the outcome of such requirements. The Air Force does not have authority to grant exemptions and waivers for statutory and regulatory requirements that have risk-related exposure elements or standards. All other waivers, variances or change requests must be properly vetted through appropriate agencies for approval. In addition, RM does not sanction or justify violations of any law.

1.5. Acquisition and Other Applications.

1.5.1. Acquisition. Although interrelated, this publication does not address AF RM guidelines, policies and procedures specifically tied to Acquisition and Sustainment Life Cycle Management, Antiterrorism, Integrated Defense RM process or Installation Emergency Management RM. AF RM concerns related to Integrated Life Cycle Management guidelines, policies and procedures for the development, review, approval or management of systems, subsystems, end-items and services are addressed in AFI 63-101/20-101, *Integrated Life Cycle Management*.

1.5.2. Other Applications.

1.5.2.1. AF RM concerns related to antiterrorism reside in DoDIO-2000.16V1_AFI 10-245-O, *Antiterrorism (AT) Program Implementation*, and AFI 10-2501, *Air Force Emergency Management Program*. Integrated Defense RM process is addressed in AFI 31-101, *Integrated Defense (FOUO)*. **Note:** The Installation Emergency Management Program in AFI 10-2501 directly addresses AF RM concerns related to antiterrorism.

1.5.2.2. This instruction does not address the risk assessment applied to the Annual Planning and Programming Guidance, the Air Force Requirements Oversight Council, and similar strategic-level applications developed by the Air Force Studies, Analysis and Assessments Directorate (AF/A9). AF/A9 works with the process stakeholders to link the Air Force's related Risk Criteria to the Chairman of the Joint Chiefs of Staff Integrated Risk Matrix.

1.5.2.3. Per Department of Defense Instruction (DoDI) 6055.01, *DoD Safety and Occupational Health (SOH) Program*, this instruction excludes fire prevention and protection covered under DoDI 6055.06, *DoD Fire and Emergency Services Program*, and AFI 32-2001, *Fire and Emergency Services (F&ES) Program*. Specific questions on any of the above topic areas should be directed to the appropriate subject matter experts and agencies as appropriate.

1.5.2.4. Air Force RM Concerns Related to Cyber Resiliency Information Technology Systems. A separate process exists for RM of information technology systems and is governed by AFI 17-101, *Risk Management Framework for Air Force Information Technology*.

Chapter 2

AIR FORCE RISK MANAGEMENT (AF RM) PROCESS MANAGEMENT ROLES AND RESPONSIBILITIES

2.1. Roles and Responsibilities. This chapter outlines the process management responsibilities of specific functionaries. These responsibilities are reinforcements or additives to those defined in the RM section of AFD 90-8.

2.2. Assistant Secretary of the Air Force Installations, Environment, and Energy (SAF/IE) will:

2.2.1. IAW Headquarters Air Force Mission Directive (HAF MD) 1-18, *Assistant Secretary of the Air Force (Installations, Environment, and Energy)*, SAF/IE has authority over the AF RM process as outlined in DoDI 6055.01. This responsibility may be re-delegated IAW HAF MD 1-18, as necessary to meet the intent of DoDI 6055.01.

2.2.2. Ultimately determine how the RM process and associated elements outlined herein apply to the AF functional areas within SAF/IE authority under HAF MD 1-18.

2.3. Air Force Chief of Safety (AF/SE) will:

2.3.1. Serve as the lead agent for the overall cross-functional integration and sustainment effort of AF RM processes and procedures to the Headquarters Air Force (HAF) staff and all subordinate MAJCOMs, units and agencies.

2.3.2. Designate an overall AF RM process manager within the AF Safety Center who will:

2.3.2.1. Be trained IAW **Chapter 4** of this instruction.

2.3.2.2. Incorporate advancements and innovations in RM into the AF RM process as warranted.

2.3.2.3. Work with all subordinate RM process managers (MAJCOM, DRU, FOA, Numbered Air Force [NAF] and Component – Numbered Air Force to develop and provide policy, plans, tools, techniques and processes that support and ensure AF RM integration and sustainment within all functional areas.

2.3.2.4. Chair the AF RM Working Group as outlined in **paragraph 2.5**.

2.3.2.5. Develop and provide final guidance and oversight of all matters pertaining to the formulation, review and execution of policies, plans, tools and techniques relative to the AF RM process necessary to support AF-wide integration and sustainment of RM.

2.3.2.6. Ensure that inputs are provided to Air Education and Training Command (AETC), Air University (AU) and the United States Air Force Academy (USAFA) for RM-related course development, integration and sustainment.

2.3.2.6.1. Any and all changes to training courseware that affect Air Force-level changes to accessions training, professional military education, continuation training, technical training, etc., need to be properly coordinated with AETC, AU and USAFA curricula managers (as appropriate). In addition, changes need to be coordinated through the Air Force Learning Division, Directorate of Force Development

(AF/A1DL) via the Air Force Learning Committee as outlined in AFI 36-2651, *Air Force Training Program*.

2.3.2.6.2. IAW AFI 36-2651, revisions that impact any courseware hosted by AETC via the Advanced Distributed Learning Service will be coordinated with AETC, Directorate of Operations Advanced Distributed Learning Branch (AETC/A3IA).

2.3.2.7. Conduct continual evaluation of applicable Air Force Instructions IAW AFI 90-201, *The Air Force Inspection System*.

2.4. Other Headquarters Air Force Agencies.

2.4.1. Deputy Chief of Staff for Manpower, Personnel and Services (AF/A1) will provide guidance to integrate RM processes, principles, and techniques into training and educational programs as appropriate.

2.4.2. Deputy Chief of Staff for Plans and Programs (AF/A8) will ensure the Air Force strategic plan and program guidance incorporates RM principles, as appropriate.

2.4.3. All HAF agencies will apply RM principles to their functions, as appropriate.

2.5. Air Force RM Working Group will:

2.5.1. Assist in developing AF RM policy, requirements, and overall strategy by identifying Air Force, MAJCOM and specific organizational RM requirements.

2.5.2. Facilitate the exchange of cross-tell and lessons-learned information between MAJCOMs and equivalent organizations.

2.5.3. Be chaired by the AF RM process manager and be comprised of representatives from SAF/IE and each MAJCOM including Air Force Reserve Command, ANG and USAFA. Other HAF agencies, DRUs, FOAs, NAFs, and Component – Numbered Air Forces will serve as on-call members of the group and will participate, as required.

2.5.4. Meet at least annually (on-site, telecom or video teleconference, as appropriate). Additional meetings will be scheduled as required by the AF RM process manager in coordination with AF RM Working Group representatives. Working group and supporting agency representatives will be unit-funded for any temporary duty requirements supporting these meetings.

2.6. MAJCOM commanders or equivalents will:

2.6.1. Serve as the principal advocate for RM and key decision maker in allocating MAJCOM or equivalent assets to control or accept risk when mission benefits dictate.

2.6.2. Appoint a MAJCOM-level (or equivalent) RM process manager to be their command-wide advocate for RM and to act as the primary command liaison with the AF RM process manager, AF RM Working Group and subordinate RM instructors and advisors on all RM-related issues.

2.6.3. Ensure subordinate wing commanders or equivalents appoint RM instructors and advisors to address wing/unit-level, on and off-duty RM processes and concerns.

2.6.4. Ensure that MAJCOM inputs are provided via their MAJCOM RM process manager to the AF RM Working Group for RM-related course development and integration within AETC, AU and USAFA.

2.6.5. Integrate RM principles, concepts, and techniques into command-level education and training programs, e.g., squadron commanders' course, supervisors' course.

2.6.6. Ensure, in addition to mission-related RM concepts, emphasis is placed on the active role of commanders and supervisors in regards to on and off-duty RM and their personal interactions with subordinates.

