OPNAV M-3750.6
24 Oct 2024

NAVAL AVIATION SAFETY PROGRAM

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DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
2000 NAVY PENTAGON
WASHINGTON, DC 20350-2000

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FOREWORD

This manual implements the policy set forth in Chief of Naval Operations Instruction (OPNAVINST) 3650.6T, Naval Aviation Safety Program. It is issued under Secretary of the Navy Instruction (SECNAVINST) 5100.10L, Policy for Department of the Navy Safety Program of 9 April 2021, and aligned with the Department of Defense Instruction 6055.07 of 6 June 2011, Mishap Notification, Investigation, Reporting, and Record Keeping, and the OPNAV Manual 5100.23 of 20 September 2023, Navy Safety and Occupational Health Manual. The Naval Aviation Safety Program encompasses all activities which detect, contain, or eliminate hazards in naval aviation. It contains requirements, delineates responsibilities, and issues policy guidance for aviation mishap investigations and safety management for Navy and Marine Corps aviation activities worldwide.

This manual is effective immediately, it is mandatory and applicable to all military and civilian personnel in every Navy and Marine Corps aviation activity throughout naval aviation and some organizations that are not traditional aviation activities that operate manned aircraft and unmanned aircraft systems (UAS).

This manual may be accessed via the Department of the Navy (DON) Issuances website, (https://www.secnav.navy.mil/doni/default.aspx) under the "Manuals" tab. This manual is approved for authorized registered users and distribution is unlimited. References for this manual that are not legislation, regulations, executive orders, or international agreements are located on the DON Issuances website, (https://www.secnav.navy.mil/doni/default.aspx) or on the DoD Issuances website, (https://www.esd.whs.mil/dd/).

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Special Assistant for Safety Matters

TABLE OF ISSUANCES, REVISIONS AND CHANGES

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NAVAL AVIATION SAFETY PROGRAM RESOURCES

1. Department of Defense Issuances website (https://www.esd.whs.mil/dd/) provides unclassified directives issued by the Department of Defense for the Office of the Secretary of Defense.

2. Department of the Navy Issuances website (https://www.secnav.navy.mil/doni/default.aspx) provides unclassified directives and forms issued by the Secretary of the Navy and the Office of the Chief of Naval Operations.

3. Commander, Naval Air Forces (COMNAVAIRFOR), Commander, Naval Air Force, Pacific (COMNAVAIRPAC) and Commander, Naval Air Force, Atlantic (COMNAVAIRLANT) Issuances website (https://flankspeed.sharepoint-mil.us/sites/CPF-CNAP-HQ/N004/directives/Forms/AllItems.aspx) provides unclassified directives.

4. Naval Air Systems Command (NAVAIR) Issuances website (https://myteam.navair.navy.mil/km/71/Directives/Pages/NAVAIR.aspx) provides unclassified directives and manuals issued by NAVAIR.

5. NAVAIR Airworthiness website (https://airworthiness.navair.navy.mil/index.cfm/publication/publicationSearch) provides unclassified Naval Air Training and Operating Procedures Standardization (NATOPS) manuals issued by NAVAIR.

6. U.S. Marine Corps Issuances website (https://www.marines.mil/Home/Search/tag/ORDER/) provides unclassified Marine Corps Orders (MCO).

7. CNICINST 3750.1B (Navy Bird/Animal Aircraft Strike Hazard Program Implementing Guidance): https://www.denix.osd.mil/dodpif/denix-files/sites/37/2020/07/BASH-Manual-Final-2019-with-out-Appendices_508.pdf.

8. COMNAVAIRFORINST 1542.7D (Navy and Marine Corps Crew Resource Management Program): https://flankspeed.sharepoint-mil.us/:b:/r/sites/CPF-CNAP-HQ/N004/directives/1542.7D.pdf?csf=1&web=1&e=pQXPkR.

9. COMNAVAIRFOR M-3710.7 (NATOPS General Flight and Operating Instructions Manual): https://flankspeed.sharepoint-mil.us/:b:/r/sites/CPF-CNAP-HQ/N004/directives/3710.7.pdf?csf=1&web=1&e=66UyaH.

10. COMNAVAIRFOR M-3710.9 (Training and Operations Manual for Department of Navy Group 1 and 2 Unmanned Aircraft Systems): https://flankspeed.sharepoint-mil.us/:b:/r/sites/CPF-CNAP-HQ/N004/directives/3710.9%20M.pdf?csf=1&web=1&e=HfUeAl.

11. COMNAVAIRFORINST 4790.2D (The Naval Aviation Maintenance Program (NAMP): https://www.navair.navy.mil/Naval-Aviation-Maintenance-Program.

12. COMNAVAIRFORINST 5420.1H (Field Naval Aviator Evaluation Board Procedures): https://flankspeed.sharepoint-mil.us/:b:/r/sites/CPF-CNAP-HQ/N004/directives/5420.1H-CH-1.pdf?csf=1&web=1&e=DHYXLk.

13. DoDI 1010.01 of 14 February 2018 (Military Personnel Drug Abuse Testing Program https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/101001p.pdf?ver=g4WjVy3ViOeNLUYN_6YPgw%3d%3d.

14. DoDI 5200.48 of 6 March 2020 (Controlled Unclassified Information (CUI)): https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/520048p.PDF?ver=2020-03-06-100640-800.

15. DoDI 5400.11 of 8 Dec 2020 (DoD Privacy and Civil Liberties Program): https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/540011p.pdf?ver=gM7QU0FeRs8wMwzFXS8uSA%3d%3d,

16. DoDI 6055.01 of 21 Apr 2021 (DoD Safety and Occupational Health (SOH) Program): https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/605501p.pdf?ver=9w5ACMyAR4HKrYamZVQY7w%3d%3d.

17. DoDI 6055.07 of 6 June 2011 (Mishap Notification, Investigation, Reporting and Record Keeping): https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/605507p.pdf?ver=2018-11-20-081332-067.

18. DoDI 6055.19 of 10 June 2019 (Aviation Hazard Identification and Risk Assessment Programs (AHIRAPS)): https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/605519p.pdf?ver=2019-06-10-105620-087.

19. DoDM 5200.01, Volume 2 of 24 February 2012 (DoD Information Security Program: Marking of Information): https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodm/520001m_vol2.pdf.

20. DoDM 6025.18 of 13 March 2019 (Implementation of the Health Insurance Portability and Accountability Act (HIPAA) Privacy Rule in DoD Health Care Programs: https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodm/602518m.pdf?ver=2019-03-13-123513-717.

21. JAGINST 5800.7G (Manual of the Judge Advocate General): https://www.secnav.navy.mil/doni/SECNAV%20Manuals1/5800.7G_CH-2.pdf.

22. MCO 3040.4 (Marine Corps Casualty Assistance Program (Short Title: MARCORCASASTPRO)): https://www.marines.mil/portals/1/Publications/MCO%203040.4.pdf.

23. MCO 3440.9 (Marine Corps Installation Emergency Management (IEM) Program): https://www.marines.mil/News/Publications/MCPEL/Electronic-Library-Display/Article/899461/mco-34409-wadmin-ch/.

24. MCO 3504.1 (Marine Corps Lessons Learned Program): https://www.marines.mil/portals/1/Publications/MCO%203504.1.pdf?ver=2012-10-11-163627-913

25. MCO 5100.29C, Volume 1 (Marine Corps Safety Management System Overview): https://www.marines.mil/News/Publications/MCPEL/Electronic-Library-Display/Article/899486/mco-510029c-wvol-1-5-cancels-mco-510029b/.

26. MCO 5100.29C, Volume 2 (Risk Management): https://www.marines.mil/News/Publications/MCPEL/Electronic-Library-Display/Article/899486/mco-510029c-wvol-1-5-cancels-mco-510029b/.

27. MCO 5100.29C, Volume 4 (Aviation): https://www.marines.mil/News/Publications/MCPEL/Electronic-Library-Display/Article/899486/mco-510029c-wvol-1-5-cancels-mco-510029b/.

28. MCO 5100.29C, Volume 6 (Marine Corps Occupational Safety and Health (OSH) Policy Order): https://www.marines.mil/News/Publications/MCPEL/Electronic-Library-Display/Article/899486/mco-510029c-wvol-1-5-cancels-mco-510029b/.

29. NAVAIR 00-80R-14 (Aircraft Firefighting and Rescue Manual): https://airworthiness.navair.navy.mil/index.cfm/publication/natopsPubDetail/versionId/1/searchID/2.

30. NAVAIR 00-80R-19 (NATOPS Aircraft Salvage Operations Manual (Afloat): https://airworthiness.navair.navy.mil/index.cfm/publication/natopsPubDetail/versionId/2/searchID/2.

31. NAVAIR 00-80R-20 (NATOPS Aircraft Salvage Operations Manual (Ashore): https://airworthiness.navair.navy.mil/index.cfm/publication/natopsPubDetail/versionId/3/searchID/2.

32. NAVAIR 00-80T-105 (CV NATOPS Manual):
https://airworthiness.navair.navy.mil/index.cfm/publication/natopsPubDetail/versionId/56/searchID/2.

33. NAVAIR 00-80T-106 (LHA/LHD NATOPS Manual):
https://airworthiness.navair.navy.mil/index.cfm/publication/natopsPubDetail/versionId/2768/searchID/2.

34. NAVAIR 00-80T-114 (Air Traffic Control (ATC) Facilities Manual):
https://airworthiness.navair.navy.mil/index.cfm/publication/natopsPubDetail/versionId/62/searchID/2.

35. NAVAIR 00-80T-115 (U.S. Marine Corps Expeditionary and Airfield Recovery Operations NATOPS Manual):
https://airworthiness.navair.navy.mil/index.cfm/publication/natopsPubDetail/versionId/5/searchID/2.

36. NAVAIR 00-80T-120 CVN Flight/Hangar Deck NATOPS Manual):
https://airworthiness.navair.navy.mil/index.cfm/publication/natopsPubDetail/versionId/63/searchID/1.

37. NAVAIR 00-80T-122 (Aircraft Operating Procedures for Air-Capable Ships NATOPS Manual):
https://airworthiness.navair.navy.mil/index.cfm/publication/natopsPubDetail/versionId/2826/searchID/2.

38. NAVAIR 00-80T-124 (NATOPS Airfield Operations Manual):
https://airworthiness.navair.navy.mil/index.cfm/publication/natopsPubDetail/versionId/1726/searchID/2.

39. OPNAV M-5090.1 of 25 June 2021 (Environmental Readiness Program Manual):
https://www.secnav.navy.mil/doni/SECNAV%20Manuals1/5090.1.pdf.

40. OPNAV M-5100.23 of 20 Sep 2023 (Navy Safety and Occupational Health Manual):
https://www.secnav.navy.mil/doni/SECNAV%20Manuals1/5100.23.pdf.

41. OPNAV M-5102.1 / MCO 5100.29C VOL 9 (Navy and Marine Corps Safety Investigation and Reporting Manual):
https://www.secnav.navy.mil/doni/SECNAV%20Manuals1/5100.23%20CH-2.pdf.

42. OPNAV M-5215.1 (The Navy Directives Management Program Manual):
https://www.secnav.navy.mil/doni/SECNAV%20Manuals1/5215.1%20(OPNAV).pdf.

43. OPNAV M-8000.16 of 15 May 2021 (The Naval Ordnance Management Policy (NOMP) Manual): https://www.secnav.navy.mil/doni/SECNAV%20Manuals1/8000.16.pdf.

44. OPNAV 1650.28B (Chief of Naval Operations Aviation, Afloat, Shore, Expeditionary-Related and Safety Leadership Awards Program): https://www.secnav.navy.mil/doni/Directives/01000%20Military%20Personnel%20Support/01-600%20Performance%20and%20Discipline%20Programs/1650.28B.pdf.

45. OPNAVINST 3440.17A (Navy Installation Emergency Management Program): https://www.secnav.navy.mil/doni/Directives/03000%20Naval%20Operations%20and%20Readiness/03-400%20Nuclear,%20Biological%20and%20Chemical%20Program%20Support/3440.17A.pdf.

46. OPNAVINST 3500.37D (Navy Lessons Learned Program): https://www.secnav.navy.mil/doni/Directives/03000%20Naval%20Operations%20and%20Readiness/03-500%20Training%20and%20Readiness%20Services/3500.37D.PDF.

47. OPNAVINST 3500.39E (Operational Risk Management): https://www.secnav.navy.mil/doni/Directives/03000%20Naval%20Operations%20and%20Readiness/03-500%20Training%20and%20Readiness%20Services/3500.39D.pdf.

48. OPNAVINST 3500.44 (Navy Culture Workshops): https://www.secnav.navy.mil/doni/Directives/03000%20Naval%20Operations%20and%20Readiness/03-500%20Training%20and%20Readiness%20Services/3500.44.pdf.

49. OPNAVINST 5090.1E (Environmental Readiness Program): https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-00%20General%20Admin%20and%20Management%20Support/5090.1E.pdf.

50. OPNAVINST 5450.180G (Missions and Functions of the Naval Safety Command): https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-400%20Organization%20and%20Functional%20Support%20Services/5450.180G.pdf.

51. SECNAVINST 5100.10L (Department of the Navy Safety Program): https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-100%20Safety%20and%20Occupational%20Health%20Services/5100.10L.pdf.

52. SECNAVINST 5100.14E (Department of the Navy Laser Protection Program): https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-100%20Safety%20and%20Occupational%20Health%20Services/5100.14E.pdf.

53. SECNAVINST 5211.5F (Department of the Navy Privacy Program): https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-200%20Management%20Program%20and%20Techniques%20Services/5211.5F.pdf.

54. SECNAVINST 5300.28F (Military Substance Abuse Prevention and Control) https://www.secnav.navy.mil/doni/_layouts/15/DocIdRedir.aspx?ID=DONI-7-3782.

55. SECNAVINST 5510.36B (Department of the Navy Information Security Program): https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-500%20Security%20Services/5510.36B.pdf#search=5510%2E36b.

56. SECNAVINST 5720.42G (Department of the Navy Freedom of Information Act Program): https://www.secnav.navy.mil/foia/references/Documents/SECNAV%20FOIA%20Inst%205720-42G.pdf#search=5720%2E42g.

57. SECNAVINST 5720.44C (DON Public Affairs Policy and Regulations): https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-700%20General%20External%20and%20Internal%20Relations%20Services/5720.44C%20CH%202.pdf.

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CHAPTER 1
INTRODUCTION AND RESPONSIBILITIES

101. Purpose. This manual issues the consolidated policies and procedures for the Naval Aviation Safety Program. The Commander, Naval Safety Command (COMNAVSAFECOM), who is also Special Assistant to the Chief of Naval Operations for Safety Matters (CNO N09F), manages the Naval Aviation Safety Program under the auspices of this manual. This manual applies to all military and civilian personnel in every USN and U.S. Marine Corps (USMC) aviation activity throughout naval aviation and some organizations that are not traditional aviation activities that operate manned aircraft and unmanned aircraft systems (UAS). Since safety is an inherent responsibility of commanders, the Naval Aviation Safety Program is implemented by, and carried out by all commanders and subordinate personnel engaged in naval aviation operations throughout the chain of command.

102. General

a. The Naval Aviation Safety Program encompasses all activities which detect, contain, or eliminate hazards in naval aviation. It includes systematic procedures, practices and policies for the management of aviation safety. The program is based on the concept that mishaps are preventable. Nothing "just happens." Thus, it should be clear that mishaps can be prevented when their causes are eliminated beforehand. Per the OPNAV M-5100.23, every Navy command must have a Safety Management System (SMS) or Safety Management Plan (SMP) to mitigate risks and avoid unnecessary harm to people or damage to equipment. For aviation activities, the Naval Aviation Safety Program is an essential part of a unit's SMS or SMP. Every aviation command must ensure compliance with this manual and with the OPNAV M-5100.23 to ensure a strong SMS or SMP and to enhance their safety and risk management culture.

b. The purpose of the Naval Aviation Safety Program is to preserve lives and enhance the well-being of its members by protecting the equipment and material they need to accomplish their mission. The Naval Aviation Safety Program supports every aspect of naval aviation. Safety practices influence combat readiness. Fleet personnel will discover naval aviation safety knowledge and practices may be applied to other areas of Department of the Navy (DON) personnel life. The Naval Aviation Safety Program may, therefore, yield benefits and preserve resources far beyond its intended scope.

c. The Naval Aviation Safety Program succeeds by preventing damage and injury. Potential causes of damage and injury are termed hazards. The objective of the Naval Aviation Safety Program is to support established SMSs or SMPs to maximize mission effectiveness through the elimination or control of hazards, thus managing risk to an acceptable level and thereby preventing mishaps.

103. Policy

a. All Navy and Marine Corps aviation commands and activities must protect Department of Defense (DoD) property from damage caused by Navy and Marine Corps operations; military personnel from accidental death, injury, or work-related illness; and DoD civilian personnel from work-related death, injury or illness.

b. All Navy and Marine Corps aviation commands and activities must protect the public from risk of death, injury, illness or property damage because of Navy and Marine Corps operations involving defined naval aircraft.

c. All Navy and Marine Corps aviation commands and activities must notify, investigate, report and maintain records of all aviation mishaps, hazards and incidents as required by this manual. Compliance is essential so that the cumulative impact of aviation mishaps and near misses can be fully understood, trends can be analyzed, and effective controls can be developed and implemented. OPNAV M-5102.1/MCO 5100.29C VOL 9 provides guidance for notification, investigation, reporting and records maintenance of non-aviation mishaps, hazards and incidents.

d. All Navy and Marine Corps aviation commands and activities must ensure their aviation safety program supports the command SMS or SMP and clearly articulates how the activity integrates and aligns with the Navy or Marine Corps SMS.

e. All Navy and Marine Corps aviation commands and activities must also take effective corrective actions to prevent future mishaps.

f. All Navy and Marine Corps aviation commands must protect personnel from coercion, discrimination or reprisal for reporting or investigating aviation mishaps and hazards.

104. Policy Applicability. The Naval Aviation Safety Program encompasses all activities, which detect, contain, or eliminate hazards in naval aviation. These activities include, but are not limited to:

a. Manned aircraft and UAS design, research, development, test, evaluation, procurement, modification, maintenance, servicing, and operations.

b. Manned aircraft and UAS support equipment, facilities (e.g. Navy and Marine Corps air stations, air facilities and expeditionary airfield facilities, equipment and personnel), ships, supplies, and weapons.

c. Personnel selection, training, education, clothing, and equipment.

d. Advertising the Naval Aviation Safety Program for training, raising awareness, and rewarding successes.

e. Policies, procedures, instructions, manuals, directives, and publications.

f. Reporting, analysis and process improvement.

105. Policy for Release of Program Information and Release Accountability

a. Release of Safety Information. CNO N09F is the sole authorized release authority for safety information within the DON. The Concept of Privilege which allows Privileged Safety Information (PSI) protections is critical to open and forthright risk communication and mitigation, and improper release of PSI reduces confidence in these protections. The rules regarding PSI protection are regulatory orders that apply to all DON personnel without further implementation. A violation of these provisions by military personnel is punishable under the Uniform Code of Military Justice. Disciplinary action against civilian personnel is authorized pursuant to DON Civilian Resources Manual, subchapter 752.

Note: Naval Safety Command (NAVSAFECOM) will not release any part of a Safety Investigation Report (SIR) or Endorsement outside the DoD safety structure until CNO N09F signs the final endorsement. The SIR is still subject to change and therefore a working draft until the final endorsement is signed. For the purposes of this manual, the DoD safety structure includes: the pertinent safety investigation board (SIB), endorsers, NAVSAFECOM personnel and DoD personnel in safety billets who have been properly granted access to Risk Management Information (RMI) or a sister-Service's equivalent. Once CNO N09F signs the final endorsement, the non-privileged portions of the SIR and endorsements may be provided to source DoD and non-DoD requests for information to include: Freedom of Information Act (FOIA), congressional, legal, inspector general, contractor and media requests.

b. Release by an Individual Having Knowledge of PSI. It is forbidden for anyone with knowledge of the content of a mishap report to release PSI, except as this manual permits. Report immediately any request for such information to the NAVSAFECOM Deputy Director, Aviation Safety Programs (Code 10A), (Defense Switched Network (DSN) 564-3520, extension (Ext) 7226 or commercial (757) 444-3520, Ext 7226).

c. Release to Other U.S. Military Services. Safety program information, including PSI, may be shared between U.S. military forces through their respective safety centers or through the NAVSAFECOM's online reporting system. Control all such information in a manner that will prevent the compromise of PSI.

d. Release to the News Media. Mishap information derived from the preliminary message and subsequent status message may be released to news media pursuant to SECNAVINST

5720.44C, DON Public Affairs Policy and Regulations. It is imperative that PSI is always protected when dealing with the press.

e. Release Based on the Privacy Act of 1974. Persons desiring information collected in a system of records subject to the Privacy Act must forward requests to NAVSAFECOM, Attention: Staff Attorney.

f. Release Based on FOIA. Forward any requests for information that either expresses or implies they are supported by FOIA to NAVSAFECOM, Attention: Staff Attorney.

g. Release to the Congress. Forward requests for information from Congress, its committees, or members to CNO or Commandant of the Marine Corps (CMC), as appropriate. These requests will subsequently be tasked to and processed by NAVSAFECOM.

h. Release to Relatives of Persons Involved in Aviation Mishaps. NAVPERS 15560D, The Navy Military Personnel Manual, or MCO 3040.4, Marine Corps Casualty Assistance Program, defines how to notify relatives of persons involved in aviation mishaps. Make no reference to causal factors of a mishap. Do not provide classified information. It is forbidden to show, discuss, or give a copy of an aviation SIR to the next of kin or their representative. They may request a copy under FOIA.

i. Subpoenas for Information. Refer any subpoenas for aviation mishap information to the Navy Judge Advocate General (JAG), General Litigation (Code 14), 1322 Patterson Avenue SE, Suite 3000, Washington Navy Yard, DC 20374-5066 with a copy to NAVSAFECOM, Attention: Staff Attorney.

j. Courts. Commands receiving requests or subpoenas for information from courts, whether Federal, State, courts-martial, or foreign must forward the request immediately to NAVSAFECOM, Attention: Staff Attorney. All such requests must be coordinated with CNO or CMC, Office of the JAG, DoD and Department of Justice, as appropriate. NAVSAFECOM is authorized to assert the safety privilege in response to all court requests and orders for PSI per the Department of Defense Instruction (DoDI) 6055.07.

k. Release to North Atlantic Treaty Organization (NATO) Nations. Standardization Agreement (STANAG) 3101 Flight Safety (FS), Dissemination of Aircraft/Missile Accident Information, authorizes NAVSAFECOM to exchange factual, de-identified, or aggregate Naval Aviation safety information with NATO nations operating common types of aircraft and missiles. The DODI 6055.07 allows for reciprocal sharing agreements with foreign safety organizations, including for PSI if the NATO nation has the laws in place to protect PSI from release. Forward any such requests for information to NAVSAFECOM, Attention: Code 10A.

l. Release to Foreign Governments. The DODI 6055.07 allows for reciprocal sharing agreements with foreign safety organizations including for PSI if the foreign government has the

laws in place to protect PSI from release. Forward any such requests for information to NAVSAFECOM, Attention: Code 10A.

m. Release to Technical Representatives and Contractors. Send any requests for mishap information including PSI from technical representatives, manufacturers, and contractors, or their agents, to NAVSAFECOM via the appropriate USN or USMC command for endorsement and certification of the legitimacy of such requests. If deemed legitimate, NAVSAFECOM will furnish the information once the appropriate non-disclosure agreements have been signed. Forward any such requests for information to NAVSAFECOM, Attention: Code 10A.

n. Release to Navy, Marine Corps, and Other DON Activities. Forward all requests for mishap information from Navy, Marine Corps, and other DON activities to NAVSAFECOM, Attention: Code 10A.

o. Release to U.S. Non-DOD Government Agencies or Departments. Prior to the release of PSI, a memorandum of understanding and associated non-disclosure agreements must be in place. Forward all requests for mishap information from Navy, Marine Corps, and other DON activities to NAVSAFECOM, Attention: Code 10A.

p. Release of Privacy Information. Handle the names of individuals not involved in the mishap and the Personally Identifiable Information (PII) of all individuals in the report as directed by the applicable sections of the DoDI 5400.11 of 8 Dec 2020. Note medical personnel who are covered entities are subject to protected health information (PHI) uses, disclosures, accounting and minimum necessary application as stipulated in DoDM 6025.18 of 13 March 2019. PII includes but is not limited to names, Social Security numbers, DoD ID or other identification number, biometric data, personal addresses or any other information that can be used as a unique personal identifier or can be used to retrieve records about an individual. To protect the privacy rights of surviving family members, do not release photographs of human remains included in the aeromedical analysis or autopsy reports. Send all requests to NAVSAFECOM, Attention: Staff Attorney.

q. Unspecified Cases. Forward all requests for information not covered to NAVSAFECOM, Attention: Code 10A.

106. Definition of Terms

a. In compliance with the OPNAV M-5215.1, the Navy Directives Management Program Manual, this manual uses the words "will," "must," "should," "may" and "can" throughout. "Will" and "must" are directive in nature and require mandatory compliance. "Should" is a strong recommendation but does not require compliance. "May" or "can" are optional in nature and do not require compliance.

b. Mishap notification, investigation, reporting and record keeping language can sometimes be complicated by the fact that important terms are used differently by agencies external to the DON. To the maximum extent possible, terms in this manual have been clearly defined using authoritative sources. These definitions are sometimes further amplified or qualified to explain exactly how the term will be used for the purposes of Navy and Marine Corps mishap notification, investigation, reporting and record keeping purposes. Additional definitions, abbreviations, and acronyms are covered in Appendix C and Appendix D.

(1) Defined Naval Aircraft. Aircraft and unmanned aerial vehicles (UAV) of the USN, USN Reserve (USNR), USMC, and USMC Reserve (USMCR) for which the naval aircraft accounting system requires accountability. For the purpose of this manual, the UAV, not the whole UAS, is considered the aircraft and will be included in subsequent discussions under the terms "defined naval aircraft," "naval aircraft," or "aircraft," unless otherwise specifically annotated separately for clarity. See paragraph 305 for more information.

(2) Aviation Event. A broad term used to describe an occurrence or series of occurrences. For DON safety reporting purposes, an aviation event can be a mishap, hazard or an incident.

(3) Aviation Mishap. A naval aviation mishap is an unplanned event or series of events, directly involving a defined naval aircraft or UAV, that results in damage to DoD property; work-related illness to DoD personnel; injury to on or off-duty DoD military personnel; injury to on-duty DoD civilian personnel; or damage to public or private property, or injury or illness to non-DoD personnel, caused by DoD activities. While any of these events are a mishap, damage and injury thresholds determine how they will be reported.

(4) Aviation Hazard. Any real or potential condition that can cause injury, illness or death to personnel or damage to or loss of equipment or property or mission degradation. Hazards are divided into the two categories listed in subparagraphs 106b(4)(a) and 106b(4)(b).

(a) An act or event (i.e., near miss) that may have resulted in a mishap where the fatality, injury, illness, property damage or loss of an asset was avoided merely by chance, the actions of an individual or individuals, a small measure of distance or a few moments in time.

(b) A workplace condition that might result in injury, health impairment, illness, disease or fatality to any person who is exposed to the condition, or which might result in damage to or loss of property or equipment.

(5) Aviation Incident. A planned or unplanned occurrence or series of occurrences resulting in injury or damage that does not meet aviation mishap reporting criteria or is exempt from aviation safety reporting. This does not necessarily mean reporting is not required as a ground mishap under the OPNAV M-5102.1/MCO 5100.29C VOL 9.

(6) Injury. A traumatic wound or other condition of the body caused by an external force received while involved with manned or unmanned defined naval aircraft. The injury must be caused by a specific event or series of events in a single day or work shift. See paragraph 311 and 315 for specifics.

(7) Aviation Ground Operations Mishap (AGM). A mishap involving one or more defined naval aircraft where there is no intent for flight that results in reportable damage, injury, or death. This applies to both on land and on-board ship. See subparagraph 317a for more information.

(8) Flight Mishap (FM). A mishap involving one or more defined naval aircraft where there is intent for flight and reportable damage to a DoD aircraft or UAV or the loss of a DoD manned aircraft. See subparagraph 317b for more information.

(9) Flight Related Mishap (FRM). A mishap involving one or more defined naval aircraft where there is intent for flight and no reportable damage to the aircraft or UAV itself, but the mishap involves a fatality, reportable injury, reportable illness, or reportable property damage (which may include another aircraft). See subparagraph 317c for more information.

(10) Safety Reporting. A general term that encompasses all aspects of the process to notify, report and keep records of mishaps, hazards and incidents required by this manual.

(11) Hazard Reporting. The process of reporting a real or potentially hazardous event or workplace condition that could cause injury, illness or death to personnel or damage to or loss of equipment or property or mission degradation to the Naval Enterprise. Hazard reporting is a subset of safety reporting.

(12) Reportable Mishap. An event that meets or exceeds mishap damage thresholds or mishap injury or illness thresholds of civilian, contractor and military personnel and must be investigated and reported. Per this manual, all Class A, B, C, D, and E aviation mishaps are reportable.

(13) Reporting Custodian. Commanding officers and, in some cases, officers-in-charge (OIC) of detachment operations of Navy and Marine Corps organizations who are responsible for or otherwise provide information about, assigned manned or unmanned aircraft.

(14) Accounting Organization. The reporting custodian that experienced the loss of or damage to an owned asset; or the fatality, injury or work-related illness of an assigned person or persons in a mishap; and is responsible for or is assigned responsibility for, safety reporting, regardless of any determination as to the responsibility for the event's occurrence. There is one accounting organization for each mishap. See paragraph 503 for the policy to determine the accounting organization when multiple reporting custodians are involved in a mishap.

(15) Aircraft Controlling Custodian (ACC). ACCs administratively control the assignment, employment, and logistic support for specified aircraft. Additionally, they provide safety oversight of reporting custodians and enforcement of the policies, procedures and requirements of this manual for safety management, safety investigation, and safety reporting. In some cases, non-aviation commands may be designated as an ACC, particularly when they are designated to operate defined naval aircraft and UASs. ACCs will be used synonymously with controlling custodian in this manual.

Note: Controlling commands are the ACC counterparts responsible for the oversight and enforcement of ground safety policies, procedures and investigation requirements detailed in the OPNAVINST M-5102.1/MCO 5100.29C.

(16) Convening Authority. (Formerly "Appointing Authority"). The commander (accountable person) who has the authority to appoint a SIB or single investigating officer (SIO) to conduct a safety investigation. Convening authority is normally held by the ACC but can be delegated to subordinate commanders for class C-E mishap investigations. The convening authority also provides administrative oversight during the investigation to include report quality control, timeline management to include extensions, and mandatory endorser.

(17) SIO. An Aviation Safety Officer (ASO) who has been directed to perform a safety investigation by a convening authority. If investigating a hazard, the SIO may be a trained aviation safety specialist. This individual is solely responsible for completing the safety investigation and drafting and submitting required report(s) and records. The SIO may receive assistance from subject matter experts (SME) in the performance of their duties.

(18) SIB. A group of individuals who have been appointed to complete a safety investigation by a convening authority. An Aviation Mishap Board (AMB) is a type of SIB specific to aviation and will be used for the remainder of this manual. Individuals are assigned to the AMB because either they are a SME, or they have specific expertise necessary to the investigation. Members of an AMB must be designated in writing for each specific safety investigation. One member of the AMB must be designated the senior member. Aviation reporting custodians are required to designate standing and alternate AMBs for mishap investigation purposes.

107. Naval Aviation Safety Program Responsibilities

a. This paragraph describes the Naval Aviation Safety Program responsibilities of: CNO N09F (COMNAVSAFECOM); Director, Safety Division, Headquarters, USMC (CMC (SD)); Chief, Bureau of Medicine and Surgery (BUMED); action agencies for MISRECs and HAZRECs; Naval School of Aviation Safety; commanders of organizations requiring ASO billets; aircraft, ACCs; commanders of naval and Marine Corps air stations and facilities; Government Flight Representatives (GFR); reporting custodians; ASOs; aviation safety specialists; senior member of AMBs; members of AMBs; RMI User Administrators (UA); and

all naval aviation personnel. Commands may discover they have responsibilities under more than one category. A naval air station (NAS), for example, may have responsibilities as an organization with an ASO billet, as an airfield, and as a reporting custodian.

b. CNO N09F (COMNAVSAFECOM), will:

(1) Serve as the naval authority for mishap and hazard notifications, investigations, reporting and record keeping.

(2) Develop, issue and maintain Naval Aviation Safety Program policy on behalf of the CNO and CMC.

(3) Advise and assist Deputy Assistant Secretary of the Navy (Safety), CNO and CMC in the formulation, implementation, administration, and monitoring of the Naval Aviation Safety Program.

(4) Ensure safety investigation and reporting policy remains in compliance with DoD and DON policies and guidance and with applicable laws and regulations.

(5) Coordinate with the Director, Air Warfare Division (OPNAV N98) and Deputy Commandant for Aviation, Headquarters, USMC on safety related matters that affect naval aviation readiness to include aviation support infrastructure and air-capable ships.

(6) Under exceptional circumstances, waive or change the investigation and reporting requirements of this manual.

(7) Act as the final authority for determining mishaps, mishap classification and mishap exceptions.

(8) Conduct final review, evaluation, and classification of all naval aviation SIRs to include mishap factors, human factors classification, and recommendations.

(9) Be the arbiter and make the final decision when there are disagreements among ACCs over accounting organization assignment.

(10) Develop standards and publish procedures for aviation mishap investigations.

(11) Initiate an independent safety investigation on behalf of CNO or CMC, when warranted.

(12) Participate in safety investigations involving multiple DoD components, when applicable.

(13) Participate in safety investigations involving foreign nations, when applicable.

(14) Terminate a safety investigation, when warranted.

(15) Make final determination on behalf of CNO and CMC for any situations concerning Navy and Marine Corps safety reporting not specifically covered in this manual.

(16) Provide oversight of the Naval Enterprise process to track and complete MISRECs and hazard recommendation (HAZRECs). Correct process deficiencies as they are discovered.

(17) Act as the sole final authority to edit, call complete or otherwise close out languishing and obsolete MISRECs and HAZRECs after coordination with the applicable action agency.

(18) Maintain and oversee RMI as the single naval authoritative source and repository for DON safety information.

(19) Act as the Navy and Marine Corps authority for protecting PSI, per the DoDI 6055.07.

(20) Act as the FOIA coordinator for DON SIR and associated documents.

(21) Promote widest possible distribution of PSI and other safety information to authorized users as permitted by DoD policies and guidelines.

(22) Provide legal consultation and guidance on the use of safety investigation-related information.

(23) Make non-privileged information available, as appropriate, upon request, to individuals conducting concurrent investigations under proper regulatory authority of any agency or department of the United States or by attorneys representing the interests of the United States in any litigation related to the event, which is the subject of a safety investigation.

(24) Collaborate with systems commands (SYSCOM), program executive offices and program managers to support integration of responsible technical authorities into evaluation of mishaps.

(25) Liaison with safety organizations in the other Military Services, DoD, Naval School of Aviation Safety, Naval Aviation Schools Command, naval aviation commands at all levels, and offices and bureaus within the DON.

(26) Selectively participate in engineering proposal evaluations and maintenance feasibility inspections of new aviation production systems and equipment, and in production improvement conferences.

(27) Maintain membership on Naval Air Training and Operating Procedures Standardization (NATOPS) boards and councils.

(28) Act as technical advisor on aviation safety for all Naval Education and Training (NAVEDTRA) courses, films, training aids, and devices.

(29) As necessary, request support from the Armed Forces Medical Examiner System (AFMES).

(30) Fulfill the responsibilities as the sole authorized DON command to generate non-privileged, sanitized SIRs to support wider dissemination of critical safety and hazard information, per DoDI 6055.07.

(31) Perform quality assurance and quality control processes to ensure safety information accuracy and completeness.

(32) Identify aviation mishap trends, compute mishap rates and prepare analysis reports for dissemination across the DON.

(33) Develop and distribute a variety of safety lessons learned products.

(34) Publish naval aviation safety magazines and explore and exploit any other media which will strengthen and support the Naval Aviation Safety Program.

(35) Transmit mishap data to Under Secretary of Defense for Personnel and Readiness within established timelines, per DoDI 6055.07.

(36) Assure proper and effective accountability of safety management across the Naval Enterprise.

(37) Conduct formal, independent assurance functions from Echelon II through unit-level (Echelon IV and V) aviation commands to evaluate the risk control system and continuous self-improvement of Navy commands and installations worldwide.

(38) NAVSAFECOM will review Echelon II and III certification processes of subordinate aviation commands (e.g., Optimized Fleet Response Plan (OFRP) milestones, weapons, communications, navigation, maintenance, diving, airborne, etc.).

(39) Conduct no-notice or short notice unit-level safety inspections and assessments to evaluate risk controls and continual self-improvement.

(40) Serve as the model manager for the Aviation Culture Workshop Program.

(41) Act as DON's sole authorized release authority for PSI.

c. Director, Safety Division, Headquarters, USMC will:

(1) Advise and assist the Deputy Commandant for Aviation, Headquarters, USMC on safety matters that affect USMC aviation safety.

(2) Coordinate with NAVSAFECOM on safety related matters that affect naval aviation.

d. Chief, BUMED will:

(1) Advise and assist in support of medical investigations into naval aviation mishaps and hazards.

(2) Coordinate with AFMES and Defense Health Agency (DHA) to ensure pathology services to process tissue from aviation mishaps as directed by this manual.

(3) Train flight surgeons and aerospace medicine physician assistants (APA) thoroughly in medical pre-mishap planning, medical investigation of aviation mishaps, and their role as members of AMBs.

(4) Coordinate with DHA to provide timely and complete medical services from properly trained and designated flight surgeons or APAs.

e. Commander, Naval School of Aviation Safety will:

(1) Advise COMNAVSAFECOM on the education and training aspects of the Naval Aviation Safety Program.

(2) Develop and conduct appropriate graduate courses of instruction to educate qualified specialists to meet the needs of the CNO, CMC and COMNAVSAFECOM and raise safety awareness of personnel in billets associated with the Naval Aviation Safety Program. These courses include:

(a) an ASO course;

(b) an Aviation Safety Command course;

(c) a Crew Resource Management Instructor (CRMI) course; and

(d) an Aviation Safety Manager's (ASM) course

(3) Assist NAVSAFECOM and aviation organizations in support of the Naval Aviation Safety Program. To the maximum extent, provide fleet commands with subject matter experts to present current aviation related topics (e.g., conferences, seminars, and safety stand downs).

(4) Conduct safety related research and research assistance that supports Naval School of Aviation Safety curriculum content and fleet assistance and advise COMNAVSAFECOM of findings as directed.

(5) Provide current aviation safety related submissions, articles, and research findings to DoD publications in fostering mission effectiveness.

f. Commands with ASO billets assigned include ACCs, type wings, Marine and Navy aircraft wings, Marine Aircraft Groups (MAG), air stations, training wings, and all activities designated as aircraft reporting custodians. Commanders of these organizations with ASO billets will:

(1) Assign only graduates of the Naval School of Aviation Safety who are naval aviators or naval flight officers to the primary billet of ASO in manned aircraft squadrons. Aeromedical Safety Officers (AMSO), who are graduates of the ASO school, may be assigned as an ASO for short periods of time (6 months or less) if a naval aviator or naval flight officer is not available. For AMSOs expected to be in an ASO billet for longer than 6 months request a waiver from NAVSAFECOM (Code 10A). Commanders of Navy and Marine Corps air stations, who are not also reporting custodians, may assign the ASO as a collateral duty. United States Air Force (USAF), United States Army (USA), United States Coast Guard (USCG), United States Space Force (USSF), or foreign Personnel Exchange Program (PEP) naval aviator or naval flight officer equivalents, who are on permanent assignment to USN or USMC flying commands and who are graduates of the Naval School of Aviation Safety may be assigned to the primary duty of ASO. PEP officers must have a non-disclosure agreement in place with NAVSAFECOM prior to receiving access to PSI. Make every effort to assign an officer who has been to the school in the past 4 years or provide that officer with ASO training at the Naval School of Aviation Safety. Experienced UAS officers or UAV operators, who are graduates of the Naval School of Aviation Safety, will be assigned the primary duty of ASO in UAS units.

(2) In circumstances where military billets have been substantially reduced, or to supplement the military ASO, the command may use a Civil Service employee as the ASO. The command must use the criteria in 107f(2)(a) through 107f(2)(c) for selection and assignment of a Civil Service employee as an ASO:

(a) Retired, former or selected reserve naval aviators or naval flight officers. USAF, USA, USSF or USCG equivalents to naval aviators or naval flight officers may also be used.

(b) ASO course graduate.

(c) Personnel who have not worked in the naval aviation safety field in the last 4 years should attend or re-attend the ASO course. If in an ASO billet they should re-attend the ASO course every 8 years. A refresher course structure may be modified (shortened) at the discretion of the Naval School of Aviation Safety and the individual's command dependent on the experience level of the attendee.

(3) Structure the command in a way that assures the ASO has either direct access to the commander or the commanding officer (CO), or access via the Safety Department head or the section head.