2.7. MAJCOM Risk Management Process Managers will:

2.7.1. Serve as the MAJCOM RM process subject matter expert for all RM-related issues.

2.7.2. Serve as the MAJCOM's primary member on the AF RM Working Group and liaison with the AF RM process manager and subordinate RM point of contacts for all command-related RM concerns.

2.7.3. Ensure MAJCOM conformance with the overall AF RM process.

2.7.4. Develop, as necessary, command-specific RM policies, guidance supplements, requirements, and overall command RM strategy in line with AF RM Policies and AF RM Working Group guidance to meet unique command situations and circumstances. These efforts must facilitate continued integration and sustainment of RM across all functional areas of the command to include both on and off-duty activities. MAJCOM-specific RM policies, guidance supplements and processes will be coordinated with the AF RM process manager and shared with the AF RM Working Group to enhance cross-tell and standardization of RM processes AF-wide.

2.7.5. Ensure all subordinate wing and unit-level RM instructors or advisors receive AF and MAJCOM-specific RM guidance in a timely manner.

2.7.6. Conduct (as time and resources permit) RM process staff assistance visits at the wing or sub-organization levels as requested by unit commanders. The focus of such visits should seek to ensure compliance, standardization and functional application of RM processes in conjunction with addressing the specific needs of the unit or agency. These staff assistance visits can be delegated to sub-organizations and personnel as necessary to meet the intent of this paragraph.

2.7.7. Work, as necessary, with MAJCOM lessons learned offices (normally associated with the AF/A9 offices) to link AF Lessons Learned Program processes with MAJCOM RM lessons learned IAW AFI 90-1601, *Air Force Lessons Learned Program*.

2.7.8. Provide and maintain periodic RM refresher briefings and presentations to unit personnel, as directed by the commander IAW [paragraph 4.2.3.2](#).

2.7.9. Support collection and distribution of RM feedback and lessons learned as appropriate and as directed IAW [paragraph 2.9.5](#).

2.7.10. Process MAJCOM and sub-organization waiver requests to this IAW [paragraph 1.4.2.4](#).

2.8. AETC, AU and USAFA will:

2.8.1. Integrate, where appropriate, AF RM principles, processes, tools and techniques into curricula for education and training programs, including accession training, professional military education, continuation education, and technical training. RM education and training will begin with initial awareness and progress in a building-block manner that is supportive of the goals outlined in this instruction.

2.8.2. Ensure their MAJCOM-level process managers work in conjunction with appropriate AETC, AU and USAFA training curricula managers and the AF RM process manager to coordinate all courseware and curricula changes related to the AF RM process.

2.8.2.1. Curriculum integration will be tailored to meet the unique mission of the school or program in consideration of the goals outlined in AFPD 90-8 and this instruction.

2.8.2.2. The LeMay Center located at Maxwell Air Force Base will support the integration of RM concepts and principles into new and existing doctrine when RM concepts and principals are mission supportive and directly applicable to the warfighter.

2.9. All Commanders/Directors and equivalents will:

2.9.1. Be trained IAW **Chapter 4. (T-1)**.

2.9.2. Ensure all subordinate personnel, supervisors, RM process managers, Instructors and Advisors are trained IAW **Chapter 4. (T-1)**.

2.9.3. Ensure RM principles, processes, tools and techniques are established, as appropriate, to address specific operations, missions, and activities (on and off-duty). **(T-1)**. As a minimum these processes, procedures and tools should:

2.9.3.1. Be standardized across similar operations, missions, and activities, whenever possible.

2.9.3.2. Identify and clearly establish specific risk acceptance authority levels and thresholds for elevating risk acceptance decisions for operations and activities. These levels can vary depending upon specific operations or activities, units, personnel involved, etc. The intent is to ensure that as risk levels increase, risk acceptance and associated Go or No-Go decisions are elevated to obtain appropriate commander or supervisory oversight and approval.

2.9.3.3. Be designed to provide commanders, supervisors and personnel with meaningful data to help improve local RM processes and provide for more effective risk mitigation efforts.

2.9.3.4. **(Added-ACC)** The ACC Form 167, *ACC Risk Management (RM) Worksheet*, may be used to identify, assess, and document safety hazards and deliberate risk assessments.

2.9.4. Ensure assigned personnel receive periodic RM refresher briefings and presentations as directed under **paragraph 4.2.3.2** This responsibility may be delegated as necessary to meet the intent of this instruction.

2.9.5. Ensure that organizational and personal application of RM principles, processes, tools and techniques are evaluated following any significant mishap or event that affects the

organization or individuals within the organization. **(T-1)**. Such evaluations will be utilized to identify and provide effective RM lessons learned for future application both inside and outside the organization. **(T-1)**. When lessons learned or observations have potential impact to AF-wide or joint military operations or activities, they should be considered for submission to the AF Lessons Learned Program, and the Joint Lessons Learned Information System, IAW AFI 90-1601, and the Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3150.25G, *Joint Lessons Learned Program*.

2.9.6. Ensure that, to diminish impact on Airmen's time, RM briefings/presentations should be accomplished at Wing Safety Days, Wingman Days, Training Days, Commander's Calls, Focus Groups, etc., whenever possible.

2.10. Wing commanders or equivalents will:

2.10.1. Serve as the principal advocates for RM and key decision-makers in allocating wing assets to control or accept risk when mission benefits dictate. **(T-1)**.

2.10.2. Determine the appropriate wing (or equivalent) organization, office or individual to facilitate and monitor RM principles, processes, policies and techniques as required by MAJCOM or wing-level policy. **(T-1)**. This organization, office or individual will serve as the central hub for all wing-related RM issues and act as the principal liaison with the MAJCOM RM process manager. **(T-1)**.

2.10.2.1. **(Added-ACC)** RM Advisors in units with a flying mission will ensure that pre-flight RM assessment worksheets comply with current ACC/A3 requirements, and that RM trend data is provided for Operations Group Standardization Evaluations trend analysis and quarterly aircrew flying safety meetings.

2.10.2.2. **(Added-ACC)** All units will use a Deliberate RM Worksheet (hardcopy or computer based) to identify and manage risks associated with their flying mission(s). Mission briefs will include identified risks and mitigation. RM worksheets should be adjusted to ensure they are applicable to Mission Design Series requirements as well as the garrison or deployed operating environment.

2.10.2.2.1. **(Added-ACC)** Aircrew will accomplish the unit approved risk management worksheet prior to the aircrew brief and incorporate it as part of the unit's Go/No-Go procedures. When the brief occurs the day (or days) before the mission, the RM worksheet will be reviewed and updated prior to step.

2.10.2.2.2. **(Added-ACC)** RM worksheets will be approved for use by the OG/CC. Units may send a copy of worksheets and/or proposed revisions to ACC/SEF for review, although MAJCOM approval is not required. ACC gained ANG units may send approved worksheets to NGB Flight Safety (NGB/SE) at NGB.SEF@ang.af.mil.

2.10.2.3. **(Added-ACC)** Units will establish threshold criteria for various overall assessed risk levels. Thresholds will separate risk categories into four areas: Low, Moderate, High, and Extreme.

2.10.2.3.1. **(Added-ACC)** For flights assessed at an elevated risk level (other than Low), the assessment will be reviewed by a supervisory authority other than the aircraft commander/flight lead prior to execution of that sortie. Examples of supervisory authority include Operations Supervisor, DO, CC, and OG/CC.

- 2.10.2.3.2. **(Added-ACC)** In the case of elevated risk assessments (other than Low), the aircraft commander/flight lead will brief the appropriate supervisory authority so they 1) understand and concur with the level of risk the pilot/aircrew is accepting, 2) have adequately mitigated known risks to the mission, and 3) approved execution of the mission with elevated risk. The supervisory authority may elect to make changes to the profile or ultimately cancel the sortie.
- 2.10.2.4. **(Added-ACC)** Aircrew will continually assess and update RM decisions to account for developing risks such as maintenance delays/conflicts, real world taskings, flight profile changes, etc. This continual update will allow appropriate real-time decisions for sortie modification/continuation.
- 2.10.2.5. **(Added-ACC)** Standardized Pre-flight RM program minimum requirements:
- 2.10.2.5.1. **(Added-ACC)** RM assessment worksheets must be filled out before briefing every flight.
- 2.10.2.5.2. **(Added-ACC)** RM assessment worksheets must include quantitative values from a minimum of three broad categories. An overall risk assessment will include the aggregate of all assessed risk then categorized IAW [2.10.2.3](#) Elevated assessed risk should direct flight lead or aircraft commander to comply with [2.10.2.3.2](#).
- 2.10.2.5.2.1. **(Added-ACC)** “Environmental Impacts” should be risk assessments of conditions the aircraft/aircrew will face during part of or throughout the mission. Examples can include but are not limited to Night, Night Illumination, Instrument Meteorological Condition, Runway Surface Condition, Winds, Weather, or Bird Watch Condition.
- 2.10.2.5.2.2. **(Added-ACC)** “ Mission Impacts” should be risk assessments of conditions that may affect accomplishment of tasked training and/or mission objectives. Examples can include but are not limited to mission complexity, airspace issues, maintenance status, crew duty day, flight duty period, large force exercise, or refueling operations.
- 2.10.2.5.2.3. **(Added-ACC)** "Individual Impacts" should be risk assessments of circumstances or conditions that directly affect the individual or distracts from their ability to contribute to mission accomplishment. All personnel on the flight orders should quantitatively assess their individual risk. Multi-flight or multi-crew aircraft should annotate the assessed risk for each individual and apply individual risk assessments into the aggregate risk of the entire crew/formation (i.e., for multi-crew aircraft, one moderate individual assessment coupled with low assessed crew members should not be weighted the same as a full crew complement of moderate individuals).
- 2.10.2.5.3. **(Added-ACC)** RM worksheets must capture applicable risks for mission, location, Mission Design Series, etc.
- 2.10.2.5.4. **(Added-ACC)** Units will perform reviews of their Aviation Risk Management Program and Worksheets at least once a year (quarterly review recommended) to ensure emerging hazards are addressed, and risk acceptance

thresholds meet mission and unit commander requirements. These reviews should include both the Operations and Safety Officers.

2.10.2.5.5. **(Added-ACC)** Units will keep RM worksheets on file for one month for look back purposes in event of a mishap or maintenance finding. Additionally, RM worksheets will be available for analysis and program improvement for that one month.

2.10.2.6. **(Added-ACC)** Units will review and update RM worksheets whenever TDY or deployed. These updated RM worksheets will be reviewed and updated for each TDY and deployment and retained for a minimum of one year.

2.10.3. Designate RM instructors and advisors, as necessary to ensure RM principles, processes, tools and techniques are applied effectively within the wing to address unique mission needs and off-duty activities. **(T-2)**.

2.10.3.1. Appoint, as a minimum, one primary RM instructor or advisor at each wing (or equivalent agency). **(T-2)**. Additional RM instructors or advisors may be assigned within subordinate units at the discretion of the wing commander (or equivalent) and in coordination with subordinate commanders as necessary.

2.10.3.2. Designated RM instructor or advisor will serve as the principal wing RM liaison, if only one RM instructor or advisor is designated for the wing (or equivalent agency), as outlined in [paragraph 2.10.2](#). **(T-1)**.

2.10.3.3. **Exception:** Wings that cannot support this manning and resource requirement will submit a waiver request through the MAJCOM RM process manager to MAJCOM Deputy Commander for approval as outlined in [paragraph 1.4.2.4](#) Waivers will not exceed 12 months and must be revalidated prior to MAJCOMs granting additional waivers.

2.10.4. Decide RM refresher topics, briefings and presentations, and focus on specific on and off-duty concerns of the MAJCOM, wing or unit, as appropriate, and use real-world and unit-specific examples of RM successes and failures. **(T-2)**. RM topics should integrate with current AF and MAJCOM RM focus areas wherever possible.

2.11. All RM Instructors and Advisors (HAF, MAJCOM, DRU, FOA, NAF, Component – Numbered Air Force, Wing and/or Unit-level) will:

2.11.1. Be trained IAW [Chapter 4](#). **(T-1)**.

2.11.2. Comply with all RM process guidance as dictated by senior RM process managers as appropriate. **(T-1)**.

2.11.3. Provide Real-Time RM expertise and risk assessment capability to leadership, personnel, and organizations within their functional area of responsibility. **(T-1)**. Formal risk assessments should be accomplished utilizing the AF Form 4437, *Deliberate Risk Assessment Worksheet*, or equivalent to ensure the assessment is properly documented for future evaluation and reference.

2.11.4. Liaise with appropriate RM offices and RM process managers as necessary to integrate current RM principles, processes, tools and techniques into RM training at the functional level. **(T-1)**. They must tailor this training to meet the unique mission(s) of their organization and personnel in consideration of the guidance outlined in this instruction. **(T-2)**.

2.11.4.1. (Added-ACC) RM trend analysis may include individual or overall RM assessment scores, mission element scores, and a review of the risk acceptance threshold values, to ensure thresholds meet mission and unit commander requirements. Other elements for analysis will be included at the discretion of the unit commander or the RM Advisor.

2.11.5. Provide and maintain periodic RM refresher briefings and presentations to unit personnel, as directed by the commander IAW [paragraph 4.2.3.2 \(T-1\)](#). Briefings and presentations should be retained for a minimum of 12 months from the date of presentation. **Note:** Maintain a repository of RM refresher briefings and presentations for unit personnel to review if they cannot attend the live refresher briefing and presentation.

2.11.6. Support collection and distribution of RM feedback and lessons learned as appropriate and as directed IAW [paragraph 2.9.5. \(T-1\)](#).

2.12. Air Force Career Field Managers. AF Career Field Managers will integrate RM principles, processes, tools and techniques into career field education and training plans where possible and it is mission supportive to do so. (T-1).

2.13. Acquisition and System Safety Managers will:

2.13.1. Be trained IAW [Chapter 4](#), as applicable, and as required for specialized test, acquisition and system safety RM training as dictated by SAF/AQ or MAJCOM specific guidance. (T-1).

2.13.2. Apply overarching RM principles and practices to acquisition and system safety RM principles and practices in the development and sustainment of weapon systems as part of acquisition systems engineering and system safety processes outlined by SAF/AQ and Air Force Materiel Command IAW HAF MD 1-10, *Assistant Secretary of the Air Force (Acquisition)*, AFI 63-101/20-101, MIL-STD-882E, *Standard Practice for System Safety*, and AFI 91-202. (T-1).

2.13.3. Provide systems safety information to testers, operators and maintainers on all potential or identified hazards, implemented mitigation measures and accepted residual risks associated with the system. (T-1).

2.13.4. Assist weapon system testers, operators and maintainers in the application of RM to those weapon systems, to include the assessment of hazards and potential mitigation measures. (T-1).

2.13.5. Comply with AFI 17-101 for RM requirements regarding information technology systems.

2.14. All Air Force Personnel will:

2.14.1. Be trained in RM Fundamentals, and receive and review periodic RM refresher training and presentations as outlined in [Chapter 4](#). (T-1).

2.14.2. Utilize sound RM principles, processes, tools and techniques to assess and mitigate risks associated with both on and off-duty activities. (T-1). All Airmen are encouraged to enter observations that contain potential lessons learned into the AF Lessons Learned Program and Joint Lessons Learned Information Systems for coordination through the AF Lessons Process and inform the local chain of command as appropriate IAW AFI 90-1601.

2.14.3. Apply RM principles in conjunction with effective “Wingman” concepts and “Personal RM” principles to promote proactive mishap prevention both on and off-duty. **(T-1)**.