(4) Assign an enlisted aviation safety specialist as an assistant to the Safety Department. This person must be a graduate of the Aviation Safety Specialist Course (A-493-0065), taught by the Naval Safety and Environmental Training Center (NAVSAFENVTRACEN), or attend within 6 months of the assignment. For commands that are not reporting custodians and therefore not staffed as such, and units with less than 25 enlisted personnel assigned, this requirement is waived at the discretion of the commander. When able, non-reporting custodian commands are encouraged to assign an enlisted aviation safety specialist as an asset to the command aviation safety program.

(5) Establish and maintain a command aviation safety program per chapter 2 of this manual.

(6) Do not assign the ASO to serve on punitive or disciplinary duties such as administrative discharge boards, Manual of the Judge Advocate General (JAGMAN) investigations, Field Naval Aviator Evaluation Boards (FNAEB) or Field Flight Performance Boards (FFPB).

g. ACCs, administratively control the assignment, employment, and logistic support for specified aircraft. Additionally, they provide safety oversight of reporting custodians and enforcement of the policies, procedures and requirements of this manual for safety management, safety investigation, and safety reporting.

(1) ACC for purposes of this manual, and without affecting command relationships established for other purposes are:

(a) CMC

(b) Commander, Naval Air Force U.S. Pacific Fleet (COMNAVAIRPAC, who is also COMNAVAIRFOR)

(c) Commander, Naval Air Force U.S. Atlantic Fleet (COMNAVAIRLANT)

(d) Commander, U.S. Marine Forces Command (COMMARFORCOM)

(e) Commander, U.S. Marine Corps Forces Pacific (COMMARFORPAC)

(f) Chief of Naval Air Training (CNATRA)

(g) Commanding General, 4th Marine Aircraft Wing (CG FOURTH MAW)

(h) Commander, Naval Air Force Reserve (COMNAVAIRFORRES)

(i) Commander, Naval Air Systems Command (COMNAVAIRSYSCOM)

(j) President, Naval Postgraduate School (NPS)

(k) Director, Naval Criminal Investigative Service (NCIS)

(l) Commanding General, Marine Corps Installations East (CG MCI-EAST)

(m)Commanding General, Marine Corps Installations West (CG MCI-WEST)

(n) Commanding General, Marine Corps Installations Pacific (CG MCI-PAC)

(o) Commander, Navy Installations Command (CNIC)

(p) Commander, Naval Special Warfare Command (COMNAVSPECWARCOM)

(q) Other controlling custodians, for safety purposes, may be designated via a memorandum of understanding (MOU) with NAVSAFECOM when subordinate reporting custodians are designated to operate manned and unmanned defined naval aircraft.

(2) ACCs will:

(a) Establish and maintain a command aviation safety program, per this manual, managed by a trained ASO. This program will be aligned to support the overall command SMS.

(b) Advise, assist, and ensure subordinate commands conduct their command aviation safety program.

(c) Act as convening authority for all mishap and hazard investigations or delegate those responsibilities to subordinate commanders. ACCs can delegate Class C, Class D, Class E and hazard reports to subordinate commands. Class A and B mishaps must not be delegated below the ACC.

Note: ACCs may choose to delegate convening authority responsibilities in real time as events occur or in advance of events by establishing a delegation policy in writing. ACC always have the authority to retain convening authority responsibilities for selected events even if a convening authority delegation policy has been issued.

(d) Coordinate with NAVSAFECOM, Echelon II commands and technical agencies, if required.

(e) Enforce mishap investigation and reporting requirements.

(f) Establish a hazard review board.

(g) Track and ensure subordinate unit execution of all outstanding mishap and hazard recommendations.

(h) Protect the sanctity of the investigative process, establish policy that prohibits acts of coercion, discrimination or reprisal against personnel who report or investigate mishaps and hazards.

h. Convening authorities, will:

(1) Direct an AMB or SIO to investigate mishaps and hazards.

(2) Appoint or ensure all AMB members or SIO are designated in writing.

Note: No person directly involved in a mishap or hazard or having a personal interest that might pose a real or perceived conflict of interest, will serve as a member of the AMB for that mishap or hazard. Contractors will not serve as a member of the AMB or as SIO, but may provide technical expertise to the investigation.

(3) Define the specific required endorsers for all mishap or hazard reports requiring endorsement.

Note: Convening authorities must list the specific commands and activities that are the required endorsers in the RMI "comments for Approval Authority" section during the convening authority administrative review before the endorsement process begins.

(4) Adhere to and enforce mishap and hazard report submission deadlines.

(5) Contact NAVSAFECOM (Code 90) for on-site investigative assistance, when required.

i. Commanders of Naval and Marine Corps air stations, air facilities, and expeditionary airfields will:

(1) Establish and maintain a command aviation safety program including assignment of a qualified ASO. Align the safety program with the command's SMS or SMP. ASOs at air stations may be assigned as a collateral duty when the commander of a Naval or Marine Corps air station is not a reporting custodian.

(2) Maintain a pre-mishap plan which coordinates the actions and responsibilities of airfield operations, service providers, tenant units, and nearby commands.

(3) Report aviation mishaps occurring within their area of responsibility.

(4) Report aviation hazards on and around their airfields via the RMI POR.

(5) Secure aircraft or UAV wreckage within their area of responsibility.

(6) Support AMBs and mishap investigations of other Services, including wreckage recovery, transportation and salvage.

(7) Manage relations with local authorities, the public, and the press.

(8) Investigate and process claims originating from aviation mishaps.

(9) Provide access to, or a list of, environmental experts capable of coordinating the removal of environmental wastes and contaminants from a crash site and determining the extent of environmental damage.

(10) Have an installation coordinated plan between departments and organizations to quickly obtain tools and equipment not normally carried in squadron investigation kits such as: Tyvek suits, positive breathing apparatuses, picks, shovels, gas-driven circular saws, tri-walls, pallets, camping gear for site security, foul-weather gear, water buffalo, sanitation equipment, food, communication equipment, floor wax (to dampen composite materials), and flood lights.

(11) Ensure that all personnel authorized to operate vehicles on airfield aircraft parking ramps, taxiways and runways complete an Airfield Vehicle Operators Instruction Course.

(12) Maintain a Bird/Animal Aircraft Strike Hazard (BASH) reduction program per Commander, Navy Installations Command Instruction (CNICINST) 3750.1, Navy Bird/Animal

Aircraft Strike Hazard Program Implementing Guidance and the OPNAV M-5090.1, Environmental Readiness Program.

j. GFRs are responsible for surveillance of contractor aircraft flight and ground operations involving government aircraft per the DCMAINST 8210.1/NAVAIRINST 3710.1 series. GFRs must:

(1) Liaise between the manufacturer to whom they are assigned, their respective ACC and NAVSAFECOM.

(2) Forward all requests for naval aviation safety information to NAVSAFECOM via COMNAVAIRSYSCOM (NAVAIR Aviation Safety Office) who will certify its legitimacy.

(3) Ensure those who request naval aviation safety information understands that data from NAVSAFECOM is for safety purposes only and must not be released by the requester.

(4) Ensure that SIRs are neither revealed nor released to unauthorized personnel.

k. Reporting custodians are COs and, in some cases, OICs of detachment operations of Navy and Marine Corps aviation organizations who are responsible to account for, or otherwise provide information about, assigned aircraft or UAVs. During the course of safety investigations, the reporting custodian is usually assigned to be the accounting organization. The Commander, Naval Air Forces instruction (CNAFINST) 4790.2 series also contains information about aircraft and UAV custody and contractor operations. Non-squadron level reporting custodians should attend the Aviation Safety Command Course. Squadron level reporting custodians must attend the Aviation Safety Command Course and will:

(1) Appoint, train, and maintain a standing AMB per this manual. Reporting custodians must ensure an appropriate AMB can be appointed to support detachments.

(2) Establish and maintain a pre-mishap plan.

(3) Do not assign the ASO to serve on punitive or disciplinary duties such as administrative discharge boards, JAGMAN investigations, FNAEBs or FFPBs.

(4) Appoint a unit-level RMI UA in writing or coordinate with higher headquarters to fulfill UA responsibilities on behalf of the command.

(5) Protect PSI from unauthorized disclosure.

(6) In case of a naval aviation mishap or hazard investigation involving manned or unmanned aircraft in their custody, the reporting custodian becomes the accounting organization:

(a) Direct their AMB to investigate or request relief from mishap investigation and reporting responsibilities per this manual.

(b) Direct a competent medical authority assigned to their command to collect any time-sensitive medical evidence, such as blood and urine samples pertinent to the safety investigation.

(c) Ensure composition of their AMB is appropriate for the circumstances of the mishap.

(d) Ensure that personnel assigned as an SIO or designated an AMB member, are not assigned to a JAGMAN or command investigation of the same event.

(e) Ensure that the RMI is used for all safety reporting.

(f) Provide logistical support to the AMB to include aircraft security, transportation, and sustainment at the mishap site.

(g) Request planning and estimator services necessary to determine severity of aircraft or UAV damage.

(h) Request engineering assistance in support of the investigation.

(i) Request investigative assistance as needed.

(j) Request help to recover wreckage.

(k) Request aircraft disposition instructions from the ACC once the mishap investigation and endorsement are complete.

l. ASOs will:

(1) Act as principal advisor to the CO on all aviation safety matters.

(2) Advise and assist the CO in establishing and managing the command aviation safety program and SMS or SMP.

(3) Maintain appropriate aviation safety records and mishap statistics.

(4) Coordinate safety matters among the organization's staff to include boards and councils, training, and mishap and hazard lessons learned dissemination. In an aviation squadron, work closely with the Maintenance Department to ensure aviation lessons learned are integrated into maintenance personnel training. At an installation, coordinate with air operations

staff, service providers, and tenant squadrons to identify safety hazards on flight lines or in aviation support services, share information on safety events, discuss safety trends, resolve All-hands Safety Action Program (ASAP) reports, and promote safety through training and exercises.

(5) Occupy a primary billet assignment when assigned as a reporting custodian ASO. Designating a school trained ASO to serve as a reporting custodian ASO while occupying another billet does not meet the intent of a primary billet and is prohibited. ASOs at air stations may be assigned as a collateral duty when the commander of a Naval or Marine Corps air stations is not a reporting custodian.

(6) Serve as an RMI UA and act as primary RMI action officer for aviation safety matters. Continuously monitor, investigate, initiate, write endorsements for, and update all mishaps, hazards, associated recommendations and ASAP reports directed at the command for a response.

(7) Serve as a member of the AMB or as the SIO for mishap or hazard investigations.

m. AMSOs will:

(1) Act as an advisor to COs and ASOs on human performance, physiological and Aviation Life Support System (ALSS) issues to include identifying discrepancies and potential causal factors. AMSO should review all Physiological Episodes (PHYSEPs) and ALSS reports in RMI prior to release by the squadron.

(2) Serve as the Physiological Event Rapid Response Team (PERRT) Lead responsible for the investigation and reporting of suspected Physiological Events (PEs) in their command.

(3) Gather all data for suspected PEs to assist in the PERRT's final PE determination and submit determination along with supporting evidence to NAVSAFECOM.

(4) Assist in preparing recommendations for PHYSEP and PE, as well as events with ALSS causal factors.

(5) Support aircraft mishap investigations. This support is provided as a full member or as a technical advisor to AMBs.

(6) Assist ASO in gathering all ALSS equipment for possible engineering investigations (EI).

(7) Assist in evaluating pre-mishap plans with emphasis on aeromedical participation and support.

(8) Develop and maintain an effective aeromedical safety brief program by establishing a liaison with operations personnel in conjunction with safety, Naval Survival Training Institute, Naval Aviation Survival Training Program, and NATOPS personnel to ensure state of the art, mission specific and relevant human performance and physiological threat briefs.

n. Aviation safety specialists (petty officer or non-commissioned officer) will:

(1) If Navy, attend the Aviation Safety Specialist Course (A-493-0665). If in a USMC command, attend Ground Safety for Marines and the Mishap Investigation Course.

(2) Advise and assist the ASO in managing the command aviation safety program per this manual.

(3) Train work center personnel in mishap identification and prevention.

(4) Assess the use, storage, labeling, and disposal of hazardous material.

(5) Monitor surveillance programs applicable to hearing and sight conservation and respiratory protection.

(6) Assist in the identification, investigation, reporting, and mitigation of hazards.

(7) Oversee the selection, care and use of personal protective equipment.

(8) Represent the command at base and ship safety meetings.

o. Senior members will:

(1) Train the AMB. (Standing AMB)

(2) Equip and keep ready the command mishap investigation kit. (Standing AMB)

(3) Test the command pre-mishap plan. (Standing AMB)

(4) When appropriate, recommend to the convening authority any augmentation required to the AMB, replacement of its members, or other changes in its composition to comply with this manual.

(5) Supervise investigations conducted by the AMB and publish their report.

(6) Know this manual; the command's aviation safety program; the command's SMS or SMP; and the command's pre-mishap plan.

(7) Include in all system-related Class A and Class B SIRs, the system program office analysis of hazards that contributed to the mishap and recommendations for materiel risk mitigation measures, especially those that minimize potential human errors.

(8) Lead the AMB through consensus. All members have an equal voice. No one has a veto.

(9) Protect PSI from unauthorized disclosure.

p. AMB members will:

(1) Know this manual; the command's aviation safety program; the command's SMS or SMP; and the command's pre-mishap plan.

(2) As directed by the AMB senior member, participate in the investigation of hazards and mishaps. Help prepare the reports required by this manual.

q. Aircraft and weapons system program managers will:

(1) Support system-related mishap investigations by providing analyses of hazards that contributed to the mishap and recommendations for materiel risk mitigation measures, especially those that minimize human errors.

(2) Ensure unmitigated residual safety risks are accepted at the appropriate levels as defined in DoD Instruction 5000.02 of 8 June 2022.

(3) Obtain user representative formal concurrence prior to all serious and high residual risk acceptance decisions.

r. RMI UA, will:

(1) Post the signed command UA designation letter and signed RMI User Agreement to their RMI profile.

(2) Familiarize themselves with RMI functional roles and associated permissions.

(3) Review and approve requests for RMI account roles including account type, category, and module access and job function, for DON uniformed and civilian personnel within your unit (assigned to your Unit Identification Code (UIC)). Approval of account roles must only be for personnel when it is necessary for them to complete their assigned tasks. All approvals must be in strict compliance with policies delineated in chapter 11 of this manual and other official RMI policies and guidance.

(4) UAs must associate at least one .mil email address assigned to their UIC via the organization hierarchy page to receive RMI unit messages.

Note: UAs are prohibited from granting RMI permissions to personnel from other DoD organizations, Military Services, U.S. Government agencies, as well as contractors, foreign exchange personnel or any non-DON civilians, unless specifically authorized by NAVSAFECOM.

s. All naval aviation personnel will:

(1) Know those safety regulations and directives applicable to them and to their assigned duties.

(2) Follow established procedures and safety standards.

(3) Report aviation hazards and mishaps per this manual and their command aviation safety program.

(4) Submit to physical examination and biological testing as deemed necessary by the CO, Accounting Organization, senior member of an AMB, or NAVSAFECOM mishap investigation representative following any mishap or incident with potential to meet defined naval mishap limits as set in this manual.

(5) Share factual, non-privileged, information with SIOs and AMBs.

108. Deviations and Variances. Only CNO N09F may authorize any deviation or variance from the policies and procedures contained in this manual. Requests for deviation or variance to policies specified in this manual must be thoroughly justified and submitted via official correspondence to NAVSAFECOM, Attention: Code 10A

CHAPTER 2
NAVAL AVIATION SAFETY PROGRAM

201. Purpose. This chapter describes the Naval Aviation Safety Program and lists those naval organizations required to adhere to its requirements. The Naval Aviation Safety Program consists of written policies, procedures, and plans, coupled with the attitudes and practices that promote aviation safety. Its purpose is to prevent mishaps to save lives and preserve resources and, thereby, to enhance command culture, combat readiness, and global war-fighting capabilities.

202. General. The success of the Naval Aviation Safety Program depends on balancing several elements. Positive leadership, proactive and aggressive risk assessment, and organizational learning will ensure the primacy of hazard detection, hazard elimination, and safety education and awareness throughout naval aviation. These functions are effective regardless of command size, seniority, mission, or resources. The Naval Aviation Safety Program is comprised of four components: safety policy, safety risk management, safety assurance, and safety promotion. These components provide a framework which supports an aviation command's SMS or SMP but does not dictate the required pillars of a command's SMS or SMP.

203. SMS and SMP Integration. An effective Naval Aviation Safety Program lays the foundation and supports the objectives of the command's SMS or SMP, the established framework for resilient safety management and continuous improvement. Their goals are parallel: to eliminate hazards and enhance the safety awareness of all hands. The SMS, normally established at the USN Echelon II and III or USMC Marine Corps Forces level of command, involves a system of systems approach which instills risk management processes, procedures, and policies throughout the organization to achieve a set of desired outcomes. The SMP, established at subordinate levels of command, defines and communicates the actions required to implement the SMS and establishes risk accountability, risk communication, and risk mitigation expectations.

a. Desired Outcomes. In alignment with the OPNAV M-5100.23, the Naval Aviation Safety Program adheres to the same desired outcomes as the Navy SMS. Although these outcomes seem self-evident, each requires significant investment of resources, effort, and time to ensure these conditions do not atrophy.

(1) Outcome 1: Safe Place. Safe workplace or working environment from a benign office environment through high-risk operational environments.

(2) Outcome 2: Safe People. People and their supervisors are trained and qualified on all aspects of conducting their work properly and who are experienced, proficient, current, procedurally compliant, risk aware and fit to work (general health and wellbeing).

(3) Outcome 3: Safe Property and Materiel. Proper and available tools, equipment, machinery, infrastructure and whole equipment systems that are Safe-to-Operate and Operated Safely.

(4) Outcome 4: Safe Processes and Procedures. Proper and accessible standard operating procedures (SOP), emergency procedures, safety procedures, maintenance standards, etc.

b. The Four Components. As previously stated, the Naval Aviation Safety Program is comprised of four components: safety policy, safety risk management, safety assurance, and safety promotion. These components allow an organized discussion of aviation safety elements which must be incorporated into a command's SMS or SMP, regardless of the framework which the command chooses. These components match U.S. governmental, civil, and international aviation SMSs. The Plan, Do, Check, Act (PDCA) framework directed by the OPNAV M-5100.23 for Echelon 2 commanders closely parallels the safety policy, safety risk management, safety assurance, and safety promotions components. Safety policy establishes senior leadership's commitment to continually improve safety and defines the methods, processes, and organizational structure needed to meet the desired outcomes. Safety risk management is comprised of numerous processes and forums for identifying hazards and controlling risk, all of which include one or more steps of the risk management process or are, in and of themselves, controls. Safety risk management determines the need for, and adequacy of, new or revised risk controls to drive risks as low as reasonably achievable (ALARA). Safety assurance evaluates the continued effectiveness of implemented risk control strategies and supports the identification of new hazards. Focusing on a layered defense system, units must leverage self-assessment, second-party assessments, and independent assessments to validate the effectiveness of policies, procedures and controls. Safety promotion includes training, communication, and other actions to create a learning culture within all levels of naval aviation. Most safety-related programs, processes and resources within naval aviation will support more than one pillar of a unit's SMS or SMP.

204. Naval Aviation Safety Program Applicability. The Naval Aviation Safety Program is applicable to:

a. ACCs as defined in this manual.

b. Aircraft reporting custodians as defined in this manual.

c. Commands with ASO billets.

d. Naval and Marine Corps air stations.

e. All aviation activities supporting launch and recovery operations of manned and unmanned defined naval aircraft.

205. Safety Policy Component. The safety policy component of the Naval Aviation Safety Program closely aligns with the "Plan" and "Governance" principles of the PDCA construct. Commanders are responsible for providing policy guidance and ensuring governance via their command's SMS or SMP. Commanders are a unit's accountable person, responsible for ensuring their unit is operating safely and providing information up the chain when there are questions about if a unit is safe-to-operate. The elements of the Naval Aviation Safety Program which are essential to a commands' SMS or SMP are:

a. Commander Support. Aviation safety is a command function, and an ongoing system of good communication and feedback is essential if the maximum benefits are to be realized from any aviation safety organization. The commander who exhibits a positive attitude toward their aviation safety program and command SMS or SMP has already overcome a major obstacle to mission success. Commanders must establish a policy and plan that clearly defines safety goals and objectives, sets high safety standards, creates an environment which rewards effective risk management, and uses information to evaluate, improve, and promote safety education and training.

b. Organizational Culture, Command Climate, and Safety. Organizational culture is the collection, or pattern, of shared values, attitudes, approaches to problem solving, and norms widely accepted by the organization's constituents. The command climate is generally described as the shared perceptions members have about the command, or issues facing the command. Leveraging organizational culture and a positive command climate, the CO can positively influence the behaviors and decisions made by personnel in his or her command. Commanders' actions that help shape a positive climate are: protection of the free flow of safety information at all levels of the command; deep-seated and sincere safety awareness in the command; a sense of pride coupled with competence and professionalism; and establishment of clear and achievable goals and norms. By shaping a positive command climate, the commander promotes decisions and actions by all hands that identify hazards and mitigate risks. In turn, the climate will promote a pattern of values and attitudes that result in operational excellence.

c. Command Safety Goals. Commanders must establish a clear set of aviation safety goals and set forth a safety policy that defines how their personnel may attain these goals. This is the command's opportunity to provide intent to its personnel.

d. Command Safety Organization. Commanders must define the requirements and delineate the functions of each member of their safety organization. They must provide expectations of cross command coordination and synchronization ensuring safety, operations, maintenance, medical, and the rest of the staff are aligned in planning and execution.

e. General Safety. Although this manual is specific to aviation safety, the command must ensure the SMS or SMP provides a holistic safety system and includes both ground, Navy and Marine Corps Occupational Safety and Health programs as defined in OPNAV M-5100.23, and aviation infrastructure requirements. Examples of these safety programs include: hearing and

sight conservation, traffic safety, motorcycle safety, airport vehicle operators safety, flight deck and airfield safety, respiratory protection, off duty safety, fall protection, and hazardous materials. Ensure a synchronization of safety efforts, as the goal of the 4 Ps (Safe Place, People, Property, and Processes) transcends the cockpit, aircraft, or UAV.

206. Safety Risk Management Component. Risk is inherent in all tasks, training, missions, operations, and personal activities no matter how routine. The most common cause of task degradation or mission failure is human error, specifically the inability to consistently manage risk. Risk management is a formal, systematic system for identifying, controlling or eliminating hazards that weigh risks against mission or task benefits. Risk management is a decision-making aid, available to all levels in the chain of command, to meet mission objectives while managing risk to an acceptable level. Hazards detected during assessments, audits, inspections, and surveys, as well as hazards identified by safety reports provide Key Risk Indicators (KRI) which inform the command of the current state of their risk management processes. Over time, commanders can use these KRIs to track the effectiveness of unit risk management actions, policies, and procedures. Although it is important to note that mishap rates and other Key Performance Indicators (KPI) provide information on the unit's performance, many times these results are not as important as the underlying processes to identify, manage, and mitigate risks. As a result, operating safely is the natural product of successful risk management.

a. Hazard Detection. A command SMS or SMP must include procedures to detect hazards. Hazards may exist because of a bad design; improper or unprofessional work or operational practices; poor training or inadequate preparation; out-of-date instructions and publications; or because the environment itself is both demanding and unforgiving. Everyone in the command must be charged with supporting risk management by identifying and reporting hazards to the appropriate authorities.

b. Investigation of Suspected Hazards. The command must investigate and recommend corrective action on all hazards discovered and reported.

c. Risk Mitigation. Like hazard detection, risk mitigation is an all-hands effort. Some hazards are readily identifiable and easy to correct; others, just the opposite. An example of the former is requiring a co-worker to wear proper protective equipment, which is an easy fix. An example of the latter is discovering a design deficiency that causes a part to fail prematurely. The redesign, testing and manufacture of a replacement will prove both costly and time-consuming. The key to risk mitigation is an effective risk management program - one which raises hazard awareness, provides and implements risk controls, and maintains their effectiveness through proper supervision. Almost as important as mitigating risks to prevent a mishap are the processes and plans established to mitigate risks after a mishap has occurred. Both the pre- and post- mishap prevention efforts establishes a command resilience, preventing mishaps and allowing units to "bounce-back" if a mishap occurs.

d. Risk Consolidation. It is essential that unit commanders understand the risks that their units are managing. To truly understand the scope of the risks, commanders must consolidate a risk registry identifying the risks, who can fix those risks (risk ownership), and what strategies the unit is using to mitigate or fix those risks. Since risks, like the operational environment, change over time, this registry must be reevaluated and updated to remain accurate and relevant. The risk registry must include risks generated by the unit that the unit can mitigate or fix themselves and the risks generated and driven down to their level by higher echelons which the unit can only mitigate or manage. Risks that cannot be fixed or successfully mitigated at the unit level must be reported up the chain of command for awareness and resolution.

e. Reporting of Hazards. The command must report hazards, regardless of outcome, as required by this manual, CNAFINST 4790.2 series, and other applicable directives. Reporting hazards enhances safety awareness, helps correct problems, and improves procedures, processes, and materials. These hazards can cite manning, operational tempo, sustainment, flight or ground operations, procedures and other degraders to a unit's safe-to-operate posture. Additionally, hazards must be reported up the chain of command if the unit cannot fix the hazard themselves. This includes formal correspondence, work orders, hazard reports (HAZREPs), Joint Deficiency Reporting System (JDRS) reports, etc.

f. Aviation Safety Council (ASC). Squadrons, air stations (to include tenant commands), and other large commands must form an ASC that will meet at least quarterly to set goals, manage assets, review safety-related recommendations, and keep records of their meetings. The goal is to identify, discuss, and create solutions to mitigate hazards with command leadership. The ASC is the ideal forum to review KRIs and create, update, and track a unit's risk registry.

(1) Squadron ASCs, chaired by the CO, detachment OIC or executive officer (XO), with the operations officer, aviation and ground safety officers, and the flight surgeon as permanent members, must review enlisted aviation safety committee minutes, command plans, policies, procedures, conditions and instructions to ensure their currency, correctness and responsiveness to safety recommendations. In cases where a unit flight surgeon is not assigned, a flight surgeon or APA from another command may assist.

(2) Air station ASCs will be chaired by the CO or XO and must include Air Operations personnel (air operations officer, ASO, airfield manager, air traffic control (ATC), wildlife biologist), airport service providers (Public Works environmental and airfield planner, fuels, explosives safety, aircraft rescue and firefighting, security), and tenant ASOs. The diversity of the attendees should allow air station leadership to gain a holistic picture of air station hazards. Meeting agendas will include discussions on airfield-related projects, airfield safety waivers, environmental inspections, the operability of airfield infrastructure, new and chronic hazards, review of applicable SIRs, HAZREPs or ASAP entries, resolution of existing MISRECs or HAZRECs, hazardous wildlife activity updates, planned training exercises and any other installation activities affecting operational safety. The ASC may be held as a staff level meeting

without the CO or XO presence if the air operations officer is attending quarterly installation safety meetings and briefing the results of the ASC directly to the CO.

(3) Large command ASCs will be chaired by the CO or XO and must include the appropriate personnel to holistically evaluate unit safety risk. At a minimum this must include, aviation and ground safety officers, an operations representative, and subordinate command's ASOs.

g. Enlisted Aviation Safety Committee. Division safety petty officer or non-commissioned officers from every work center in the command must form the enlisted aviation safety committee. Monthly, they must discuss safety deficiencies and provide recommendations for improving safety practices and awareness. Although normally chaired by the aviation safety specialist, the unit CO has the flexibility to determine their chair. In either case, the aviation safety specialist, or his or her appointee, must keep a record of attendance and discussion topics. Recommendations must be forwarded to the aviation safety council. The CO must respond to their recommendations in a timely manner.

h. Human Factors Review. COs have two methods by which they may stay apprised of the physical condition, the psychological well-being, attitudes, and the motivation of their personnel in a flight status which, for air stations, includes air traffic controllers. The first is a regular, proactive, informal, human factors review of all officer and enlisted personnel in a flight status. The second is a formal review conducted whenever the CO thinks it is necessary. Commanders must undertake their human factors review process as directed by ACC or other higher authority instructions on the subject, but it is recommended that all aviation activities, including naval airports, conduct human factors reviews, even if not mandated by higher authority. See CNAFINST 5420.2D or MCO 5100.29C VOL 4 provide for additional information.

(1) Human Factors Councils (HFC). Informal reviews will be conducted by a HFC that include, as a minimum, either the commanding or executive officer, the ASO, the operations officer, the training officer, the NATOPS officer, and the flight surgeon. Air station HFC's will include the air operations officer and ASO but may have a different mix of other staff level personnel dependent on manning. The information generated is for the CO's use only for the enhancement of safety. It must be kept in confidence and must not be used for disciplinary or administrative action. No official record or report is required; however, personal notes may be produced and retained by the CO. In Marine Corps units, human factors councils can be blended with force preservation councils. In cases where a unit flight surgeon is not assigned, a flight surgeon or APA from another command may assist.

(2) Human Factors Boards (HFB). HFBs will conduct a formal review of any area of a member's performance, training, health, attitude or motivation felt by the CO to be relevant. The human factors board should include, at a minimum, the ASO, flight surgeon, and any additional officers of the CO's choosing. The human factors board should be proactive. It is to be convened early on, once a significant problem or concern is discovered. Besides performance

concerns, commands can establish life-event triggers for human factors board initiation including: death in the family, birth of a child, marriage, divorce, etc. Its goal is to identify the specific problem(s) or concern(s) and provide a course of action for resolution or assistance. A formal report with conclusions and recommendations should be produced and forwarded to the CO for determination of final action. In cases where a unit flight surgeon is not assigned, a flight surgeon or APA from another command may assist.

(3) HFB and HFC reports, notes, materials or other work-product must not be appended or made an enclosure, in whole or part, to any SIR or mishap investigation file. HFB reports, notes, or materials may be used in support of the FNAEB or FFPB process, HFC documentation must never be used for this purpose.

i. ASAP. ASAP is a tool designed to allow aviation personnel to quickly report hazards or high-risk activities via the ASAP Safety Application on their phone or electronic device or through RMI. ASAP empowers all personnel to identify hazards and offer risk mitigating solutions. ASAP provides unit commanders and community leadership invaluable information about specific hazards, command culture, and trends deserving time and investment. All USN aviation ASAP entries are sent to RMI for triage where they are evaluated on whether they are HAZREP worthy or remain ASAP files. All USMC aviation ASAPs are currently sent to the USMC ASAP website for analysis. For additional USMC ASAP information and reporting requirements, see MCO 5100.29 VOL 4. Aggregated data in ASAP highlights "blind spots" before they become mishaps and degrade readiness. ASOs at all levels of command must review inputs at least monthly, take immediate action to resolve significant issues, and address reported hazard trends at quarterly ASCs. To access ASAP, visit https://asap.safety.af.mil (USN), https://asap-usmc.com/usmc/ (USMC) or download the ASAP app to your smartphone, called "Airman Safety App" in the App store.

j. Flight Planning and Scheduling. ASOs must be integrated into the flight planning and scheduling process. Doing so will provide an independent assessment of hazards and concerns. Air stations ASOs must ensure air operations personnel and airfield service providers are scheduling and executing their mission-set according to higher authority risk management instructions.

k. The Sleep Activity Fatigue Task Effectiveness-Fatigue Avoidance Scheduling Tool (SAFTE-FAST). SAFTE-FAST takes sleep and activity schedules and provides an estimate of an individual's fatigue level.

(1) Proactively, SAFTE-FAST can be used as a planning tool. Fleet users can enter sleep and activity (flight) schedules into the tool to estimate impacts on fatigue allowing commanders to make scheduling decisions to manage fatigue.

(2) During mishap investigations, mishap boards can enter mishap personnel's 72 hour and 14-day histories into the model to help determine how fatigued the personnel were at the time of the mishap. This helps in determining causal factors in mishaps.

(3) SAFTE-FAST is available at https://nsc.saftefast.com/scenarios/. Contact the NAVSAFECOM Aeromedical Division, NAVSAFECOM_CODE14_AEROMED@navy.mil, to establish an account.

l. Crew Resource Management (CRM). The purpose of the CRM program is to integrate the instruction of specifically defined behavioral skills throughout Navy and Marine Corps aviation training, and to integrate the effective application of these behavioral skills into operational aviation procedures wherever appropriate. CRM uses the Threat and Error Management Model to facilitate the effective application of these behavioral skills to efficiently prepare for threats, repair mismanaged errors, and recover from undesired aircraft states to avoid potentially fatal incidents or accidents. CRM training will increase mission effectiveness, minimize crew-preventable error, maximize aircrew coordination, and optimize risk management. The CRM framework not only provides benefits to aircrew, but the critical skills can be applied across naval aviation to include personnel operating across the airport environment. Station and higher headquarters ASOs should evaluate areas where the incorporation of CRM principals would enhance mission effectiveness. See COMNAVAIRFORINST 1542.7D for additional information.

207. Safety Assurance Component. Safety assurance evaluates the continued effectiveness of implemented risk control strategies and supports the identification of new hazards to ensure continuous improvement and effective management of change. This evaluation is based on information derived from numerous sources. These are typically surveys, audits, or standardization checks, but can be any source of information or evaluation of a SMS or SMP. To maximize effectiveness, these different sources must be layered to form defense-in-depth.

a. Safety Assessments. Safety assessments are a critical part of the safety assurance component. To get a holistic view on whether a unit is safe-to-operate and operating safely, safety assessments must look at every aspect of a unit's posture. This includes manpower, funding, readiness, training (currency and proficiency), planning, sustainment, policies, procedures, compliance and even aircraft design. Individually, honest assessment of these areas can provide important information, collectively they can show aggregate risk. The strengths and weaknesses uncovered during these assessments need to be recorded, best practices leveraged and encouraged, and deficiencies corrected with new procedures or policies to be re-assessed in the future for effectiveness. This layered defense system must leverage self-assessments, second party assessments, and independent assessments to validate the effectiveness of policies, procedures and controls. The key question assessors should ask is, "does an assessed command instill behaviors of self-awareness, self-assessment, self-correction, and continual learning in order to ensure that the command is safe-to-operate and is operating safely?"

(1) Level 1 - Self-Assessment. Unit self-assessments focus on self-awareness and self-correction. To be effective these self-assessments must be honest deep dives into the programs, policies, or actions which are being assessed. This will allow accurate and actionable information to flow up to decision makers who can adjust or enforce policies and procedures. Inaccurate reporting skews a command's risk picture and prevents the implementation of effective risk mitigation strategies. Unit self-assessment examples are:

(a) Quality Assurance (QA) audits and 3M Program Audits

(b) NATOPS, Instrument, and CRM checks

(c) Flight standardization checks

(d) Flight schedule evaluation process

(e) Daily and Turnaround inspections

(f) Safe for Flight certifications

(g) Knowledge checks

(h) Zone inspections

(i) Defense Readiness Reporting System (DRRS)

(j) Aircraft Material Readiness Report

(k) Human Factors Councils

(l) Airfield safety certification, BASH and civil air landing permit self-assessments

(m) Daily airfield pre-opening checks

(2) Level 2 - Second-Party Assessments. Second-party assessments are normally conducted by the chain of command to ensure compliance with the established standards. These usually require a formal unit response and a set timeline to correct discrepancies. As the accountable person, the commander must ensure corrections, especially to systemic problems, and codified into policies or procedures. Second-party assessments examples are:

(a) Aviation Maintenance Inspections

(b) Maintenance Program Assessment

(c) Flight Leadership Standardization and Evaluations (USMC)

(d) Commanding General Inspections (USMC)

(e) OFRP and deployment evaluations (Internal to the chain of command)

(f) ATC and airfield operations NATOPS inspections (OPNAV and CNIC)

(3) Level 3 - Third-Party Assessments. Third-party assessments are independent assessments from units outside the chain of command. Third-party assessments examples are:

(a) NAVSAFECOM Tier 1 (Echelon II and III) and Tier 3 (Local Area) assessments

(b) Marine Aviation Weapons and Tactics Squadron One and Naval Aviation Warfighting Development Command standardization flights

(c) NATOPS and Model Manager unit evaluations

(d) OFRP and deployment evaluations (External to the chain of command)

(e) Inspector General inspections

(f) Installation explosives safety inspections (External to the chain of command)

Note: NAVSAFECOM has transitioned from a unit-based assessment process to an enterprise-based process. NAVSAFECOM teams will conduct formal, independent assurance functions from Echelon II (e.g. U.S. Fleet Forces Command (USFLTFORCOM), U.S. Marine Corps Forces, Pacific (MARFORPAC)) through unit-level commands (e.g. squadrons, air stations) to evaluate the risk control system and continual self-improvement of the Naval Enterprise. No-notice Local Area Assessments (LAA) observing squadrons, detachments, airfields, and the supporting aviation infrastructure provide units with a quick look of their safety posture while collecting and validating data for the viability of higher Echelon's SMS. NAVSAFECOM LAA assessors will not formally debrief unit commanders but will provide observations to a unit representative. LAA results will be analyzed for systemic trends and rolled up in formal reports provided to the Echelon II commanders and USN and USMC leadership. This process identifies and analyzes risk decisions made by higher echelon commanders which have been pushed down to organizational-level commanders to manage and assigns risk accountability back up to the correct level.

Note: Although NAVSAFECOM no longer conducts regularly scheduled assessments upon request, in extreme situations, a unit may request a NAVSAFECOM "go team" to provide help. These requests must come through the unit's ACC to the Director,

Aviation Safety Programs (Code 10) unless there are inter-command climate concerns preventing that. NAVSAFECOM will assess the requesting unit but will also assess the chain of command to get comprehensive look at the concern and what actions each level of the chain of command has taken to attempt to mitigate these concerns. In most cases, the requesting unit's chain of command will fund the NAVSAFECOM team's travel.

b. Aviation Culture Workshop. Aviation Culture Workshops (ACW) provide a tool for commands to gain insight into the attitudes and behavioral norms of their members. Senior Navy and Marine Corps Reserve aviators facilitate this 2-day workshop format. The process is designed to provide a strictly confidential, external assist in aiding command leadership in identifying and mitigating risks associated with human behavior. NAVSAFECOM serves as the model manager for the ACW Program and COMNAVAIRFOR executes the program for Navy and Marine Corps aviation with support from CMC (SD). Send requests for ACWs to COMNAVAIRFOR at ACW.help@us.navy.mil or https://flankspeed.sharepoint-mil.us/sites/CNAFN45/ACWs/SitePages/TrainingHome.aspx.

c. Anymouse and Anonymous Reporting

(1) All command safety programs must provide a system for anonymously reporting hazards. Command personnel must be able to make a submission without fear of retribution. Anonymous online or electronic systems may be used as long as all command personnel have access to the system. If used, Anymouse boxes must be placed in a location where command personnel can make a submission without being observed. Do not include a requirement for the name of the person making the submission. Commands must set up a feedback mechanism to address issues raised by the program.

(2) Anymouse reports may be submitted to NAVSAFECOM for investigation and response. A hazard report may be released by NAVSAFECOM to ensure anonymity of the reporting command.

d. Online Safety Climate Assessment Surveys. There are many online climate assessment surveys available including the Commander, Naval Air Forces managed Command Safety Assessment Maintenance Climate Assessment Survey (CSA-MCAS). The periodicity and requirements for these surveys is determined by Service directives.

208. Safety Promotion Component

a. Safety Education and Awareness. Every command must contain a safety marketing, education and awareness element designed to not only educate its members on the proper management of safety information, but also teach them how to identify, report, and correct hazards. This educational effort includes a requirement for certain designated personnel to attend formal aviation and other safety-related courses of instruction. Unit safety training must

encompass all safety subjects including aeromedical safety, and the principles and practical applications of risk management. Training in the proper management of safety information must include:

(1) Collection of Safety Information. That includes guidance on how to properly receive and care for safety reports, correspondence, publications, films, and other safety materials.

(2) Distribution of Safety Information. That includes guidance on how to distribute safety reports, safety correspondence, periodicals, and other safety materials.

(3) Control of PSI. The proper control of PSI is critical to the success of the Naval Aviation Safety Program. This manual prescribes the proper distribution, handling, use, retention, and release of this information. See paragraph 508 for additional guidance on protection of safety information by AMB members.

b. Safety Stand Downs. Commands must conduct periodic safety stand downs devoted to providing dedicated time for safety training, awareness, and enhancement of the command safety climate. Safety is inherently a command function and the safety stand down is a forum for commanding officers to provide their safety guidance and expectations. This can be a long or short discussion, but the unit commander must be present and active for the safety stand down to be effective. There is no single format or environment that a safety stand down must adhere to, but interactive training and discussion has proven to be more effective than hours of briefings. All non-safety training should be divorced from safety stand downs so the safety training can be the focus of the event. Commands must conduct periodic safety stand downs devoted to safety training, awareness, and enhancement of the command safety climate. The frequency and agenda of safety stand downs will be determined by the chain of command.

c. Safety Training. Commanders must ensure safety training is regularly conducted and properly documented. Training should be integrated into the command annual training schedule, and where applicable, include a mix of classroom sessions, practical application, tabletop drills and live exercises. Commands must ensure that all personnel are trained and qualified for all billets and assigned tasks.