2.15. Supervisors will:

2.15.1. Apply RM processes in day-to-day operations and interaction with subordinates to influence and motivate personnel to use effective RM both on and off-duty. **(T-1)**.

2.15.2. Consistently apply effective RM concepts and methods to operations, activities and tasks. **(T-1)**.

2.15.3. Elevate risk issues beyond their control or authority to upper management, as needed, for resolution at the appropriate level. **(T-1)**.

2.15.4. Fulfill their role to ensure implemented risk controls are sustained over time. **(T-1)**.

Chapter 3

AIR FORCE RISK MANAGEMENT (AF RM) CORE CONCEPTS AND PROCESSES

3.1. Risk Management Principles. Four principles govern all actions associated with RM. These principles are the cornerstone of effective RM and are applicable 24 hours a day, 7 days a week, 365 days a year by all personnel, for all on and off-duty operations, tasks and activities.

3.1.1. Accept No Unnecessary Risk. Unnecessary risk comes without a commensurate return in terms of real benefits or available opportunities. It will not contribute meaningfully to mission or activity accomplishment and needlessly jeopardizes personnel or other assets. All Air Force missions and daily routines involve risk. The most logical choices for accomplishing a mission are those that meet all mission requirements while exposing personnel and resources to the lowest acceptable risk.

3.1.1.1. Take only those risks that are necessary to accomplish the mission or task. However, being completely risk averse is unacceptable, and even high risk endeavors may be undertaken when there is a well-founded basis to believe that the sum of the benefits exceeds the sum of the costs.

3.1.1.2. Balancing benefits and costs is a subjective process and tied intimately with the factors affecting the mission or activity. Therefore, personnel with prior knowledge and experience of the mission or activity should be engaged whenever possible in making risk decisions to ensure a proper balance is achieved.

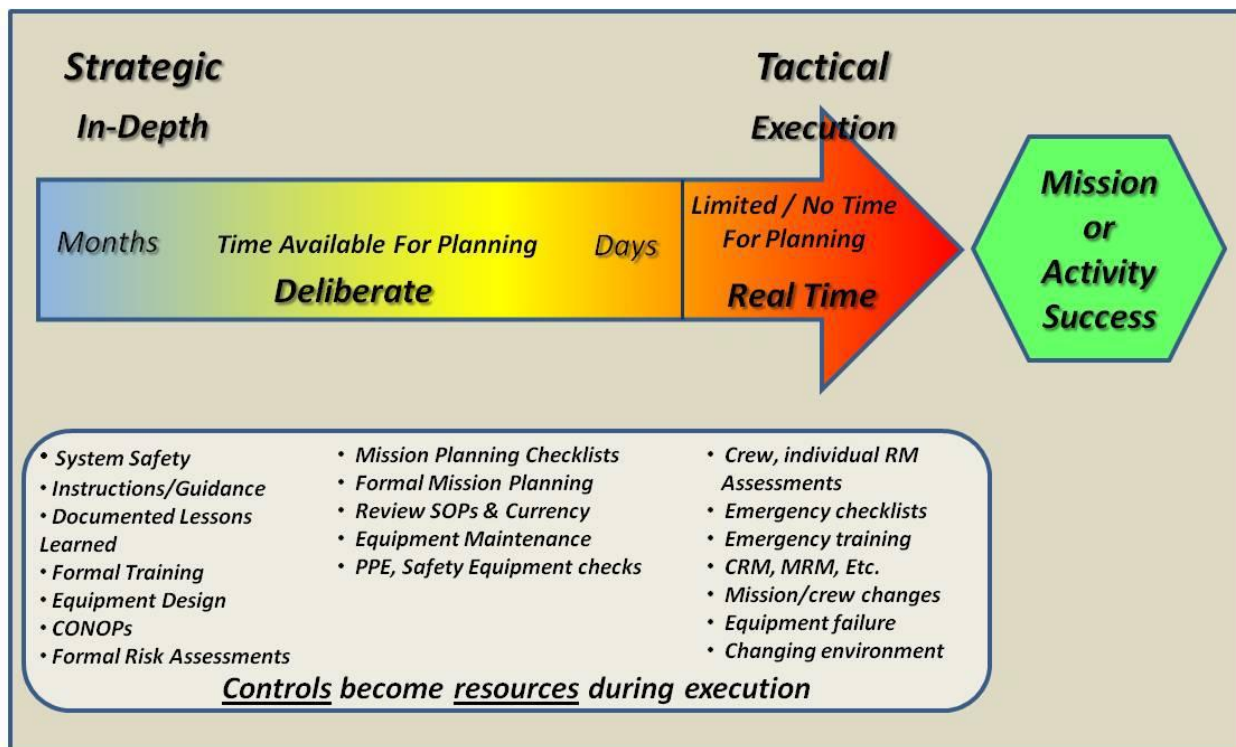
3.1.2. Make Risk Decisions at the Appropriate Level. Although anyone can make a risk decision that impacts their personal well-being, some risk acceptance decisions should be made by an appropriate decision-making authority that can effectively allocate resources and implement controls to mitigate or eliminate risks associated with an operation or activity. Making risk decisions at the appropriate level also establishes clear accountability. Leaders and individuals must be aware of how much risk they can accept and when to elevate RM decisions to a higher level. Those accountable for the success or failure of the mission or activity must be fully engaged in the risk decision process.

3.1.3. Integrate RM Into Operations, Activities and Planning At All Levels. Integrate RM into planning at all levels and as early as possible. This provides the greatest opportunity to make well-informed risk decisions and implement effective risk controls. To effectively apply RM, commanders, supervisors, and personnel must dedicate time and resources to integrate RM principles into planning, operational processes and day-to-day activities. Risk assessments of operations and activities are most successful when they are accomplished in the normal sequence of events (the preplanning of a mission or activity) by individuals directly involved in the event, and not as a last-minute or add-on process. Any amount of preplanning that can be accomplished, even in a time-constrained environment, is better than no planning at all.

3.1.4. Apply the Process Cyclically and Continuously. RM is a continuous process applied across the full spectrum of military training and operations, base operations functions, and day-to-day activities and events both on and off-duty. It is a cyclic process that is used to continuously identify and assess hazards, develop and implement controls, evaluate outcomes and provide feedback to our Airmen to save lives and preserve combat resources.

3.2. Risk Management Levels. The principles, goals and fundamental concepts of RM highlight the universal application of RM concepts both on and off-duty. There are two primary levels of RM (Deliberate and Real-Time) that dictate the level of effort and scope that should normally be undertaken when evaluating risk(s). **Figure 3.1** depicts the basic relationship of these levels and how they relate across the strategic (long-term) and tactical (short-term) spectrums. The controls, resources and issues shown below the RM levels are examples of resources and impacts that might apply across the planning and execution timelines. As the diagram shows, Deliberate and Real-Time Risk Management are interrelated when making RM decisions; they are separated only at the point where the planning phase transitions to the execution phase of the mission or activity. A strong, effective RM process involves careful and deliberative planning coupled with effective Real-Time Risk Management. This full spectrum approach ensures comprehensive risk mitigation and the likelihood of mission or activity success.

Figure 3.1. Relationship of Risk Management Levels.



3.2.1. Deliberate Risk Management. Deliberate RM refers to pre-mission or activity planning and normally involves the full formal application of the complete 5-Step RM process outlined in **paragraph 3.3**.

3.2.1.1. This process can include an in-depth planning process involving thorough hazard identification, detailed data research, diagram and analysis tools, formal testing and long-term tracking of the risks associated with an operation, activity or system. It also includes normal day-to-day operations and activity planning that utilize the same 5-Step RM Process, but requires less time and resources to complete. Generally associated with strategic-level planning, in-depth RM planning is reserved for complex operations and

systems, high-priority and high-visibility situations or circumstances in which hazards are not well understood.

3.2.1.2. In-depth RM planning is normally implemented well in advance of the target system, mission, event or activity, and is normally reserved for more complex and riskier efforts. Efforts such as large troop or unit movements, airshow planning, system development, tactics and training curricula development, scheduled vacations, organized camping and hiking activities, and scheduled home repairs are examples of in-depth RM planning.

3.2.1.3. As the situation, operation or activity becomes less complex, familiar or closer to execution, Deliberate RM planning becomes simplified and the focus shifts to ensuring near-term hazards and mitigation strategies are considered. The experience, expertise and knowledge of experienced personnel to identify known hazards or risks and strategies to effectively mitigate risks for the specific mission, activity or task in both on and off-duty situations should be included. Although RM is a part of the preplanning, it should also be considered when we begin the execution phase of an activity.

3.2.2. Real-Time. This level of RM is always associated with RM decisions made in “Real-Time”. This would be during the “execution” or tactical phase of training, operations, emergency and crisis response situations, or off-duty activities where there is normally little or no time to conduct formal or Deliberate RM planning. It is usually an informal, mental risk assessment that is done “on the fly”. Examples include short notice taskings, weather or natural phenomena driven activities, emergency responses, spontaneous off-duty activities, etc. Basic RM process steps to identify and mitigate hazards in the new or changing situation. As time is normally constrained or limited in these situations, Deliberate RM planning ([paragraph 3.2.1](#)) is impractical. In Real-Time situations it is imperative that individuals are able to efficiently and effectively apply RM concepts to mitigate risks.

3.3. The 5-Step RM Process. RM is a continuous, systematic decision-informing process consisting of five primary steps ([Figure 3.2](#)). These steps define the formal RM process primarily associated with Deliberate RM planning and form the basis for Real-Time Risk Management considerations. The following is a brief description of the 5-Step RM Process.

Figure 3.2. 5-Step Risk Management Process.



3.3.1. **(Step 1)** Identify the Hazards. Step one of the RM Process involves application of appropriate hazard identification techniques in order to identify hazards associated with the operation or activity. Hazards can be defined as any real or potential condition that can cause mission degradation; injury, illness, death to personnel or damage to or loss of equipment or property. Key aspects of this step include:

- 3.3.1.1. Mission and Task Analysis. Review current and planned operations and tasks associated with the mission or activity.
- 3.3.1.2. List Hazards. Identify and list hazards or factors that may lead to dangers and risks associated with the operation or activity.
- 3.3.1.3. List Causes. List the causes associated with each identified hazard, and try to identify the root cause(s) against which to apply RM strategies.

3.3.2. **(Step 2)** Assess the Hazards. This assessment step involves the application of quantitative and/or qualitative measures to determine the probability and severity of negative effects that may result from exposure to hazards and risks, and directly affect mission or activity success. This process can be formalized or intuitive. Key aspects of this step include:

- 3.3.2.1. Assess Hazard Exposure. Evaluate the time, proximity, volume or repetition involved to determine the level of exposure to hazards.
- 3.3.2.2. Assess Hazard Severity. Determine severity of the hazard in terms of potential impact on personnel, equipment, mission or activity.

3.3.2.3. Assess Probability. Determine the probability that the hazard will cause a negative event of the severity assessed above. Probability may be determined through estimates or actual numbers (if available).

3.3.2.4. Assess Risk Levels. Determine the level of risk associated with the hazard as it relates to Severity and Probability. The level of risk will vary from “extremely high” as associated with frequent exposure and catastrophic effects to “low” as associated with unlikely exposure and negligible effects.

3.3.2.5. Complete Risk Assessment. Combine severity and probability estimates to form a risk assessment for each hazard. By combining the probability of occurrence with severity, a matrix is created where intersecting rows and columns define a Risk Assessment Matrix. **Figure 3.3** provides one example of a Risk Assessment Matrix; color coding, coupled with numeric values is one way to ensure the matrix is readable in both color and grayscale formats. Risk Assessment Matrices can take different forms and must be designed to fit the organization or situation as warranted. **Note:** A complete and in-depth description of the Risk Assessment Matrix can be found in Air Force Pamphlet (AFPAM) 90-803, *Risk Management (RM) Guidelines and Tools*.

Figure 3.3. Sample Risk Assessment Matrix.

Risk Assessment Matrix			PROBABILITY					
			Frequency of Occurrence Over Time					
			A Frequent (Continuously experienced)	B Likely (Will occur frequently)	C Occasional (Will occur several times)	D Seldom (Unlikely; can be expected to occur)	E Rarely (Improbable; but possible to occur)	
SEVERITY	Effect of Hazard	Catastrophic (Death, Loss of Asset, Mission Capability or Unit Readiness)	I	EH	EH	H	H	M
		Critical (Severe Injury or Damage, Significantly Degraded Mission Capability or Unit Readiness)	II	EH	H	H	M	L
		Moderate (Minor Injury or Damage, Degraded Mission Capability or Unit Readiness)	III	H	M	M	L	L
		Negligible (Minimal Injury or Damage, Little or No Mission Capability or Unit Readiness)	IV	M	L	L	L	L
			Risk Assessment Levels					
			EH=Extremely High H=High M=Medium L=Low					

3.3.3. **(Step 3)** Develop Controls and Make Decisions. Step three involves the development and selection of specific strategies and controls that reduce or eliminate risk. Effective mitigation measures reduce one of the three components (Probability, Severity or Exposure) of risk. Risk mitigation decisions must be made at the appropriate level for the identified risk. The higher the risk, the higher the decision-level needs to be to ensure that an appropriate analysis of overall costs to benefits has been carefully weighed. Keep in mind there is no “cookie-cutter” approach or specific standard for establishing levels of RM decision authority

across the Air Force. However, it is critical that leadership and decision makers ensure that the levels of decision authority are aligned appropriately for mission requirements and experience levels of the personnel conducting operations and activities under their responsibility. It is possible for decision-levels to vary within a command for differing operations and activities if training requirements, mission sets or activities are divergent enough to warrant separate standards, i.e., AETC, Air Force Special Operations Command (AFSOC), etc. Decision-makers must ultimately choose the most mission-supportive risk controls, consistent with RM principles that provide the best solution for the given hazards. Risk decisions must never be delegated to a lower level for convenience or when the situation dictates senior-level involvement; exceptions may be considered in time-critical situations where delays might endanger lives, resources or equipment. Key aspects of this step include:

3.3.3.1. Identify Control Options. Starting with the highest-risk hazards as assessed in Step 2 ([paragraph 3.3.2](#)), identify as many risk control options as possible for all hazards. Each hazard should have one or more controls that can effectively eliminate, avoid, or reduce the risk to an acceptable level.

3.3.3.2. Determine Control Effects. Determine the effect of each control on the risk(s) associated with the hazard. With controls identified, the hazard should be reassessed taking into consideration the effect the control will have on the severity or probability. This refined risk assessment determines the residual risk for the hazard (assuming the implementation of selected controls). At this point, it is also appropriate to consider the cost (personnel, equipment, money, time, etc.) of the control and the possible interaction between controls; do they work together?

3.3.3.3. Prioritize Risk Controls. For each hazard, prioritize those risk controls that will reduce the risk to an acceptable level. The best controls will be consistent with mission objectives and optimize use of available resources (manpower, material, equipment, funding, time).

3.3.3.4. Select Risk Controls. For each identified hazard, select those risk controls that will reduce the risk to an acceptable level. Similar to prioritizing controls, the best controls will be consistent with mission or activity objectives and optimize use of available resources (as listed in [paragraph 3.3.3.3](#)).