Note: Proper documentation for air station live exercises or mishap drills must include lessons learned.

d. Exchange of Safety Information. Encourage the exchange of safety information. Require command personnel to attend safety council meetings. Commands should liaise with senior staffs, nearby commands, and subordinate activities on safety-related matters. Write safety articles and submit them for publication. Although ASOs and safety specialists should be a constant presence on the hangar deck and flight line to interact with all maintenance divisions, ASOs and safety specialists must regularly coordinate efforts with their counterparts in the QA

Division. Integrating trends, hazards, and SIR reviews during maintenance technical training periods will increase safety awareness positively influencing procedural compliance and mishap prevention efforts.

e. Safety Awards. Annually, the SECNAV and the CNO present aviation safety awards to recognize and congratulate those Navy and Marine Corps commands that have demonstrated exceptional and sustained safety excellence. Like the Naval Aviation Safety Program awards individuals and units whose actions increased the safety awareness and mishap prevention posture of the Naval Aviation Enterprise, units must encourage and reward personnel who follow suit. The award method is up to command discretion, but programs like Safety Pro are highly encouraged.

209. Standing AMBs. AMBs apply universally to all the components of the Naval Aviation Safety Program. They are both backward looking finding root causes which caused and contributed to mishaps, as well as forward looking, determining future hazards and mitigation strategies. In essence they help build unit resilience. The analysis they provide is codified in SIRs which are maintained in RMI for safety training and awareness of naval aviation activities. Mishap and hazard investigations are difficult and require AMB training and platform or billet subject matter expertise. To accomplish this, each organizational-level aircraft reporting custodian must maintain at least one standing AMB led by the executive officer. Graduates of the ASO course must train the standing AMB members to the requirements of this manual as they pertain to mishap investigations, in mishap investigation techniques, handling PSI, and writing SIRs. Detachments are not required to maintain a standing AMB but must have personnel trained to initiate investigations until the appointed AMB arrives. An alternate trained standing AMB will ensure flexibility to all units, especially for units that routinely deploy detachments. In both cases, standing AMBs must be designated in writing. The executive officer, the standing AMB senior member, is accountable for all standing AMB requirements to include appointment, qualifications, training, and protection of PSI. Appendix 2A contains a sample appointment letter. Additional requirements are:

a. AMB standing board membership must consist of four personnel: at a minimum, an ASO (ASO course graduate), a flight surgeon, an officer well-qualified in aircraft maintenance, and an officer well-qualified in aircraft operations is required. In cases where a unit flight surgeon is not assigned, a flight surgeon or APA from another command may be designated.

b. Members of AMBs must be drawn from the ranks of commissioned officers on active duty in the USN or USMC. Civil Service personnel in designated aviation safety billets in naval aviation commands may serve as AMB members.

c. Officers on exchange duty from other Services, the USCG, or foreign PEP and Civil Service personnel may serve on AMBs but may not be the senior member. PEP officers must have a non-disclosure agreement in place with NAVSAFECOM prior to receiving access to PSI.

d. Enlisted personnel with the rank of E-6 and above may serve on AMBs for UAVs.

210. Pre-Mishap Plans. Pre-mishap plans support all four components of the Naval Aviation Safety Program. A pre-mishap plan describes - in advance - the steps that must be taken when a mishap occurs, anticipates all reasonable eventualities and devise measures to cope with them. Deficiencies may be identified through periodic drills designed to ensure the plan's smooth execution when a mishap occurs. At a minimum, pre-mishap drills must be conducted semi-annually, but other considerations such as location shift (detachment for training or deployment) may require an increase in frequency. Air stations will conduct one major integrated pre-mishap drill annually, but air operations departments will conduct at least one small airport–related, scenario-based drill every quarter. A checklist of items to consider when formulating a pre-mishap plan is in Appendix 2B. The recommended air station after action report template in Appendix 2C. For air stations, a sample pre-mishap plan instruction cover letter is in Appendix 2D and a sample pre-mishap plan template is in Appendix 2E. While the contents of a pre-mishap plan are largely at the option of the command, plans for Navy and Marine Corps airfields and aircraft operating facilities must address the elements listed in subparagraphs 210a through 210g.

a. Coordination with local news media, area law enforcement officials, civil fire and rescue agencies, the Environmental Protection Agency (EPA), Federal Aviation Administration (FAA) and plans for medical services including casualty treatment, evacuation, and retrieval of remains. Liaise with Military Services medical facilities, local civilian medical centers, medical examiners, coroners, and other county, State and Federal medical agencies. Local EPA offices can help notify proper personnel in the event of a mishap, even if the mishap is not in the local area.

b. Coordination with installation tenant commands to ensure required support for engineering services, supply, medical assistance, and hazardous material disposal will be available.

c. Coordination with nearby military aviation facilities to clearly delineate the geographic boundaries of responsibilities for immediate responses to an aviation mishap.

d. Provisions for an immediate telephone report to the reporting custodian of aircraft mishaps within the airfield's area of cognizance. If unable to contact the reporting custodian by phone, notify NAVSAFECOM. If the aircraft belongs to another Military Service, let the nearest activity of the service involved know of the mishap, then notify NAVSAFECOM. If the aircraft involved is either a civilian or foreign (military or civilian) aircraft tell the nearest FAA facility and then notify NAVSAFECOM.

e. Plan to protect aircraft wreckage so that it remains undisturbed for at least 24 hours. The only exception to this requirement to keep the crash site inviolate would be to protect life, limb, or property, to facilitate mishap investigations or to protect the wreckage from loss or further damage.

f. Provisions for explosive ordnance disposal (EOD) services that will render explosives in the aircraft wreckage safe and provide authorized storage facilities. Do not send EOD personnel into a crash site before a qualified mishap investigator has given permission. Valuable evidence may be lost through actions designed to make the area safe.

g. Air station pre-mishap plans or airport emergency plans must incorporate air operations, service providers, and tenant units, and include outlying airfields.

APPENDIX 2A
SAMPLE AMB APPOINTMENT

SSIC
Code
Date

From: (Commanding Officer, Commander, etc.)
To: (Name, Rank, Service, etc.)
Via: (Command of the appointed member if different from the appointing authority)

Subj: APPOINTMENT AS MEMBER OF (UNIT) AVIATION MISHAP BOARD

Ref: (a) OPNAVINST M-3750.6
(b) NAVAIR 00-80T-116 VOLs 1-4
(c) Organizational Safety Directive (Pre-Mishap Plan, etc.)

1. Based upon your professional experience and knowledge, I appoint you as (a member) (the senior member) of the (organization) AMB. You must follow the provisions of references (a), (b), and (c) in the performance of your duties. You must maintain complete familiarity with the content of these publications.

2. I direct your attention to the provisions of reference (a), which concerns privileged information. You must properly safeguard all privileged information to which you become privy as a member of the AMB.

3. When investigating and reporting an aviation mishap, your duties as a member of the AMB will take precedence over all other duties.

4. The responsibility inherent in this appointment extends beyond loyalties you may hold to this command. All of naval aviation depends on the efforts of AMBs to identify and eradicate the causes of injury to our people and damage to our equipment. The sole objective of an AMB is to improve safety. Therefore, your efforts should include a complete, open, and forthright expression of your views. To this end, I assure you that the aviation safety investigation report you produce will be used within this command, and elsewhere within the Department of the Navy, only for safety purposes.

5. Should any circumstances arise, which would prevent the proper performance of your duties as a member of the AMB, you must advise me immediately.

I. M. SAFE

APPENDIX 2B
SAMPLE PRE-MISHAP PLAN CHECKLIST

Pre-mishap plans are simply descriptions of who is responsible for doing what, both before and after an aircraft mishap.

Pre-mishap plans will vary widely, depending on the mission, resources, environment and personnel of the publishing command. Try to write pre-mishap plans so that they will remain valid during deployments. Incorporate an abbreviated pre-mishap plan into a letter of instruction (LOI) or implementing instructions for detachments. Other changes may be required when the command moves on or off a ship. The checklist provides some items for consideration in compiling a pre-mishap plan.

1. References

   a. OPNAVINST M-3750.6, Naval Aviation Safety Program

   b. The directives listed in the resources section of this manual

   c. OPNAV M-5090.1, Environmental Readiness Program Manual, of 25 June 2021

   d. STANAG 3531 (if in a NATO command)

   e. Pertinent safety directives of senior commands

   f. Pertinent safety directives of local commands

2. Text and Enclosures

3. Potential Pre-Mishap Items

   a. Provisions for Periodic Drills of the Pre-mishap Plan

      (1) Staff or department head pre-mishap responsibilities, including flight surgeon, APA or medical personnel

      (2) AMB task organization

   b. Responsibilities for Transportation Preparations

      (1) Travel orders

      (2) Passports

(3) Identified means of local transportation

c. Description of arrangements for obtaining photographic coverage of mishaps.

d. Description of coordination with local EOD and crash units.

e. Description of arrangements and coordination to deal with hazardous material.

f. Description of coordination with local EPA.

g. Description of coordination with local public affairs office organization.

h. Description of coordination with local civil or military medical activities.

i. Responsibilities for maintenance of mishap investigation kit.

j. Listing of contents of mishap investigation kit.

k. Plans and schedules for squadron duty officer (SDO) training.

4. Potential Post-Mishap Items

a. Plans and schedules for AMB training.

b. Responsibilities of SDO (or equivalent duty personnel).

c. Procedures for notification of overdue aircraft to airfield operations.

d. Listing(s) of personnel and commands to be notified (including names, telephone numbers, and addresses).

e. Procedures for use of local crash plan and notification system.

f. Procedures for recording information on aircraft mishaps.

g. Procedures for requesting emergency assistance.

h. Procedures and criteria for notification of FAA.

i. Responsibilities of CO and XO.

j. Responsibilities of staff and department heads (including assistance to the AMB).

k. Investigative responsibilities of each AMB member.

l. Guide(s) to mishap classification and serialization.

m. Checklist of reports required by OPNAVINST M-3750.6 and other directives.

n. RMI generic mishap worksheets, especially where internet access is limited or connectivity may be difficult (underway periods, austere locations, etc.).

o. Sources of assistance to the AMB; i.e., AMSO, etc. (list type of assistance available, command or individual, telephone number, address).

p. Plans for wreckage:

(1) Location assistance

(2) Recovery assistance

(3) Security measures

(4) Hazardous material procedures

(5) Transportation assistance

(6) Reconstruction site

(7) Engineering Investigations (EI)

(8) Release procedures

(9) Disposal procedures

(10) Material Safety Data Sheet

APPENDIX 2C
SAMPLE AIR STATION MISHAP DRILL AFTER-ACTION REPORT

SSIC
Code
Date

From: Aviation Safety Officer (ASO), (Installation)
To: Commanding Officer, (Installation)

Subj: (INSTALLATION) MISHAP DRILL AFTER ACTION REPORT (AAR)
DD MMM YYYY

1. Summary. (Insert summary here) Example: At XXXX, on DD MMM YYYY, the installation conducted a mishap drill in order to evaluate the installation's mishap response and to test the effectiveness of the pre-mishap plan. This drill involved the (list applicable personnel here, example: aviation safety officer (ASO), aviation mishap board (AMB), operations duty officer (ODO), emergency reclamation team (ERT), airfield manager, and all available ATC personnel). The focus of the drill was to instruct personnel on mishap procedures and immediate actions. The drill lasted X hours with the execution of the pre-mishap plan followed by (AMB, ERT, other) members embarking to a simulated mishap site to execute immediate actions.

2. Execution. The installation contacted the (unit) safety office to inform them that a drill was being conducted. (Insert scenario execution here).

a. Describe the scenario

b. What roles key members were assigned

c. How the drill was executed

d. How the events of the drill unfolded and what actions were taken

e. How long did it take

Example: The Air Operations Department scheduled a (aircraft type/model/series) to land in landing zone (LZ) Eagle to simulate a downed aircraft at an LZ. An installation officer, playing the role of a witness to a helicopter crash, placed a phone call to the installation ODO. The caller informed the ODO of the mishap drill, at which point, the ODO began executing the mishap plan. The Safety Department head observed the execution of the mishap plan by the AMB and available pilots. The ERT was informed via maintenance control and the ERT officer-in-charge (OIC) monitored their procedures. Once the pre-mishap plan was completed, the AMB and ERT embarked to the mishap site. At the mishap site, the ERT executed their immediate actions

supervised by the ERT OIC. Installation officers played the roles of a site witness and a news reporter. The AMB and ERT were instructed on how to coordinate with witnesses, the press, crash fire rescue, and the police. The mishap drill was completed in X hours and both teams returned to MCAS XXXX. A debrief of the mishap was conducted with members of the AMB and the ERT OIC the following week.

3. Result. The mishap drill showed that: (Insert a brief summary of results and findings here).

Example: The pre-mishap plan directs the ODO to execute all required tasks within the first hour following a mishap. In this case the ODO was successful in meeting this timeline.

4. Feedback from the mishap drill identified the following areas for improving the mishap plan and mishap site operations: (List several areas for improvement in the format provided in 4a and 4b.)

a. (Observation 1)

(1) Discussion. (Insert why this is important)

(2) Recommendation/Action. (Insert recommendations or actions)

(3) CO's comments.

_____
_____
_____

b. (Observation 2)

(1) Discussion.

(2) Recommendation/Action.

(3) CO's comments.

_____
_____
_____

5. The point of contact for the Mishap Plan and Mishap Drill coordination is Captain Ivan M. Safe who can be reached at (XXX)-XXX-XXXX.

I. M. SAFE

APPENDIX 2D
SAMPLE AIR STATION PRE-MISHAP PLAN INSTRUCTION COVER LETTER

INSTALLATIONINST 3750
Code
Date

(INSTALLATION) INSTRUCTION 3750

From: Commander, Installation

Subj: PRE-MISHAP AND SALVAGE RESPONSE PLANS
(*Optional to include salvage plan in same instruction*)

Ref: (a) OPNAVINST 3750.6
(b) The directives listed in the resources section of this manual
(c) OPNAV M-5090.1 of 25 June 2021
(d) STANAG 3531 (if in a NATO command)
(e) (Pertinent safety directives of senior commands)
(f) (Pertinent safety directives of local commands)

Encl: (1) Pre-Mishap Response Plan
(2) Salvage Response Plan *(optional to include in same instruction)*

1. Purpose. Example: To provide general guidelines and responsibilities for aircraft mishap reporting, investigations, and salvage operations, and to identify gaps and seams in an air station's organic capability for mishap and salvage response.

2. Scope and Applicability. Example: This coordinated plan should be used by command personnel when responding to an aircraft mishap. It is not meant to be all encompassing or restrictive in nature. Primary emphasis is placed on actions required during the first few hours following an aircraft mishap and the collection and dissemination of pertinent information.

Note: Most installations are not reporting custodians, but there is still a responsibility to report and assist as required.

3. Initial Responsibilities. Example: The primary concern following an aircraft mishap is the preservation of life and the prevention of additional damage to property or injury to personnel. Responders are responsible for rescuing crash victims, making the scene safe, and initiating the Incident Command System (ICS). Safeguarding wreckage is a secondary concern.

a. Locate the crash.

b. Dispatch rescue, crash and medical services.

c. Initiate notification and reporting per this plan for transient aircraft

d. Secure the area. *(Who will proceed to scene, who will begin investigation, etc.)*

e. Support salvage operations as necessary to recover wreckage. *(Optional)*

f. Submit reports as required.

Note: CNIC Installations are tasked to support wreckage recovery. The NAVSAFECOM mishap investigator assigned owns and controls all wreckage and real evidence connected with the mishap until the investigator releases it to the AMB's senior member. The AMB senior member then has full authority of the wreckage until the senior member turns it over to the reporting custodian who will request disposition from the aircraft controlling custodian. The authority for salvage operations then shifts to the aircraft controlling custodian. Per reference (d) installation Commanding Officers (CO) are designated the Facility Incident Commander (FIC) with regard to Navy oil and hazardous substance releases.

4. Action: Example: All personnel assigned responsibility for any part of the pre-mishap plan must become thoroughly familiar with its contents and related references. If an Aircraft Mishap Board is required, the Senior Member must ensure training and readiness of the AMB. Periodically, but not less than annually, the AMB must conduct a drill to exercise the pre-mishap plan. Aviation safety officers must ensure duty officers and watch standers are properly trained in reporting procedures.

a. General. Any person having knowledge of an aircraft in distress, a mishap involving damage no matter how slight to an aircraft, or injury to personnel working on an aircraft must report such to installation duty personnel immediately. Except as provided in this instruction, personnel must not divulge any information, officially or unofficially, to any other party.

b. Specific. Enclosure (1) is provided to assist action officers in the event of a mishap. Deviation from the procedures in this instruction is permitted; however, each step should be completed as soon as possible. Mishaps must not be discussed with persons outside the command until information has been released by proper authority. Proper Authority is designated as (Public Affairs from command/wing/installation/CNATRA).

c. Installation Commanding Officer. Establish a command pre-mishap response plan. Pre-mishap and salvage plans are not required to be part of the same instruction, as is presented here

for the sake of brevity. Assign a qualified ASO to manage the aviation safety component of the command pre-mishap response plan.

5. Records Management. Example: Records created as a result of this, regardless of media and format, must be managed per Secretary of the Navy Manual 5210.1 of September 2019.

6. Review and Effective Date. Example: Per OPNAVINST 5215.17A, the Aviation Safety Officer will ensure this instruction is reviewed annually on its effective date to ensure applicability, currency, and consistency with Federal, DoD, SECNAV, and Navy policy and statutory authority using OPNAV 5215/40. This instruction will automatically expire 10 years after its issuance date unless reissued or canceled prior to the 10-year anniversary date, or an extension has been granted.

I. M. SAFE

Releasability and distribution: This instruction is cleared for public release and is available electronically only via (location/website).

APPENDIX 2E
SAMPLE AIR STATION PRE-MISHAP PLAN TEMPLATE

Pre-mishap plans are simply descriptions of who is responsible for doing what, both before and after an aircraft mishap.

Pre-mishap plan responses to various mishap scenarios may vary widely, depending on the mission, resources, environment and personnel of each installation. The template provides a general pre-mishap plan format for the purposes of standardization across air stations. Tabs should be utilized for easy access to checklists and required items, and for the ability to provide individual action checklists to personnel familiar with the pre-mishap response plan to assist watch standers or duty personnel.

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Chapter 1 – PRE-MISHAP GUIDELINES AND CHECKLISTS

(RMI generic mishap worksheets, especially where internet access is limited or connectivity may be difficult (underway periods, austere locations, etc.)

Chapter 2 – REPORTS

(Checklists required by OPNAVINST M-3750.6 and other directives)

Chapter 3 – PERSONNEL RESPONSIBILITIES

(Consider command duty officer (CDO), SDO, CO, XO, OIC, AMB, flight surgeon, air operations officer, Public Works, fire, security, PAO, tenant wing or squadron support)

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CHAPTER 3
EVENT CATEGORIZATION AND CLASSIFICATION

301. Purpose. This chapter describes how to determine the appropriate naval aviation event category, as well as define damage and injury classifications, subcategories and types. Aircraft event classification is a complex process. The earliest information may be limited and incomplete and require best estimates from the accounting organization as to the extent of damage and injury. Knowing this, the reporting system provides ample opportunity to correct initial estimates. Do not delay reporting to determine an exact cost. If the estimate is near a severity threshold, then report a higher severity mishap and downgrade, if necessary, rather than reporting a lower severity and upgrading later.

302. Background. A safety event is broad term used to describe an occurrence or series of occurrences which involve risk to naval assets. For DON investigation and safety reporting purposes, an aviation event can be categorized as a mishap, hazard or an incident. For aviation mishaps, the mishap severity class (A, B, C, D, E) together with the mishap subcategory (FM, FRM, or AGM) can constitute the mishap classification such as, "Class B FM" or "Class A AGM."

a. Aviation Mishap. A naval aviation mishap is an unplanned or unexpected event or series of events, directly involving a defined naval aircraft or UAV, which results in reportable damage injury, or illness. See paragraph 308 for specifics.

b. Aviation Hazard. Any real or potential condition that can cause injury, illness or death to personnel or damage to or loss of equipment or property or mission degradation but has not met mishap classification thresholds. Hazards are divided into two categories:

(1) An act or event (i.e., near miss) that may have resulted in a mishap where the fatality, injury, illness, property damage or loss of an asset was avoided merely by chance, the actions of an individual or individuals, a small measure of distance or a few moments in time.

(2) A workplace condition that might result in injury, health impairment, illness, disease or fatality to any person who is exposed to the condition, or which might result in damage to or loss of property or equipment.

c. Aviation Incident. A planned or unplanned occurrence or series of occurrences resulting in injury, illness, or damage that does not meet aviation mishap reporting criteria or is exempt from aviation safety reporting. This does not necessarily mean reporting is not required as a ground mishap under the OPNAVINST M-5102.1/MCO 5100.29C.

303. Policy. All events that meet the definition of a reportable aviation mishap or hazard and are not exempted, must be investigated and reported per the guidelines established in this manual. SIRs and HAZREPs must be submitted into the RMI system within 30 calendar days of

the event or hazard identification. Extensions to the 30-day requirement during the investigative process must be submitted to the convening authority for approval.

304. Actions. After an event occurs, conduct the actions listed in subparagraph 304a through 304d.

a. Check paragraphs 305 and 306 that define naval aircraft and UAVs and the list of exceptions to those definitions. If naval aircraft or UAVs are not involved, there is no need to report under provisions of this manual with the exception of some HAZREPs that have implications for aviation safety. The OPNAVINST M-5102.1/MCO 5100.29C describe other reporting requirements that may apply. If a defined naval aircraft or UAV is involved, continue this checklist.

b. Read paragraph 307, which explains damage, injury, and illness, and paragraphs 308 and 309, which define naval aviation mishaps and exceptions. If a defined naval aviation mishap has not occurred, there is no need to report the event as a mishap, but if a mishap exception was used, report the event as an incident or a HAZREP. If the criteria for a naval aviation mishap have occurred, continue with this checklist.

c. Determine, or make a best estimate, for property damage, injuries, or illnesses. Paragraph 316 and the diagram in Appendix 3A define the severity classifications. For mishaps that require summing costs of property damage see paragraph 319. If no injury, illness, or damage occurred, report the event via a HAZREP.

d. Determine the aviation mishap subcategory: AGM, FM, and FRM. Paragraph 317 describes these subcategories. They are diagrammed in Appendix 3B. These subcategories are based off of intent for flight as well as damage to the aircraft.

305. Naval Aircraft Defined. As stated in chapter 1 and paragraph 302, for an aviation mishap to occur, there must be a defined naval aircraft directly involved. If naval aircraft are not involved, then report the mishap under the OPNAV M-5102.1/MCO 5100.29C VOL 9. For the purpose of this manual, the UAV, not the whole UAS, is considered the aircraft and will be included in subsequent discussions under the terms "defined naval aircraft," "naval aircraft," or "aircraft," unless otherwise specifically annotated separately for clarity. The term "defined naval aircraft" refers to those aircraft of the USN, USNR, USMC, and USMCR for which the naval aircraft accounting system requires accountability. Included in this definition are all manned, weight-carrying devices supported in flight by buoyancy or dynamic action, man-rated aircraft when operated remotely as drones with no live operator on board (except when designated as a target), Group 3-5 UAVs, and aerostat balloons. This includes:

a. Aircraft owned or leased by the Navy or Marine Corps (including Reserve) that are operated and exclusively controlled or directed by the Navy or Marine Corps.

b. Furnished by the Government, loaned, or on bailment to a non-DoD organization for modification, maintenance, repair, test, contract training, or experimental project for a DoD component, when the Government has assumed ground and flight risk.

c. Aircraft under test by the DON. This includes aircraft furnished by a contractor or another Government agency when operated by a DoD aircrew in official status and a DD Form 250, Material Inspection and Receiving Report, has been executed to certify that the DON has accepted the aircraft.

d. As stated in paragraph 305, for purposes of reporting UAV mishaps under this manual, the focus is on the aerial vehicle and not the entire UAS. There is, however, nothing preventing submission of a HAZREP for any part of the system that produces a hazard to safety of flight.

306. Exceptions to the Naval Aircraft Definition. The exceptions listed in subparagraph 306a through 306h are not defined as naval aircraft. Mishaps occurring to them are not reportable under the provisions of this manual; however, CNO may decide to participate in mishap investigations involving them. Conduct JAGMAN investigations whenever litigation against or by the U.S. Government is expected.

a. Aircraft leased, on bailment, or loaned (except, as specified in 305b) to contractors, commercial airlines, other Government agencies, or foreign governments, when the lessee has assumed risk of loss.

b. Civil aircraft owned by civil operators engaged in contract air missions for the USN or USMC. This includes contractor owned aircraft conducting public aircraft operations and aircraft designated as U.S. state aircraft. The fiscal loss of the contracted aircraft, and any third-party liability costs, are borne by the contractor through private insurance mandated in the contract. In some cases where there is no public interest in the mishap, the National Transportation Safety Board (NTSB) and FAA may direct the contracting entity to conduct the investigation. Contractor mishaps will not be reported as DON mishaps and typically, the contracting entity will direct the contractor to investigate the mishap and submit the investigation report to the DON for oversight and dissemination. A mishap involving contracted aircraft where the government is accepting liability is still not considered a defined naval aircraft but, in some cases, may require investigation by the Naval Safety Command and COMNAVAIRSYSCOM.

c. Factory-new production aircraft until successful completion of the post-production acceptance flight. Mishaps that involve such aircraft are reported as contractor mishaps. COMNAVAIRSYSCOM will investigate mishaps involving aircraft owned by Government contractors in which there is damage to DoD property or injury to other DoD personnel.

d. Unmanned target drone aircraft and ballistic or semi-ballistic vehicles.

e. Navy flying club aircraft or privately owned aircraft stored in a hangar on a DoD installation. These are reportable under OPNAV M-5102.1/MCO 5100.29C VOL 9.

f. Group 1 and 2 UAVs flown by traditional and non-traditional aviation activities.

g. An aircraft when it is being handled as a commodity or cargo.

Note: This exception includes aircraft in preservation and packaged for shipping, aircraft being craned, winched, or already loaded onto ground vehicles, cargo aircraft, and commercial shipping. Aircraft being towed by DoD personnel or mishaps on air-capable ships do not fall under this exception.

h. Aircraft components already removed from a defined naval aircraft, regardless of whether or not they are still assigned to the aircraft, will not be counted as damage to the defined naval aircraft and must be reported under OPNAV M-5102.1/MCO 5100.29C VOL 9 unless the event meets the criteria as a mishap exception. Example: A panel is removed from an aircraft for maintenance and is subsequently damaged in the maintenance shop by a grinder, this event would be investigated and reported as a non-aviation ground mishap. Components damaged while being removed do not fall under this exception.

307. Damage, Illness and Injury Explained

a. Damage. Damage is a physical harm caused to something in such a way as to impair its value, usefulness, or normal function. The DoD uses monetary cost thresholds to determine damage of DoD or non-DoD property.

b. Injury. Injury is a traumatic wound or other condition of the body caused by an external force or exposure received while involved with manned or unmanned defined naval aircraft. For the purposes of this manual, an illness directly resulting from an aviation mishap will be treated as a work-related injury and will be included in subsequent discussions under the term "injury" unless otherwise specifically annotated separately for clarity. The injury or illness must be caused by a specific event or series of events in a single day or work shift. See paragraph 311 for specifics.

c. Damage and Injury. The term "damage and injury" is divided into two categories. The first results from the immediate causes of the mishap. The second entails avoidable or additional damage and injury from factors not associated with the immediate causes of the mishap. If the total damage and injury in an event exceeds an established severity threshold, that event is called a mishap.

d. Example. An improperly designed engine forces an aircraft to crash-land resulting in mishap-level damage. After landing, the aircraft burns because its fuel system was not crashworthy, and some occupants are burned because their flight clothing was not flame-resistant. In this case, there is not only a mishap with its associated cause and damage to the

aircraft, there is also additional damage and injuries occurring during or immediately after the mishap. The damage and injury have their associated causes; however, none of them was the cause of the mishap. Although there was only one mishap, there are three factors that resulted in damage or injury. Under the Naval Aviation Safety Program, all of them must be addressed.

308. Naval Aviation Mishap Defined. Paragraph 308 details aviation mishap definitions.

a. A naval aviation mishap is an unplanned event or series of events, directly involving a defined naval aircraft, that results in damage to DoD property; illness to DoD personnel; injury to on or off-duty DoD military personnel; injury to on-duty DoD civilian personnel; or damage to public or private property, or injury or illness to non-DoD personnel, caused by DoD activities. As previously stated, an illness directly resulting from an aviation mishap is also included under the term injury for the purposes of this manual. While any of these events is a mishap, damage and injury thresholds determine how they will be reported.

b. Damage incurred as a result of salvage efforts do not count as mishap costs on the involved aircraft. Damage such as corrosion or fire that happens while the aircraft is awaiting salvage must be included in mishap calculations.

c. A diagram of naval aviation mishap classification and subcategories is in appendices 3A and 3B and includes:

d. Five classes of mishap severity: A, B, C, D and E; all defined in paragraph 316.

e. Three mishap subcategories: AGM, FM and FRM; all defined in paragraph 317.

309. Exceptions to the Naval Aviation Mishap Definition. Subparagraphs 309a through 309l are not categorized as naval aviation mishaps. These events must not be reported as mishaps in this manual except where noted but should be reported as incidents or HAZREPs for awareness or if corrective actions need to be taken.

a. Damage or injury by DEA to include maneuvering conducted relative to hostile fire or a perceived hostile threat, or hostile force. DEA events must be reported in RMI.

Note: This exception does not include suspected cases of friendly fire.

b. Intentional, controlled jettison or release, during flight, of canopies, cargo, doors, drag chutes, hatches, life rafts, auxiliary fuel tanks, missiles, drones, rockets, non-nuclear munitions, streamed or towed airborne mine countermeasure equipment, dipped or streamed sonar systems and externally carried equipment not essential to flight when there is no injury, no reportable damage to the aircraft or other property and when the reason for the jettison is not a malfunction.

Note: If intentional release or jettison of an object causes damage to the aircraft or other property (not including jettisoned items), then the event will be reported as a mishap. The mishap classification will be determined by the cost threshold of the damage not including the intentionally jettisoned items. Inadvertent jettison, loss or release of an object due to an aircraft system malfunction or aircrew error is a mishap and must be reported. Loss of streamed or towed airborne mine countermeasure equipment, dipped or streamed sonar systems as a result of unknown undersea environmental conditions are not a mishap unless it is the result of an aircraft malfunction or aircrew error. Loss of streamed or towed airborne mine countermeasure equipment, dipped or streamed sonar systems as result of an aircraft malfunction or aircrew error will be subcategorized as FRMs. Costs associated with environmental cleanup are costed regardless if the jettison was intentional or not.

c. Replacement of component parts due to wear and tear, when the component fails without human factors associated with the failure, and when all damage is confined to the component part. This exemption only applies to items that are normally used until they fail or until predetermined wear limits are reached. The need for replacement may not be evident until malfunction or failure of the part. Resultant damage to other components is reportable, but do not cost the excepted component. Only NAVSAFECOM can approve a wear and tear exception.

Note: This exception includes internal engine failures (normal wear and tear) for which there is no reportable injury or damage to other property or components. This exception does not apply if the damage is caused by servicing a component with the wrong, substandard or contaminated material that results in reportable damage. If software (e.g., software improperly coded, software logic error, software constraint violation) causes damage to hardware, the software is considered a separate component.

Note: This exception also may apply during UAV landing or recovery operations when the UAV strikes the landing area or capture mechanism on parameters and is damaged. The single component rule still applies.

d. Intentional or expected damage to DoD equipment or property incurred during NAVAIRSYSCOM, U.S. Naval Research Laboratory, or Naval Postgraduate School developmental testing or combat training, including missile and ordnance firing. This expected damage must be documented in the test plan. Intentional or expected damage to UAVs being used as a weapon is also exempted as long as the UAVs is damaged in the target area as opposed to during launch, recovery or en route.

Note: UAS higher probability of loss does not constitute a mishap exception or alleviate the reporting custodian from mishap investigation and reporting.

e. Foreign Object Damage (FOD) to aircraft, air-breathing missiles, or drone engines discovered during scheduled engine disassembly at an intermediate or depot level maintenance facility.

Note: Damage (normal wear and tear) from a source internal to aircraft engines, air-breathing missiles, or drone engines is not a mishap unless the FOD damages a component external to the engine. When it is determined that the damage was caused by external FOD (i.e., something entered the intake from any external source) including aircraft components, aircrew or maintenance personnel error or action, runway or taxiway debris or components, or a BASH event, the command has a mishap. All FOD events discovered by a reporting custodian will be initially investigated and reported as a mishap. If the FOD is determined by a depot level facility to be an internal failure, then NAVSAFECOM may approve a mishap exception. The exceptions for internal FOD will be reported via an incident or HAZREP.

f. Property damage, death or injury as a result of vandalism, riots, civil disorders, sabotage, terrorist activities or criminal acts such as arson. Negligence, whether criminal or not, is not considered a mishap exception because the damage or injury was not the intended outcome.

g. Normal residual damage as a result of a missile launch.

h. Contractor injury mishaps in which the contractor is not under the direct supervision of DoD personnel. Contractor mishaps which damage DoD property must be reported as a mishap based on the established mishap thresholds.

i. Occupational or work-related illness caused by repeated exposure (of more than one day's duration) to environmental factors associated with the work environment. Report these illnesses per the OPNAVINST M-5102.1/MCO 5100.29C.

j. Reportable injury or damage sustained during a planned aircraft egress (such as parachute jumping, aerial delivery, rappelling) if the aircraft or aircrew actions did not contribute to the injury or damage. If the aircrew actions result in damage to the aircraft, report the mishap as a FM. If the aircrew actions do not result in aircraft damage but damage or injury to personnel or equipment egressing the aircraft, report the mishap as an FRM.

k. Damage to an aircraft, when it is being handled as a commodity or cargo.

Note: This exception includes aircraft in preservation and packaged for shipping, aircraft being craned, winched, or already loaded onto ground vehicles, cargo aircraft, and commercial shipping. Aircraft being towed by DoD personnel or mishaps on military shipping do not fall under this exception.

l. Aircraft inducted into depot-level maintenance, between formal induction into the maintenance event and completion of re-assembly of the aircraft for ground or flight functional checks. Damage or injury occurring during depot-level maintenance will be investigated per reference OPNAVINST M-5102.1/MCO 5100.29C and a ground hazard or mishap report must be submitted when appropriate.

310. Intent for Flight Defined. Subparagraphs 310a through 310c dictate the criteria which apply to DoD aircraft involved in aircraft mishaps. Intent for flight is a prerequisite for the classification of a naval aviation mishap as an FM or FRM.

a. Fixed Wing Aircraft Intent for Flight. Intent for flight exists when the fixed wing aircraft's brakes are released (not for taxi purposes) or takeoff power is applied to begin an authorized flight. For catapult takeoffs, flight begins at first motion of the catapult after pilot has signaled readiness for launch. For UAV rocket-assisted takeoff (RATO), flight begins at the first sign of RATO bottle ignition. For UAV pneumatic launches, flight begins at first sign of pneumatic launcher motion after the pilot has signaled readiness for launch.

b. Helicopter, Rotary Wing and Tiltrotor Aircraft Intent for Flight. Intent for flight exists for skid and wheel configured helicopters, rotary wing and tiltrotor aircraft when takeoff power is applied, including during hover taxi.

c. Intent for Flight Continues Until:

(1) The fixed-wing aircraft taxies clear of the runway or landing area. UAV flights may also end at recovery in a net, or when captured by another recovery system.

(2) The helicopter, rotary wing or tiltrotor aircraft has landed at the termination of the flight and the skids or landing gear supports the aircraft weight. Touch-and-go or stop-and-go landings are not terminations of flight.

311. Injury Defined

a. A reportable injury is any bodily harm such as a cut, fracture, burn, or poisoning received while directly involved with naval aircraft, so long as these injuries, updated until the final endorsement has been sent, result from a single- or one-day exposure to an external force, toxic substance, or physical agent, and result in a:

(1) Fatality, regardless of the time between injury and death.

(2) Permanent total disability.

(3) Permanent partial disability.

(4) Lost workday injuries - defined as causing the loss of one or more workdays (not including the day of injury).

(5) Light or limited duty.

(6) First aid injuries or greater.

b. Consider only these injuries in determining the severity classification of a naval aviation mishap:

(1) All injuries to active duty, on or off-duty, DoD military personnel (including reservists).

(2) All injuries to on-duty DoD civilian personnel, including foreign nationals attached to the DoD.

(3) Fatal injuries to anyone.

312. DoD Personnel and Non-DoD Personnel Defined. These definitions apply when determining mishap severity. While non-DoD personnel injuries are reported, they must not be used to determine mishap severity, except that any non-DoD fatality will result in a Class A mishap.

a. DoD Personnel

(1) Civilian. General schedule, administratively determined, and wage grade employees (including National Guard and reserve technicians, unless in military duty status), non-appropriated fund employees (except military members employed part time), Corps of Engineers Civil Works employees, youth or student assistance program employees, foreign nationals employed by DoD components, and military exchange employees.

(2) Military. Personnel on active duty, active duty for training, or inactive duty for training in the U.S. Army, USMC, USN, U.S. Air Force, U.S. Space Force and U.S. Coast Guard; personnel on active duty, active duty for training or inactive duty for training in the National Guard of the United States under the provisions of either Title 10, U.S. Code (i.e., Federally funded, command and control with the President of the United States through combatant commanders) or Title 32, U.S. Code (i.e., Federally funded, command and control with the State Governor through the Adjutant General); personnel on active duty in a Naval Militia under the provisions of Title 10, U.S. Code; cadets of the U.S. Military Academy; midshipmen of the U.S. Naval Academy; cadets of the U.S. Air Force Academy; cadets of the U.S. Coast Guard Academy; midshipmen of the U.S. Merchant Marine Academy when engaged in directed training activities with a DoD component or the U.S. Coast Guard; Reserve Officer Training Corps cadets or midshipmen when engaged in directed training activities; officer

accession program students when engaged in directed training activities; and foreign national military personnel assigned to a DoD component or the U.S. Coast Guard.

Note: Personnel on State active duty in the National Guard of the United States or in the Naval Militia are excluded.

b. Non-DoD Personnel. Off-duty DoD civilian personnel, persons employed by other Federal agencies, and other civilians and foreign nationals not employed by DoD.

313. Duty Status Defined. These definitions are for mishap reporting purposes only and have no relation to compensability or line-of-duty determination.

a. On Duty. DoD personnel are on-duty when:

(1) Physically present at any location where they are to perform their officially assigned work. Officially assigned work includes organization-sponsored events an employee is permitted to attend, regardless of location. This includes those activities related to normal work activities that occur on DoD installations, such as lunch, coffee, or rest breaks, and all activities aboard military vessels.

(2) Being transported by DoD or commercial conveyance to perform officially assigned work. (This includes travel in personal motor vehicles or commercial conveyances while performing official duty, but not routine travel to and from work.)

(3) On temporary duty or temporary additional duty. Personnel on assignment away from the regular place of employment are covered 24 hours a day for any injury that results from activities essential or incidental to the temporary assignment. However, when personnel deviate from the normal requirements of the trip and become involved in activities, personal or otherwise, that are not reasonably incidental to the duties of the temporary assignment contemplated by the employer, the person ceases to be considered on-duty for investigation and reporting purposes of injuries.

b. Off Duty. DoD personnel are off-duty when they are not on-duty as indicated in subparagraph 313a. Reserve component personnel performing inactive duty training (IDT) (e.g., drill, additional flight training program flights) will be considered off-duty:

(1) When traveling to or from the place at which such duty is performed; or

(2) While remaining overnight, immediately before the commencement of IDT; or

(3) While remaining overnight between successive periods of IDT, at or in the vicinity of the site of the IDT, unless the site of the IDT is outside reasonable commuting distance of the member's residence.

314. Days Away from Work and Restricted Work

a. Days Away from Work. Those days when a person loses one or more workdays as a result of an injury, starting with the day after the injury occurred and including calendar days the person was unable to work, regardless of whether the person was scheduled to work on those days. For military personnel, days away from work for on- and off-duty injuries include inpatient hospitalization, medical restrictions to quarters, convalescent leave, and commander directed removal from duties at the place of employment.

b. Days of Restricted Work or Transfer to Another Job. Days of restricted work or transfer to another job are those days on which a person is working but restricted from completing assigned tasks, works less than a full day or shift, or is transferred to another task to accommodate the injury. Calendar days not scheduled to work are included in the count of days. Count of days is stopped when the person is either returned to their pre-injury job or permanently assigned to a job that has been modified or permanently changed to eliminate the routine functions the person was restricted from performing. For military personnel, restricted work or transfer to another job includes limited- and light-duty assignments.

315. Injury Classification. Injury classifications are: fatal injury, permanent total disability, permanent partial disability, lost workday injury, recordable injury, lost at sea, missing or unknown.

a. Fatal Injury. A fatal injury is an injury that results in death from a mishap or the complications arising there from, regardless of the time intervening between the mishap and a subsequent death.

b. Permanent Total Disability. Any non-fatal injury or work-related illness that in the opinion of competent medical authority permanently or totally incapacitates a person to the extent that he or she cannot follow any gainful occupation and results in a medical discharge or civilian equivalent. (The loss, or the loss of use of both hands, both feet, both eyes, or a combination of any of those body parts as a result of a single mishap will be considered as a permanent total disability.)

c. Permanent Partial Disability. An injury or work-related illness that does not result in death or permanent total disability, but, in the opinion of competent medical authority, results in permanent impairment through loss of the use of any part of the body with the following exceptions: teeth, fingernails, toenails, tips of fingers or tips of toes without bone involvement, inguinal hernia, disfigurement, or sprains or strains that do not cause permanent loss of motion.

d. Lost Workday Injury. An injury that does not result in death, permanent total disability or permanent partial disability, but results in one or more lost workdays, not including the day of injury. For purposes of naval aviation mishap reporting, lost workday injuries are further divided into major lost workday injury, (10 or more lost workdays) and minor lost workday injury, (one

or more, but less than 10 lost workdays.) A minor lost workday injury meets the definition of a Class C mishap however, the AMB may consist of a SIO as directed by the accounting organization. A major lost workday injury is also at least a Class C mishap report, but also requires a standard AMB.

e. Recordable Injury. For the purposes of Navy and Marine Corps safety reporting, the recordable injury will be limited to events involving Government civilian and contractor work-related injury and illness reporting to the Occupational Safety and Health Administration (OSHA). DoD uniformed personnel will be considered reportable mishaps. Recordable injuries, like reportable mishaps, are those receiving at least first aid treatment or those involving loss of consciousness, days away from work (not including the day or shift it occurred), light or limited duty for military personnel, restricted work or job transfer for on-duty Navy and Marine Corps civilian employees or fractured and cracked bones or teeth. First aid is generally when individuals are treated and released (e.g., observation or counseling, diagnostic procedures, including X-ray and blood tests, over-the-counter medications at over-the-counter strength, tetanus booster shot, cleaning, flushing or soaking wounds, wound coverings, including suture substitutes such as butterfly bandages or sterile strips, hot or cold treatment, non-rigid support such as ace, non-rigid back belts, etc., temporary immobilization for transport purposes, drilling of nail to relieve subungual hematoma, eye patches, foreign body removal from eye using only irrigation or swab, simple skin removal, finger guards and massages). When applied by a medical professional, medical adhesives or gels (i.e. DermaBond) constitute greater than first aid treatment. For purposes of Class D mishap reporting, apply the definition of a recordable injury requiring treatment greater than first aid or not otherwise classified as a Class A, B, or C Mishap with up to one day (the day or shift of the injury only) away from work. Any additional days away from work would constitute at least a Lost Workday Injury and represent at a minimum a Class C mishap. All injuries requiring first aid treatment only (not greater than first aid treatment) and not meeting the other stipulations of a recordable injury will be reported as a Class E.

f. Lost at Sea

g. Missing or Unknown

Note: Lost at sea and missing or unknown injuries are not listed in RMI but equate to a fatality for mishap severity-level classification. Paragraph 316 defines mishap severity levels.

316. Naval Aviation Mishap Severity Classes. Mishap severity classes, based on an involved defined naval aircraft, personnel injury and property damage, apply to all three subcategories of mishaps. ACCs or convening authorities, in consultation and coordination with NAVSAFECOM, must ensure that mishaps are properly classified and that exceptions to mishap definitions are properly used. CNO N09F is the final authority for mishap classification and the determination of mishaps exceptions. To determine mishap costs, see paragraph 319.

a. Class A Mishap. A Class A mishap is one in which the total cost of damage to DoD or non-DoD property or aircraft is $2.5 million or more, or a naval aircraft is destroyed or missing, or any fatality or permanent total disability of personnel results from the direct involvement of naval aircraft. A destroyed or missing UAV is not a Class A unless the cost is greater than $2.5 million or there is any fatality or permanent total disability of personnel.

b. Class B Mishap. A Class B mishap is one in which the total cost of damage to DoD or non-DoD property or aircraft is $600,000 or more, but less than $2.5 million, or results in a permanent partial disability, or when three or more personnel are hospitalized for inpatient care as a result of a single mishap (which, for mishap reporting purposes only, inpatient care does not include individuals hospitalized for observation, diagnostic reasons, or for administrative purposes that were treated and released).

c. Class C Mishap. A Class C mishap is one in which the total cost of damage to DoD or non-DoD property or aircraft is $60,000 or more, but less than $600,000, or a nonfatal injury that results in one or more days away from work, not including the day or shift of the injury.

Note: See paragraph 314 for investigations involving injuries that are one or more day away from work up to and including 10 days away from work.

d. Class D Mishap. A Class D mishap is one in which the total cost of damage to DoD or non-DoD property or aircraft is $25,000 or more, but less than $60,000; or there is a recordable injury requiring treatment greater than first aid or that is not otherwise classified as a Class A, B, or C mishap (e.g., loss of consciousness, light or limited duty for military personnel or restricted work or job transfer for on-duty Navy and Marine Corps civilian employees, or fractured and cracked bones or teeth). For purposes of Class D mishap reporting, this would include injuries with up to one day (the day or shift of the injury only) away from work. Any additional days away from work would constitute at least a Lost Workday Injury as previously defined and represent at a minimum a Class C mishap.

e. Class E Mishap. A Class E mishap is one in which the resultant total cost of damages to DoD or non-DoD property or aircraft is greater than $0, but less than $25,000 or there was a reportable injury requiring only first aid treatment or is not otherwise characterized in paragraph 316. Naval aviation Class E mishap reporting is mandatory per this manual.

Note: Class E mishaps are not privileged and are treated as HAZREPs with cost or first aid injury.

317. Naval Aviation Mishap Subcategories

a. AGM. A mishap involving one or more defined naval aircraft where there is no intent for flight that results in reportable damage, injury, or death. This applies to both on land and on-board ship. Jet blast or rotor wash damage by a non-DoD or unknown airborne aircraft to a DoD

aircraft on the ground will be reported as an AGM. Jet blast or rotor wash damage by a DoD aircraft with no intent for flight will also be reported as an AGM.

b. FM. A mishap involving one or more defined naval aircraft where there is intent for flight and reportable damage to a DoD aircraft or the loss of a manned DoD aircraft. Explosives, chemical agent, or missile events that cause damage to an aircraft with intent for flight are categorized as FMs. Mishaps involving factory-new production aircraft until successful completion of the post-production flight are reported as contractor mishaps.

c. FRM. A mishap involving one or more defined naval aircraft where there is no reportable damage to the aircraft itself, but the mishap involves a fatality, reportable injury, or reportable property damage. A missile that is launched from an aircraft departs without damaging the aircraft and is subsequently involved in a mishap is reportable as a guided missile mishap or a FM, and not an FRM. Jet blast or rotor wash damage or injury from a known DoD aircraft with intent for flight to DoD or civilian property (including aircraft) or personnel on the ground will be reported as an FRM.

318. Naval Aviation Event Types. In order to standardize event reporting and data collection the subparagraphs 318a through 318aa are used for determining mishap and hazard types. The list includes the name and, where appropriate, an abbreviation or acronym in parenthesis. There is also a definition, aircraft mishap use, inclusive statement and exclusive statement. Type selection may not be possible until the completion of the mishap investigation and may be modified thereafter.

a. Abrupt Maneuver (AMAN). Damage or injury caused by intentional abrupt maneuvering. Flight, flight related, ground operations.

(1) Includes: Structural damage from aerodynamic overstress (e.g., exceeded aircraft gravity design). Damage or injury when objects or people are thrown about by abrupt maneuvering. Practice autorotations which recover prior to ground contact.

(2) Excludes: All midair collisions (see MIDAIR, subparagraph 318o). Collisions with terrain, water, trees and man-made obstacles (see CFIT, subparagraph 318d). Hard landings, skids and runway excursions (see Airfield Operations, subparagraph 318b).

b. Airfield Operations (AFOPS). Events occurring during takeoff, landing or other powered movement on prepared airfield surfaces, austere fields and helicopter landing zones. Flight, flight related, ground operations, hazard.

(1) Includes: Collisions with aircraft, flight line vehicles or equipment, or stationary objects (e.g., light poles) while moving on the ground or in hover taxi. Wing, tail or nacelle scrapes. Skids, hydroplaning, departures from prepared surfaces, and runway excursions; excessive drift on ground contact. Abnormal landings (e.g., hard, short, hot, long, heavy),

accidental gear-up landings, or practice autorotations which lead to ground contact at a prepared airfield. Rejected takeoff and hot brake mishaps. Events involving system failures when crew response was both improper and inadequate and well below reasonable expectations.

(2) Excludes: Towing mishaps (see Ground Handling and Servicing Operations, subparagraph 318k). Intentional gear-up landings, runway excursions and other mishaps when primarily caused by system or power plant failures (see SYSTEM, subparagraph 318w and POWER, subparagraph 318u). Wildlife strikes or wildlife activity (see BASH, subparagraph 318z). Aircraft touchdown prior to available runway under-run (see CFIT, subparagraph 318d). Events involving Whiteout or Brownout or Degraded Visual Environment (see WOBO, subparagraph 318y). Aircraft, vehicles, or pedestrians entering a Controlled Movement Area without specific control tower approval that do not endanger airborne aircraft or aircraft operating on the ground (see CMAV, subparagraph 318e). Near midair collisions (see NMAC, subparagraph 318q); Controlled Movement Area incursions that do not endanger airborne aircraft or aircraft operating on the ground (see CMAV, subparagraph 318e); or occurrences on the airfield movement area that endanger airborne aircraft or aircraft operating on the ground (see HATR, subparagraph 318l).

c. Cabin and Cargo (CAB/CAR). Miscellaneous events in either the cockpit, passenger cabin, or cargo compartment. Flight, flight related, ground operations, hazard.

(1) Includes: Events which involve internal cargo or equipment, including leaks (e.g., fuel from cargo, over-serviced lavatories), cabin configuration problems, and cargo shifts.

(2) Excludes: Smoke and fumes from overheated or failed electrical and mechanical components (see SYSTEM, subparagraph 318w). Ground Handling and Servicing Operations events that involve cargo loading or unloading (see GHAND, subparagraph 318k).

d. Controlled Flight into Terrain (CFIT). Events involving collision with terrain, water, trees or a man-made obstacle during flight prior to planned touchdown. Flight.

(1) Includes: Events involving impact with terrain, water, trees or man-made obstacles where the aircraft is controllable, and the pilot is actively controlling the aircraft or the pilot's ability to control the aircraft is reduced due to spatial disorientation (SD). Events where the aircraft is flown in controlled flight to a point where it is no longer possible to avoid unintended ground impact (e.g., attempted maneuver with insufficient altitude or airspeed, low altitude over bank or flight into a box canyon), regardless of subsequent pilot reaction (e.g., ejection, stall, spin, etc.). Intentional autorotation (non-system or power plant related) to areas other than a prepared airfield, which lead to ground contact.

(2) Excludes: Hard landings near the intended runway (e.g., on the under-run) or landing zone or practice autorotation to a prepared airfield (see Airfield Operations, subparagraph 318b). Aircraft departures from controlled flight that ultimately result in ground impact when collision

avoidance was still reasonably preventable prior to departure (see Pilot Loss of Control In-Flight (PLOC), subparagraph 318t). Unavoidable ground impact due to System Failure or Malfunction (e.g., flight control failure, loss of thrust) (see SYSTEM, subparagraph 318w and POWER, subparagraph 318u). Events resulting from encounters with Whiteout or Brownout (WOBO) conditions (see WOBO, subparagraph 318y). Events resulting from Insufficient Power (IPOWER) (see IPOWER, subparagraph 318m).

e. Controlled Movement Area Violation (CMAV). Events involving aircraft, vehicles, or pedestrians entering a Controlled Movement Area without specific control tower approval. Hazard.

(1) Includes: Aircraft, vehicles, or personnel entering controlled movement areas including taxiways, parking areas, or runway without clearance.

(2) Excludes: Violations resulting in the endangerment of an aircraft or landing or departing without clearance (see HATR, subparagraph 318l).

f. Environment and Weather (ENV/WX). Events resulting from encounters with weather or man-made environmental phenomena. Flight, flight related, ground operations, hazard.

(1) Includes: Weather (e.g., lightning, static discharge, thunderstorms, hail, freezing rain, ice accumulation, wind shear, turbulence, mountain waves, volcanic ash, tornados, dust storm, etc.) and man-made environmental phenomena (e.g., wake turbulence and vortex encounters).

(2) Excludes: Carburetor icing (see FUEL, subparagraph 318j). Events resulting from encounters with WOBO conditions (see WOBO, subparagraph 318y). Events caused by wildfires or other external sources of a fire or an explosion (see FIRE/EXP, subparagraph 318h).

g. External Operations (EXT OPS). Events related to personnel or equipment physically attached but which operate as a non-permanent external system to the aircraft. Flight, flight related, hazard.

(1) Includes: Rappelling, fast-rope (specialized rappelling), stabilized extraction without lift (STABO), rescue hoist operations, airborne mine countermeasure sled operations, sonar dipping operations, and sling-load or vertical replenishment operations.

(2) Excludes: Injury to personnel or damage to internal aircraft systems, including damage caused by the malfunction or failure of fuselage or wing stores (e.g., bombs, missiles, external tanks, pods, antenna, etc.) or their attachment hardware (see SYSTEM, subparagraph 318w).

h. Fire or Explosion (FIRE/EXP). Events or hazards initiated by an external source of fire or explosion. Flight, flight related, ground operations, hazard.

(1) Includes: Events resulting from an external fire (e.g., forest fire, grass fire, etc.) or explosion (e.g., unidentified weapons cache, rocket arming and exploding early, etc.).

(2) Excludes: Fire and explosions initiated by aircraft system or power plant failure (see SYSTEM, subparagraph 318w and POWER, subparagraph 318u) or where a fire or explosion is secondary to the principal cause.

i. Foreign Object Damage (FOD). Damage or the potential for damage due to foreign objects or debris from another failed aircraft component. Flight, ground operations, hazard.

(1) Includes: Events where aircraft damage (or potential damage) is due a foreign object or impact with another failed component (e.g., shards of tires). Events where power plant damage is due to an ingested object (e.g., ice, support equipment, hand tool, runway and taxiway debris, fasteners, panels, shards from failed tires, etc.).

(2) Excludes: Damage from wildlife strikes and wildlife activity (see BASH, subparagraph 318z). Power plant damage due to the failure of internal power plant components (see POWER, subparagraph 318u).

j. Fuel-Related (FUEL). Events where one or more power plants experienced or had the potential to experience reduced or no power output due to a fuel anomaly. Flight, ground operations, hazard.

(1) Includes: Fuel exhaustion, starvation, mismanagement, contamination, leakage, trapped fuel, the incorrect fuel, lack of required additives, carburetor icing and the inadvertent placement of a throttle to cutoff.

(2) Excludes: Power plant initiated fuel problems (e.g., fuel controls) (See POWER, subparagraph 318u).

k. Ground Handling and Servicing Operations (GHAND). Events resulting from improper ground handling or servicing, or as the result of the failure of ground handling or servicing equipment. Ground operations, hazard.

(1) Includes: Towing and cargo loading and unloading events; Ground servicing events (e.g., jacking, craning, refueling, deicing, fold, etc.); Injuries while conducting ground operations (must directly interact with an aircraft, e.g., fall from aircraft, struck by aircraft, cut while on aircraft, etc.); Damage to other objects or injury to personnel due to jet blast from stationary aircraft.

(2) Excludes: Damage to an aircraft (e.g., power plants, systems) undergoing ground operational checks (see POWER, subparagraph 318u and SYSTEM, subparagraph 318w).

Ground Handling and Servicing Operations mishaps that occur onboard ships (see SHIP/EMBLAND, subparagraph 318v).

l. Hazardous Air Traffic Report (HATR). Events resulting in or from potentially hazardous aviation practices, publications, procedures, or navigational aid or communication systems. Hazard.

(1) Includes: Events or occurrences within controlled airspace and on the airfield movement areas which endanger airborne aircraft or aircraft operating on the ground. Including safety related problems within flight information publications, notices to airmen, aeronautical information publication, or other related publications that did or could contribute to a hazardous air traffic condition or altitude deviations. This also includes airfield communications or navigational equipment malfunctions or improper indications.

(2) Excludes: Near midair collisions (see NMAC, subparagraph 318q), Controlled Movement Area incursions that do not endanger airborne aircraft or aircraft operating on the ground (see CMAV, subparagraph 318e).

m. Insufficient Power (IPOWER). Events resulting in ground or water impact when power required exceeds power available. Flight.

(1) Includes: Events involving helicopters, tiltrotors and vertical takeoff and landing aircraft where power required is greater than power available, settling with power, and rotor droop or loss of tail rotor authority when caused by requesting more power than is available.

(2) Excludes: All mishaps involving conventional takeoff and landing aircraft. All mishaps to vertical takeoff and landing aircraft when flown conventionally. Mishaps involving helicopters, tiltrotors and vertical takeoff and landing aircraft that occur due to IPOWER when that insufficiency is caused by a power plant failure (see POWER, subparagraph 318u).

n. Laser Strike (LSRST). Events involving ground-based or airborne laser energy directed at an aircraft in flight. Flight, flight related, hazard.

(1) Includes: Laser events resulting in, or with the potential to result in, eye-irritation requiring post-flight medical evaluation.

(2) Excludes: Intentional hostile or criminal acts.

Note: Besides an RMI entry, all laser events, intentional or unintentional (e.g., incidents, hazards, and mishaps) involving DoD aircraft must be reported per Chairman of the Joint Chiefs of Staff Instruction 3320.02F via DoD Laser Safety Event Hotline at commercial 800-473-3549 or DSN 312-798-3764.

o. Midair Collision (MIDAIR). Collision between aircraft when intent for flight exists. Flight, UAV.

(1) Includes: Mishaps resulting from collision between aircraft when intent for flight exists. Inadvertent contact during formation takeoffs and air-refueling operations.

(2) Excludes: Mishaps resulting from collision between taxiing aircraft (see Airfield Operations, subparagraph 318b).

p. Near Controlled Flight into Terrain (N-CFIT). Events that could have led to a collision with terrain, water, trees or a man-made obstacle during flight prior to planned touchdown. Hazard.

(1) Includes: Automatic Ground Collision Avoidance System (Auto-GCAS) or pilot activated recovery systems, or any time aircrew intervenes to avoid a CFIT.

(2) Excludes: Auto-GCAS activations when the pilot is incapacitated (see PHYSEP, subparagraph 318r and PE, subparagraph 318s).

q. Near Midair Collision (NMAC). Events in which intent for flight exists and where aircrew took, or would have taken, abrupt evasive action to avoid an airborne collision with an aircraft, or another aircraft were within 500 feet and presented a hazard to flight safety. Hazard.

(1) Includes: Traffic Collision Avoidance System Resolution Advisories which required aircrew to deviate from a planned or assigned flight path. While unintentional separation less than 500 feet meets these criteria, it is not required unless there is a hazard to flight safety.

(2) Excludes: Any physical contact between aircraft (see MIDAIR, subparagraph 318o).

r. Physiological Episode (PHYSEP). Injury, illness, or adverse physiological, psychological, pathological, or physical symptoms experienced by aircraft occupants that manifest during powered ground operations, actual flight, or after a flight. Flight, flight related, ground operations, hazard.

(1) Includes: Spatial disorientation (SD) that does not result in a MIDAIR or CFIT. All gravity-induced (G-induced) loss of consciousness (GLOC), hypoxia and other PHYSEPs.

(2) Excludes: SD events occurring during WOBO conditions or resulting in a MIDAIR or CFIT (see WOBO, subparagraph 318y; MIDAIR, subparagraph 318o; and CFIT, subparagraph 318d).

s. Physiological Event (PE). A PE is a "subset" of a PHYSEP and occurs when aircraft occupants experience injury, illness, or adverse physiological, psychological, pathological, or

physical symptoms during powered ground operations, actual flight, or after a flight AND these are attributed to a known or suspected aircraft or aircrew systems malfunction. Flight, flight related, ground operations, hazard.

(1) Includes: SD that does not result in a midair collision or CFIT when the aircrew symptoms are attributed to an aircraft or aircrew systems malfunction. All GLOC, hypoxia and other PHYSEPs when the aircrew symptoms are attributed to an aircraft or aircrew systems malfunction.

(2) Excludes: SD events occurring during WOBO conditions or resulting in a midair collision or CFIT (see WOBO, subparagraph 318y; MIDAIR, subparagraph 318o; and CFIT, subparagraph 318d). PHYSEPs not attributed to a known or suspected aircraft or aircrew systems malfunction (see PHYSEP, subparagraph 318r).

t. Pilot Loss of Control In-Flight (PLOC). Aircrew failure to maintain control of the aircraft while in flight. Flight, hazard.

(1) Includes: Events resulting from failure to control the aircraft during flight, when that loss of control is not primarily related to environment, weather or any system failure. Includes departures, stalls and spins. For UAVs, includes "lost link" mishaps when the "lost link" is not attributable to a System Failure or Malfunction.

(2) Excludes: Control loss due to a Power Plant or System Failure or Malfunction (see POWER, subparagraph 318u and SYSTEM, subparagraph 318w). Control loss due to environment or weather (see Environment and Weather (ENV/WX), subparagraph 318f). Helicopter, tiltrotor and vertical takeoff and landing aircraft mishaps resulting from encounters with Whiteout or Brownout conditions (see WOBO, subparagraph 318y). Helicopter, tiltrotor and vertical takeoff and landing aircraft mishaps resulting from Insufficient Power (see IPOWER, subparagraph 318m). Intentional stalls and spins for training where recovery is uneventful.

u. Power Plant Failure or Malfunction (POWER). Failure or malfunction of a thrust-producing system or related components. Flight, ground operations, hazard.

(1) Includes: Events resulting from failure or malfunction of an aircraft thrust-producing system or related component (e.g., fuel controls, engine-mounted gearboxes, propellers, thrust reversers, thrust vectoring components). Includes maintenance and crew induced failures.

(2) Excludes: Damage due to ingestion of foreign objects and debris (see FOD, subparagraph 318i). Damage from wildlife strikes (see BASH, subparagraph 318z). Damage to gearboxes or other components that are not either engine-mounted or included in the transfer of engine power to thrust or lift producing components (e.g., aircraft mounted accessory drives, blade de-ice system, etc.) (see SYSTEM, subparagraph 318w).

v. Ship-Related/Embarked Landing (SHIP/EMBLAND). Events resulting from ship-board flight or ground operations or the failure of unique ship-board equipment for launching, maintaining or recovering aircraft. Flight, flight related, ground operations, hazard.

(1) Includes: Mishaps or hazards which are a result of flight or ground operations onboard any ship (e.g., ramp strikes, aircraft movement, cargo loading or unloading events, refueling, emergency low visibility approaches to the ship, etc.), the direct coordination with shipboard air traffic controllers, or the failure of unique ship-board equipment (e.g., parted wires, catapult failures, etc.).

(2) Excludes: Events that do not physically involve the shipboard environment, such as flights originating from a ship but not in direct contact with the ship. Events that could equally have occurred in a non-shipboard environment (e.g., power plant or system failure, wildlife strike) (see POWER, subparagraph 318u; SYSTEM, subparagraph 318w; and BASH, subparagraph 318z).

Note: Contact the USN Landing Signal Officer (LSO) School for EMBLAND events involving CVN aircraft recovery. Provide LSO School personnel access to the Integrated Launch and Recovery Television System (ILARTS) tapes in RMI or forward to the U.S. Navy Landing Signal Officer School, NAS Oceana, Virginia Beach, VA 23460-5129.

w. System Failure or Malfunction (non-power plant) (SYSTEM). Events or unsafe conditions involving the failure or malfunction of a system or component - other than the power plant. Flight, ground operations, hazard.

(1) Includes: Mishaps resulting from failure of aircraft system or component - other than the power plant. Includes maintenance and crew induced failures.

(2) Excludes: Damage from wildlife strikes and wildlife activity (see BASH, subparagraph 318z). Failure of low dollar value components (e.g., fasteners, sealant, fairings, panels, tires, etc.) that result in significant FOD to aircraft or power plants (see FOD, subparagraph 318i). Crew induced UAV lost-link (see PLOC, subparagraph 318t). Power Plant Failure or Malfunctions (see POWER, subparagraph 318u). Failure, injury, damage or loss due to externally operated systems or missions including parts internal to the aircraft (i.e. reeling machine, rescue hoist control panel during search and rescue, etc.) (see EXT OPS, subparagraph 318g).

x. Things Falling Off Aircraft (TFOA). Events involving the unintended loss of aircraft parts, aircrew gear, or any other object not designed to jettison while airborne. Flight, flight related.

(1) Includes: Events resulting from aircraft parts (panels, fasteners, external lights, etc.), aircrew gear (NVDs, gloves, helmets, cases, bags, etc.), guns or ammunition (unexpended ammo, ammo cans, weapon parts, etc.) or personnel falling off or out of an aircraft unintentionally.

(2) Excludes: Intentionally discarded objects or externally operated systems including but not limited to: fast-rope, hoist, sling-loads, towed arrays, etc. (see EXT OPS, subparagraph 318g). Aircraft component or objects which cause additional damage to the aircraft (see FOD, subparagraph 318i).

y. Whiteout or Brownout (WOBO). Mishaps or hazards resulting from encounters with WOBO conditions during takeoff or landing. Flight, flight related, hazard.

(1) Includes: Events involving helicopters, tiltrotors and vertical takeoff and landing aircraft resulting from encounters with WOBO conditions during takeoff or landing.

(2) Excludes: All events involving conventional takeoff and landing aircraft. All mishaps to vertical takeoff and landing aircraft when flown conventionally. Mishaps involving helicopters, tiltrotors and vertical takeoff and landing aircraft where WOBO conditions are present, but the mishap results from another condition such as power plant failure, system failure, or rotor droop (see POWER, subparagraph 318u; SYSTEM, subparagraph 318w; and IPOWER, subparagraph 318m).

z. BASH. An event due to collisions with wildlife or resulting from wildlife activity. Flight, flight related, ground operations, hazard.

(1) Includes: Collisions with birds and other wildlife. Damage resulting from wildlife activity such as nesting within aircraft.

(2) Excludes: Wildlife strikes encountered after or as a result of an aircraft system or power plant failure (see POWER, subparagraph 318u; SYSTEM, subparagraph 318w) or where a wildlife strike is secondary to the principal cause of the event (see appropriate category for the cause of the event).

Note: Any remains, found on the aircraft or runway must be collected and mailed to the Smithsonian Feather Identification Laboratory for identification and analysis after the associated BASH report is created in RMI.

aa. Other (OTHER). Any occurrence not covered under another category. Flight, flight related, ground operations, hazard.

(1) Includes: Events when insufficient information exists to categorize the occurrence (unknown and undetermined), for mishaps that occur infrequently such as friendly fire, or for an exceptional occurrence which is not likely to be repeated.

(2) Excludes: All reported events that can be more accurately categorized in another available mishap type.

Note: Friendly Fire (FF) mishaps or hazards are unintentional damage or a near miss to friendly forces and include the terms FF, blue on blue, harm to friendly forces. Mishaps in which members of a U.S. or friendly military force are mistakenly killed, or wounded, or equipment damaged by U.S., or allied forces actively engaged with an enemy, or a presumed enemy. Although not a separate event type, use the OTHER. Additionally, FF events must be annotated in the General Information section of RMI. Additionally, notify the Joint Staff (J-6), Joint Fires Integration Division, at (757) 203-8603, DSN 668-8603 or js.norfolk.j6.list.dd-c5i-jf-div-ffrip@mail.mil. See paragraph 414.

319. Determining Aircraft Mishap Costs. The AMB calculates aviation mishap costs by totaling the cost of property and aircraft damage in RMI. RMI will add injury costs to the total.

a. DoD Property Costing

(1) The intent of this subparagraph is to provide direction on how to determine costs of damage to DoD aircraft, non-aircraft DoD property and non-DoD property as a result of a mishap. Parts, labor, repair costs and environmental damage repair are used as a methodology to determine the scope of the event and determine when mishap thresholds are met. For mishap reporting and costing purposes, there are no "free" parts, such as those that are removed from a stricken aircraft to replace damaged parts. For aircraft that are not destroyed, a financial decision to not repair an aircraft (e.g., strike the aircraft early) or replace a component does not affect the cost for mishap reporting purposes. Mishap damaged parts, even when they are due for replacement when an aircraft is scheduled for a modification or overhaul, must be included in mishap costing. Compute the cost of damage to DoD property using the best-known cost of repair or replacement. Base these cost estimates on the price of materials and man-hours necessary to repair the damage. For assessing damage cost to aircraft, use figures provided by the fleet readiness center that has cognizance of the damaged aircraft. Report direct man-hours spent removing and replacing damaged components. Direct man-hours are the cumulative man-hours - expended at any maintenance level - to affect complete repair of the aircraft and restore it to serviceable condition. Aircraft parts which may be damaged, and which require removal from the aircraft for intermediate or depot level inspection to ascertain the extent of damage must be reported.

(2) When a component, including engines, is economically repairable and sent to an intermediate level or higher maintenance facility, and planning and estimate (P&E) information is not available, calculate the cost of repair by computing 15 percent of the item's initial cost - not the turn-in cost. Report man-hours spent removing and replacing the damaged part.

(3) Base cost estimates on damaged engines sent to intermediate or higher-level maintenance facilities for repair on engine cost information from NAVSAFECOM. If repairable,

use 15 percent of the original engine cost as the estimate if P&E information is not available. Report man-hours spent in removing and replacing the engine(s).

(4) Include in the cost estimates the man-hours spent removing undamaged parts to gain access to those that are damaged. Include those man-hours spent in anticorrosive work following saltwater immersion, as the result of an aviation mishap. It is a violation of the intent of this manual to remove a damaged assembly and replace it with a new one in an attempt to avoid costing the number of man-hours spent on repairs and, thereby, lower the mishap classification.

(a) Do not report man-hours spent removing or disassembling undamaged parts to gain access to areas where damage is suspected unless damage is found.

(b) Do not include those man-hours consumed setting up maintenance stands or other support equipment in preparation for the repair effort.

(c) If commercial equipment is rented for aircraft movement or space is rented for aircraft repair, do not include those costs in the cost of the mishap.

(5) If an aircraft is destroyed, the accounting organization reports this in RMI, and the costs will be auto-populated.

(6) Include in the cost estimates only that damage sustained as a direct result of the mishap. Do not include costs of any further aircraft damage resulting from rescue or salvage efforts. Do not include the cost of intentionally jettisoned or released equipment. See the note below subparagraph 309b if the jettison or release damages the aircraft.

(7) Use supply system "as new" cost for any parts acquired from salvage for repair.

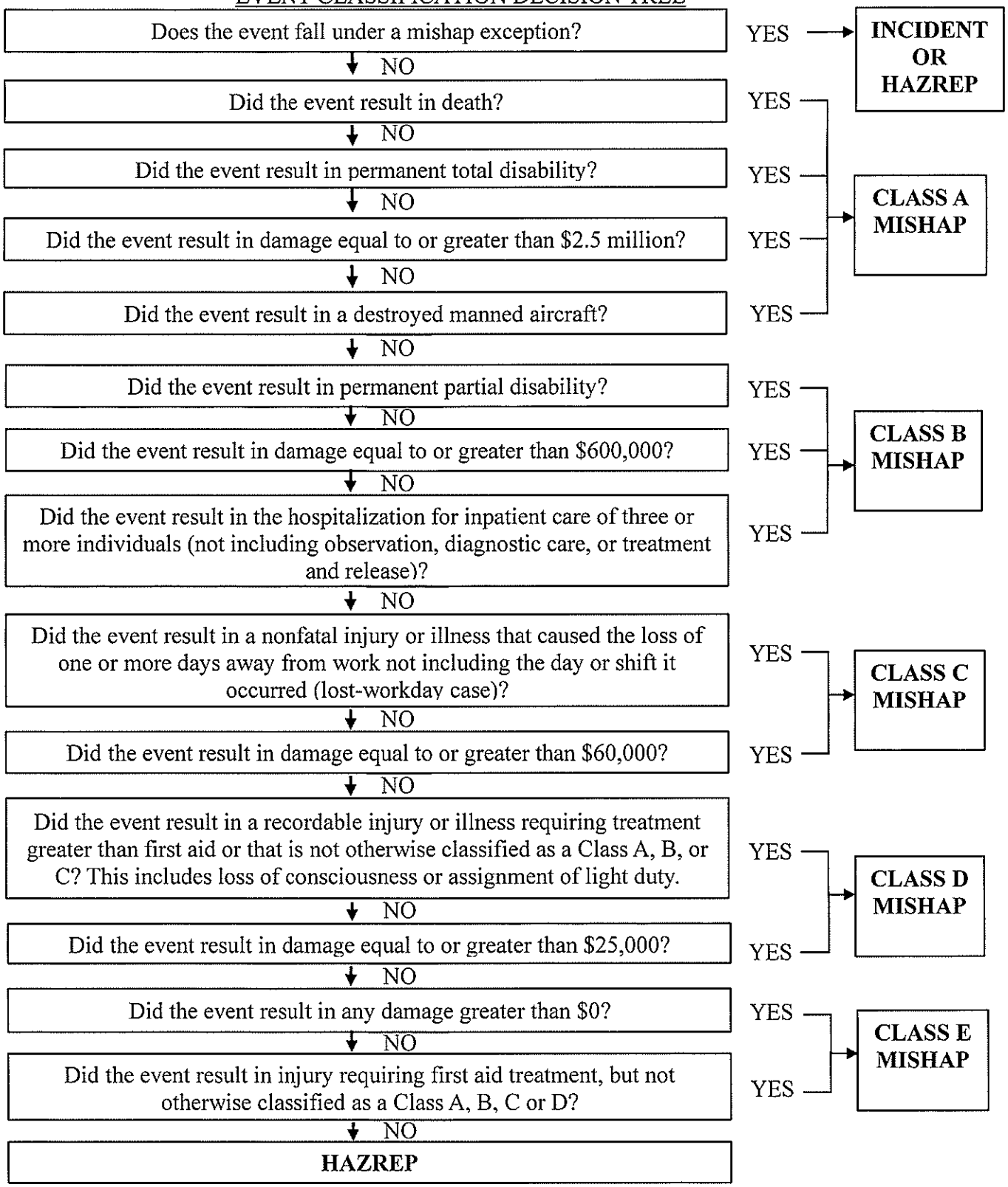
(8) Determine non-aircraft DoD property damage costs from the damage sustained as a result of the mishap. Do not include any further damage that results from rescue or salvage efforts. The cost of decontamination, environmental restoration and restitution at the crash site is part of the mishap total cost. If the actual cost is unavailable, use the best estimate.

(9) Accounting organizations are responsible for informing the endorsement chain via a status message when changes in total cost will change mishap severity classification.

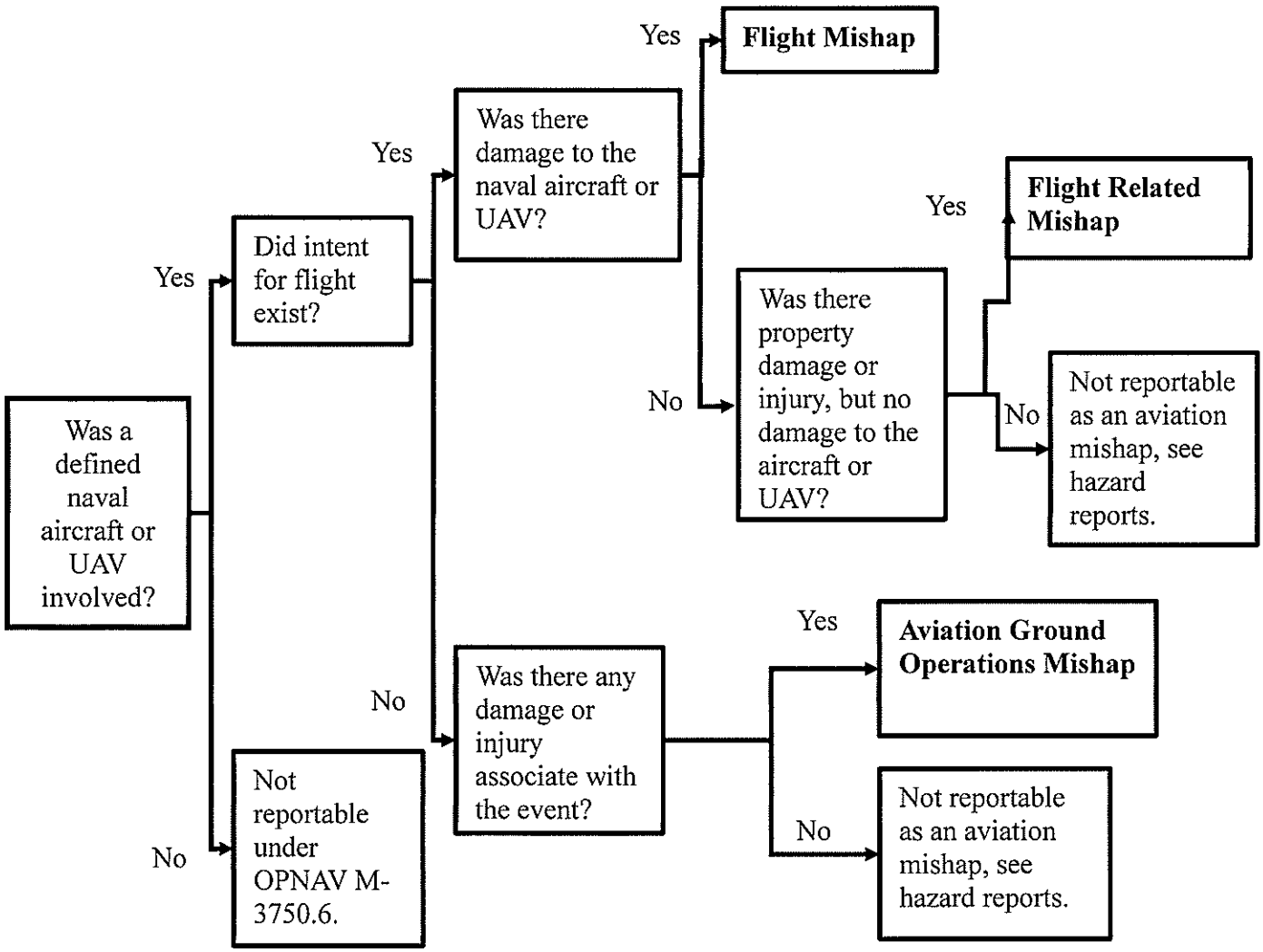
b. Non-DoD Property Costing. Information about the actual cost of damage to non-DoD property will be provided by a representative from the claims section of the nearest naval activity or a representative from the nearest naval legal service office. Use their best estimates until this information is available. Determine non-DoD property damage costs from the damage sustained as a result of the mishap and include any further damage that results from rescue or salvage efforts. The cost of decontamination, environmental restoration and restitution at the crash site is part of the mishap total cost. If the actual cost is unavailable, use the best estimate. The policy

is to capture all costs associated with putting non-DoD property back in operation or undamaged condition whether or not an actual claim is made against DoD.

APPENDIX 3A
EVENT CLASSIFICATION DECISION TREE



APPENDIX 3B
MISHAP SUBCATEGORY DECISION TREE



CHAPTER 4
PHONE REPORTS, PRELIMINARY AND STATUS MESSAGES

401. Purpose. To explain when event notifications are required, including phone reports, preliminary messages (PM) and status messages. It explains who submits the report and when, how, and why it is sent.

402. General. PMs and status messages inform interested commands of a naval aviation mishap. They also present preliminary information and describe the mishap investigation progress. Accounting organizations may request help with their investigations, relief from investigative responsibilities, or extension of deadlines for SIRs. Do not use PMs or status messages to submit hazard elimination information, such as causal factors or corrective actions. The initial telephone report provides NAVSAFECOM with the timeliest information about the mishap and starts action for NAVSAFECOM's possible participation in the investigation. A PM provides the information to other interested commands. Status messages provide additional information to the PM as well as updating any previously submitted status message thereby enhancing and correcting information.

403. Submission Criteria. All Class A mishaps require a telephone report to NAVSAFECOM. Class A, B and C mishaps require a PM. Any naval command may submit a telephone report or a PM; however, they are normally submitted by the accounting organization of a mishap.

404. Originator. Submitting phone reports, PMs and updated status messages is the responsibility of the accounting organization of the naval aircraft involved in a mishap. When another reporting custodian assumes the responsibility for investigating and reporting a mishap from an accounting organization, the convening authority of the AMB assumes responsibility for any further reporting. If aircraft of more than one reporting custodian are involved, the senior command is the accounting organization and does the reporting unless relieved by higher authority. In the event of a mishap where the reporting custodian for an aircraft cannot be contacted, or the reporting custodian lacks communication capabilities, the first naval command to become aware of the mishap, with appropriate communication capabilities, must assume phone report and PM responsibilities, but they will not replace the owning reporting custodian as the accounting organization. Pre-mishap plans of commanders of Navy and Marine Corps air stations must include procedures for submitting telephone reports and PMs for reporting custodians who cannot be contacted immediately following a mishap in the air station commander's area of responsibility.