3.3.3.5. Make Risk Control Decision. Analyze the level of risk for the operation or activity with the proposed controls in place. Determine if the benefits of the operation or activity now exceed the level of risk the operation or activity presents. Be sure to consider the cumulative risk of all the identified hazards and the long-term consequences of the decision. If the cost of the risk(s) outweighs the benefits, reexamine the control options to see if any new or modified controls are available. If no additional controls are identified, inform the next level in the chain of command that, based on the evaluation, the risk of the mission exceeds the benefits and should be modified. When notified of a situation in which risk outweighs the benefit, the next level in the chain of command should assist and implement required controls, modify or cancel the mission, or accept the identified risks based on a higher level of the risk-benefit equation. Keep in mind that as circumstances change for a given mission or activity, the benefit-to-risk comparison should also be made to ensure that previous “Go/No-Go” decisions are valid.

3.3.4. **(Step 4) Implement Controls.** Once control measures have been selected, an implementation strategy should be developed and carried out. The strategy should identify who, what, when, where and cost(s) associated with the control measure. For mission-related controls, accountability must be emphasized across all levels of leadership and personnel associated with the action so that there is clear understanding of the risks and responsibilities of commanders and subordinates alike. **(T-2).** There should always be accountability for acceptance of risk regardless of circumstances. Key aspects of this step include:

3.3.4.1. **Make Implementation Clear.** Provide a roadmap for implementation, a vision of the end state, and describe successful implementation. The control measure must be deployed in a method that ensures it will be understood by the intended audience.

3.3.4.2. **Establish Accountability.** Accountability is a critically important area of RM. The accountable person is the one who makes the decision (approves the control measures), and hence, the right person (appropriate level) must make the decision. Also, be clear on who is responsible at the unit- or execution-level for implementation of the risk control. Individuals involved in a specific RM process must be aware of who is responsible and accountable at each stage of an operation or activity and when (if possible) decisions will be elevated to the next level.

3.3.4.3. **Provide Support:** To be successful, command and leadership must be behind the control measure(s) put in place. Provide the personnel and resources necessary to implement the control measures. Incorporate sustainability from the beginning and be sure to deploy the control measure along with a feedback mechanism that will provide information on whether the control measure is achieving the intended purpose.

3.3.5. **(Step 5) Supervise and Evaluate.** The RM Process continues throughout the life cycle of the system, mission or activity. Leaders and supervisors at every level must fulfill their respective roles to ensure controls are sustained over time. Once controls are in place, the process must be periodically reevaluated to ensure controls remain effective and mission supportive over time. Key aspects of this step include:

3.3.5.1. **Supervise:** Monitor the operation or activity to ensure:

3.3.5.1.1. The controls are effective and remain in place.

3.3.5.1.2. Changes which require further RM are identified.

3.3.5.1.3. Action is taken when necessary to correct ineffective risk controls and reinitiate the RM steps in response to new hazards.

3.3.5.1.4. Risk and controls are reevaluated anytime the personnel, equipment, or mission or activity change, or new actions are anticipated in an environment not covered in the initial RM analysis.

3.3.5.1.5. There is continuity of selected RM controls during leadership changes. Ensuring outgoing leaders share knowledge, experiences, and lessons with incoming leaders provides positive transition of risk acceptance and less volatility to the operation or activity when these changes occur.

3.3.5.2. **Evaluate:** The RM process review and evaluation must be systematic. After assets are expended to control risks, a cost-benefit review must be accomplished to see if risk and cost are in balance. Significant changes in the system are recognized and appropriate RM

controls are reapplied as necessary to control the risks. Effective review and evaluation will also identify whether actual costs are in line with expectations and how the controls have affected mission performance (good or bad). Other considerations:

3.3.5.2.1. It is unlikely that every risk analysis will be perfect the first time. When risk analyses contain errors of omission or commission, it is important that those errors be identified and corrected.

3.3.5.2.2. Measurements are necessary to ensure accurate evaluations of how effectively controls eliminate hazards or reduce risks. When available, after-action reports, surveys and in-progress reviews are excellent tools for measurements. To be meaningful, measurements must quantitatively or qualitatively identify changes in risk, mission outcome or capabilities.

3.3.5.3. Feedback: A review by itself is not enough; a feedback system must be established to ensure that the corrective or preventative action taken was effective. The feedback system also ensures any newly discovered hazards identified during the mission or activity are analyzed and corrective action taken. Feedback informs all involved as to how the implementation process is working and whether or not the controls were effective. Feedback can be in the form of briefings, lessons learned, cross-tell reports, benchmarking, database reports, etc. Without this feedback loop, the benefit of knowing if the previous forecasts were accurate, contained errors or were completely incorrect is lacking.

3.3.5.3.1. Commanders, supervisors and individuals must work with appropriate RM process managers, Instructors and Advisors to ensure effective RM feedback and cross-tell is collected and distributed to enhance future operations, and activities. **(T-3)**.

3.3.5.3.2. Coordinating observations and lessons learned within the AF Lessons Learned Program process and Joint Lessons Learned Information System, IAW AFI 90-1601, and CJCSI 3150.25F, *Joint Lessons Learned Program*, should be encouraged.

Note: For an expanded description of the 5-Step RM Process, refer to AFPAM 90-803.

3.4. Real-Time RM. Real-Time Risk Management is a less formal risk assessment using basic RM process steps to identify and mitigate hazards in a new or changing situation. Although Real-Time Risk Management is founded on the 5-Step RM Process, streamlining the steps is essential in situations where risk decisions need to be made quickly and in Real-Time.

3.4.1. Identifying and Assessing Hazards. Identifying and assessing hazards in a time-critical environment typically occurs when a planned activity is already underway or when the complexity or perception of overall risk is low. Effective identification and assessment requires the key elements of hazard and risk identification and understanding the negative effects associated with those hazards and risks. It is essential for individuals to seriously consider the activity or action in which they are about to engage and choose appropriate mitigation strategies to address the hazards they identify. In Real-Time Risk Management, a complete assessment of the situation requires three stages of situational awareness in a relatively short time: (a) Perception of what is happening, (b) Integration of information and goals, and (c) Projection into the future. Unlike Deliberate RM, where there is ample time to assess potential situations, it is an individual's ability to discern the situation and apply available resources quickly and effectively that can mean the difference between success or failure.

3.4.2. Develop Controls. After assessing the situation, personnel must consider all available controls (resources) to facilitate mission or activity success and how to manage them effectively. Controls and resources can vary in scope and availability from situation to situation. The better prepared individuals are prior to an activity, the more likely they will have more controls and resources available to create multiple redundancies or “blocks” to effectively eliminate or mitigate potential risks in real-time. Examples include having a good understanding of the situation, being properly trained, wearing correct personal protective equipment, knowing personal limitations, and having a “Wingman” to support their effort(s). Each of these controls and resources serves as a layer of protection and enhances a decision maker’s ability to effectively balance risk versus reward through proper preparation and understanding of the situation and options. When making these considerations it is also essential that Airmen communicate with their team and leadership to ensure all options and resources are effectively utilized in making a sound yet timely risk decision.

3.4.3. Communication. Communication can take various forms such as real-time communication with leadership to discuss problems and intentions, internal team and crew communication can address real-time hazards and mitigation options, or an individual internalizing their current situation and taking time to evaluate if they are heading down the right path. This action assumes individuals or teams carefully consider options and controls available to them in real-time situations. They should be aware of how perception and communication skills change in unanticipated and changing environments.

3.4.3.1. Perception and communication skills are adversely affected as individuals become increasingly stressed and lose situational awareness. Feeling undo pressure to succeed or to continue with a plan when anticipated conditions require “mid-stream” changes can have similar effects on individuals or team members as they try to compensate. In these high-stress situations, communication skills diminish as individuals channelize attention and lose awareness of the overall situation. They can experience tunnel vision and be unable to multitask effectively to deal with the changing circumstances.

3.4.3.2. Understanding this, individuals and teams thrust into these situations can better prepare, anticipate and identify if they or others are losing situational awareness and make corrections. This awareness enables individuals to more effectively communicate with teammates and leadership in Real-Time situations. It allows them to take a step back and reevaluate options.

3.4.3.3. Asking questions such as: “Who needs to know about the situation?” “Who can help or assist?” “Who can provide back-up?” or “Can this be done differently” are just a few examples of the considerations that must be made prior to implementing a mitigation strategy in Real-Time.

3.4.4. Making Decisions. Unlike the deliberative RM level where an implementation strategy is carefully developed and carried out through identification of the who, what, when, where and cost associated with the control prior to an activity, Real-Time Risk Management relies on the individual or small group taking immediate or near immediate action to mitigate risk(s) in Real-Time. This aspect alone can make Real-Time Risk Management decisions riskier than deliberate RM decisions. Individuals must realize this and make every effort to deliberately weigh risk decisions before taking action to ensure they are selecting the best course of action.

3.4.5. Implement Controls. Sometimes the original plan must be modified or changed to account for unforeseen issues in order to assure success. Although minor changes or modifications to a plan or strategy may be easily implemented, others may require higher authority (if available) to properly weigh the risk and determine the best course of action. Accountability under these circumstances rests solely with the individual(s) involved in the activity. It is their responsibility to fully understand the scope and limits of their Go/No-Go decision and act accordingly.

3.4.5.1. As such, the acceptance of risk and associated consequences needs to be taken seriously with the understanding that any adverse outcome from a selected course of action may not only affect the individual, but greatly impact family, friends, coworkers and the individual's ability to contribute to the Air Force mission.

3.4.5.2. The goal for any mission or activity is to operate safely and achieve success. However, all Airmen must consider the possibility of abandoning the mission or activity if the situation appears too risky or too costly to continue. Particularly when there are no reasonable options or strategies to change or alter the circumstances in the time remaining to conduct the mission or activity.

3.4.6. Supervise and Evaluate. It is essential that both leadership and personnel involved in a mission or activity ensure that the feedback loop or "Evaluate" aspect of the RM process is performed. This vital process step ensures individuals follow through and complete the 5-Step process by identifying what worked, what did not work, and ensures documented lessons learned are disseminated. Debriefs will improve performance, mitigate risks in future activities, and are essential in completing the RM 5-Step process. Asking questions such as: "Was our assessment accurate?" "Were we lucky?" "How well did we use the controls and resources?" "Was the communication effective?" and "What can we do to improve the events in the future?" are a few examples of questions that leaders, crews and teams, and individuals can ask in debriefs to ensure future activities are improved and risks are reduced.

3.4.7. Knock-it-off and Timeout Concepts. Integral to Real-Time Risk Management are the concepts of "Knock-it-off" and "Timeout" during an ongoing operation or activity. These concepts are essential to ensuring that all personnel have a voice in any situation to identify concerns or to inform others of a developing hazardous situation. Verbalizing either of these terms sends a message to those involved in a specific action to stop, take a moment to reset and reevaluate the current situation. The terms should be integrated as an essential part of all on and off-duty operations and activities. Key aspects of these two terms include:

3.4.7.1. All Airmen (regardless of rank or position) are empowered to use these terms without any fear of repercussions.

3.4.7.2. When either term is used, all current actions are immediately halted and the situation is stabilized to a safe position in order to evaluate what the specific concern is; this is nonnegotiable and cannot be overridden by command authority.

3.4.7.3. After the Knock-it-off or Timeout call, a clear determination is made whether the current action may be continued safely, requires change or must be terminated based upon the perceived concern(s) or hazard(s).

3.4.7.4. The alerts provided by the use of those terms do not prevent actions from continuing, once safety and risk concerns are addressed, but provide all personnel with an

avenue to effectively mitigate risk through immediate intervention in any evolving operation or activity.

Chapter 4

AIR FORCE RISK MANAGEMENT (AF RM) TRAINING

4.1. Training Resources.

4.1.1. AF RM Fundamentals training will be completed through one of the following options:

4.1.1.1. Approved AF RM Fundamentals computer-based training course accessed through the Advanced Distributed Learning Service or other learning management system, as determined by AFSEC. **(T-1)**.

4.1.1.2. Approved standalone computer-based training courseware media (Compact Disc or Digital Video Disc based). **(T-2)**. This option is authorized for personnel without web-based access to the training site(s) indicated above.

4.1.1.3. Requests for approval of alternate or equivalent courseware for mass briefing presentations will be coordinated through MAJCOM RM process managers and the AF RM process manager. **(T-2)**.

4.1.2. AF RM Application and Integration course training is follow-on training to the RM Fundamentals course and suitable for AF RM process managers, instructors and advisors. AF RM Application and Integration course will be completed through one of the following options: **(T-2)**.

4.1.2.1. Classroom-based instruction hosted at AFSEC or AFSEC instructor-led roadshow course at a host-base facility.

4.1.2.1.1. Course leaders will utilize only approved AFSEC courseware materials obtained from the AFSEC Training and Force Development Division (AFSEC/SET). **(T-1)**. If training is contracted, MAJCOMs or sub-organizations will establish a formal contract agreement or memorandum of agreement with the contractor that includes this requirement. **(T-2)**.

4.1.2.1.2. Requests for AFSEC road show courses and instruction must be coordinated through MAJCOM training managers and AFSEC/SET. **(T-1)**. Requests will be approved or disapproved on a case-by-case basis. **(T-1)**.

4.1.2.2. Via Advanced Distribution Learning Service, other learning management system or standalone courseware media as determined by AFSEC.

4.1.2.3. AF RM Application and Integration Field Course. This course covers the same material, but is taught by instructors outside of AFSEC.

4.2. Training Requirements.

4.2.1. Commanders and supervisors (officers, enlisted and civilians) will be trained in AF RM Fundamentals as outlined in [paragraph 4.1.1](#) and [paragraph 4.2.3](#). **(T-2)**. All other approved AF RM training courses (i.e., supervisor, senior leader courses, etc.) will be trained via Advanced Distribution Learning Service other learning management system, or standalone courseware media as determined by AFSEC. **(T-1)**.

4.2.2. RM process managers, instructors and advisors will:

4.2.2.1. Be trained in RM Fundamentals as outlined in [paragraph 4.1.1](#) and [paragraph 4.2.3](#).

4.2.2.2. Complete the AF RM Application and Integration course as outlined in [paragraph 4.1.2](#). This training is a mandatory, one-time requirement for all officially designated RM process managers and instructors or advisors, and must be completed at the earliest opportunity, but no later than six months after RM duty assignment. **(T-2)**.

4.2.3. All Air Force personnel, to include Non-Appropriated Fund, direct hire contractor, direct hire host nation and part time hires, will:

4.2.3.1. Be trained in AF RM Fundamentals via one of the options outlined in [paragraph 4.1.1](#). **(T-2)**.

4.2.3.1.1. This training is a mandatory, one-time requirement and must be completed by all personnel. **(T-2)**. New or incoming personnel will be trained no later than 60 days after reporting to first permanent duty station or assignment (120 days of initial duty station or assignment for AFR and ANG personnel). **(T-2)**. AF RM Fundamentals training completed in conjunction with any formal accessions or other training course as outlined in [paragraph 4.1.1](#) (prior to first duty station or assignment) satisfies this requirement.

4.2.3.1.2. Currently assigned personnel who have successfully completed any previous version of the AF RM Fundamentals course (i.e., RM Fundamentals course) and have documented this training IAW [paragraph 4.3](#) of this instruction are not required to re-accomplish the course. Those who have not completed the AF RM Fundamentals course or any previous version, as outlined above, must complete the AF RM Fundamentals Course as soon as practical, but no later than 120 days of training discrepancy notification.

4.2.3.2. Periodically receive and review RM refresher briefings and presentations as directed by MAJCOM, wing or unit-level commanders. Personnel that cannot attend the live RM refresher briefing and presentation should review the briefing and presentation at their earliest opportunity.