405. Deadlines

a. Telephone Reports. Within 60 minutes of their occurrence, submit telephone reports for all Class A mishaps to NAVSAFECOM. Provide additional information in subsequent calls as it becomes available.

b. PMs. PM are time-sensitive non-privileged initial notifications of a mishap. PMs are required for all Class A, B, or C mishaps and must be entered using RMI. Submit a PM within 24 hours of the mishap for all Class A, B and C mishaps.

(1) Reporting timeline requirements are based on the length of time elapsed between activating a command's mishap plan to the time of PM submission in RMI. If a unit is unable to access RMI immediately following a mishap, they should notify their convening authority via telephone or email and provide them with a completed PM Worksheet.

(2) All PMs require administrative review and approval by the convening authority prior to release. The ACC is always the convening authority for Class A and B mishaps. Convening authorities are expected to thoroughly review the PM ensuring accuracy.

(3) The Unit Control Number is the unit's local serial number. It is a four-digit number, the first two digits are the sequential number of events occurring that Fiscal Year (FY) and the last two numbers are the FY. Do not separate counting of HAZREPs and SIRs. Examples: first event of FY21: 01-21. Third report of 2022: 03-22.

(4) RMI does not allow the convening authority or NAVSAFECOM to change data in a PM once it has been released by the accounting organization and enters the Quality Control phase. If the convening authority or NAVSAFECOM analyst identifies any information that requires revision, the analyst must reject the message back to the accounting organization to correct and resubmit.

c. Updated Status Messages. There are multiple reasons that a unit might need to send an update to their PM or SIR; a board might need an extension while awaiting salvage, engineering investigations, or even due to the availability of board members. Additionally, as the AMB discovers information, it may need to upgrade or downgrade a report.

Note: Extension requests do not automatically renew. A new status message must be submitted to the convening authority prior to the expiration of each 30-day extension.

406. Telephone Reports. During normal East Coast working hours call DSN 564-2929 or (757) 444-2929 to report a mishap. After working hours call at DSN 564-3520 or commercial (757) 444-3520 to report a mishap. Include this information in the telephone notification to NAVSAFECOM:

a. Accounting Organization (Reporting custodian(s))

b. Mishap Event

c. Mishap Classification

d. Date and time (local) of the event

e. Aircraft type, model and series, and bureau number

f. Mishap location

g. Brief narrative

h. Damage

i. Injuries and fatalities

j. Points of contact

k. Request for a NAVSAFECOM investigator (most Class A mishaps)

407. Distribution. PMs and status messages are available to RMI users once the quality control process is complete.

408. Non-privileged Status. PMs and status messages are not SIRs, they are not limited-use reports, and must not contain any PSI. They must not contain the source of any information, any information from statements made to an AMB, nor any information discovered as a result of statements made to an AMB. Do not include any analysis, conclusions or recommendations of an AMB, nor any known, probable, or possible causal factors of a mishap.

409. Markings. PMs and status messages are marked CUI in RMI. See SECNAVINST 5510.36B, Department of the Navy Information Security Program, of 12 Jul 2019 for instructions on their handling.

410. Security Classification. Phone reports, PMs and status messages are unclassified. Omit any portion of the report or notification that warrants classification and substitute the word "classified" in its place. If no meaningful report can be submitted in this fashion, submit a classified report using Secret Internet Protocol Router Network (SIPRNet). Contact NAVSAFECOM for details on accomplishing classified submissions.

411. Government Civilian (On-duty) Fatality Reporting. Situations where an on-duty government civilian is killed in an aviation mishap. In addition to the standard Class A mishap requirements, the death of an on-duty civilian in the United States requires an OSHA notification within 8 hours. Notification can be made by telephone at toll-free 24-hour hotline at (800) 321-6742 (OSHA) or www.osha.gov.

412. Laser Reporting. Beside an RMI entry, all laser events, intentional or unintentional (e.g., incidents, hazards, and mishaps) involving DoD aircraft must be reported per Chairman of the

Joint Chiefs of Staff Instruction 3320.02F via DoD Laser Safety Event Hotline at commercial 800-473-3549 or DSN 312-798-3764.

413. Combat Zone Reporting

a. High tempo operations associated with operating in a designated combat zone may dictate abbreviated AMB requirements and abbreviated reporting requirements for DEA incidents only. The definition of "combat zone" for reporting under this manual is any area designated by the CNO or CMC where extended hostilities occur. Unintentional damage or injury as a result of FF or blue on blue engagements in a designated combat zone is reportable under this manual. There is a combat zone and DEA reporting decision tree in Appendix 4A.

b. When investigating operational mishaps in a combat zone:

(1) Class A mishaps require a standard AMB using the guidelines in chapter 5. For investigating and reporting Class B, C, D and E mishaps, the AMB may consist of one investigating officer (naval aviator or naval flight officer) and one flight surgeon or APA. The investigating officer must be senior to the pilot and mission commander involved in the mishap.

(2) Telephone NAVSAFECOM, if able, to make a telephone report for Class A mishaps. Report all combat zone mishaps with a PM and updated status messages as required.

(3) Time limits for combat zone aircraft Class A mishaps are PM within 48 hours and updated status messages as required. Send Class B or C mishaps PMs within 7 days of the mishap. Submit combat zone operational mishap SIRs not later than 30 calendar days after the mishap.

(4) RMI reports must contain only unclassified information and data. Use the word "classified" to omit data that is in fact classified. If for reasons of clarity, a classified report is necessary, contact NAVSAFECOM to discuss sending the report via SIPRNet.

414. Friendly Fire Reporting. FF mishaps or hazards must be annotated in the General Information section of RMI. Additionally, all FF events must be reported to the Joint Staff (J-6), Joint Fires Integration Division's, Friendly Fire Reporting and Investigation Process (FFRIP) Action Officer at (757) 203-8603, DSN 668-8603, js.norfolk.j6.list.dd-c5i-jf-div-ffrip@mail.mil (NIPRNet), or js.norfolk.j6.list.dd-c5i-jf-div-ffrip@mail.smil.mil (SIPRNet) within 48 hours of occurrence.

415. DEA Reporting

a. Combat Losses. It is important that combat losses caused by DEA are documented. Over the years NAVSAFECOM records have been a valuable source of information in the search for and the identification of comrades missing in action. These records also provide valuable

data for research into the design of new combat aircraft. While much information is collected for many purposes at the time of action, experience shows that NAVSAFECOM records are the ones that endure. Details, such as extent of damage, systems lost, and the last known altitude and heading of the aircraft play an important role in future attempts to reconstruct and understand the loss.

b. DEA Incidents Defined. DEA events are by definition not mishaps although RMI is used to report them as DEA incidents. A DEA incident is damage or injury by direct action of an enemy to include maneuvering conducted relative to hostile fire or a perceived hostile threat, or hostile force, not including suspected cases of FF. Note that DEA incidents do not have to occur in a combat zone. These involve incidents in which the reporting custodian perceives one of the conditions cited in subparagraph 415b(1) through 415b(3) exist.

(1) Damage or loss of aircraft, or injury on the ground, or in the air, by enemy action, weapons fire, or sabotage.

(2) Damage or loss of aircraft, or injury due to evasive action taken to avoid enemy fire or perceived hostile threat.

(3) Aircraft fails to return from a combat mission and there is no evidence that an operational mishap occurred.

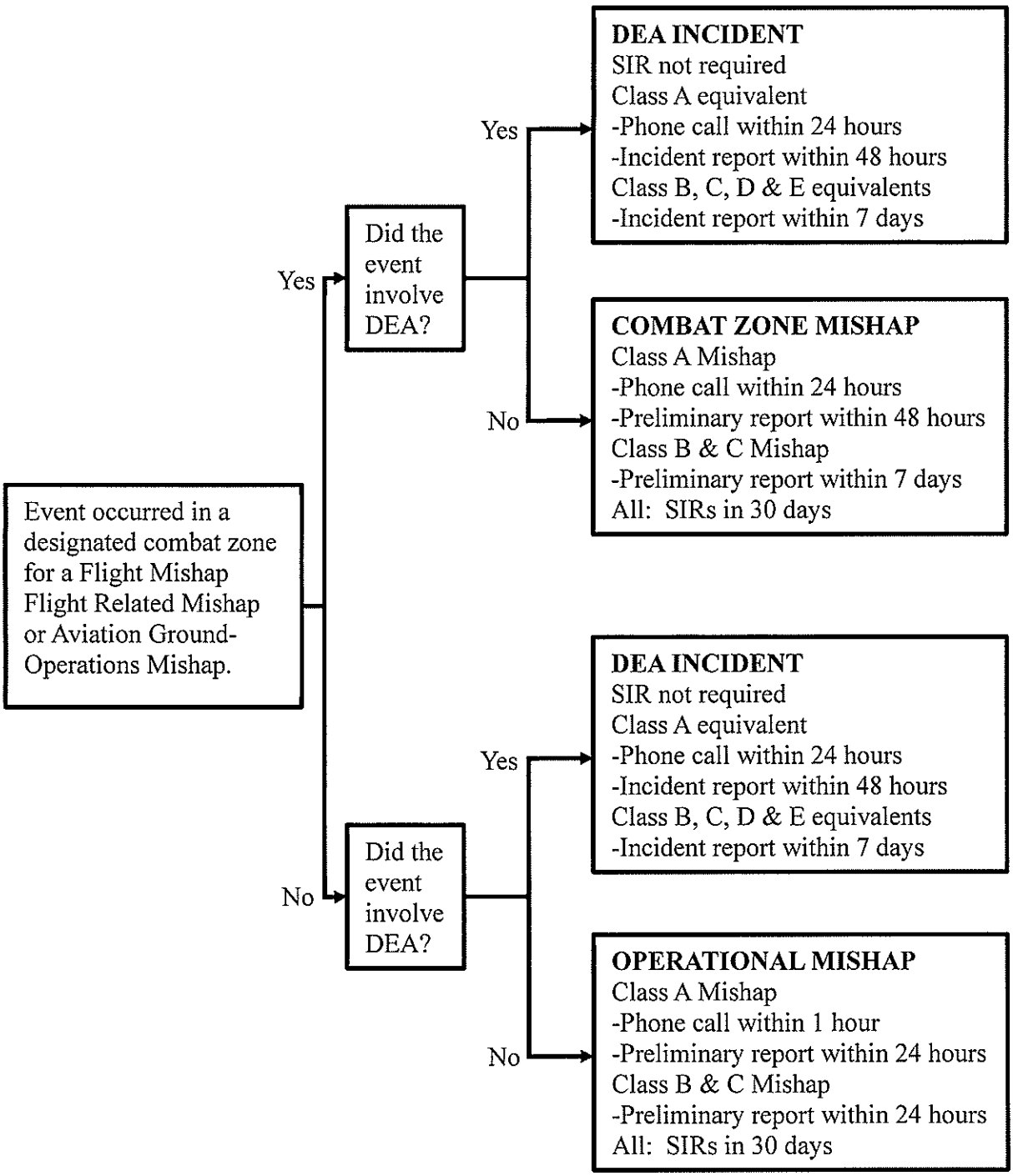
c. Reporting Requirements. The reporting requirements outlined in this subparagraph are the minimum required when reporting DEA incidents. If deemed appropriate, reporting custodians may employ a full or partial investigation board and submit more detailed information in an SIR.

(1) DEA incidents require only a phone notification to NAVSAFECOM and a single incident report to be filed. To distinguish DEA incidents from mishaps, select DEA in the incident type drop down. Include injury data in the involved person section prior to submission of the incident report if aircrew are injured or killed.

(2) The time limit for DEA incidents is a phone call within 24 hours and an incident report submission for Class A equivalent incidents within 48 hours. If a unit is unable to access a phone or RMI within the timeframe, their ACC should report in their stead. For Class B, C, D and E equivalent incidents, submit an incident report within 7 days.

(3) All reports submitted in must be unclassified. Use the word "classified" to omit data if it is in fact classified. If, for reasons of clarity, a classified report is necessary contact NAVSAFECOM to discuss sending the report via SIPRNet.

APPENDIX 4A
DEA AND COMBAT ZONE REPORTING DECISION TREE



CHAPTER 5
SAFETY INVESTIGATIONS

501. Purpose. To provide guidance on safety investigation responsibilities, AMB composition, and safety investigation processes and procedures.

502. General. Part of a learning organization is not only to look forward to identify possible challenges or hazards, but also to look backwards to determine errors and make corrections. Naval aviation safety investigations answer the question, "Why?" and provide recommendations to prevent recurrence. The safety investigation is a search for causes; it looks for undetected potential hazards as well as hazards which caused or contributed to a mishap. Safety investigations also demonstrate an organization's commitment to their SMS. Although a naval aviation mishap signals a failure in the Naval Aviation Safety Program and the Naval SMS, it is not too late to prevent a mishap recurrence. This is why naval aviation investigates aviation mishaps with such vigor. All naval aviation safety investigations are conducted solely for safety purposes.

503. Determining Investigation and Oversight Responsibilities

a. Determining the Accounting Organization. By policy, the investigation and reporting responsibility of each naval aviation event is assigned to one reporting custodian. As a result, responsibility can be consistently determined regardless of an event's causal factors. This prevents lengthy delays and avoids the dilemma wherein causal factors are attributed to two or more reporting or ACCs, or to activities that are not naval aircraft custodians. The reporting custodian assigned to this role will be the accounting organization.

(1) Single-Aircraft Events. The accounting organization is the reporting custodian that experienced the loss of or damage to a defined naval aircraft; or the reporting custodian of a defined naval aircraft which was directly involved in a fatality, injury or work-related illness of an assigned person or persons in a mishap. The accounting organization is responsible for safety reporting, regardless of any determination as to the responsibility for the event's occurrence.

(2) Multi-Aircraft Mishaps. When two or more naval aircraft are involved in a naval aviation event, the senior reporting custodian is responsible for investigating and reporting the event. Seniority is the key here, not the presumption of accountability. Examples of multiple aviation events are:

(a) Collisions or near misses between aircraft.

(b) Parts separating from one aircraft damaging another.

(c) Prop, jet, or rotor blast from one aircraft damaging or interacting with another.

(d) In-flight refueling mishaps or near misses.

(3) Inter-service Aviation Events. Inter-service aviation events are those that involve aircraft of one Military Service and the aircraft, personnel, services, facilities, or equipment, of another. To avoid double-counting a single event, only one Service will assume DoD reporting responsibility for the mishap, its attendant costs, and injuries. COMNAVSAFECOM and the commander(s) of the associated military safety center(s) will jointly determine investigation responsibility. If agreement cannot be reached, each Service must investigate and report its own losses for the mishap.

(4) Naval Aviation Fleet Readiness Center Mishaps. Assign mishaps involving naval aircraft in the custody of a fleet readiness center to COMNAVAIRSYSCOM.

(5) CNATRA Mishaps. When the training wing commander is the reporting custodian for a training command aircraft involved in an event, the CO of the training squadron involved will undertake the responsibilities of the accounting organization pursuant to this manual. If more than one squadron is involved, the senior CO will commence the mishap investigation. If no squadron is involved, then assigning the mishap to the wing is usually appropriate (e.g. Instructor Training Unit). Mishaps during functional check flights, including those involving CNATRA contracted pilots, will be assigned to the wing.

(6) Contractor Mishaps. Assign mishaps to aircraft in the physical custody of a commercial contractor to the ACC who oversees the writing and administration of the contract.

(7) Aircraft or Temporarily Assigned to Another Reporting Custodian. ACCs may approve temporary loan or transfer of aircraft between reporting custodians. This includes transfer to and from consolidated maintenance organizations. The receiving reporting custodians may assume responsibility for mishaps occurring while the aircraft is in their possession. A detailed memorandum of understanding (MOU) between loaning and receiving organizations is highly recommended. The MOU must clearly define mishap investigation, reporting and accountability responsibilities in the event of a mishap.

(8) Unclear Cases. CNO N09F will resolve any ambiguities concerning who is responsible for investigating and reporting a naval aviation event. CNO N09F will determine accountability, or accountability reassignment, in any case where accountability is unclear. Accountability will be reassigned after a discussion with the involved ACC(s). See paragraph 815 for absolution of a mishap.

b. Determining the Convening Authority. Like accounting organizations, only one unit may be assigned as the convening authority. Convening authority determination is typically based upon the administrative control chain of command of the accounting organization. The ACC will act as the convening authority, unless that responsibility has been delegated.

(1) The ACC will always be the convening authority for Class A and B mishaps.

(2) The ACC will always be the convening authority if any recommendations in the report have an action agency outside of the accounting organization's chain of command.

(3) For Class C, D and E mishaps and HAZREPs, the assigned action agency will dictate selection of the appropriate convening authority for that report. The convening authority must be at the same echelon of command as the action agency (e.g. If the representative of COMNAVAIRSYSCOM (N00019) is selected as an OPR, the convening authority will be the ACC).

504. Types of Investigations

a. Investigation Differences. As a result of aviation mishaps, various agencies conduct separate investigations for different purposes. Naval aviation personnel must have a clear understanding of the differences between these investigations and work to preserve the relationship between them. All naval aviation mishap and hazard investigations are conducted solely to prevent mishap recurrence and must not be used for legal or administrative purposes. Additionally, mishap investigations are conducted under the concept of privilege which provides additional protections to the deliberative process and to statements made under a promise of confidentiality. The protections pose restraints in providing safety information to legal and administrative investigations as well as interagency and partner nation safety investigation. NCIS may be involved in an aviation mishap if there is evidence of criminal or foreign intelligence entity involvement. As the criminal investigative arm of the DON, NCIS civilian special agents have investigative responsibility within the DON for all crimes punishable under the Uniform Code of Military Justice and relevant federal statutes. Due to the legal or punitive nature of NCIS investigations, PSI will never be shared with NCIS agents. More specifics regarding investigation types are found in subparagraphs 504b through 504j.

b. Aviation Mishap Investigations. Naval aviation mishap investigations encompass FMs, FRMs and AGMs and are conducted under the auspices of this manual. No other investigation relieves a command from the responsibility to conduct a mishap investigation. AMBs, appointed and maintained by aircraft reporting custodians, assume the role of accounting organization and conduct naval aviation mishap investigations. Squadron officers, trained at the ASO's course, and flight surgeons or APAs, trained at the Naval Aerospace Medical Institute are members of the board. This system of squadron-level AMBs is consistent with one of the basic tenets of the Naval Aviation Safety Program, that an individual or command detecting hazards is obliged to others in this profession to report hazards as soon as they are detected. The system supports and encourages mutual trust and confidence common among naval aviators and avoids both the specter of adversarial investigations of one command by another and the implication that safety is the business only of higher authority. In addition:

(1) Squadron, air station, or UAV unit AMBs provide for close coordination with other mishap-related responsibilities of the accounting organization, which include:

(a) Operational reports and situation reports.

(b) Telephone and preliminary reports and status messages.

(c) Casualty reports.

(d) Notification of next of kin.

(e) Reports of loss of classified material.

(f) Aircraft custody and status change (X-ray) reports.

(g) Material deficiency reports and requests for EIs.

(h) Requests for P&E services.

(i) Requests for technical assistance.

(j) Requests for recovery of submerged wreckage. (In cases where NAVSAFECOM investors intend to attend, NAVSAFECOM will submit the salvage request on behalf of the AMB).

(2) Squadron, air station or UAV unit level AMBs also ensure that board members will have knowledge of:

(a) Mission and current commitments.

(b) Aircraft characteristics and configurations.

(c) Current unit operating area(s).

(d) SOPs, policies, and directives.

(e) Pertinent policies of all echelons within and above the unit.

(f) Unit personnel and their dependents.

(g) Unit training, personnel, and aircraft records.

(h) Pre-mishap plans and AMB task organization.

(i) AMB capabilities and limitations.

(j) Availability of technical assistance.

(k) Contingency arrangements with appropriate activities for:

1. Wreckage location, security, recovery, movement, preservation, reconstruction, disposal, release and environmental restoration.

2. Rescue.

3. Firefighting.

4. EOD.

5. Hazardous material removal.

6. Logistic support.

7. Photographic coverage.

8. Medical support.

9. Release of information.

(3) Standing AMBs avoid delays in commencement of investigations, shifts in investigative responsibilities, and the travel and temporary additional duty costs, which often result when mishaps are investigated by other than standing AMBs. Additionally, it would often be wholly impractical for other than a squadron or UAV unit's AMB to investigate a naval aviation mishap occurring at a remote deployment site or at sea.

c. Interagency Investigations. The NTSB and FAA may participate in naval aviation mishap investigations whenever mishaps involve civil aircraft or FAA functions, facilities or personnel. The NTSB has primary investigative responsibilities and authority when a mishap involves both naval and civil aircraft. Sometimes naval personnel may be asked to participate in NTSB investigations. These investigations are separate from the naval aviation mishap investigation. NTSB or FAA investigations are legal proceedings; testimony taken in them is not privileged. Contact NAVSAFECOM for guidance in dealing with aviation mishap investigations involving other U.S. Government agencies.

d. Special Weapons Investigations. Refer to OPNAVINST 3440.15E if an aviation mishap involves nuclear weapons or material.

e. JAGMAN Investigations. Naval aviation mishaps may also require a JAGMAN investigation. These investigations are conducted independently from any safety investigation.

(1) Do not assign members of AMBs, or other persons who have participated in a naval aviation safety investigation conducted under the authority of this manual, to a JAGMAN investigation of the same event.

(2) Do not append SIRs or HAZREPs, or extract privileged or non-privileged excerpts from a safety investigation for inclusion in a JAGMAN investigation report, nor any other report. Do not send a Navy or Marine Corps JAG any part of an SIR or HAZREP. Statements made to an AMB are the property of the Naval Aviation Safety Program; do not release them for inclusion in the JAGMAN investigation report.

(3) To prevent any inference of association with disciplinary action, do not append the JAGMAN investigation report to, nor make it a part of, the SIR or HAZREP. Include no reference to any disciplinary action, FNAEBs, FFPBs, or any other administrative action taken as a result of this mishap in the SIR. Do not use any information or material from a HAZREP or SIR for FNAEBs, FFPBs, or any other administrative or disciplinary action taken as a result of a mishap or near miss.

f. NATO and Other Allied Partner or Coalition Investigations. Plan to conduct a combined, non-privileged safety investigation pursuant to NATO STANAG 3531, whenever an aviation mishap involves another NATO member nation. Investigations involving two or more of Australia, Canada, New Zealand, the United Kingdom, and the United States may be investigated under Air Standard 85/2A(1). When mishaps occur involving nations that are not signatories to STANAG 3531 or Air Standard 85/2A(1), consider investigating and reporting using the procedures outlined in those documents. If a defined naval aircraft is involved, plan to conduct a sequential mishap investigation following this manual. Historically, the best way to conduct these investigations involving a defined naval aircraft and another nation was to conduct the combined investigation first. When the combined investigation is complete or nearly complete, the United States only AMB can meet and conduct additional privileged deliberation and produce a report under this manual. Additionally, some DON training squadrons may have allied personnel and aircraft assigned resulting in a combined command. Pre-mishap plans must be carefully written to cover various combinations of aircraft and personnel to help meet the investigation and reporting requirements of the DON and the allied nation. These investigations are always complex. Contact NAVSAFECOM for assistance.

g. NAVSAFECOM Investigations and Support. In special cases, NAVSAFECOM may conduct an independent naval aviation mishap investigation under the authority of the CNO or CMC. These investigations do not relieve accounting organizations of their responsibilities for mishap investigation and reporting. Most often, however, NAVSAFECOM's involvement takes the form of help with the mishap board's investigation. In Class A FMs, where wreckage is available or a fatality is involved, NAVSAFECOM will generally send an experienced aviation

mishap investigator to assist the AMB. In cases involving wreckage at sea, an investigator will not normally be dispatched until the commencement of the ocean salvage. Full cooperation and the unrestricted exchange of information and opinions is essential between the NAVSAFECOM representative and the AMB. This may extend to division of labor, joint interview of witnesses, and joint deliberations. NAVSAFECOM investigators are direct representatives of the CNO; they control all evidence pertaining to the mishap (including the aircraft wreckage and parts undergoing EIs) until released to the AMB. NAVSAFECOM investigators will have final decision authority on all aspects of the mishap site, wreckage, and human remains. This includes security decisions, environmental cleanup, and movement of personnel and machinery in and around of the mishap site. Custody of human remains will be transferred to AFMES or the local coroner upon their arrival on scene. Transferring of human remains by the Navy Mortuary Branch must not interfere with the investigative process. In cases where the NAVSAFECOM investigator is not present, this authority falls to the AMB senior member. NAVSAFECOM investigators may invite additional experts, military or non-military, to assist in the investigation and provide analysis to the board. The AMBs convening authority must provide administrative and logistic support to NAVSAFECOM investigators. Convening authorities should also encourage the sharing of factual information in the possession of non-safety investigators with the AMB.

h. Joint Investigations

(1) Only COMNAVSAFECOM may enter into agreements or understandings about mishap reporting and investigations with other Services outside DON.

(2) Joint investigations will be conducted per the joint Safety Investigation and Reporting of Multiple Component Mishaps Memorandum of Understanding.

(3) COMNAVSAFECOM will coordinate with sister Service safety chiefs to determine which Service has primary responsibility for investigating and reporting each Class A, multiple component mishaps. Only Class A mishaps will require direct coordination between the respective Component Safety Chiefs. Contact the NAVSAFECOM Deputy Director, Aviation Safety Programs (Code 10A) at DSN 564-3520, extension (Ext) 7226 or commercial (757) 444-3520, Ext 7226) to begin inter-Service coordination.

(4) Normally, the convening authority for the investigation is the Service experiencing the greater loss, although other factors must also be considered.

(5) The Service owning or controlling the facility where a mishap occurs or is geographically closest, will secure, protect, document and preserve the mishap site to prevent contamination or removal of evidence.

(6) Each involved Service safety chief may send safety investigators to participate in the board.

(7) If it is determined to assign a USN or USMC accounting organization, there are three methods by which joint participation in a naval AMB may be accomplished:

(a) Sister Services may assign members as observers on a naval AMB;

(b) They may assign one of their members to a naval AMB as liaison; or

(c) Any number of Military Services may form a joint AMB.

(8) In all these cases, naval aviation will investigate and report the mishap according to this manual. Joint AMBs may report according to the other Service's instructions as well.

(9) Conversely, per the Joint Service Investigation MOU, naval aviation may send a member of a Naval Service to sit as an observer on another Service's mishap board.

(10) Forward all requests for joint participation on AMBs to NAVSAFECOM for approval.

(11) Subparagraph 503a(3) should answer any questions about investigation responsibilities in joint mishaps.

i. Naval Aviation Mishaps Involving Fire, Explosion, or Damage to a Ship or Shore Facility

(1) Ships must use OPNAVINST 5100.19F Navy Safety and Occupational Health (SOH) Program Manual, for forces afloat to report a fire, explosion, or other damage caused by a naval aviation mishap.

(2) Shore facilities must use OPNAVINST 11320.23G, Navy Fire and Emergency Services Program, to report fire damage resulting from a naval aviation mishap.

j. Criminal Activity. If evidence suggesting criminality (e.g., intentional damage or sabotage) is discovered, the senior member must immediately pause the safety investigation and notify the convening authority. The convening authority must consult with NAVSAFECOM before terminating the investigation and calling for the NCIS. Ordinary or simple negligence is not grounds for terminating a mishap investigation. If sabotage exists and the investigation is terminated, the senior member must turn over all non-privileged evidence but must not share witness statements with the NCIS or any other investigative body.

505. Safety Investigation Responsibilities

a. Every naval FM, FRM and AGM must be investigated and reported per this manual.

b. Although all hazards should be investigated and reported, it is mandatory to submit a HAZREP for specific occurrences of NMAC, PLOC, SHIP/EMBLAND, HATR, PHYSEP, PE, BASH, EMI, LSRST, FF, CMAV, and N-CFIT.

506. Transfer of Investigation Responsibilities

a. As a matter of policy, reporting custodians will not be relieved of their reporting responsibilities in a naval aviation safety investigation, but it could happen. If such is the case, the reporting custodian still must provide whatever assistance the new accounting organization's AMB or SIO requires. This may include assigning personnel to temporary duty with the AMB, sending requests for EIs, clerical assistance, and other support normally provided by a command to its own AMB.

b. When reporting custodians cannot fulfill their investigation and reporting responsibilities as the accounting organization, they should request relief from their convening authority in status message.

c. Seniors in the chain of command may request the convening authority relieve a subordinate of reporting responsibility. In such cases, the requesting senior must provide the convening authority an AMB or investigator of their own to investigate and report the mishap. The requesting senior must also notify the reporting custodian by naval message of this request and the reasons for doing so. Include CNO, CMC, CNO N09F, appropriate ACC(s), and other interested commands as necessary in any notifications. The requirement to notify the reporting custodian, CNO, CMC, CNO N09F and ACC remains, even if the requesting senior is the convening authority.

d. When a squadron CO is a member of the aircrew involved in a mishap, the immediate superior in command takes the action required by subparagraph 506b. ACCs may waive this requirement.

e. When a mishap occurs while an aircraft is in a ferry status, the aircraft's reporting custodian becomes the accounting organization and is responsible for investigating and reporting the mishap.

f. COMNAVAIRSYSCOM is responsible for investigating and reporting mishaps involving naval aircraft in the physical custody of fleet readiness centers. The safety centers of the Services involved will decide who is responsible for investigating mishaps involving aircraft in the custody of another Service's depot or readiness center.

g. Except for those mishaps that occur at commercial facilities operating under contracts administered by other commands, COMNAVAIRSYSCOM has the responsibility for investigating and reporting mishaps involving naval aircraft in the physical custody of commercial contractors. In those exceptional cases, the responsibility rests with the command

exercising contract control over the facility. Contracts must describe the contractor's responsibilities concerning investigating and reporting naval mishaps. COMNAVAIRSYSCOM may request that Defense Contract Management Agency military personnel participate in AMBs investigating contractor mishaps.

h. Specific requirements concerning a maintenance contractor's obligations in a Navy aircraft mishap investigation are found in the contract. On any contract in which the Government assumes risk of loss for an aircraft, the applicable Defense Federal Acquisition Regulations Supplement clauses and the DCMAINST 8210.1/NAVAIRINST 3710.1 SERIES require the contractor to cooperate with the mishap investigators and provide a certain degree of support to them. The contracting officer, or the duly appointed GFR or contracting officer technical representative, is responsible for interpreting these sections, and must assist the AMB in obtaining the needed help from the contractor. Unique aspects of contractor maintenance involvement in mishap investigations are:

(1) Contractor witnesses are usually unavailable outside normal working hours, legal counsel may accompany them, and their cooperation may be restrained. Conduct a thorough briefing on privileged testimony with these witnesses before the interview.

(2) Contractors regularly work 8 hours a day. Wreckage recovery routinely involves 12-hour workdays. The military maintenance representative can get overtime authorization.

(3) Use squadron, wing or base resources, if needed, to reinforce manpower.

(4) While a contractor's maintenance records may not be in the CNAFINST 4790.2 series format or filled out on familiar forms, all their records, books and information, if not already sequestered by the military maintenance representative or squadron safety officer, must be made available upon request. Per the National Archives and Records Administration, contractor records of work performed for a Government agency are the property of the agency and must be maintained per the records schedules located in SECNAV M-5210.1 of January 2019.

i. Sometimes aircraft, people, or facilities from one Military Service are involved in mishaps or near-misses with another. In such cases, COMNAVSAFECOM will identify the command responsible for the mishap investigation.

507. Safety Investigator Appointments. The ACC, a command delegated or designated as the convening authority by the ACC, must appoint safety investigators, both AMB members and SIOs, by name and in writing. ACCs or convening authorities must ensure:

a. SIOs are only appointed to investigate hazards, Class D mishaps, Class E mishaps, and some Class C mishaps including BASH, LSRST, or minor injuries (one – nine lost workdays).

(1) The SIO is a naval aviator, naval flight officer, or a Civil Service employee qualified as ASO. If investigating a hazard, the SIO may be a trained aviation safety specialist.

(2) The SIO was not directly involved or have personal conflicts with the event they are investigating.

b. At a minimum, AMBs are assigned to all Class A, B, and C mishaps, except for Class C BASH, LSRST, or mishaps with minor injuries. Convening authorities always have the option to assign AMBs to any safety investigations.

(1) All Class A mishap investigations have a senior member appointed from a command not involved in the mishap, preferably from outside the expected endorsing chain.

(2) The senior member for Class A mishaps must be a naval aviator or naval flight officer (a commander or lieutenant colonel or above), a graduate of the ASO or aviation command course, and be senior in rank to the aircraft commander, mission commander, or any other member of the crew. The senior member must have SIR release approval in RMI (Event: Message Approval).

(3) For Class B or C mishaps, the senior member may be from the reporting custodian and must be of higher seniority by rank or lineal number, than the aircraft commander, mission commander, or any other member of the crew.

(4) The minimum AMB membership must consist of four personnel drawn from the command's standing board: at a minimum, an ASO (ASO course graduate), a flight surgeon (or APA), an officer well-qualified in aircraft maintenance, and an officer well-qualified in aircraft operations is required. Enlisted personnel with the rank of E-6 and above may serve on AMBs for UAVs.

(5) Ensure the accounting organization has enough qualified personnel to field a complete AMB. In exceptional cases where this is not possible (operating from a remote location, combat operations, etc.), the convening authority must appoint AMB members from outside the accounting organization. For example, in cases where a unit flight surgeon is not assigned, a flight surgeon or APA from another command may be designated. If, despite their best efforts, convening authorities find themselves with too few members to constitute a board, they may request a board composition waiver or relief to their ACC. If the convening authority is an ACC, request the board composition waiver or relief from NAVSAFECOM Code 10A. See paragraph 506.

c. Other AMB Composition Considerations. Some circumstances may require adjustments to the membership of the AMB by the convening authority depending on exceptional circumstances of personnel assigned to the AMB or of the mishap under investigation. Make every effort to meet the requirements set in subparagraphs 507c(1) through 507c(10).

(1) If the convening authority determines that appointing a senior member who is senior in rank to the aircraft commander, mission commander, or any other member of the crew would require unreasonable measures, then with the concurrence of NAVSAFECOM this requirement may be waived.

(2) For manned aircraft mishaps, at least one member of the AMB must be a pilot or naval flight officer who is NATOPS-qualified in the model aircraft involved. For unmanned aircraft mishaps, every effort should be made to have at least one qualified in model AMB member.

(3) Personnel directly involved in a mishap must not serve on an investigating that mishap.

(4) Members whose personal interest in a mishap might conflict with the objective and impartial performance of their duties must not serve on the AMB investigating that mishap. If the senior member determines this to be the case of a member of the AMB, request a replacement from the convening authority.

(5) Do not allow someone who may be called upon to endorse the SIR to sit on the AMB investigating the mishap.

(6) In rare circumstances, the executive officer who is functioning as the senior member of an AMB may become the CO before the SIR is released for endorsement. In this case, it is acceptable for the CO to be the first endorser on his or her own report. When this occurs, it is strongly recommended that the ACC include at least one endorser after the CO.

(7) Class B, C, D and E operational mishaps which occur in a combat zone may be investigated by a reduced AMB of one investigating officer (naval aviator or naval flight officer) and one flight surgeon or APA. The investigating officer must be senior to the aircraft commander, mission commander, or any other member of the crew involved in the mishap. Class A mishap during combat operations require a full AMB as discussed in subparagraph 413b(1) and 507b(4).

(8) Sequential investigations by the same AMB may be authorized by an ACC for Class B, C or D mishaps in the case of identical or nearly identical material failures of malfunctions. Separate reports are required.

(9) If a mishap involves equipment or personnel from an outside entity (other squadron, ship, airfield, ground unit, etc.), every effort should be made to include a representative from that unit on the AMB.

(10) Appoint AMBs members which will be available throughout the course of the investigation and endorsement process. Appointing personnel slated for retirement or a permanent change of station should be avoided.

508. The Concept of Privilege in Mishap Investigations. A thorough understanding of the concept of privilege is essential for the proper investigation of naval aviation mishaps.

a. PSI. Military and Federal courts grant protection from public release and non-safety uses under executive privilege to information given under promises of confidentiality, and to the analysis, conclusions and recommendations of the AMB or SIO and endorsers. PSI includes, but is not limited to, notes taken by members of an AMB or the SIO, witness statements given under a promise of confidentiality and any information derived there from, any documents, photographs, films, videotapes, and sketches that are staged, reconstructed, or contain annotations that reveal the opinions or conclusions of the AMB or SIO, and simulated reenactments of possible or probable scenarios developed by AMB or SIO analysis. CNO N09F is the final authority in determining whether or not a piece of evidence is protected by the concept of privilege. All PSI must be marked "UNCLASSIFIED//CUI//SP-PSI" or "CUI//SP-PSI."

b. Promises of Confidentiality. Members of the AMB or the SIO may give promises of confidentiality but should do so sparingly. If a witness initially refuses to make a statement or seems to be reluctant to provide a complete statement, the AMB or SIO may offer the promise of confidentiality. Members must judge whether confidentiality is necessary to ensure a witness's full cooperation. The promise of confidentiality must be explicitly given. When granted, the protected witness must sign the OPNAV 3750/16 page that offers a promise of confidentiality. Maintain all witness statements, related documents and records with other mishap documents. Along with the witness statements, the associated signed OPNAV 3750/16 must be uploaded into RMI. The Naval Aviation Safety Program has long benefited from the willingness of personnel to confide in AMBs and SIOs. The fact that the promise will be explicitly given or withheld will strengthen those promises that are given. Witnesses not given promises of confidentiality will sign the OPNAV 3750/16 page that does not offer a promise of confidentiality. Information taken from these witnesses remains subject to restrictions on its use and release per this manual. Both forms are available from the Defense Logistics Agency website at https://forms.documentservices.dla.mil/order or in the ASO Toolbox on the NAVSAFECOM SharePoint at: https://intelshare.intelink.gov/sites/nsc/investigations/Advc_witns.pdf.

c. PSI Rules. Every SIR contains privileged information and must be used only for safety purposes. Privileged information must not be used for any other purposes including, but not limited to:

(1) In any determination affecting the interest of an individual making a statement under a promise of confidentiality.

(2) As evidence or to get evidence in making a misconduct or line-of-duty determination pursuant to the JAGMAN.

(3) As evidence to determine the susceptibility of personnel to discipline.

(4) As evidence in claims on behalf of the Government.

(5) As evidence to determine the liability of the Government for property damage caused by a mishap.

(6) As evidence before administrative bodies such as FNAEBs, FFPBs or administrative separation boards.

(7) As evidence before, or as any part of, a JAGMAN investigation report.

(8) In any other punitive or administrative action taken by the DON.

(9) In any investigation or report other than aviation mishap safety investigations report.

(10) As evidence in any court, civilian or military.

d. The Purpose of Offering Confidentiality. Promises of confidentiality are offered to:

(1) Overcome an individual's reluctance to reveal complete and candid information about the circumstances surrounding a mishap.

(2) Encourage AMBs, SIOs and endorsers of aircraft SIRs to provide complete, open and forthright information, opinions, and recommendations about a mishap.

e. Rationale. Privilege allows those involved in mishaps to tell the truth about their actions (or inaction), command climate, or anything else that may have contributed to a mishap, safe from fear of retribution. If privileged information was allowed to be used for purposes other than safety, vital safety information might be withheld.

(1) Requiring personnel to take an oath prior to making a statement is prohibited. Advise them in writing, using the appropriate version of OPNAV 3750/16, as to why they are providing their statement and of the limitations placed on the release of the statement they are providing. Witnesses need not limit their statements to matters to which they could testify in court. Invite them to express opinions and speculate on possible causes of the mishap.

(2) In one respect, the rationale for designating mishap investigative information as privileged is more important than the rationale for encouraging witnesses to be candid. AMBs, SIOs and endorsers must feel free to develop information that could be vital for mishap

prevention without fear that it could be used for purposes other than safety. Every SIR involves an AMB or SIO and endorsers. Not every mishap has witnesses who would require a promise of confidentiality as encouragement to make a statement.

(3) Individuals may be reluctant to reveal information pertinent to a mishap because they believe that information could be embarrassing to themselves, their fellow Service Members, their command, their employer, or others. They may also elect to withhold information by exercise of their constitutional right to avoid self-incrimination. Members of the Military Services must be assured that they may confide in safety professionals for the mutual benefit of fellow Service Members without incurring personal jeopardy in the process.

f. Protection of Privileged Information. To continue the revelation, development, and submission of privileged information in aviation SIRs and endorsements, everyone in naval aviation must keep faith with the promises that are made while gathering it. Every failure to protect PSI from improper release or use weakens the protections against the same that have been acquired in numerous court opinions. Defenders of naval aviation safety have argued all the way to the Supreme Court that the efforts taken to protect PSI are the normal course of business. When the rules for use and protection of PSI are not followed, the argument loses its fidelity. Repeated violations of this trust will destroy the credibility of the Naval Aviation Safety Program that has always depended on its ability to protect PSI for its success. The safeguards listed in subparagraphs 508f(1) through 508f(3) will help protect privileged information:

(1) Witness Statements. Do not share privileged or non-privileged witness statements with any individual or organization except as authorized in this manual. All statements and the signed promise of confidentiality gathered in a mishap investigation must be uploaded into RMI, and all paper copies or working documents must be destroyed when the endorsement is complete.

(2) Investigations. The distinction between aviation mishap safety investigations and other investigations is important and must be understood. Aviation mishap safety investigations (both mishap and hazard investigation) must be independent of, and separate from, all other investigations. The safety investigation is the primary investigation and must initially control all witnesses and evidence unless there is clear evidence that criminal activity caused the event. Parallel investigations (JAGMAN and NCIS) will be conducted also and the sharing of non-privileged factual information between investigations is encouraged. The safety investigation must ensure that other investigations are only given access to non-privileged factual information. Witness statements (privileged and non-privileged) must not be given to other investigative bodies. If evidence of criminal activity is discovered, the safety investigators must suspend their investigation, preserve the evidence, and immediately notify the safety investigation convening authority and NAVSAFECOM. The convening authority will contact NAVSAFECOM for further guidance.

(a) Inter-Service (joint or combined) participation in aviation mishap investigations (authorized by COMNAVSAFECOM or higher authority) is the only time information and opinion may be shared outside the AMB. Cooperation between investigative boards may include division of labor, joint review of evidence, exchange of witness' statements, and joint deliberations.

(b) Requests for help from other activities are not privileged and must be meticulously reviewed to be sure they do not contain privileged information. Technical specialists assisting the AMB are not members of the board. Do not give them access to AMB deliberations or access, except as authorized elsewhere in this manual, to the content of SIRs. At the discretion of the senior member of the AMB, privileged information may be shared with technical specialists working with the AMB if necessary. The AMB must ensure these technical specialists are briefed on the concept of privilege, the responsibilities for safeguarding privileged information, and the differences between a mishap investigation and other types of investigations. This sharing is applicable only for those technical specialists who have access to PSI and will read the mishap report once published (e.g., test pilots, COMNAVAIRSYSCOM Civil Service employees, etc.). Although never members of an AMB, contractors from original equipment manufacturers may be provided PSI if they and their company have each executed non-disclosure agreements with NAVSAFECOM.

(3) Investigators. Members of AMBs or SIOs must not, nor may they be requested to, divulge their opinion or any information that they arrived at, or to which they became privy, in their capacity as a member of an AMB or SIO. Do not assign members of AMBs or SIOs to any other investigation convened as a result of the same mishap, including JAGMAN investigations, FNAEBs or FFPBs. Per subparagraphs 107f(6) and 107k(3), ASOs must never be appointed to serve on punitive or disciplinary duties such as administrative discharge boards, JAGMAN investigations, FNAEBs or FFPBs. It is prohibited for members of AMBs or SIOs to keep a copy of any part of an SIR after completion of the investigation.

509. Safety Investigations Process. Paragraph 509 provides a general description of safety investigations of naval aviation events.

a. Responsibilities. Safety investigation and reporting responsibilities of AMB members or SIOs take precedence over all other duties, particularly in the case of a mishap. Chapter 1 describes individual responsibilities connected with a mishap or hazard investigation.

b. Organization for Investigation

(1) The Standing AMB. This manual requires reporting custodians appoint an AMB in writing, or if undermanned, have access to a standing AMB through the ACC. Except in specific cases, an AMB requires a minimum of four members with experience and knowledge in the specialized fields of safety, aeromedical, operations, and maintenance. The standing AMB's senior member must be sure their board is trained and ready to investigate.

(2) Changes in Board Membership. When changes in board membership are necessary, it is the responsibility of the senior member to recommend to the convening authority changes of AMB membership to comply with this manual. The senior member may also recommend additional members be seated as required by the investigative effort. For example, the AMSO can provide valuable information in reference to physiological, Escape or Egress, Aviation Survival Training, Night Vision Device and ALSS concerns.

(3) Use of Board Members. The senior member may excuse any member from active participation in the investigation if that individual's particular skills are no longer needed. The individual retains board membership until removed by the convening authority.

(4) Use of the ASO as a SIO. Although the SIO must be a school trained ASO familiar with the investigation process, SIOs are highly recommended to use the expertise of individuals that are knowledgeable in specific subject areas related to the mishap or hazard. The SIO must consult with the flight surgeon, APA, or the AMSO (if warranted) to ensure the aeromedical portion of the investigation is complete.

c. Initiate the Investigation

(1) The Investigative Effort. The amount of investigative energy expended in discovering the causes of mishaps or near misses has nothing to do with the amount of damage they cause. There is no correlation between the severity of a mishap and the potential for damage or injury inherent in the hazards detected during investigation of that mishap or near miss. Events that cause little or no damage may expose a hazard with the potential to cause frequent and severe mishaps. On the other hand, a catastrophic mishap may reveal a hazard that would rarely cause future problems. Do not, therefore, tailor the investigative effort to the severity of the mishap. The job of the AMB or SIO is to identify the hazards associated with the mishap and make recommendations to prevent recurrence. A complex or mysterious mishap or near miss may require extensive investigative efforts; a simple, well-defined event might be investigated with minimal effort. The extent of the investigative effort depends on the investigator's assessment.

(2) Climate, Culture and Readiness Metrics. Investigators should pay close attention to the command climate, culture and readiness to determine if they play a role leading to a mishap. These factors may include:

(a) Command climate and an introspective examination of senior leadership's obligations in the event.

(b) The command's pre-mishap aviation safety tracker dashboard status.

(c) The command's ASAP 12-month trends and actions.

(d) Formal inspections, assessments, and climate surveys.

(e) The command's pilot, naval flight officer, enlisted aircrew and maintenance personnel manning metrics.

(f) The specifics of the pilot, naval flight officer, enlisted aircrew and maintenance personnel training and qualifications.

(g) Expected items captured by DoD Human Factors Analysis and Classification System (HFACS) nanocodes in the supervisory or organizational tiers. If these items are included in the report, the report must address these factors with detailed justification for rejection or acceptance.

d. Collection of Evidence. It is impossible to accurately predict what kinds of evidence should be collected under what circumstances in every mishap investigation. For this reason, the Naval Aviation Safety Program relies on the investigator's judgment. It must be noted that no one other than a NAVSAFECOM investigator may conduct a safety investigation of a naval aviation mishap under the authority of this manual, except those personnel assigned as SIOs or AMB members and are under the supervision of the AMB senior member. This supervision begins before the event, during pre-mishap planning and AMB training. This training is the responsibility of the unit standing AMB's senior member.

(1) Witness Statements. Submit witness statements that provide data, context, or findings to the report. Offer a promise of confidentiality if necessary to elicit testimony. Have each witness sign the appropriate page of the OPNAV 3750/16 and ensure it is uploaded into RMI with the witness statement.

(a) Aircrew Statements. If possible, submit a statement made by everyone who ejected, bailed out, made an emergency egress, or was rescued in a SAR operation. Their statements should recount all problems they encountered before or during egress from the aircraft, during parachute descent and landing, and during survival and rescue episodes. Include any information on the use and the effectiveness or any problems with survival and signaling equipment. A promise of confidentiality for such witnesses is not usual but may be granted if necessary to elicit testimony.

(b) LSO, Landing Signalman Enlisted (LSE) or Taxi Director Statements. Summarized statements from the controlling LSO, the senior LSO present, LSO, LSE, and the taxi director whenever mishaps occur to aircraft under their control may be used. Those should include information cited in 509d(1)(b)1 through 509d(1)(b)3, if appropriate:

1. A complete account of the mishap from their viewpoints.

2. An analysis of the pilot's landing grades for the previous 30 days.

3. Applicable items requested by section VII of the LSO NATOPS Manual.

(c) Other Statements (Specify). Include statements from maintenance, operations, ATC and other personnel if their statements clarify the mishap. Include statements from the SAR pilots, SAR swimmers, or others involved in the rescue, only if their statements clarify the understanding of the rescue.

(2) Data. Ensure all pertinent data is identified, gathered and reviewed.

(a) Arresting and Catapult Data. Submit in every mishap where the arresting gear, launching system, optical landing system, or arresting gear and catapult crew malfunctioned. Include as much technical information concerning failure, malfunction, or inadequacy as necessary to identify the difficulty completely.

(b) Takeoff Data. If takeoff data calculation was a possible factor, upload a copy of the data calculated before the mishap (probably not privileged) if it is available and a copy of takeoff data calculated by the AMB (privileged).

(c) Weight and Balance. Upload into the online reporting system weight and balance information gathered directly under a specific AMB ordered test as privileged information. If a DD 365-4, Weight and Balance Clearance Form F – Transport or Tactical, was prepared before the mishap, upload it as non-privileged information.

(d) Electronic Information. Summarize all electronic information, such as National Track Analysis Program, Air Combat Maneuvering Range tapes, and other process electronic data available before the mishap in the SIR, if necessary. Upload or mail any additional electronic information specifically developed by or for the AMB as privileged material.

(e) Copies of NATOPS Qualification Jacket Page and Logbook. Submit mission qualification record, designation record and mishap and flight violation record for crewmembers on all FMs and FRMs where there is aircrew involvement, ejection, bailout or emergency egress.

(f) Photographic Coverage. Photographs are helpful in analyzing the mishap. Most mishap photographs, except for those contained in the aeromedical analysis, autopsy report, and those staged by the AMB or SIO, are non-privileged.

(g) Sketches and Diagrams. Submit only if needed to clarify events that are difficult to explain in the text of the report.

(h) Engineering Investigations. EIs, technical, laboratory and contractor reports must contain only non-privileged information. Speculation, opinions and mishap causal factors have no place in these evaluations.

(i) Data Recorders. Electronic recording devices are used extensively in aviation today. They include: ATC center raw radar plots and associated audio tracks, control tower radio communications recordings, heads-up display (HUD) recordings, ILARTS recordings, forward looking infrared and radar video recordings, and data from mission computers and flight data recorders. All such data in this raw, undisturbed state is non-privileged evidence. However, if this data is enhanced, manipulated or animated for analysis, correlated and interlaced with other data, or interpreted in any way as part of the AMB's deliberative process, the products of these efforts are privileged.

Note: Classify all recorded ILARTS tapes as confidential. Classify them as secret if they reveal a serious deficiency in aircraft or carrier operations that would degrade the ability of the fleet to perform its mission. Classify them per OPNAVINST 5513.2C, enclosure (1), which includes Security Classification Guide 02-105 Pilot Landing Aid Television/ILARTS tapes. Contact, NAVSAFECOM, Deputy Director, Aviation Safety Programs (Code 10A) who will review them for declassification. Do not upload PLAT/ILARTS Tapes to RMI until an unclassified determination is made.

1. The information in flight data recorders, flight information recorders, cockpit voice recorders, video tape recorders, health and usage monitoring system and mission computers recovered from mishap aircraft contain non-volatile memory and can be invaluable to the AMB's analysis. Properly preserving and transporting these sources of non-volatile memory' directly affects the success of data retrieval.

2. Never open or tamper with any recording or memory device. Data can be retrieved from non-volatile memory units even if they have been damaged in a mishap, but special precautions and procedures may be needed to ensure successful extraction of any remaining data. Never attempt to extract the data using equipment at the command without first consulting with appropriate COMNAVAIRSYSCOM or fleet support team engineers or NAVSAFECOM mishap investigator.

3. For any data recorders or HUD recorders contaminated by water, fuel, hydraulic fluid, foam, etc., soak and rinse them in de-ionized or distilled water to flush any sources of corrosion. Keep them immersed, and change water periodically, until sealed in an airtight container for shipping and transport.

4. Ship all non-volatile memory devices using static-free caps on electrical hookup ports and wrap the device in EMI or static shield (Mil-B-81705C type I, class I or equivalent) before wrapping in bubble wrap or other energy-absorbing material. Take special care to protect any device which employs solid-state circuitry from exposure to static electricity. Then place the protected device in a sturdy shipping container prior to shipment.

5. Labeling, shipment and analysis of non-volatile memory units is accomplished through the EI process via the JDRS. Mail via fastest traceable means available according to

shipping instructions received in the EI preliminary disposition or hand carry to the appropriate fleet support team lead. Clearly mark the outside of the package: "DO NOT X-RAY" and "AVIATION MISHAP INVESTIGATION EVIDENCE, DO NOT TAMPER WITH CONTENTS."

(j) Maintenance Records and Aircrew Logbooks. Due to the flight data reporting requirements outlined in this manual and the fact that maintenance and pilot logbooks and training jackets are often valuable evidence in the investigation process, squadron pre-mishap plans should identify personnel to immediately retain and impound all records pertaining to the mishap aircraft and aircrew. At a minimum, the following records should be retained: pilot and aircrew logbooks, training records, health records, flight schedules, weather briefs (including existing and forecast weather at the time of mishap), aircraft maintenance records and logbooks. Squadrons that use digital systems for organizational maintenance activities should perform a data backup and make a copy of the mishap aircraft's automated Aircraft Discrepancy Book following notification of an aircraft mishap.

(3) Medical Evidence. Because medical evidence is perishable, the AMB, unit flight surgeon or assigned APA must be immediately notified when a mishap occurs. The flight surgeon or assigned APA is primarily concerned with medical, physiological, social, behavioral and psychological factors which may reveal mishap causal factors. The flight surgeon or APA must coordinate the collection and analysis of medical and human factors evidence with all other aspects of the investigation. When investigating a mishap, the flight surgeon or APA participates fully in the AMBs investigation and deliberations, which help ensure the contents of the aeromedical analysis and the SIR, where possible, are coordinated and complementary. For all PHYSEP, PEs, and events involving ALSS, ensure an AMSO participates in the investigation as a member of the AMB or as a subject matter expert. Using the gathered evidence, the flight surgeon or APA must complete a comprehensive aeromedical analysis for all investigations where an AMB is assembled unless exempted by the NAVSAFECOM Aeromedical Division, Code 14.

(a) Pre-Mishap Planning. The flight surgeon or assigned APA must participate fully in AMB pre-mishap planning, including planning for the collection of medical evidence.

(b) Physical Examinations. Regardless of their Military Service affiliation, the first flight surgeon, Aviation Medical Examiner, or APA on a mishap scene, or the one to whom mishap victims are brought, must immediately perform examinations and laboratory procedures required by the flight surgeon's Service. However, the parent Service of the victims must delineate unique requirements and assume responsibility for the aeromedical portion of the SIR as soon as possible. Flight surgeons, Aviation Medical Examiners, or APAs may record and report their examinations using their own Service's reporting forms and procedures. Examinations should be as complete as the examinee's condition and other circumstances permit, with special emphasis on those areas that may be pertinent to mishap causal factors. They must

examine all crewmembers, and if indicated, passengers, maintenance personnel and anyone else who may have been a causal factor of the mishap.

(c) Medical Imaging. Flight surgeons or APAs must request radiology studies as clinically indicated. Full spinal X-rays are required after all ejections, bailouts, and crashes with or without suspected back injuries. Separate X-rays do not need to be obtained for spinal segments if higher level imaging has already been performed.

(d) Biological Samples. Per the DODI 1010.01 of 14 February 2018, the SECNAVINST 5300.28F, and this manual, all Class A, B, and C mishaps, biological sampling must take place immediately after the mishap. However, biological samples are not required for Class C mishaps when it is clearly evident no human factors were involved (e.g., material failure only, some bird strikes, etc.) Where there is even a remote chance of human error, those involved must submit biological samples. This includes all personnel who may have been involved in the mishap (e.g. maintenance, ground, flight deck, ATC, and other support personnel). The importance of this knowledge is unrelated to the severity of the mishap. Include biological sampling policies that conform to current Navy and DoD directives in every pre-mishap plan. Take sufficient blood and urine quantities for blood alcohol, carbon monoxide, drug screen, hematocrit, hemoglobin, glucose, and urinalysis testing. Freeze and store an aliquot of each specimen for at least 90 days following the mishap for verification or for other studies as may be necessary later. Promptly submit all toxicological (drug screen, alcohol, carbon monoxide, etc.) specimens to the AFMES for analysis, utilizing chain of custody protocols. All other biological specimens may be analyzed by qualified biological laboratories, at the discretion of the AMB or SIO.

1. The results of routine toxicology tests (drug screen, alcohol, carbon monoxide) on biological samples are non-privileged data releasable to other investigators per the DODI 1010.01 of 14 February 2018 and the SECNAVINST 5300.28F. Toxicological tests conducted as the result of a promise of confidentiality or AMB or SIO deliberative process are privileged and must be protected from release. Results for each individual tested should be uploaded into RMI and included in the aeromedical analysis. It is prohibited for legal or administrative investigators to request privileged information from AFMES.

2. Chain of custody for biological samples sent to the AFMES will be maintained and recorded on AFMES Form 18, Armed Forces Medical Examiner/Division of Forensic Toxicology Toxicological Request.

(e) Pathological Studies. Conduct an autopsy, including full body X-rays, whenever a fatality occurs as a result of a naval aviation mishap. The prerogatives of command (Navy Regulations 1990, chapter 8, article 0815) and NAVMED P-117, Manual of the Medical Department, article 17-2, constitute the authority to perform autopsies on military aviation mishap fatalities when the mishap occurs at sea or on a military base where the Federal Government has legal jurisdiction. Furthermore, any Military Service's medical examiner has

the authority to order a medicolegal investigation, including an autopsy of the aviation mishap related deaths of Service Members, where the Federal Government has exclusive jurisdictional authority. Whenever a military aviation mishap occurs outside Federal jurisdiction, on State or private property, a waiver or a release from the local coroner or medical examiner must be obtained. Include these waiver provisions in the command's pre-mishap plan. After the autopsy, the prompt release of the remains for preparation, encasement and shipment is important. See NAVMED P-117 for details.

(f) Drug-Assisted Interviews and Hypnotic Techniques. Drug-assisted interviews and hypnosis are prohibited without the specific, written authority of OPNAV N09F. These interviews and techniques will be authorized only when critical safety-related information cannot be obtained any other way, and the subject agrees voluntarily. When authorized, the procedure must be conducted by a member of the medical department qualified in the procedure, with the AMB, flight surgeon, or APA in attendance. Other attendees are discouraged. The value of these efforts is suspect and the probability of getting false, inaccurate, and misleading information from them must be considered.

(g) Fatigue, and Fatigue-Modeling Software. Fatigue resulting from sleep deprivation, circadian desynchronosis, or associated conditions is a commonly cited aeromedical cause factor in naval aviation mishaps. Fatigue is four times more likely to contribute to workplace impairment than drugs or alcohol. Flight surgeons or APAs must use fatigue-modeling software on all 72-hour and 14-day histories regardless of mishap class in which fatigue is suspected or reasonably considered by the AMB unless specifically exempted by the NAVSAFECOM Aeromedical Division, Code 14. Fatigue-modeling software must also be used whenever RMI indicates fatigue should be considered as a factor. SAFTE-FAST is available at https://nsc.saftefast.com/scenarios/. Contact the NAVSAFECOM Aeromedical Division, NAVSAFECOM_CODE14_AEROMED@navy.mil, to establish an account. SAFTE-FAST modeling results are privileged when the data used is derived from privileged sources or is the result of AMB or SIO deliberative process.

e. Deliberations

(1) Evaluate the Evidence. As the investigators collect evidence, they must begin to attach significance to that evidence and decide what part it may have played in the event. The SIR or HAZREP format provides a guide for the deliberations of the board.

(2) Analysis and Factors. The AMB must analyze the evidence available to them in order to determine the causes of the event. The first thing the investigators must do is discuss everything that could possibly have led or contributed to the event, then reject those things too remote to consider, and systematically investigate those possibilities that remain. Eventually, the AMB or SIO must phrase each possibility in language designed to aid formal classification and explain which, based on the evidence, they have accepted and which they have rejected. The resulting list constitutes the factors of the event. Each cause factor or contributing factor is a

potential starting point for corrective action. Experience has shown that human factors play a role in most mishaps, while a significant number of others involve material failure. Thus, factors generally fall into two classifications: human and material, but in extremely rare circumstances, environmental and other factors may be appropriate.

(a) Human Factors. Drawing upon Reason's (1990) and Wiegmann and Shappell's (2003) concept of active failures and latent failures and conditions, a taxonomy was developed to identify hazards and risks called the DoD HFACS. HFACS describes four main tiers of failures or conditions called acts, preconditions, supervision, and organizational influences. Investigators will determine and select the appropriate HFACS tiers, categories, subcategories and nanocodes associated with accepted factors. The NAVSAFECOM Aeromedical Division, Code 14, can be contacted for questions pertaining to HFACS.

(b) Material Factors. Even in material failures, there may be enough evidence for the AMB or SIO to identify human factors; aircrew error following failure, someone misused something, or did not maintain or service it, or designed it improperly, or made or reworked it below standards. If that is the case, select a factor and the appropriate HFACS in addition to the accepted material factor. Factors involving resource or acquisition management may require HFACS selection starting and finishing at the organizational influences tier. Including material factors in the set of mishap factors is important because, while human factors are likely to be involved, the material factor is often the weak link in the chain. It may be possible, for example, to redesign and strengthen a part. On the other hand, there may be no evidence supporting human factor involvement and a material failure may be the only possibility. Thus, the AMB includes material factors in this set of mishap causal factors. The AMB should identify all material failures that significantly affect the events leading to the mishap. The set of elements for material factors are component, mode, and agent. There is no matrix comparable to HFACS for material factors. The AMB should describe the material factor elements using standard nomenclature seen in the RMI drop down menus. Use applicable technical reports, such as EIs or outside laboratory reports, as a guide.

1. Component. The smallest, most specific part, assembly, or system identified as having failed.

2. Mode. How the component failed. Specifically, "WHAT" occurred, is the mode. Typical examples are: fracture (load bearing member broke), stripped threads, jammed, leaked, etc.

3. Agent. The acts or events, which led to the failure mode, are the agents. Typical examples are overload, fatigue, fire, or spalling. These are the "technical" agents; each component failure should have at least one "technical" agent. In addition, the AMB may discover further "human factor" agents. These might include improper maintenance procedures, poor design or improper aircrew procedures. The AMB will address "human factor" agents as separate factors and will analyze them using HFACS more fully.

(c) Environmental. Events involving unforecasted environmental conditions of such a magnitude that they could not have been predicted or prepared for or for which all reasonable preparations had been taken. Example: clear air lightning on a cloudless day.

(d) Other. Only used in situations where no human, material, or environmental causal factors could be determined. Only NAVSAFECOM can approve an "other" factor.

(3) Determining Factors. A factor is any action or condition, discovered in the course of an investigation, which in the investigator's opinion, caused or contributed to the eventual outcome. The narrative of an SIR or HAZREP is comprised of findings that collectively answer "what" happened. Factors are based on the weight of evidence, professional knowledge and good judgment of the investigators. The analyses contained in factors lead to recommendations. Factors that directly led to injury, damage or a hazardous event are considered causal and result in causal factors. Irrefutable proof is not always available, nor is it required, to determine the cause of a mishap. Determining causal factors is a difficult task requiring deductive and inductive reasoning in the analysis of the evidence. The AMB or SIO must, in their best judgment, decide on the most likely reasons for the mishap and express their conclusion. Besides BASH and LSRST HAZREPs and Class E mishaps not involving human factors, all safety reports must contain at least one causal factor.

(a) Causal Factors. These factors caused the event to occur. If you remove this action from the event, the event does not (or cannot) occur.

(b) Factors. These factors directly contributed to the event. They are not causal, however they contributed to the eventuality or severity of the final outcome of the event.

(c) Non-factors. These factors are items that were investigated and ruled out and require no additional justification or explanation. Although not required, non-factors may be entered in the General Background Information section. Non-factors should be standalone, succinct statements that require no further explanation.

(d) Non-Factors Worthy of Discussion (NFWOD). Non-factors worthy of discussion are rejected factors which typically fall into one of three categories: areas uncovered during the investigation that did not cause the event or influence the outcome but should be fixed due to the potential to be a factor in a future event (e.g., incorrect information in a maintenance technical order), areas that were thoroughly investigated and subsequently ruled out as factors (i.e., in order to provide context to the audience on why these areas are not factors) and areas that may be considered an interest item to the convening authority (e.g., risk management and crew resource management). Other findings of significance are the basis for NFWOD and recommendations of significance.

f. Determining and Documenting Causes

(1) Cause does not imply blame, it highlights that if the factor was corrected, eliminated or avoided, the mishap, hazard, or incident would not have happened.

(2) Not every factor is causal. Some factors contribute to hazard or mishap severity, but the mishap would have happened even if these factors were mitigated.

(3) Environmental conditions such as lightning, high wind, turbulence, or flooding may be causal only if all reasonable avoidance and damage and injury mitigation actions were taken.

(4) For human factors, the action that could have prevented a failure resides within the human realm and not on an object or publication. Publications or objects should almost never be found causal. Rather, the party responsible for ensuring the publications are correct or the party responsible for ensuring an object does not fail with catastrophic consequences, is causal. In such cases, there may be process or organizational failures and appropriate parties must be identified as responsible for these failures.

(5) Failure to provide a system or procedure may only be causal if a party should reasonably have been expected to know the omission was deficient prior to the mishap.

g. Documenting Factors

(1) Factors will always be worded in an active voice and in past tense. A factor will identify the causal agent (i.e., who), the action taken (i.e., what) and the reason for the deficiency (i.e., why). Why the action or lack of action occurred should be fully explained in the narrative and may be included in the causal factor.

(2) Write each factor as a full sentence, not a bullet or bullets. Use active voice where the subject accomplishes the action. Use past tense since the events occurred in the past.

(3) Do not include people's names, call signs, DoD HFACS codes, gender pronouns or names of military bases or installations in the factors. Instead, use terms such as "the mishap pilot," "mishap maintainer," etc.

(4) After developing the factors, apply the "Factors Test" to ensure the proposed factors are written correctly.

(a) Is the factor necessary to sustain the event?

(b) Is the factor a single action or condition?

(c) Is the factor analysis specific enough?

(d) Is the factor relevant or simply interesting to the reader?

(e) Does the factor answer the "why?" Repeat for each factor.

(f) Is the factor an effect or an expected result of a previously identified cause, even though its inclusion sustains the event sequence? If so, it is not causal.

Note: Do not include actions that follow rescue or recovery actions unless they specifically led to further damage or injury.

h. Determining Findings. Each finding is a single event, condition or data point, which is important in the mishap or hazard. Findings establish lines of evidence. Findings are the underlying basis for factors. There are three types of findings.

(1) Primary Causal Findings: Occurrence of this data point directly resulted in event. If this finding does not occur, the event does not happen.

(2) Primary Non-Causal Finding: This occurrence either contributed to the event occurring or was a subsequent result of the event. Examples include: subsequent damage caused by the event, weather, injuries, and events that were part of the "Swiss cheese" model but did not singly cause the event to occur.

(3) Other Finding of Significance: This occurrence neither resulted in the event nor contributed to the event. This is something that is completely independent of the event occurring and was identified as an issue through the process of the investigation. Other findings of significance are the basis for NFWOD and other recommendations of significance.

i. Documenting Findings. Besides BASH and LSRST HAZREPs and Class E mishaps not involving human factors, all safety reports must have at least one finding.

(1) All Findings are purely factual in nature and do not contain analysis or opinion. Sequence-sustaining findings may be included and do not need to be linked to a factor.

(2) Like factors, write each finding as a full sentence, not a bullet or bullets. Use active voice where the subject accomplishes the action. Use past tense since the events occurred in the past. State the source of the findings at the end of each finding statement.

(3) Do not include people's names, call signs, DoD HFACS codes, gender pronouns or names of military bases or installations in the findings. Instead, use terms such as "the mishap pilot," "the mishap air traffic controller," etc.

(4) Identify causal findings by selecting the "Causal" button when entering findings in the RMI. Do not list causes under a separate heading. Word a causal finding as a clear and simple statement of a single condition or action. Causal findings must support a causal factor detailed in the analysis and formal report.

(5) Do not enter every possible finding. Findings should be relevant to the narrative, factors, or recommendations.

j. Determining and Documenting Recommendations. Recommendations are reasonable and effective solutions to eliminate identified hazards; or, if the hazard cannot be eliminated, to mitigate the hazard's potential consequences. Primary recommendations are associated to primary findings, and other recommendations of significance are associated to other findings of significance. The expectation is that besides BASH and LSRST HAZREPs and Class E mishaps in which there were no human factors, all safety reports include at least one primary recommendation from the AMB or SIO to prevent future occurrences, based on a serious evaluation of the causal factors. Recommendations require the assignment of a risk assessment code (RAC).

(1) All recommendations should target one or more of the hazards identified and documented during the investigation. It is also sometimes prudent to make two or more recommendations against one hazard. Developing sound recommendations also requires recognition of the system safety hierarchy of controls (i.e., "order of precedence") concept (i.e., design changes, safety devices, warning devices or training and procedures) which recognizes that not all risk mitigation alternatives are equal. Figure 5-1 depicts a hierarchy of controls representation from the National Institute for Occupational Safety and Health website. Design fixes are among the most preferable solutions because they can often completely eliminate the hazard; however, these types of fixes often have the highest upfront costs. In all cases, use a hierarchy of controls to develop risk mitigation alternatives.

(2) Based upon the specific information discovered during the investigation, selected alternatives should be formulated into effective and practical recommendations and other alternatives discarded. The purpose of using the hierarchy of controls is to ensure investigators consider the entire range of available options and not just the cheap and easy ones…which, usually have the least mishap prevention value.

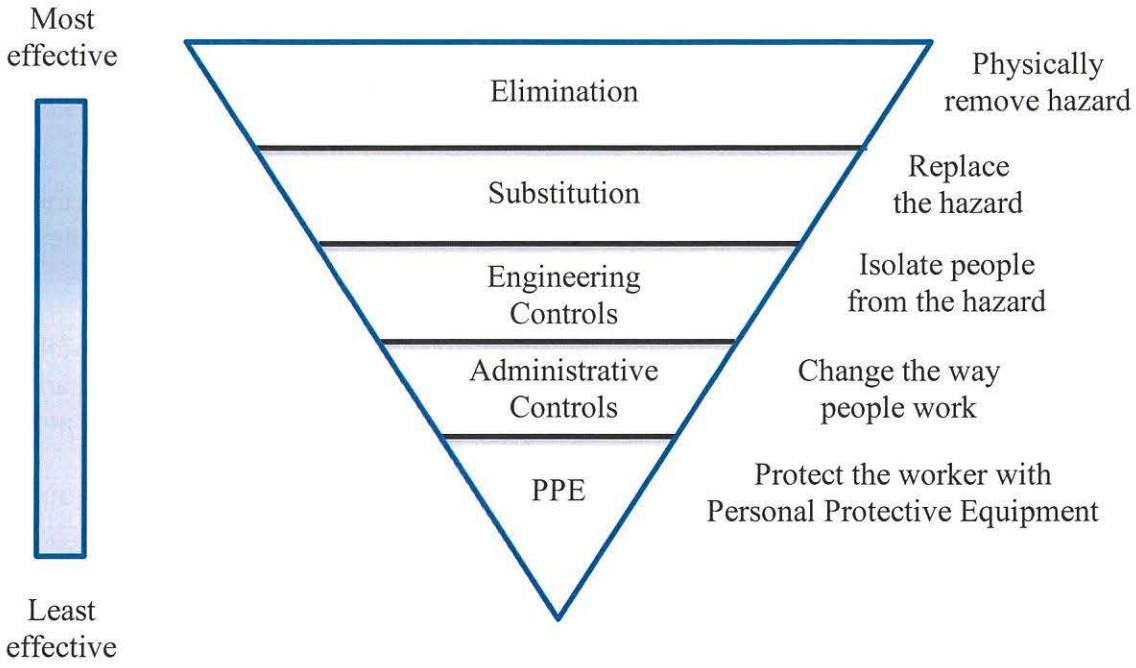


Figure 5-1. Hierarchy of Controls

(2) Based upon the specific information discovered during the investigation, selected alternatives should be formulated into effective and practical recommendations and other alternatives discarded. The purpose of using the hierarchy of controls is to ensure investigators consider the entire range of available options and not just the cheap and easy ones…which, usually have the least mishap prevention value.

(3) Address only one subject in each recommendation. Avoid dual recommendations (do this and do that) and avoid alternative recommendations (do this or do that). If alternatives are apparent, select and recommend the best one or include a second recommendation that does not conflict with the first.

(4) Most recommendations will be associated with causal factors, but not all factors will have recommendations. For example, a causal factor may not have a recommendation if the deficiency is already prohibited in policy (i.e., instruction, technical order, etc.). Likewise, factors that are not causal may also have recommendations written against them.

(5) Make comprehensive recommendations. When a hazard is common to an entire aircraft community and recommended corrective action could be of benefit to all, do not limit a recommendation to local actions. Write it to apply to all who could benefit.

(6) Make uninhibited recommendations. Do not suppress valid recommendations because they appear to be too expensive, too difficult, or imply criticism. A decision in favor of the desired action may be pending only the impetus of a recommendation.

(7) Do not create a recommendation to state that there are no recommendations or to state that the recommendation is submitted for tracking purposes.

(8) If a recommendation depends on tests or analyses that are incomplete when the report is transmitted, explain this and provide a reference to the tests or analyses (e.g., deficiency report, study or contract number).

(9) Recommendations should require the action agency to correct a deficiency rather than to implement a particular solution. The action agency normally has greater expertise than the investigators and should be given the opportunity to develop the optimal solution for a problem.

(10) Avoid recommendations that only require a study or evaluation. Action should be required based upon results of a recommended study. In most cases, it is not necessary to recommend a study or evaluation since studies or evaluations are implicit in the process. The recommendation can simply require corrective action.

(11) General, vague, sweeping or open-ended recommendations that cannot be closed by the action agency are not appropriate. Write recommendations that have a definitive closing action.

(12) Do not recommend briefing personnel on the event. Such a briefing is a basic commander responsibility and a normal function of safety offices at all levels of command.

(13) Do not recommend reminding personnel of the importance of simply doing their jobs properly. However, recommendations to place CAUTIONS and WARNINGS in technical order guidance relating to the adverse consequences of not doing one's job properly, may be appropriate. Recommendations for a specific action such as refresher training, implementing in-process inspections, etc., to ensure job duties are being properly performed, may also be appropriate since they are specific and can be closed.

(14) Recommend use of established procedures for changes of publications. When appropriate, recommend who (usually the reporting custodian that sustained the mishap) should submit exactly what change to NATOPS, Naval Aircraft Maintenance Program directives, an NWP, etc. When possible, include a verbatim draft of the recommended change to show exactly what is intended.

(15) Express each recommendation in a complete, self-explanatory statement. Recommendations are often separated from their parent report. They must stand alone. When writing them follow these guidelines:

(a) Spell out acronyms in each recommendation.

(b) Include the item to which the recommendation applies.

(c) Do not write "Recommend..." at the beginning of the recommendation.

(d) Do not write "COMNAVAIRSYSCOM should..." in the recommendation; just start with the required action. The action agencies are the office of primary responsibility (OPR) and office of collateral responsibilities (OCR) for the recommendation.

(16) Determine the appropriate action agencies for each recommendation. Assign action agencies for all recommendations. An OPR is required for every recommendation. Although an OCR is not required, they may be appropriate for some recommendations. List only one OPR per recommendation. More than one OCR may be listed for an individual recommendation. OPRs and OCRs will be assigned by name and UIC for a given recommendation. OPRs will have the authority to update the recommendation and request closure.

510. Technical and Medical Assistance to Safety Investigations

a. Sources of Technical and Medical Assistance. Help with medical or physiological issues can be found at local military medical facilities, AMSO personnel, Navy Medicine Operational Training Command, Naval Survival Training Institute and its Aviation Survival Training Centers, AFMES, and the National Institute of Health. Technical assistance is available from: fleet readiness centers, COMNAVAIRSYSCOM, maintenance engineering cognizant field activities (CFA), naval laboratories and development centers, aircraft and component manufacturers, Naval Air Technical Data and Engineering Service Command detachments, and technical representatives. NAVSAFECOM mishap investigators can discuss questions about technical assistance.

b. Request for Technical and Medical Assistance. Requests for assistance are not privileged and must be carefully reviewed to be sure they contain no privileged information. To get help from distant activities and from agencies senior or external to commands of the ACC, send the request to the ACC usually via a status message. Requests for aid from local activities should be part of pre-mishap planning.

c. Advisory Nature of Technical and Medical Assistance. Medical or technical specialists advising the board are not members of the board, and they have no access to privileged communications, or the deliberations of the board, or privileged portions of the SIR. They are advisors; their advice is just that – advice – and nothing more. The board may accept or reject their conclusions as they see fit. Give them only that information deemed absolutely necessary. Take care when granting those rare exceptions to this rule (such as using a local flight surgeon or APA in lieu of the one assigned to the board) to be sure these people are thoroughly briefed about their responsibilities to safeguard privileged communications.

d. General Aeromedical Support. Navy Medicine must train their staff members in the general medical and administrative requirements of this manual, prepare and keep current a pre-mishap plan, and have ready both personnel and material to support the Naval Aviation Safety Program. They must train flight surgeons and APAs to prepare them fully for assignment to an AMB. When requested, Navy Medicine Commands must provide a flight surgeon or an APA for appointment as an AMB member or to assist a SIO. If local Navy Medicine Commands cannot provide a flight surgeon or APA, the ACC will. AMB duties take precedence over all others. Any request for medical help from an AMB must be treated as a priority and handled with dispatch.

e. AFMES Assistance. Forensic pathologists are a valuable addition to a mishap investigation. Due to the urgency of such requests, NAVSAFECOM will request AFMES participation in investigations of most fatal aircraft mishaps without prior request from AMB. In these cases, NAVSAFECOM must promptly inform all interested commands of actions taken. When responding to a request for assistance in investigating a naval aircraft mishap, the AFMES representative is a direct representative of the CNO and controls medical evidence (once released by the local coroner) until the investigation is complete. The AFMES team will perform autopsies, visit the mishap site and inspect the wreckage in an effort to correlate injury patterns with aircraft damage. They are authorized to record aircraft and medical evidence in the course of their investigation by any means available. Prior to departure from the area, the team will debrief the AMB.

f. Navy Casualty Affairs Division. The Navy Casualty Affairs Division's Navy Mortuary Branch are responsible for moving human remains from the local coroner or crash site to AFMES facility at Dover AFB. NAVSAFECOM investigators will have final decision authority on all aspects of the mishap site, wreckage, and human remains coordination. This includes security decisions, environmental cleanup, and movement of personnel and machinery in and around of the mishap site. Custody of human remains will be transferred to AFMES or the local coroner upon their arrival on scene. Transferring of human remains by Mortuary Affairs must not interfere with the investigative process. In cases where the NAVSAFECOM investigator is not present, this authority falls to the AMB senior member. Remains should be handled with respect.

g. EIs. When AMBs or SIOs need help with maintenance engineering technical assistance, they should ask the mishap aircraft's reporting custodian to send an EI request to the maintenance engineering fleet support team. Include a description of the physical circumstances of the mishap, photographs of the part as found in the wreckage, and if practical, a statement of the possible cause of the part's failure (not the cause of the mishap) when the material is shipped. Do not tamper with, adjust, remove parts from, or clean the material forwarded. EIs are an important source of factual information for not only the SIR but other reports as well. Do not include privileged information or statements about causal factors of mishaps. That would violate their non-privileged status and threaten the Naval Aviation Mishap Investigation System. Include in all system-related Class A and Class B SIRs, the system program office analysis of

hazards that contributed to the mishap and recommendations for material risk mitigation measures, especially those that minimize potential human errors. Due to the cost and completion timelines, AMBs should be judicious when submitting components for EIs.

h. EIs of ALSS. Investigators must conduct EIs on ALSS used in a mishap or recovered in an investigation. Unfortunately, unlike other parts and equipment in the aviation profession, there is no single activity responsible for all ALSS subsystems. Technical assistance for ALSS investigations is available at the crash site by contacting a NAVSAFECOM investigator or the COMNAVAIRSYSCOM Mishap Investigation Support Team (MIST). A known or suspected ALSS malfunction must be reported under the CNAFINST 4790.2 series. Investigators must request an ALSS EI through the reporting custodian as described in paragraphs h.(1) through h.(2)(c):

(1) Mishaps Involving Ejection Seat Equipped Aircraft

(a) AMBs must examine ejection malfunctions as a total system. Ship the de-armed and safed ejection seat(s), all escape system and ALSS parts, and all non-explosive and non-pyrotechnic aircrew personal protective and survival equipment to the aircraft CFA. Mark the container: "For engineering investigation. This equipment has been used in an emergency situation." Provide a written summary of the circumstances surrounding the use of the ALSS items. In cases of multiple crewmembers, label each person's ALSS to be sure the equipment is not mixed. The CFA will request assistance from the subsystem CFAs in examining interaction between ejection seat and other ALSS items. While the aircraft CFAs conduct their EIs, the subsystem CFAs will conduct EIs on the subsystems. Send the results of all EI investigations to: NAVSAFECOM, COMNAVAIRSYSCOM Human Systems Engineering Department, reporting custodian, the aircraft CFA, and other interested CFAs. The Program Manager for Aircrew Systems (PMA-202) has chartered and funded the aircrew systems Mishap Investigation Support Team (MIST) to provide on-site technical engineering assistance and analysis to the AMB for all aircrew systems products to include escape, egress, crashworthy seating and aviation life support systems, on a request basis. The AMB should request on-site MIST assistance from the NAVSAFECOM on-site investigator. The MIST on-scene lead will debrief the AMB on its preliminary findings prior to departing the area and will forward a written report within 7 days of completing any EIs.