4.3. Training Documentation. It is the responsibility of all personnel to ensure that all required AF RM training is properly documented within their official training records.

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Major General, USAF
Chief of Safety

(ACC)

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GS-15, MS, COHC, DAF
Director of Safety

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

- AFI 10-2501, *Air Force Emergency Management Program*, 19 April 2016
- AFI 17-101, *Risk Management Framework (RMF) for Air Force Information Technology (IT)*, 2 February 2017
- AFI 31-101, *Integrated Defense (FOUO)*, 5 July 2017
- AFI 32-2001, *Fire and Emergency Services Program*, 28 September 2018
- AFI 33-360, *Publications and Forms Management*, 1 December 2015
- AFI 36-2651, *Air Force Training Program*, 3 January 2019
- AFI 63-101/20-101, *Integrated Life Cycle Management*, 9 May 2017
- AFI 90-201, *The Air Force Inspection System*, 20 November 2018
- AFI 90-1601, *Air Force Lessons Learned Program*, 18 December 2013
- AFI 91-202, *The US Air Force Mishap Prevention Program*, 24 June 2015
- AFMAN 33-363, *Management of Records*, 1 March 2008
- AFPAM 90-803, *Risk Management (RM) Guidelines and Tools*, 11 February 2013
- AFPD 90-8, *Environment, Safety and Occupational Health Management and Risk Management*, 14 March 2017
- CJCSI 3150.25G, *Joint Lessons Learned Program (JLLP)*, 31 January 2018
- DoDI 6055.01, *DoD Safety and Occupational Health (SOH) Program*, 14 October 2014
- DoDI 6055.06, *DoD Fire and Emergency Services (F&ES) Program*, 21 December 2006
- DoDIO-2000.16V1_AFI 10-245-O, *Antiterrorism (AT) Program Implementation*, 18 July 2017
- HAF MD 1-10, *Assistant Secretary of the Air Force (Acquisition)*, 2 September 2016
- HAF MD 1-18, *Assistant Secretary of the Air Force (Installations, Environment and Energy)*, 10 July 2014
- MIL-STD-882E, *Department of Defense Standard Practice for System Safety*, 11 May 2012

Prescribed Forms

- (**Added-ACC**) ACC Form 167, *ACC Risk Management (RM) Worksheet*
- AF Form 4437, *Deliberate Risk Assessment Worksheet*

Adopted Forms

- AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

AETC—Air Education and Training Command

AETC/A3IA—Air Education and Training Command, Directorate of Operations Advanced Distributed Learning Branch

AF/AIDL—Air Force Learning Division, Directorate of Force Development

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFPAM—Air Force Pamphlet

AFPD—Air Force Policy Directive

AFR—Air Force Reserve

AFSEC—Air Force Safety Center

AFSEC/SET—Air Force Safety Center, Training and Force Development Division, Training Development Branch

AFSOC—Air Force Special Operations Command

AF/SE—Air Force Chief of Safety

AF RM—Air Force Risk Management

ANG—Air National Guard

AU—Air University

CJCS—Chairman of the Joint Chiefs of Staff

CJCSI—Chairman of the Joint Chiefs of Staff Instruction

DoD—Department of Defense

DoDI—Department of Defense Instruction

DRU—Direct Reporting Unit

FOA—Field Operating Agency

HAF—Headquarters Air Force

HAF MD—Headquarters Air Force Mission Directive

HQ—Headquarters

IAW—In accordance with

MAJCOM—Major Command

NAF—Numbered Air Force

RM—Risk Management

SAF—Secretary of the Air Force

SAF/AQ—Assistant Secretary of the Air Force for Acquisition, Technology, and Logistics

SAF/IE—Assistant Secretary of the Air Force Installations, Environment and Energy

USAFA—United States Air Force Academy

Terms

Air Force Risk Management Process Manager—Individual assigned by the AF/SE to act as the primary Air Force process manager for the overall AF RM Process. Provides oversight of the AF RM Process and is responsible for guidance and process direction to all HAF, DRU, FOA and MAJCOM RM process managers.

Component—Numbered Air Force—An operationally-oriented organization and serves as the AF component headquarters for a Unified Combatant Command, or subordinate unified command, when appropriate. The Component – Numbered Air Force includes an Air Operations Center to provide command and control, and an "A Staff" to provide administrative and logistical support to assigned resources. With the exception of USAFCENT, a Component – Numbered Air Force has two designations, both the Numbered Air Force designation (i.e., 7th Air Force), and a functional component designation (i.e., United States Pacific Command, or USPACOM).

Cross-tell—The sharing and transfer of information between MAJCOMs, units, working groups, Air Force personnel and military services.

Deliberate Risk Management—The pre-mission or activity planning, which involves the complete formal application of the 5-Step RM process, including an in-depth planning process (hazard identification, detailed data research, diagram and analysis tools, formal testing and long-term tracking of the risks associated with an operation, activity or system).

Hazard—A condition with the potential to cause injury, illness or death of personnel, damage to or loss of equipment or property, or mission degradation.

Knock-it-off/Timeout Concepts—A safety call, using sound risk management, made by any participant during an activity or operation, immediately halting all actions until the situation is stabilized to a safe position.

Lead Agent—Office or agency that has primary oversight of their Air Force-level program to include oversight and development of guidance, policies, courseware, tools and techniques specific to their area of responsibility. SAF/AQ is the Lead Agent for Integrated Life Cycle Management, acquisition, test and systems safety RM-related issues, while AF/SE is the Lead Agent for mission and personal RM-related issues and concerns.

Lessons Learned—An observation that, when validated and resolved, results in an improvement in military operations or activities at the strategic, operational, or tactical level and results in long-term, internalized change to an individual or an organization.

Principal Advocate—Office or agency that has primary responsibility for ensuring AF RM principles, processes, tools and techniques are incorporated into functional areas within their agency and sub organizations and staffs. Principal advocates do not develop primary guidance, policies, courseware, tools or techniques pertaining to Air Force Risk Management; they simply act as the liaison between their agency and the AF RM Process Manager.

Real-Time Risk Management—This level of risk management includes risk management decisions made in real-time, such as short notice taskings, responding to emergency situations or making spur of the moment decisions during tactical or training operations.

Risk—The probability and severity of loss or adverse impact from exposure to various hazards.

Risk Assessment—The process of detecting hazards and their causes, and systematically assessing the associated risks.

Risk Management—The systematic process of identifying hazards, assessing risk, making control decisions, implementing control decisions, and supervising and reviewing the activity for effectiveness.

Risk Management Instructors and Advisors—MAJCOM, Wing, or Unit-assigned personnel who act as primary RM instructors or advisors for their functional area(s) of responsibility. They are responsible for providing RM expertise and functional-level RM training as necessary for their organization.

Risk Management Process Manager (HAF, DRU, FOA and MAJCOM)—Individual assigned by each HAF, DRU, FOA or MAJCOM commander to act as the primary RM process manager for their organization. They are Primary members of the AF RM Working Group and act as the commander's or director's direct liaison to the AF RM process manager. In addition, they coordinate directly with all sub-organizations and assigned RM instructors or advisors to promote the AF RM Process, as necessary.

Significant Mishap or Event—A Class A or B mishap or any other mishap or event deemed worthy of review by the organization's commander where lessons may be identified or learned for future application both in and outside the organization.

System—A composite, at any level of complexity, of personnel, procedures, materials, tools, equipment, facilities, and software. The elements of this composite entity are used together in the intended operational or support environment to perform a given task or achieve a specific mission requirement.

System Safety—The application of engineering and management principles, criteria and techniques to achieve acceptable risk within the constraints of operational effectiveness and suitability, time and cost throughout all phases of the system life-cycle.

Wingman Concept—A culture of Airmen taking care of Airmen, whether in uniform or not.

Zero-Defect—Having no errors or flaws.