(b) A malfunctioning parachute assembly or a parachute deployment system requires an on-site examination of the complete parachute system and related deployment components by the Naval Air Warfare Center Weapons Division, China Lake, CA. Send the results of this examination to NAVSAFECOM and other appropriate subsystem CFAs.

(c) If seat and man separation occur during an ejection sequence with no reported problems, ship the recovered ALSS equipment to the appropriate CFA. The CFA need not send an EI report unless the AMB requests it.

(2) Helmets

(a) Request an EI on all recovered aircrew helmets whenever there is:

1. Damage to the helmet;

2. A visor fails;

3. The oxygen mask separates from the helmet (remember to send all the recovered oxygen mask components);

4. The helmet lost on ejection but recovered;

5. Neck injuries including sprains, fractures, abrasions, contusions, or lacerations that may have been caused by the helmet or oxygen mask;

6. Facial injuries;

7. Skull fractures;

8. Unconsciousness; or

9. Fatal injuries.

(b) Ship helmets accompanied by a complete identification of the mishap and the failure to: the Naval Air Warfare Center Aircraft Division, Escape Systems (Code 4.6.2.1) 47123 Buse Rd., Unit IPT, Patuxent River, MD 20670-1547. In cases of ejection seat-equipped aircraft mishaps, send the equipment only after the total system ALSS investigation is complete.

(c) In all cases in subparagraph 510h(2)(a), the CFA must conduct an EI on all submitted items and provide the results to NAVSAFECOM, COMNAVAIRSYSCOM and the accounting organization.

i. EIs of Night Vision Devices (NVD). If the AMB or SIO suspects an NVD failure, ship the entire system including batteries, to the Naval Surface Warfare Center, 300 Highway 361, building 65NE Code 805C, Crane, IN 47522-5001. Mark the container "Night Vision Devices. For Engineering Investigation. Handle With Care." Segregate and label separately equipment from each crewmember. The CFA must conduct an EI on all submitted items and provide the results to: NAVSAFECOM, COMNAVAIRSYSCOM Avionics Engineering Department) and the reporting custodian.

511. Aircraft Wreckage

a. Preservation of Evidence and Release of Wreckage

(1) Do not move or disturb aircraft wreckage for at least 24 hours, except to protect life, limb, or property, to ease military or civil activities, or to protect the wreckage from loss or further damage. This allows those commands concerned time to decide about their interests in conducting an independent investigation. Before wreckage can be moved (for any reason) the officer ordering such removal must first map and photograph the wreckage and the wreckage distribution pattern. Record any damage inflicted on the wreckage during recovery.

(2) Request salvage for submerged wreckage as soon as possible. Record any damage inflicted on the wreckage during salvage. Although it is difficult, attempt to get an accurate diagram of the submerged wreckage. Make every effort to retrieve all items associated with the aircraft or its crewmembers. Commence anti-corrosion measures immediately after recovery of components as necessary.

(3) The NAVSAFECOM mishap investigator assigned owns and controls all wreckage and real evidence connected with the mishap until the investigator releases it to the AMB's senior member. Absent an assigned NAVSAFECOM investigator, responsibility for control and ownership of the mishap site, wreckage, and the real evidence falls to the AMB's senior member alone. The AMB senior member will not relinquish control of the wreckage and real evidence to the associated reporting custodians until all other investigative teams have completed their work. In the case of Class B, C or D mishaps, the senior member may release the aircraft to the reporting custodian as soon as his or her investigation is complete, assuming there is no other investigation ongoing. For Class A mishaps, the reporting custodian will notify Naval Supply Systems Command (NAVSUP) Weapons Systems Support (WSS), the ACC and all commands holding wreckage (info the Navy JAG, COMNAVSAFECOM, COMNAVAIRSYSCOM), parts or components that the wreckage is ready for final disposition by naval message. The ACC will provide final disposition instructions.

b. Obliterating and Marking Abandoned Wrecked Aircraft. To forestall any reinvestigation of mishaps, obliterate all wreckage left at the crash site. If this cannot be done, determine the precise geographic location of the mishap and photograph the site from as low an altitude as practical. Furnish all search and rescue (SAR) agencies within the area with the information and photographs. The ACC and NAVSAFECOM will include the info addresses on all wreckage disposition messages.

c. Submerged Wreckage. When the wreckage is submerged, the AMB will request salvage assistance from the ACC. The ACC, in consultation with NAVSAFECOM, will decide if the salvage is worth the effort. If salvage is recommended, the NAVSAFECOM investigator, or the

AMB if no NAVSAFECOM investigator is assigned, will send a naval message containing the information listed in subparagraphs 511c(1) through 511c(7) to ask the cognizant fleet commander for support:

(1) Type of aircraft.

(2) Estimated location of wreckage.

(3) Whether the wreckage is marked by a buoy or pinger. If marked with a pinger, include its frequency and battery life.

(4) Type of ordnance or hazardous material on board the aircraft, if any.

(5) Whether classified material is on board.

(6) Names and phone numbers of points of contact.

(7) Add the commands listed in 511c(7)(a) through 511c(7)(o) to the message INFO line:

(a) CNO WASHINGTON DC//N98/N31//

(b) CMC WASHINGTON DC//A/SD// (as appropriate)

(c) COMNAVSEASYSCOM WNY DC//00C//

(d) COMNAVAIRSYSCOM PATUXENT RIVER MD

(e) COMUSFLTCOM NORFOLK VA (for Atlantic)

(f) COMPACFLT PEARL HARBOR HI (for Pacific)

(g) COMUSNAVEUR LONDON UK (for Europe and West Africa)

(h) COMUSNAVCENT (for Middle East and Eastern Africa)

(i) COMSIXTHFLT (for Europe and West Africa)

(j) COMFIFTHFLT (for Middle East and Eastern Africa)

(k) COMTHIRDFLT (for Eastern Pacific)

(l) COMSEVENTHFLT (for West Pacific and Far East)

(m)COMNAVSURFOR CORONADO CA//N05/N42// (as appropriate)

(n) COMNAVSURFLANT NORFOLK VA//N37/N32// (as appropriate)

(o) COMNAVSAFECOM NORFOLK VA//10/13/37//

d. Water Salvage. Water salvage takes a lot of planning, time and money. Expect to have a board member at sea with the recovery ship for the duration of the salvage effort, as well as the AMB's flight surgeon or APA whenever the recovery effort may bring up human remains. NAVSAFECOM investigators will have final decision authority on all aspects of the water salvage. In cases where the NAVSAFECOM investigator is not present, this authority falls to the AMB senior member. Remains should be handled with respect. The fleet commander has the option to salvage the wreckage. The NAVSAFECOM Mishap Investigation Directorate will liaise with the Supervisor of Salvage, Naval Sea Systems Command, for salvage operations including assignment to a civilian contractor, if the fleet commander cannot handle the tasking. Call the NAVSAFECOM Mishap Investigation Directorate, DSN 564-2929 or commercial (757) 444-2929, for further information.

e. Help with Wreckage Recovery. AMB's should request assistance from the nearest military base when recovering wreckage. Additionally, the commander of the local Coast Guard District, Air Force Headquarters, or Army Area Headquarters will know what heavy military equipment is available in the local area.

512. Mishap Investigations in Foreign Countries

a. General Procedure

(1) A good source of information about this subject is NATO STANAG 3531, as international agreements between the U.S. and foreign governments tend to follow these same general guidelines. Each will:

(a) Notify the other nation of aircraft or missile accidents or events.

(b) Provide operational or technical consultants to the investigating nation, which may use them either as observers or members of its investigating committee.

(2) Expect nations concerned to conduct disciplinary, litigation, claims, or administrative investigations under their own laws. These investigations remain separate from the aircraft or missile accident safety investigation.

(3) When allied forces occupy airfields or launch sites in a host nation and mishaps involving only those allied forces occur within the boundaries of those sites, the allied forces, not

those of the host nation are responsible for all measures taken. Respect all the laws and consult with civil authorities of the host nation whenever mishaps involve their civil aircraft.

(4) Cooperate with other nations in mishap investigations and, wherever possible, exchange relevant information which will neither compromise security nor conflict with practices regarding privilege.

(5) Host nations must respect the security restrictions of the operating nation and not issue statements to the press without the concurrence of the operating nation. Both nations should consult with one another before statements are made to the press.

b. Actions, Reporting and Investigation Procedures

(1) Actions. When an accident involving equipment or personnel from one country occurs on the territory of another, the military authorities of the host nation must:

(a) Help the injured in every way possible and remove any fatalities.

(b) Provide a medical doctor, preferably with aeromedical specialist qualifications, to begin the investigation and help the medical member or advisor to the AMB.

(c) Secure the accident site until the AMB has taken action to have the wreckage removed or has accepted the responsibility to guard it. Whatever their source, guard details will abide by the rules of the host nation. Do not move the wreckage without first mapping, drawing or photographing it.

(d) In the case of fatal accidents:

1. The host nation will detail an officer to ensure all necessary legal steps required by the local civilian authority are completed expeditiously.

2. The local military authorities must honor the dead and respect the desires of the involved nations.

(2) Reporting. The host nation must also:

(a) Report the accident to the appropriate agencies in their own country. Inform the nearest representatives of the military authorities of the countries concerned. Invite the operating nation to send an AMB.

(b) Report the names, location, and condition of any injured persons to the operating nation's authorities.

(c) The country of occurrence must immediately send an officer to the scene of the accident to help with the AMB's work. This officer should collect any statements or other evidence and be prepared to help the board as liaison between the civilian authorities of the host nation and the AMB.

(3) Investigations

(a) Three types of national safety investigations:

1. If there is military hardware only, the operating nation will normally be allowed to conduct its own safety and legal investigation when the only damage and injury are to its own hardware and personnel. The country of occurrence may assign a liaison officer or observer to the safety board. Note that this may only be done with NAVSAFECOM concurrence. Do not share privileged information with a liaison officer or observer assigned to the AMB.

2. If more than one nation has military hardware involved in the accident, the operating nations involved will form a combined AMB. Each nation will conduct its own legal investigation.

3. In the case of military and civil aircraft accidents, most nations require civil aviation authorities to be the primary investigative agency when civil aircraft are involved. In this situation, ask to assign a military representative to the civil investigation. Reporting custodians must still conduct a separate mishap investigation under the rules of this manual.

(b) Combined Safety Investigations into Military Accidents or Events

1. After consulting with NAVSAFECOM, use a combined aircraft or missile AMB to investigate all aircraft and missile accidents or events involving equipment, facilities or personnel of two or more nations. Aircrew on foreign exchange duty are exempt.

2. Promises of confidentiality will not be given when a combined investigation is convened, and board deliberations and analysis will not be privileged.

3. Composition of the combined AMB:

a. Construct the combined aircraft or missile AMB from such investigators and technical advisors as the countries involved feel is necessary.

b. The affected nations must tell their counterparts in the country of occurrence of the names of the officers in their investigating group and will, after consulting with NAVSAFECOM, designate a senior member.

c. The senior member of each nation's investigation group comprises the coordinating group for the investigation.

d. The coordinating group forms the investigators and technical advisors of member nations involved into one investigating committee, working under the unified direction of a coordinating group.

e. The senior member of the group appointed by the operating nation becomes president of the combined AMB.

f. All nations involved must agree on the presidency of the combined AMB whenever aircraft or missiles of two nations are involved in an accident over the territory of a third.

g. When the board cannot agree on the causes of an accident, each nation may state its point of view.

h. The U.S. members will conduct and submit a privileged U.S. only mishap investigation report to NAVSAFECOM per this manual after the combined investigation has been completed.

c. Combined Safety Investigations into Military and Civil Aircraft Accidents. Conduct international investigations of accidents involving civil and military aircraft under annex 13 to the Convention on International Civil Aviation. The coordinating group must be responsible for overall direction of the investigation, must organize the investigating committee into specialized subcommittees as necessary, and must conduct the investigation under the procedures normally used by the operating nation.

513. Retention of Records

a. RMI automatically retains SIRs, endorsements, as well as most types of evidence. Accounting organizations and non-controlling custodian staffs may retain hard copy and digital SIR and endorsements as required by this manual for up to two years from the mishap date, at which point they must be destroyed. If being stored digitally, file SIRs by aircraft type and date of mishap. Do not file SIRs according to any person's name or other personal identifier. Do not retrieve information from SIR files by an individual's name or other personal identifier. Make every effort to purge files in a timely manner.

b. Statements, diagrams, photographs, and notes, gathered by an AMB during an investigation must be uploaded into RMI. Hard copy documents may be retained by the AMB or convening authority until the release of the Memorandum of Final Evaluation (MOFE). Absent any action involving these documents at that time, they must be destroyed. AMB members are prohibited from keeping a personal copy of the SIR. If Navy legal authorities announce pending

legal action, upload all evidence into RMI and store source documents used in the investigation in a secure area until the legal process has run its course. Call the NAVSAFECOM Staff Attorney at DSN 564-3520, Ext 6055 or commercial (757) 444-3520, Ext 6055 for guidance.

c. Dispose of aircraft logs and records of destroyed aircraft per the CNAFINST 4790.2 series.

d. Dispose of service and health records of missing or deceased naval personnel per NAVPERS 15560D, The Navy Military Personnel Manual, or MCO P1070.12K, Marine Corps Individual Records Administration Manual. Dispose of all other records locally. Aviator's logbooks, training jackets and NATOPS jackets may be given to the next of kin.

CHAPTER 6
HAZARD REPORTS

601. Purpose

a. This chapter defines hazards and describes hazard detection and reporting. This chapter does not include instructions for reporting a naval aviation mishap. As stated in subparagraph 302a(2), an aviation hazard is any real or potential condition, that can cause injury or death to personnel; damage to or loss of equipment or property, mission degradation; or damage to the environment, but has not met mishap thresholds. A near miss is an undesired event that, under slightly different circumstances, would have resulted in personal harm, property damage, or undesired loss of resources. The goal of a successful Naval Aviation Safety Program is to assist a command's SMS in identifying and eliminating hazards and near misses before they result in mishaps. While HAZREPs are by definition not privileged, and promises of confidentiality are not offered, HAZREPs must not be used for any administratively or judicially adverse process to include FNAEBs or FFPBs. Subparagraph 601b explains how to detect and report hazards before a mishap occurs.

b. The four purposes of HAZREPs are:

(1) To report a hazard and the remedial action taken, so others may take similar action.

(2) To report a hazard and recommend corrective action to others.

(3) To report a hazard so another organization may determine and take appropriate corrective action.

(4) To document a continuing hazard in order to establish risk severity and exposure.

602. General

a. Corrective Actions. HAZREPs and SIRs are the media for recommending corrective action to eliminate hazards. Both require endorsements when they address a severe hazard (hazards containing a recommendation with an overall RAC 1 or 2) or recommend corrective action by another command. Regardless of whether the hazard is identified and reported before or after a mishap, corrective action is essentially the same.

b. Hazard Detection Before a Mishap. Observing, identifying and analyzing hazards, conducting safety assessments, and reviewing command plans, policies, procedures and instructions aid in detecting hazards before a mishap occurs. Proper risk management, applied in the planning stages of an operation, should identify hazards at the earliest possible opportunity. Individuals or commands with direct, first-hand knowledge of the circumstances surrounding a hazard are the most effective at detecting and reporting hazards. An essential element of an

effective command safety program includes a review of operating procedures, analysis of equipment failures, etc., for hazard detection and assessment. Two vital parts of hazard assessment are: classifying the hazard according to the severity of the expected damage, and determining the probability, or likelihood, that the identified hazard will occur.

c. Hazard Reporting. Everyone associated with naval aviation has an obligation to report hazards. It is essential that COs encourage, and command safety programs foster, hazard reporting. Once identified, the attendant risk should be assessed both for mishap probability and severity. Hazards that affect people or organizations outside the command must be reported to higher authority. Local hazard reporting programs (i.e., Flash Reports entries) are not a substitute for reports outlined in this manual. Reports may include descriptions of corrective action (risk control options) undertaken by the command which would benefit other commands facing similar problems.

(1) Consider these questions when an event falls below mishap thresholds or a near miss occurs. Using Reason's "Swiss Cheese model," these adverse events can be defined by saying there were a number of significant holes which aligned, but fortunately one or two remaining holes were not aligned. The path was blocked, and a mishap did not occur. So, when an adverse event occurs, here are the questions that should be asked:

(a) What created the original holes that became aligned in the first place? How many defensive layers broke down and contributed to what could have been a mishap? What were they?

(b) When submitting a HAZREP, consider not only what went wrong (the holes that aligned), but also consider and assess what went right (those barriers in the model that prevented a mishap).

(c) What procedures, programs, or equipment was put in place or enabled to prevent a full-scale mishap? Not only can the things that went wrong be reported, but the things that went right can be praised, encouraged and validated.

(2) It is contrary to a right and just safety culture to look for someone to blame. If personnel believe that sharing a near miss episode might result in any kind of personal retribution, they are much less likely to report the event. Instead of looking for someone to blame, investigators must identify latent conditions and include them with corrective actions or recommendations in a HAZREP.

(3) The quality of HAZREPs depends directly on the quality of the investigation into its attendant circumstances. Although not required, using an AMB to investigate and report hazards keeps the board's skills honed and produces excellent results. Therefore, forming an AMB to investigate and report hazards is authorized.

(a) Discussing which risk management procedures proved helpful during a hazard investigation is appropriate in the Investigation Conclusions section of the HAZREP.

(b) Investigations into PHYSEPs must include the services of a flight surgeon or APA and an AMSO. PHYSEPs which are determined to be PEs will require MOFE. For additional reporting requirements for PEs, see the NAVSAFECOM Physiological Event Investigations and Reporting Operating Guide located at: https://intelshare.intelink.gov/sites/nsc/Aviation/NSC%20PE%20OPERATING%20GUIDE%20-%206%20Mar%2023.pdf.

(4) Success of the Naval Aviation Safety Program depends on the complete, open and forthright exchange of information and opinions about safety matters. Any effort on the part of seniors in the chain of command to edit, change or censor, in any way, the content of reports is contrary to the spirit of the program and is prohibited. A senior's endorsement during the MOFE process is the only acceptable method of expressing opinions or disagreement with the report.

d. Anonymous HAZREPs. Commands or individuals desiring to submit an anonymous HAZREP should contact NAVSAFECOM. This method is pertinent when unique situations exist, especially when there is a threat or perceived threat of retribution against the submitter. Severe risks discovered in the course of a mishap investigation which the AMB feels needs to be immediately released to the NAE must be treated as an anonymous HAZREP. NAVSAFECOM protects the confidentiality of these anonymous reports, sanitizes them and then redistributes the information as necessary.

603. Submission Criteria

a. General Submission Criteria. A hazard is a potential cause of damage or injury under human control. Submit HAZREPs whenever less than mishap reportable damage or injury occurred, a hazard is detected or observed, or whenever a near miss event occurs. Keep in mind that the reports submitted under this manual are a major source of data for the Naval Aviation Safety Program. Unreported hazards do not get into the safety database. The same thing is true of reports submitted under other directives, such as those submitted using the CNAFINST 4790.2 series. Sending a Hazardous Material Report (HMR) instead of an aviation HAZREP deprives the safety community of long-term trend information, data, and documentation useful in mishap prevention. Additionally, HAZREP trends are used to justify system safety priorities for funding. HMRs are maintenance reports, and as such, do not require chain of command endorsement and lack the visibility of HAZREPs to the NAE as a whole. It is often appropriate to issue both a HAZREP and an HMR concerning the same event, especially when safety of flight is an issue. Appendix A is a graphic representation of HAZREP and mishap general reporting requirements.

b. Specific Submission Criteria. It is mandatory to submit a HAZREP for specific occurrences of NMAC, PLOC, SHIP/EMBLAND, HATR, PHYSEP, PE, BASH, EMI, LSRST, FF, CMAV, and N-CFIT. Additional guidance is provided in 603b(1) through 603b(13).

(1) NMAC Reports. Events where aircrew took, or would have taken, abrupt evasive action to avoid an airborne collision with an aircraft, or another aircraft were within 500 feet and presented a hazard to flight safety. Pilots involved in an NMAC must:

(a) Report the event by radio to an FAA air traffic facility or flight service station. Inform them the crew will file a written NMAC HAZREP; or

(b) At the next point of landing, contact the nearest FAA air traffic facility or flight service station and report the event. Inform them the crew will file a written NMAC report; and

(c) Under this manual, file a written, formal NMAC HAZREP.

(2) PLOC Reports. PLOC includes mishaps and near-mishaps encountered during air combat maneuvering, guns defense, air intercept control or other flight regimes. These mandatory reports highlight the risks associated with high angle of attack (AOA), low airspeed flight. Unplanned departures from controlled flight or unintentional out-of-control flight are hazards to naval aircraft and their crews. Any un-briefed or unexpected departure from controlled flight, deliberately or unintentionally must be submitted as a PLOC event. Pre-briefed departure recognition training or high AOA and low airspeed flight excursions deliberately conducted for training need not be reported.

(3) Ship-Related EMBLAND Reports. A Ship-Related EMBLAND hazard is a potential cause of damage or injury directly associated with an EMBLAND, to include low visibility approaches for helicopters and emergency low visibility approaches to the ship.

Note: Contact the USN Landing Signal Officer (LSO) School for EMBLAND events involving CVN aircraft recovery. Provide LSO School personnel access to the ILARTS tapes in RMI or forward tapes to the USN Landing Signal Officer (LSO) School, NAS Oceana, Virginia Beach, VA 23460-5129.

(4) HATR Reports

(a) An HATR is an occurrence attributed to an element of the ATC system that:

1. Results in less than the applicable separation minima between two or more aircraft, or between an aircraft and terrain or obstacles, as required by FAA JO 7110.65 and supplemental instructions. Obstacles include vehicles, equipment, and personnel on runways; or

2. Places aircraft that are in a tower pattern in close proximity to other aircraft, terrain, or obstacles whereby collision may have occurred; or an

3. Aircraft lands or departs on a runway closed to aircraft operations after receiving ATC authorization.

(b) Also considered a reportable hazard is a controlled occurrence where applicable separation minima, as referred to in subparagraph 603b(4)(a)(1), was maintained, but:

1. Less than the applicable separation minima existed between an aircraft and protected airspace without prior approval.

2. An aircraft penetrated airspace delegated to another position of operation or another facility without prior coordination and approval.

3. An aircraft penetrated airspace delegated to another position of operation or another facility at an altitude or route contrary to the altitude or route requested and approved in direct coordination or as specified in a letter of agreement, pre-coordination or internal procedures.

4. An aircraft, vehicle, equipment or personnel encroached without clearance upon a landing area resulting in the endangerment of a landing or departing aircraft.

(c) Report HATRs using the guidelines in paragraphs 603b(4)(c)1 through 603b(4)(c)5:

1. Assign HATR HAZRECs as a RAC 1 or RAC 2 if addressing causal factors associated with events found in subparagraph 603b(4)(a)1, 603b(4)(a)2 or 603b(4)(a)3.

2. Assign HATR HAZRECs as a RAC 3, 4 or 5 if addressing causal factors associated with events in subparagraph 603b(4)(b)1, 603b(4)(b)2 or 603b(4)(b)3.

3. Runway incursions as defined in subparagraph 603b(4)(b)4 that result in a wave off, aborted takeoff or ATC cancelled takeoff clearance will be submitted as a HATR. HAZRECs associated with these causal factors will be assigned a RAC 1 or RAC 2. Other runway incursions will be reported as CMAVs.

4. Notify the appropriate naval representative to the FAA when a HATR involves civilian aircraft.

5. CNIC and the affected region commander will endorse all HATRs with RAC 1 or 2 recommendations for air stations and air traffic control facilities. The chain of command,

including the ATC officer on COMNAVAIRPAC or COMNAVAIRLANT command staff will endorse all HATRs with RAC 1 or 2 recommendations for CVNs and applicable L-class ships.

(5) PHYSEP or PE Reports. Investigations into PHYSEPs must include a flight surgeon or APA and an AMSO. A PHYSEP occurs whenever any of the conditions listed in 603b(5)(a-f) exist outside of a naval aviation mishap. PEs occur when aircrew experience adverse physiological symptoms during or after flight and these are attributed to a known or suspected aircraft or aircrew systems malfunction. For additional reporting requirements for PEs, see the NAVSAFECOM Physiological Event Investigations and Reporting Operating Guide.

(a) Loss of consciousness for any cause.

(b) Hypo or hypercapnia (typically hyper or hypoventilation).

(c) Decompression illness because of evolved gas (bends, chokes, neurocirculatory collapse) or severe reaction to trapped gas resulting in incapacitation.

(d) Carbon monoxide poisoning or other toxic exposure (smoke or fumes in the cockpit).

(e) SD or distraction resulting in unusual attitude.

(f) Hypoxia, proven or suspected.

(g) An unintentional rapid decompression exposing personnel to cabin altitudes above flight level 250, regardless of whether dysbarism or hypoxia occurs.

(h) Autonomic response to physiological stress.

(i) Other psychological, pathological or physical problems that manifest during or after actual flight.

(6) BASH Reports

(a) The scope of the BASH reporting system includes collisions with birds and all other animals. A bird (wildlife) aircraft strike occurs anytime a naval aircraft collides with any wildlife or domesticated animal whether the event causes damage to the aircraft or not. Submit a BASH HAZREP for all instances of aircraft animal strikes including those where no damage occurred. Air stations must also submit BASH HAZREPs for all events involving other DoD and civilian aircraft at the air station, and when remains are found on an airfield within 250 feet of runway centerlines or within 1000 feet at the ends. If a HAZREP is submitted for a BASH event at a civilian airfield, it is recommended that a copy of the report is sent to the airfield. Do not send BASH mishap reports to civilian agencies due to PSI concerns.

(b) The most critical element of the BASH reporting process is the collection and positive identification of any remains remaining from a damaging or non-damaging strike event. This species identification data is vital to the installation BASH program to reduce the risk of future strike events and increase the safety margin for aircrew. Any remains, to include only blood stains or snarge, found on the aircraft or runway (within 250 laterally, 1000 feet off the ends) of aircraft movement areas must be collected and mailed to the Smithsonian for identification and analysis. If an entire carcass is collected, a digital photograph of the remains uploaded to the BASH section may be used in lieu of mailing remains. Once remains are collected and prepared for mailing, create the wildlife report in RMI, print the BASH report, and include it in the remains package.

(7) EMI Reports

(a) Although not a separate hazard event, EMI has the potential to cause damage or injury and is associated with an in-flight or on-the-ground interruption or loss of aircraft instruments, flight controls, radio communication, navigation, electrical equipment, etc., in which electrical interference is experienced or suspected. As a result, you will need to specify EMI on the Object information page in RMI. EMI types include:

1. Radio frequency interference

2. Electrical storm interference

3. Electrical noise

4. Precipitation static

(b) EMI exists when undesirable voltages or currents adversely influence the performance of an electronic device. The extent to which it degrades performance depends on the level of interference encountered. These levels are:

1. Mild - Detectable but does not hamper the detection and interpretation of a desired signal.

2. Medium - Interferes with the detection and interpretation of a desired signal. This level causes partial breakup or masking of the desired signal with some loss of signal content.

3. Severe - Causes a complete loss of a desired signal.

(c) There are two types of interference classification:

1. Intra-system interference. The source of the interference is on the same aircraft as the affected victim system.

2. Intersystem interference. The source of the interference is external to the aircraft. Atmospheric interference including lightning, precipitation static, and St. Elmo's fire is in this classification.

(8) LSRST Reports. All LSRST events, whether a mishap or a hazard must be reported in RMI. Additionally, all laser events, intentional or unintentional (e.g., incidents, hazards, and mishaps) involving DoD aircraft must be reported per Chairman of the Joint Chiefs of Staff Instruction 3320.02F via DoD Laser Safety Event Hotline at commercial 800-473-3549 or DSN 312-798-3764.

(9) FF Reports

(a) FF hazards are resident risks or near miss situations involving friendly forces and include the terms friendly fire, blue on blue, and potential harm to friendly forces. Although not a separate event type, use the OTHER event type for FF events. Additionally, FF events must be annotated in the General Information section of RMI.

(b) Report all combat zone FF events involving active engagement with the enemy that do not meet mishap thresholds, as an FF HAZREP.

(c) When an aviation training event that involves simulated or actual ordnance delivery is conducted inside or outside of a combat zone and events listed in 603 occur, report the event as an FF hazard.

1. Hazards are discovered that could have resulted in damage to friendly forces or damage to friendly forces did occur but did not meet mishap thresholds; and

2. The event involves problems with, or violations of, joint or Service specific training, SOPs, or joint or Service tactics, techniques and procedures.

(d) If conducting an FF mishap investigation and a severe hazard is discovered that requires immediate attention, contact NAVSAFECOM to initiate an anonymous HAZREP. Provide NAVSAFECOM with detailed information including recommendations to the appropriate combatant commander, component commander, joint forces command and action agency.

(10) CMAV Reports. When aircraft, vehicles, or pedestrians entering a Controlled Movement Area without specific control tower approval which poses a direct hazard to an aircraft.

(11) N-CFIT Reports. Conditions that could have led to a collision with terrain, water, trees or a man-made obstacle during flight prior to planned touchdown. This includes Auto-GCAS, or pilot activated recovery systems, or any time aircrew intervenes to avoid a CFIT situation.

(12) Related Aviation Reports

(a) Events which meet the criteria in the CNAFINST 4790.2 series for submission of hazardous material reports, aviation-related explosive mishap reports, technical publication deficiency reports, and quality deficiency reports may also require a HAZREP under this manual if there is a safety of flight or other significant safety issue. The hazardous material reporting system does not reach the same audience as the safety reporting system. The safety reporting system requires endorsements by action agencies and tracking of corrective action.

(b) Submit deficiencies in other publications that have established procedures for changes (NATOPS, Naval Warfare Publications (NWP), etc.) as recommended changes to those publications.

(13) Submission of a Severe HAZREP by AMB Investigating a Mishap. Occasionally, an AMB will discover among their causal factors, severe hazards that require immediate attention. To protect AMB analysis and PSI, in such cases, AMBs must contact NAVSAFECOM to initiate an anonymous HAZREP. Provide NAVSAFECOM with detailed information including hazard analysis, conclusions, and recommendations (to include OPRs and OCRs). HAZREPs submitted under these circumstances do not relieve the AMB of the responsibility for submission of a complete SIR.

604. Originator. Anyone can initiate a HAZREP, but investigating hazards and preparing the HAZREP should be left to members of the standing AMB or SIO. While the reporting custodian involved usually submits HAZREPs, any naval activity may be accounting organization for a HAZREP.

605. Risk Assessment. Originators of HAZREP recommendations must assign a RAC which best describes the risk associated with the reported hazard, e.g., RAC 1, RAC 3, etc. Refer to Appendix B of this manual for information concerning RACs.

606. Deadlines. Submit HAZREPs which contain recommendations with a severe RAC (i.e., RAC 1 or 2) within 72 hours of detecting the hazard. Submit all other HAZREPs as soon as possible but no later than 30 days after the hazard is discovered. Extensions to the 30-day requirement during the investigative process must be submitted to the convening authority for approval via a status message in RMI.

Note: Complete reports that require information from tape recordings of ATC communications or radar video in a timely manner. ATC records over these tapes after 45 days unless investigators request a copy.

607. Method of Submission. On-line reporting via RMI is the primary method for submitting HAZREPs. If HAZREP submission on-line is not possible, e-mail the hazard details to the immediate superior in command for entry into RMI.

608. HAZREP Serialization. The Unit Control Number is the unit's local serial number. It is a four-digit number, the first two digits are the sequential number of events occurring that FY and the last two numbers are the FY. Do not separate counting of HAZREPs and SIRs. Examples: first event of FY21: 01-21. Third report of 2022: 03-22.

609. Distribution. RMI does not partition USN or USMC reports. Any individual with RMI access can establish message rules to receive pertinent HAZREPs.

610. Non-privileged Status. HAZREPs are not privileged. Do not give promises of confidentiality. Although the Navy and Marine Corps may only use HAZREPs for safety purposes, the contents may be divulged to outside agencies in response to FOIA requests, or provided to partner nations via the foreign military sales program. Personnel submitting hazard reports must not identify specific individuals.

611. Markings. HAZREPs are marked CUI in RMI. See SECNAV M-5510.36, Controlled Unclassified Information (CUI), of 6 March 2020 for instructions on their handling.

612. Security Classification. Normally, HAZREPs are unclassified. Omit any portion of the report that warrants classification and substitute the word "classified" in its place. In the unlikely event that a meaningful report cannot be produced in this fashion, submit a classified report on SIPRNet. Do not enter classified information into RMI.

613. MOFE Requirements for HAZREPs. If any recommendation in a HAZREP addresses a severe hazard or has an OPR at a higher echelon than the CO, then the report will require a higher convening authority and will require MOFE. In this case, the assigned OPRs will dictate selection of the appropriate convening authority for that report. The convening authority must be at the same echelon of command as the action agency. If the OPR is outside of the accounting organization's chain of command (including Naval Air Systems Command), then the convening authority must always be the unit's ACC.

614. CO HAZREP Comments. For Class E mishaps and HAZREPs that do not require MOFE, this section may be used to enter CO Comments. Any CO Comments entered in the Investigation Conclusions section must appear after the Investigator's summary of conclusions and be prefaced with the words, "CO Comments:." Any report requiring MOFE, to include

applicable Class E mishaps and HAZREPs, must not have CO comments included in the Investigation Conclusions section. CO comments will be entered during the Comments for MOFE period.

615. OIC HAZREP Release. If the HAZREP is released by a detachment OIC, the OIC can request endorsement by the unit CO. However, the detachment OIC comments can be written on behalf of, and in coordination with, the unit CO. In this case all HAZREPs are endorsed as indicated in paragraph 614.

CHAPTER 7
SAFETY INVESTIGATION REPORTS

701. Purpose. This chapter describes the SIR, explains who submits the report and when, and how and why it is submitted. After a mishap, use the SIR to report the hazards uncovered by the investigation. SIRs are vital to the success of the Naval Aviation Safety Program. Their succinct, open and forthright information, opinions, and recommendations are used to prevent the recurrence of aviation mishaps. Any attempt by the command or chain of command to gain, review, influence, edit, or in any way censor the content of SIRs, contradicts the spirit of the program and constitutes a direct violation of this manual. All such activity is prohibited. Anyone wishing to comment on or change the contents of any SIR must do so in the open during the endorsement process. If assistance is required with SIR content, contact the NAVSAFECOM investigator if one assisted with the mishap investigation. If not, contact the NAVSAFECOM Investigation Directorate, or the type-model-series analyst at NAVSAFECOM.

702. General. SIRs report the hazards which cause or contribute to mishaps. They provide a method for accounting of personnel injuries and damage or loss of DoD or non-DoD property. SIR also report hazards which did not cause or contribute to a mishap but may lead to a future mishap. Equally important is the opportunity they offer to submit recommendations to prevent the mishap and the resultant damage or injury from recurring. Submit SIRs for all naval aviation mishaps as defined by this manual.

703. Privilege in the SIR. SIRs are submitted using RMI. All Class A, B, C, and D reports have privileged elements. Class E reports are not recognized in RMI as privileged because they fall below the DoD mishap thresholds set in DoDI 6055.07.

a. Privilege considerations for Class A-D mishaps:

(1) Analysis, factors and recommendations are always privileged.

(2) All privileged finding narratives must begin with a (P).

(3) Documents uploaded to the General Background Information section and Factors section and their associated file names will display in the final SIR or HAZREP. Any privileged photographs or diagrams must have a (P) at the beginning of the file name. This will require the user to rename the file prior to upload.

(4) Privileged Exhibits must begin with a (P) at the beginning of the file name.

b. The Exhibit Groups listed in subparagraph 707b are always non-privileged. If an exhibit contains privileged information, it cannot be assigned to any of the categories listed in 703b(1) through 703b(7).

(1) Deficiency Reports

(2) Evidence Transfer Document

(3) Law Enforcement Reports

(4) Medical Information (Not Medical Analysis)

(5) Non-Disclosure Agreements

(6) Parametric Data

(7) Transcripts (Not Interviews)

c. In order to ensure the legal protection of privilege, a signed Privileged Advice to Witness form must be uploaded to the Exhibits section of the report.

704. Originator. The senior member of the AMB is responsible to approve the final version of the SIR and release it for convening authority and NAVSAFECOM quality control. The endorsement process will begin once quality control is complete.

705. Risk Assessment. AMBs and SIOs must assign RACs to each hazard they wish to eliminate. The RACs must correspond to the recommendation listed in the SIR. Entry of RAC severity and probability codes is mandatory for all recommendations.

706. Deadlines. Submit SIRs within 30 calendar days of the mishap. If aircraft are missing, submit the report 30 calendar days after completion of the organized search. Submit a status message to request an extension from the ACC if necessary. Describe the specific reason(s) for the request; "administrative delay," or "investigative delay" is not enough. In some cases, combined requests for assistance and a deadline extension are appropriate. For example, when all the wreckage is not yet located, or when results of an EI, a pathological study, or a toxicology report have not yet been received, an extension may be appropriate. When submitting an extension request for EI, pathological study, or toxicology report, include estimated completion date and facility conducting the investigation, study, or report. Senior members and ACCs must balance the value of waiting for the receipt of the final EI, medical, or applicable report and the timely submission of the SIR.

707. Methods of Submission

a. Online Submission. Submit all SIRs via RMI. In the event of a mishap where the accounting organization cannot report via RMI, the accounting organization is responsible to send all data to the convening authority for entry in RMI. Unlike the previous mishap reporting system, the Web Enabled Safety System, all evidence can be uploaded into RMI.

b. SIR

(1) Only the CNO, CMC, or COMNAVSAFECOM may provide SIRs to organizations outside the Navy or the Marine Corps for safety purposes. If the intended recipient is not a DoD uniformed or government civilian, the recipient must sign a non-disclosure agreement with NAVSAFECOM.

(2) Do not distribute SIRs to individuals or commands not specified in this manual under any circumstances. To do so is a direct violation of the Uniform Code of Military Justice and will subject civilian personnel to disciplinary action under sections 7503, 7405, 7513, 7514, 7121, 7701, 7702 and 7703 of title 5, U.S.C.

(3) Receiving commands must limit their internal distribution to only those individuals who require the report for safety purposes. COs must configure their command's distribution system so that only authorized personnel receive the SIRs and their endorsements.

(4) The SIR contains privileged and sensitive information. If sent via e-mail the file should be marked with a CUI//SP-PSI in the subject line, encrypted, and password protected.

708. Determining and Submitting Privileged Information

a. Military and Federal courts recognize that information given to the AMB or SIO under promises of confidentiality, and the deliberative process that produces the SIR (including narratives, analysis, causal factors and recommendations) and endorsements to the SIR are protected from release under executive privilege. An AMB or SIO appointment directs members to protect privileged information. The AMB or SIO members may offer a promise of confidentiality to witnesses, although witness names are not privileged. Any information that is derived from a statement given under a promise of confidentiality is privileged. Therefore, the deliberative analyses of findings, conclusions, and recommendations of the AMB or SIO and witness statements given under a promise of confidentiality are privileged. Also deemed privileged is information directly calculated by the AMB or SIO, or when disclosing that information would reveal the AMB's or SIO's deliberative process.

b. Data from electronic recording devices is non-privileged unless the AMB manipulates the information into tables, multidimensional imagery or animation during the deliberation process. This effort is part of the AMB's analysis of the evidence and is, therefore, privileged information.

c. Cockpit voice recorder tapes will not be released. NAVSAFECOM may release some portions of the transcript under FOIA or in response to litigation, but the actual voice recordings are subject to the Privacy Act.

d. Photographs staged by the AMB (i.e., photographs that are preplanned or posed to illustrate a specific condition or situation) as a result of their deliberative process are privileged. All other photographs are not. However, those captions and markings placed on photographs indicative of the AMB's deliberative process are privileged. The captions and markings only, not the photographs, are privileged.

e. NAVSAFECOM is the only command authorized to determine the privileged or non-privileged status of information contained in the SIR.

f. NAVSAFECOM is the only command authorized to sanitize an SIR.

709. Special Handling. The term "Special Handling" means the handling of privileged reports to ensure that their use is limited strictly to safety. Common sense must be applied to determine exactly what handling actions would be appropriate.

a. Marking PSI. Special handling includes properly marking PSI "UNCLASSIFIED//CUI//SP-PSI" or "CUI//SP-PSI." Use of these markings is mandatory for all PSI.

b. Electronic transmission and storage of PSI. Distributing SIRs and other PSI on local area networks, e-mail or electronic bulletin board systems is authorized, provided access is controlled and authorized by the commander, commanding officer, officer-in-charge or safety officer. Access to storage systems containing PSI must always be controlled to exclude those who do not have a need-to-know and are not authorized access to PSI. The electronic transmission of PSI must be encrypted, and such information must only be transmitted through DoD electronic mail (e-mail) systems. Use of personal, corporate or commercial e-mail systems to send or receive PSI or Personal Identifiable Information is not authorized. Contact the NAVSAFECOM Staff Attorney with any questions.

c. Storage of PSI. PSI stored locally must be protected from unauthorized access by outside entities, contractors and Navy and Marine Corps personnel who do not have a need to know (e.g., they are not directly concerned with safety and mishap prevention).

d. Sharing of PSI. Personnel granted access to safety information containing PSI are authorized to share this information with similarly situated DON personnel per this manual. Key factors to keep in mind are that the safety information must be shared for mishap prevention purposes and that special handling is required by all involved personnel to protect the PSI from unauthorized release.

e. Uncontrolled distribution of PSI. Uncontrolled distribution of PSI (e.g., placing PSI in reading racks, on general access message boards or on bulletin boards) is prohibited. Route printed SIRs or other PSI in file folders with proper markings. This helps ensure access is given only to those who need to know the content for safety and mishap prevention purposes.

Accountability must be maintained throughout the handling process, to include returning the circulated SIRs or other PSI, to a safety professional for proper filing, disposal or destruction.

f. Distributing SIRs and other PSI. Distributing on local area networks, e-mail or electronic bulletin board systems is appropriate, provided access is controlled and authorized by the commanding officer. Wherever possible, e-mails containing such information must be digitally signed and encrypted for transmission.

710. Independence of SIRs

a. Do not append, or extract excerpts, from any part of an SIR for inclusion in a JAGMAN investigation report, nor any other report. Statements made to AMBs, whether or not under a promise of confidentiality, become the property of the Naval Aviation Safety Program and may not be released for inclusion in the JAGMAN investigation report. AMB members or SIOs are not authorized to include Military or civilian representatives of the JAG corps in any SIR distribution. Refer all requests from JAGs to OPNAV N09F (NAVSAFECOM).

b. Items that do not show deliberative process such as mishap photos (that do not indicate the thought process of the AMB), EIs, and a list of witnesses interviewed, or flight data recorder visualizations are not privileged and may be shared with other investigators. Other SIR materials, even though non-privileged, are not to be provided to the JAG investigator. The JAG investigator is required to develop such evidence independently of the AMB. Contact NAVSAFECOM if the AMB has questions about what can be shared.

c. To preclude any inference of association with disciplinary action, JAGMAN investigation reports must not be a part of any SIR. SIRs must not include any reference to disciplinary action, FNAEBs for Navy personnel, FFPBs for Marine Corps personnel, or any other administrative action in connection with the mishap being reported. Personnel that have read the SIR or participated in the investigative process of a specific event must not participate in the FNAEB or FFPB board of that same event.

d. Any attempt at command or chain of command influence, any effort to edit, change, or in any way censor the content of SIRs is prohibited. Requests or attempts by individuals inside or outside of the endorsing chain for a review of the SIR, AMB analysis, or privileged evidence, prior to SIR transmittal is prohibited. Anyone who observes attempts to hinder or coerce an AMB must report the issue to NAVSAFECOM via the NAVSAFECOM ANYMOUSE program or by contacting the Director or Deputy Director, Aviation Safety Programs, NAVSAFECOM.

711. AMB Review of SIRs. Regardless of the degree of a member's active participation in an investigation, each AMB member must review the completed report before its release. The AMB arrives at its conclusions by consensus with no one member having veto power over the conclusions of the board. AMB members will not keep a personal copy of the SIR.

712. Pre-briefing the SIR

a. For all mishap reports it is the responsibility of the AMB senior member or SIO to prepare a complete SIR of high quality.

b. To ensure the integrity and independence of the AMB, and to prevent any hint of command influence, the pre-briefing or reviewing of the AMB's report with any endorsers prior to the release of an SIR is prohibited.

c. Only convening authorities may review SIRs for completeness (as opposed to review for concurrence or non-concurrence) as part of their quality control responsibilities prior to SIR release. Should the convening authority consider the investigation or report incomplete, they should send the report back to the AMB along with sufficient direction to ensure an acceptable SIR can be produced.

713. Markings. SIRs are CUI//SP-PSI. The CUI//SP-PSI and privileged warning statement is automatically appended to reports in the online reporting system. See DoDI 5200.48, Controlled Unclassified Information (CUI), of 6 March 2020 and this manual for instructions on handling.

714. Security Classification. SIRs are unclassified. Omit any portion of the report that warrants classification and substitute the word "classified." Treat any classified evidence in a like manner. In the unlikely event that a meaningful report cannot be produced in this fashion, submit a classified report on SIPRNet. Do not enter classified information into RMI.

CHAPTER 8
SAFETY INVESTIGATION ENDORSEMENT PROCESS

801. Purpose. This chapter describes HAZREP and SIR endorsement process, also known as the Memorandum of Final Evaluation (MOFE) process. Endorsing HAZREPs and SIRs is an important step in hazard identification, vetting, and elimination. Endorsers have the opportunity to lend their broader perspective and authority to the process of completing recommended corrective actions. Prompt, comprehensive endorsements are the hallmark of a strong Naval Aviation Safety Program.

802. Applicability. The endorsement process described in this chapter applies to all SIRs and HAZREPs that require endorsement, whether the investigation was conducted by an AMB or by an SIO.

803. Method. Reports are endorsed via the MOFE endorsement process. The MOFE endorsement process relies on a concurrent 45 calendar day review and endorsement period (Concurrent Comment Period) for all endorsers and authorized parties, except for the final endorser. Once the Concurrent Comment Period ends, a second 45 calendar day review and endorsement period (Deliberation and Adjudication Period) begins for the final endorser. During this period, the final endorser will review and adjudicate all comments and recommendations that have been made by the endorsers, then complete and release the final endorsement.

804. General

a. The RMI endorsement process is a significant change from the previous process. The previous endorsement process relied on a specifically defined endorsing chain that typically mirrored the operational chain of command, to conduct a formal and sequential review and endorsement of an SIR from an AMB investigation. Each command in the endorsing chain reviewed both the SIR and the previous endorser(s) comments and recommendations, then added their own endorsement. This previous process was extremely lengthy, often requiring more than two years from mishap occurrence to final endorsement and closeout.

b. The new methodology described in this chapter adopts portions of the U.S. Air Force's Memorandum of Final Evaluation (MOFE) process when SIRs and HAZREPs require endorsement. The MOFE process relies on a concurrent 45-calendar day review and endorsement period (i.e., Concurrent Comment Period) for all endorsers, except for the final endorser. While there remains a requirement for those identified as required endorsers to critically review the SIR or HAZREP during the Concurrent Comment Period, except for the convening authority, there is no requirement for endorsers to provide comments if they concur with the entire SIR or HAZREP as written by the AMB or SIO. The absence of a comment is considered tacit approval of the SIR or HAZREP.

c. Once the Concurrent Comment Period ends, a second 45-calendar day review and endorsement period (i.e., Deliberation and Adjudication Period) begins for NAVSAFECOM, the final endorser. During this period, the final endorser will review and adjudicate all comments and recommendations that have been made by the endorsers, then complete and release the final endorsement. With the release of the final endorsement, the investigation is officially considered closed. The new endorsement process will dramatically shorten the timeline from the release of an SIR or HAZREP, to the final endorsement and closeout.

d. The new, concurrent endorsement process does not minimize the importance of endorsers and is a critical final step to finalize an SIR or HAZREP. For mishaps, endorsers must still carefully review and evaluate the SIR and ensure that the AMB or SIO completed a sufficiently rigorous investigation that uncovered all the root causes of the mishap to include associated damage, capturing the entire chain from prevention through overhaul and recovery. The same applies for hazard investigations requiring endorsement, except the endorsers should focus on the sufficiency of the investigation in describing the characteristics of the hazard and its underlying causes. Endorsers must also verify that the controls recommended by the AMB or SIO are sufficiently strong enough to mitigate the identified risks and are sufficiently practical and feasible to implement.

Note: The terms "review and endorsement process," "endorsement process," and "MOFE process" may be used interchangeably to describe the process explained in this chapter. The acronym "MOFE" and the term "final endorsement" may also be used interchangeably to describe the product released by the final endorser that finalizes the SIR or HAZREP and officially closes the investigation.

805. Determination of the Requirement for Endorsement. All SIRs and HAZREPs that contain recommendations or corrective actions outside of the accounting organization must be endorsed.

806. SIR Endorsement Process Steps and Timeline. This section describes each step in the endorsement (i.e., MOFE) process. Figure 8-1 illustrates a nominal endorsement timeline.

a. Step 1. Report Submission. The AMB or SIO completes the investigation and submits the SIR or HAZREP into the RMI POR.

b. Step 2. Convening Authority Review. The convening authority safety officer or safety staff conducts an administrative review of the entire SIR or HAZREP submitted by the AMB or SIO. The review will focus on technical accuracy. Disagreement with a particular factor or recommendation is insufficient grounds to reject a report and must be handled during MOFE. This review must be completed within 10 calendar days and will:

(1) Ensure the investigative guidance and documentation standards established in this manual have been met;

(2) Ensure adequate evidence and analysis is presented and sufficient to support the investigation's conclusions;

(3) Ensure DoD HFACS codes are assigned and sufficient;

(4) Ensure recommendations and action agencies are assigned appropriately;

(5) Determine if the SIR or HAZREP requires endorsement; and

(6) When an endorsement is required, identify the specific commands or activities that are required endorsers and enter the endorser information into RMI.

Note: During Step 2, the convening authority identifies the specific commands or activities that are required endorsers and informally lists the commands or activities by name and UIC in the "Comments for Approval Authority" box. NAVSAFECOM will take the list provided by the convening authority and enter the list of commands and activities into the MOFE following its Quality Control Review (Step 3).

c. Step 3. NAVSAFECOM Quality Control Review. NAVSAFECOM reviews the SIR or HAZREP for technical accuracy. Omissions or deficiencies identified during this review are addressed with the AMB or SIO directly or through the convening authority safety officer or safety staff. This review must be completed within 14 business days. Once this review is complete, the SIR or HAZREP will be released by NAVSAFECOM, and the report enters the Concurrent Comment Period. The unendorsed SIR or HAZREP is also available for viewing in the RMI database.

Note: RMI does not allow the convening authority or NAVSAFECOM to change the SIR message once it has been released by the accounting organization and enters the Quality Control phase. If the convening authority or NAVSAFECOM analyst identifies any information that requires revision to the message, the analyst must reject the message back to the accounting organization to correct and resubmit.

d. Step 4. Concurrent Comment Period. The 45-calendar day Concurrent Comment Period begins when the NAVSAFECOM quality control checks are completed and the SIR or HAZREP is released. During this period, all required endorsers must, and other authorized individuals may, review the SIR or HAZREP concurrently. Endorsers must assess the overall rigor and thoroughness of the safety investigation, evaluating the factors, recommendations and DoD HFACS codes that were assigned by the AMB or SIO. Endorsers who have substantive comments must enter those comments into the RMI POR database within 45 calendar days. Endorsement comments should follow the format provided in Appendix 8A. Required endorsers who concur with the factors, recommendations and DoD HFACS codes in the SIR or HAZREP and have no comments after completing their review, have no further required actions, with two exceptions as listed in subparagraphs 806d(1) and 806d(2).

(1) The convening authority must provide comments even if "concur as written" is the only applicable comment made.

Note: RMI offers a free text box to enter comments during the Concurrent Comment Period. Endorsers must first identify a reference point from the SIR before entering comments. Typically, the reference point will be a finding, causal factor, DoD HFACS code or recommendation. See Appendix 8A for more information on organizing endorsement comments.

(2) Action agencies with OPRs that are assigned a recommendation or recommendations, must provide comments informing the convening authority on the feasibility of the recommendation, give advice to ensure the recommendation is properly worded or aligned and provide a status if available.

Note: RMI can provide an e-mail notification when an SIR or HAZREP has entered the Concurrent Comment Period once the command or activity e-mails have been manually added into the RMI. UAs should refer to The Navy and Marine Corps Safety Investigations and Reporting Guide for details on establishing e-mail notifications.

(3) The responsibility to enter comments within the 45-day Comments Period resides with each endorser's CO or Commander. Waivers to extend the 45-day Comments Period require CNO N09F's approval and will be considered on a case-by-case basis. As a business practice, extension requests will typically be denied.

(4) If adding an additional recommendation in MOFE comments, you are required to provide all the same information as if entering an actual recommendation into a report, to include OPR, OPR Contact info, RAC, Associated findings, etc.

(5) Any report requiring MOFE, to include applicable Class E mishaps and HAZREPs, must not have CO comments included in the Investigation Conclusions section. CO comments will be entered during the Concurrent Comment Period.

(6) When assigned as an OPR, COMNAVAIRSYSCOM will complete their mishap or hazard recommendation response during the Concurrent Comment Period. COMNAVAIRSYSCOM will not formally respond to Class E and HAZREP recommendations with a RAC code of 3, 4 or 5.

e. Step 5. Deliberation and Adjudication Period. Once the 45-calendar day Concurrent Comment Period concludes, the 45-calendar day Deliberation and Adjudication Period begins. During this time, NAVSAFECOM will review and adjudicate all comments and complete the final endorsement. In most cases, NAVSAFECOM administratively defers to the convening authority for disposition of all Class B and below reports with the exception of PEs. When complete, the final endorsement is released and entered into the RMI database. The MOFE

represents the independent final evaluation and position on the factors, recommendations, and DoD HFACS codes of a safety or hazard investigation. Release of the final endorsement officially closes the investigation.

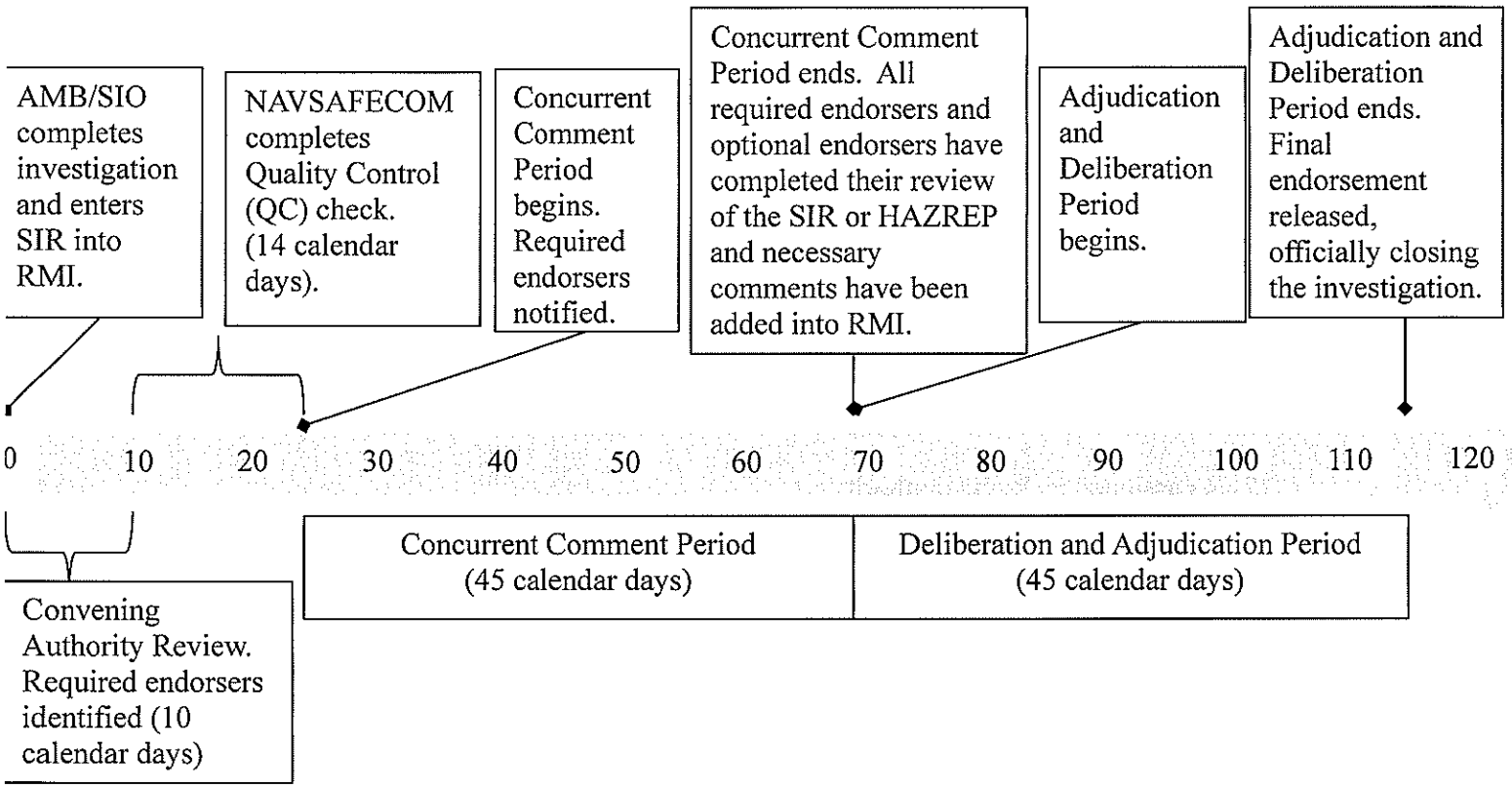


Figure 8-1. Nominal Endorsement Timeline

807. Determining SIR and HAZREP Endorsers. The commands, activities and individuals listed in 807a and 807b are either required or optional reviewers during the Concurrent Comment Period for all SIRs and HAZREPs that require endorsement. NAVSAFECOM will coordinate all endorsements outside the DON.

a. Required Endorsers:

(1) Convening authority.

Note: The convening authority is the only endorser who is required to make comments in MOFE.

(2) Commanding officer(s) of the unit(s) involved in the mishap or hazard.

(3) Commanding officer(s) and commander(s) in the operational chain of command below the convening authority.

(4) Designated OPRs and OCRs assigned one or more corrective actions in the SIR or HAZREP.

(5) Navy and Marine Corps installation commands are required endorsers for severe hazards generated by their subordinate air facilities when there are specific recommendations or actions to be considered by the flag or general officers and their staffs. The chain of command, through the CNIC, region commander, will endorse all HATRs with RAC 1 or 2 recommendations for shore air stations, air traffic control facilities, and tactical air control squadrons. The chain of command, including the ATC officer on COMNAVAIRPAC or COMNAVAIRLANT command staff will endorse all HATRs with RAC 1 or 2 recommendations for CVNs and applicable L-class ships.

(6) The ACC of the aircraft involved in a Class A, B and C mishap when the ACC is not the convening authority or in the operational chain of command.

(7) As assigned by higher authority.

b. Optional Endorsers:

(1) Fleet commander, for a mishap occurring in their respective area of operations.

(2) Component commanders of unified commands when the mishap occurred during contingency operations.

(3) Systems commanders, for mishaps and hazards that required their expertise during the investigation (e.g., an engineering investigation).

(4) The appropriate Navy type aircraft wing, Marine aircraft group and Marine aircraft wing (MAW) in the administrative chain of command for reporting custodians, or detachments deployed as part of a carrier air wing, Marine expeditionary unit, Marine air ground task force, MAW forward, or joint task force.

(5) Commanders of vessels either directly or indirectly involved in mishaps or hazards occurring aboard their command.

(6) DON agencies outside the investigating command, if their functions were involved in the mishap or hazard.

808. Endorsement Prohibitions and Protections

a. Endorsements or extracts from endorsements must not be appended to or included in, JAGMAN investigation reports, nor any other reports.

b. Endorsements must not include any reference to disciplinary action or any other administrative action in connection with the mishap being endorsed.

c. Class A-D mishap endorsements are privileged and must be handled accordingly. HAZREP and Class E endorsement are not privileged and are handled per Chapter 6.

d. Normally, endorsements are unclassified. If any portion of the endorsement warrants classification, omit that information and insert the word "Classified" in its place. If a meaningful endorsement is impossible using this technique, contact NAVSAFECOM and submit a classified endorsement.

809. Extension of the Concurrent Comment Period

a. In extreme circumstances, required endorsers may request an extension of the Concurrent Comment Period. Requests must provide sufficient justification and be endorsed by the convening authority.

b. Only CNO N09F is authorized to grant extensions.

810. Reopening an Investigation

a. The authority to reopen an investigation rests only with CNO N09F.

b. If any endorser concludes that an investigation is incomplete or an SIR or HAZREP is inadequate, they must recommend the reopening of the investigation by plainly stating this recommendation with specific justification when providing comments during the Concurrent Comment Period.

Note: Disagreement with a particular factor or recommendation is insufficient grounds to reopen an investigation. Disagreements of this kind should be addressed in the endorser comments during the Concurrent Comment Period.

c. When an investigation is reopened, the convening authority or higher authority who has directed the reopening, must clearly specify the areas of concern or deficiencies to the AMB or SIO.

d. Reopened investigations will be completed within 30 days unless an extension is requested by the AMB or SIO and approved by the convening authority.

811. Introduction of New Information. If, during the Deliberation and Adjudication Period, CNO N09F learns facts that were not available to safety investigators or that shed new light on the published factors and recommendations, they must:

a. Reopen the investigation.

b. Include the new facts as a "Comments for MOFE" by selecting the "Provide Comments for MOFE" link.

812. Submission of Comments after the Concurrent Comment Period. Comments cannot be entered into RMI once the Concurrent Comment Period has closed. Comments may be submitted via e-mail to the applicable NAVSAFECOM Aviation Safety Programs (Code 10) aircraft analyst or to NAVSAFECOM_CODE11_AIRCRAFT_OPS@navy.mil, but are considered unofficial comments and will only be used during the MOFE deliberation if deemed essential by the Director or Deputy Director, Aviation Safety Programs. These e-mailed comments are privileged and must be handled accordingly.

813. Final Endorsement. The final endorsement (i.e. MOFE) will address factors, recommendations, other recommendations of significance, designated action agency responsibilities and DoD HFACS coding. The final endorsement is used to:

a. Provide comments about factors to address procedural errors, changes to causal or not causal, additions or deletions or to add information not available to the AMB. Provide specific information to support the requested changes.

b. Provide comments about recommendations to address procedural errors, changes to designated action agencies or to make additions or deletions.

(1) If changes to designated action agencies are required, provide contact information for the newly designated action agency, to include the name, rank or GS grade, office symbol, DSN or commercial phone number and Government e-mail address. Additionally, comments may address the recommendation narrative to clarify intent or correct errors.

(2) If the endorser disagrees with the severity classification, evidence, analysis, any conclusion, or any corrective action as stated by the previous endorser, they must take the time to provide justification to any "Restates" or "Do Not Concurs" prior to transmitting their endorsement.

(3) If a recommendation has already been completed and the action agency has provided sufficient documentation of actions taken, NAVSAFECOM may close the recommendation in the MOFE.

(4) Finalization of SIRs and HAZREPs is solely within the discretion of CNO N09F.

814. Submission of Evidence after Final Endorsement. There may be times when evidence is discovered after the final endorsement is released. In these cases, contact NAVSAFECOM Code 10A to determine if the new evidence should be uploaded into RMI or if a reopening of the investigation is warranted.

815. Aviation Mishap Accountability and Absolution

a. Mishap Accountability

(1) Each naval aviation mishap must be assigned to one reporting custodian to account for the mishap.

(2) Generally, mishap accountability will remain with the reporting custodian assigned as the accounting organization, but in certain circumstances, CNO N09F may assign accountability to another reporting custodian based on the associated causal factors or in situations where accountability is unclear.

(3) Assignment to a single reporting custodian assures proper accountability and valid mishap statistics.

(4) In joint mishaps, only one Service will assume accountability for the mishap, its attendant costs, and injuries. COMNAVSAFECOM and the commander(s) of the associated military safety center(s) will jointly determine accountability. If agreement cannot be reached, each Service will report its own losses for the mishap and the Office of the Secretary of Defense will make the determination.

b. Mishap Absolution. Accounting organizations may submit requests for mishap absolution via email or naval message to the ACC once the endorsement is finalized. Submissions must provide a specific reference to the associated factor, or factors, and a tangible, robust supporting justification detailing how no human factors were associated with the accounting organization. ACCs may grant absolution for safety award purposes and continuation of mishap-free flight hours for all classes of mishaps when the factors of the mishap were clearly beyond the control and responsibility of the accounting organization. If absolution is granted, the ACC must provide email or naval message correspondence to NAVSAFECOM for inclusion in the RMI exhibits. Endorsers will not include requests or comments regarding absolution in the SIR or endorsement. In the interest of uniformity, additional guidelines are:

(1) Absolution is not authorized when cause of the mishap is undetermined.

(2) Limit absolution, usually material failure, to those cases where the accounting organization had no opportunity to influence the failure. ACCs may consider absolution where human factors exist but are clearly beyond the control and responsibility of the accounting organization.

(3) Absolution is not required when accountability for a mishap is reassigned to another reporting custodian.

(4) Reporting custodians are responsible for maintaining their own records of absolution.

APPENDIX 8A
MOFE ENDORSEMENT TEMPLATES

Note: Templates are provided in paragraphs 1 through 4 of this appendix to organize the Memorandum of Final Endorsement (MOFE) comments.

1. General Endorsement Guidelines

a. The convening authority must provide comments even if "Concur as Written" is the only applicable comment made.

b. The absence of comments by endorsers other than the convening authority (CA) is considered tacit approval of the SIR or HAZREP and will be considered equivalent to commenting "Concur as Written."

c. If adding an entirely new recommendation, additional data fields are required to be entered in the comments in addition to the Recommendation Narrative:

(1) RAC Severity: I-IV

(2) RAC Probability: A-D

(3) Associated findings: provide finding numbers only

(4) Identified hazard or deficiency narrative

(5) Action agency and OPR action officer: name, grade, email

(6) Estimated completion date

2. MOFE Endorsers Other Than the CA

a. Concur with Report as Written: (No entry required).

b. Concur with Report, with Additional Comments or Recommendations: "[Unit] concurs as written, with the following additional recommendation(s)/comments:"

Recommendation #X [Justification].
Additional comments (optional).

c. Non-Concur with Sections of Report: "[Unit] concurs as written with the following exceptions:"

Section number [X.X.X] Title: [Non-concur Justification].
Section number [X.X.X] Title: [Non-concur Justification].

(Repeat as required).
Additional comments (optional).

3. CA Comments

a. CA Concurs with Report and MOFE Comments (CA Only): "[CA unit] concurs as written."

Additional CA Comments (optional).

b. CA Non-Concurs with Report, Non-Concurs with MOFE Comments or both (CA Only): "[CA unit] concurs with report as written with the following exceptions:"

Section number [X.X.X] Title: [Non-concur Justification].
Section number [X.X.X] Title: [Non-concur Justification].
(Repeat as required).
"[CA unit] does not concur with [unit 1]'s comments for MOFE." [Justification].
"[CA unit] does not concur with [unit 2]'s comments for MOFE." [Justification].
(Repeat as required).
Additional CA Comments (optional).

4. Commanding Officer Comments on HAZREPs and Class E SIRs Not Requiring Endorsement

Note: Enter comments in "Investigation Conclusions" block.

a. CO Concurs with Report and Comments: "[CO unit] concurs as written."

Additional CO Comments (optional).

b. CO Non-Concurs with Report or Comments: "[CO unit] concurs with report as written with the following exceptions:"

Section number [X.X.X] Title: [Non-concur Justification]
Section number [X.X.X] Title: [Non-concur Justification]
(Repeat as required)
Additional CO Comments (optional).

CHAPTER 9
MANAGING MISHAP AND HAZARD RECOMMENDATIONS

901. Purpose. To provide procedures and guidelines for managing open MISRECs and HAZRECs and for determining, managing and accepting the risks associated with those MISRECs and HAZRECs. Authorities and procedures to modify, cancel and close open MISRECs and HAZRECs are also explained.

902. General. Safety investigations result in MISRECs and HAZRECs developed by the SIO or AMB designed specifically to address hazards identified during the investigation. MISRECs and HAZRECs are scrutinized during the endorsement process and approved by the final endorser as discussed in chapter 8. Some MISRECs and HAZRECs are completed and closed out quickly while others take considerable time to complete, primarily due to the complexity of the required actions. These open MISRECs and HAZRECs increase the risk to naval aviation activities; therefore, a systematic process is required to assess the increased risk and present this information to naval leaders so that the elevated risk is understood and accepted at the right level. Effective management of MISRECs and HAZRECs forms an essential component of the DON mishap prevention efforts.

903. Policy

a. RMI must be used to manage the life cycle of MISRECs and HAZRECs from their approval by the final endorser to final disposition and closeout.

b. OPR of open MISRECs and HAZRECs must provide an update at least every six months until the MISREC or HAZREC is closed.

c. Hazard Review Boards (HRB) must be established at the ACC level to manage open MISRECs and HAZRECs and the risk assessment process per the requirements defined in this chapter. See paragraph 908 for more information on HRBs.

d. A formal risk assessment is required for all open MISRECs and HAZRECs and the risk assessment must be approved and signed at the appropriate level. Risk assessments must be completed no later than six months after the MISREC or HAZREC is approved by the MOFE process.

(1) For MISRECs from Class A and B mishaps and all RAC 1 and 2 HAZRECs, the OPR's ACC or designated official must approve and sign the risk assessment.

(2) For MISRECs from Class C, D and E mishaps and all RACs 3, 4, and 5 HAZRECs, the OPR's commander, commanding officer, or designated official must approve and sign the risk assessment.

e. The approval authority must justify when MISREC or HAZREC actions are different than the proposed actions or where no action have been taken or will be taken, prior to closeout.

Note: See paragraph 905 for MISREC and HAZREC closeout procedures and paragraph 907 for assignment of approval authority.

904. Managing Open MISRECs and HAZRECs

a. Use of RMI is required to manage updates and final disposition of MISRECs and HAZRECs.

b. As noted in 903b, the OPR must provide MISREC and HAZREC updates in RMI every six months until the MISREC or HAZREC is closed. In cases where the OPR does not have sufficient RMI privileges to submit the update, the OPR must work with the RMI UA of their assigned command to post updates to the RMI. MISREC and HAZREC updates will include the items in subparagraphs 904b(1) through 904b(8):

(1) Actions taken and actions planned.

(2) Results of development and testing.

(3) Significant problems encountered.

(4) Delays and delay causes.

(5) Rationale and any supporting risk assessment to justify decisions made.

(6) Concurrence or non-concurrence by other affected commands or activities.

(7) Percent of equipment modified, if applicable.

(8) Justification for any risk transferred to a lower echelon.

905. Closing Out MISRECs and HAZRECs

a. The OPR must request closure in RMI of every MISREC and HAZREC from the appropriate authority who determines if the closing action is acceptable.

b. A risk assessment must accompany all requests for MISREC or HAZREC closeouts when the actions taken are different from the proposed actions or where no action is taken. See subparagraph 903d for details on risk assessments.

c. The OPR must upload supporting documentation with requests for closeout (e.g., technical publication pages, risk assessment, training plans or HRB results).

d. Acceptable MISREC and HAZREC closeout actions are provided in subparagraphs 905d(1) through 905d(5):

(1) Recommended changes have been completed to all applicable publications and those publications have been issued. Include supporting details such as publication name and number, date of publication and the affected page numbers in the publication. In cases where there is a formal change process (NATOPS, Training and Readiness (T&R), etc.), when the recommended changes are submitted to the appropriate adjudication entity, the recommendation is closed. Include supporting details such as publication name and number, date of change submission, and the affected page numbers in the publication.

(2) Recommended modifications to all applicable equipment, systems or items have been completed. Development and approval of the technical change or changes is insufficient grounds for requesting a MISREC or HAZREC closeout since the elevated risk remains. MISREC or HAZREC closeout must not be requested until modifications or design changes have been implemented on all applicable equipment, systems or items.

(3) Recommended studies or evaluations have been completed, conclusions were validated and actions on all validated requirements were completed. In these cases, the OPR must include detailed rationale, to include a risk assessment, to support their conclusions.

(4) Recommended changes to training have been completed. If the training changes were incorporated into a publication, see paragraph 905d(1). Otherwise, corrective action annotations must include, as a minimum, the implementation method of the new training, the date implemented and the currency requirement for the training.

(5) After a risk analysis, the recommended changes are not executed by the OPR, but accepted by the accountable person of the applicable organization. There must be formal documentation signed by the accountable person accepting the risk for each recommendation. For COMNAVAIRSYSCOM, a completed and signed System Safety Risk Assessment may be used as formal documentation accepting risks associated with the recommendation.

e. Other offices are afforded the opportunity to coordinate on a recommendation's closing action. RMI automatically assigns the applicable coordinating authority to a safety office based on the OPR's hierarchy. If the safety office does not have personnel with necessary roles to coordinate, then the recommendation will automatically be elevated to the next office in the hierarchy where personnel have necessary roles. Coordination authorities must occur within 30 calendar days after the OPR requests closure. The system will not let the approval authority close a recommendation until the 30-day coordination period is complete.

f. The approval authority will approve closeout only after the 30-day coordination is complete and all actions have been completed and properly annotated.

g. For MISRECs and HAZRECs closed without action taken (i.e., to include no action taken), justify the approved closeout in RMI.

h. For MISRECs and HAZRECs that were not implemented because of the planned retirement of a system, piece of equipment or item, the retirement date must be annotated. If the system, piece of equipment or item has not yet been completely removed from service at the time that the MISREC or HAZREC closeout is requested, an approved and signed risk assessment must be submitted. See subparagraph 903d for details on approving risk assessments.

906. Reassignment of OPR Responsibilities. Action agencies have the authority to reassign OPR responsibilities to other individuals within their command.

907. Assignment of Approval Authority

a. RMI approval authorities are automatically determined by the RMI system based on the level of the action agency. Due to differences in the USN and USMC force structures, there are corresponding differences in the units assigned as the approval authority. Table 9-1 provides a guide for the MISREC and HAZREC approval authority.

b. As seen in Table 9-1, the approval authority to close Class C, D, and E mishaps at the USN and USMC wing or base level and above is the same organization as the action agency. It is incumbent that adequate justification is entered into RMI and retained for Level 3 - Third-Party Assessments.

Rule	If the MISREC or HAZREC action agency is…	And the MISREC or HAZREC involves a…	Then authority to close the MISREC or HAZREC is…
1	an O-5 level command (e.g., squadron, facility, battalion, ship)	Class A and B mishap	CNO N09F
2	an O-5 level command (e.g., squadron, facility, battalion, ship)	Class C, D or E mishap	USN and USMC wing, base, ground, or ship equivalent
	O-5 level command (Patrol squadrons)		USN group
	O-5 level command (Training squadrons)		CNATRA
3	an O-6 level command (e.g., type wing, Marine aircraft group, base, ship)	Class A & B mishap	CNO N09F
4	an O-6 level command (e.g., type wing, Marine aircraft group, base, ship)	Class C, D or E mishap	USN and USMC wing, base, or ship
			USN group
			CNATRA
5	Type command, ACCs, SYSCOMs, or major staff	Class A & B mishap	CNO N09F
		Class C, D or E mishap	Type command, ACCs, SYSCOMs, or major staff
6	OPNAV, HQMC, Naval Safety Command or CMC (SD)		CNO N09F

Table 9-1. Determination of MISREC and HAZREC Approval Authority

908. Hazard Review Boards

a. Each ACC will either establish an HRB or incorporate the requirements of this paragraph into the charter or operating instructions of an existing council or committee formed per OPNAV M-5100.23, (i.e., Navy ACCs) or MCO 5100.29C, volume 1, chapter 6 (i.e., Marine Corps ACCs).

(1) The HRB will meet at least semiannually. A memorandum for the record must be created for each HRB meeting and retained at the ACC for three calendar years beyond the current calendar year.

(2) The HRB should be chaired by the ACC's safety officer or safety manager. Collective bargaining agreements may require an employee representative to be a member of entities affecting employee health or safety, such as an HRB. Additional representation is left to the discretion of the ACC.

b. The broad purpose of an HRB is to evaluate hazards that exist within the operating environment of a command and its subordinate commands to better understand the risks

associated with those hazards, determine whether stronger risk controls are needed and keep the commander informed of those risks. At a minimum, HRBs will:

(1) Manage all open MISRECs from Class A and B mishaps and all open RACs 1 and 2 HAZRECs assigned to OPRs within the command including subordinate commands.

(2) Periodically reevaluate the effectiveness of risk controls that were put in place when MISRECs and HAZRECs were implemented to determine if these controls are having the desired effect. In cases of elevated risk, make a recommendation to convene a hazard investigation by an SIO or AMB.

(3) Evaluate risk assessments prepared by OPRs for sufficiency. Submit risk assessments to the commander for review and signature.

(4) Review and approve updates from OPRs for open MISRECs and HAZRECs. Upload all approved updates into the RMI.

(5) Provide a brief or written report to the commander at least semiannually. At a minimum, the brief or report must include the information in subparagraphs 908b(5)(a) through 908b(5)(e):

(a) Total number of open MISRECs from Class A and B mishaps and RACs 1 and 2 HAZRECs held by OPRs within the command, including subordinate commands.

(b) The status of all open MISRECs from Class A and B mishaps and RACs 1 and 2 HAZRECs held by OPRs within the command, including subordinate commands and identification of those that have been open for more than two calendar years.

(c) Number of MISRECs and HAZRECs that have been closed since the last brief or report.

(d) A review of all previously approved risk assessments still in effect.

(e) Areas of elevated risk that warrant increased attention or investigation.

c. Echelons of command below the ACC are encouraged, but not required, to establish a similar HRB process to manage MISRECs from Class C through E mishaps and RACs 3 through 5 HAZRECs.

Note: While an HRB is not required below the ACC level, all open MISRECs and HAZRECs must be tracked by the action agency and command responsible for signing off the completed MISRECs and HAZRECs per table 9-1.

909. Managing the MISREC and HAZREC Process at the Service Level

a. CNO N09F is responsible for managing the overall MISREC and HAZREC process. Specific responsibilities include those listed in subparagraphs 909a(1) through 909a(5):

(1) Track open MISRECs and HAZRECs.

(2) Create and manage an independent, standardized process to evaluate the risks associated with open MISRECs and HAZRECs.

(3) Create and keep a current list of open MISRECs and HAZRECs.

(4) Periodically communicate prioritized risks from this evaluation to ACCs and other senior Navy and Marine Corps leaders to remove barriers that are preventing the completion of necessary actions to close MISRECs and HAZRECs.

(5) Work closely with and aid the HRBs for ACCs in the execution of their responsibilities.

b. CNO N09F is solely responsible for the requirements in subparagraphs 909b(1) and 909b(2):

(1) Verifying that specified actions required by Class A and B MISRECs and HAZRECs have been completed by the appropriate action agencies.

(2) Editing, calling complete or otherwise closing out languishing and obsolete MISRECs and HAZRECs.

(3) Verifying that ACCs and approval authorities have a process to ensure actions required by MISRECs and HAZRECs have been appropriately completed and approved.

CHAPTER 10
NON-AVIATION UNIT SMALL-UNMANNED AIRCRAFT SYSTEM

1001. Purpose. To provide guidance on the investigation and reporting requirements for non-aviation units operating Group 1 and 2 UAVs, which are collectively referenced as small unmanned aircraft systems (SUAS).

1002. Applicability. This chapter applies to all military and civilian personnel in Navy and Marine Corps units that are not traditional aviation activities but operate program of record (POR) and non-program of record (Non-POR) SUAS. Non-traditional aviation activities designated as an ACC via a NAVSAFECOM memorandum of understanding will adhere to the standards of the Naval Aviation Safety Program discussed in this manual exclusive of this chapter or their associated memorandum of understanding.

1003. General. SUAS is a system designed to operate Group 1 and 2 UAVs, which are launched, flown, and landed without an onboard human operator. Although these systems have different airworthiness requirements than manned aircraft, conducting safe operations ensures the preservation of a critical war fighting capability through the prevention of SUAS related mishaps, injuries or fatalities. To achieve this endstate, commanding officers must ensure SMSs or SMPs are effective at identifying, communicating, and mitigating risks. This includes ensuring the platforms are safe-to-operate as well as operating safely.

1004. Naval Small UAS Defined. Generally, SUAS or their associated Group 1 and 2 UAVs are not in the Aircraft Inventory Reporting System, nor are they CNAFINST 4790.2 series compliant. For the purposes of this manual, SUAS are not defined naval aircraft and will be reported under the OPNAVINST M-5102.1/MCO 5100.29C.

1005. Accountability. Although Group 1 and 2 UAVs have a lower level of inherent airworthiness and higher probability of catastrophic failure than manned aircraft, acknowledgement of higher probability of loss (HPOL) does not alleviate the UAS reporting custodian from the reporting requirements set in this chapter. UAVs with initial acquisition cost of $5,000 or more that operate under a NAVAIR flight clearance per NAVAIRINST 13034.1 are expected to be tracked.

1006. SUAS mishap defined. A SUAS mishap is an unplanned event or series of events, directly involving a Group 1 and 2 UAVs, which results in damage to the vehicle or work-related injury or illness to personnel. As stated in paragraph 1005, HPOL is not considered planned.

1007. SUAS mishap exceptions. Paragraph 1007 details events that are not categorized as a SUAS mishap. These events must not be reported as mishap but should be reported as incidents or HAZREPs for awareness or if corrective actions need to be taken.

a. Damage or injury by DEA to include maneuvering conducted relative to hostile fire or a perceived hostile threat, or hostile force. For DEA events, submit an incident report in RMI.

Note: This exception does not include suspected cases of friendly fire.

b. Replacement of component parts due to normal wear and tear, when the component fails without human factors associated with the failure, and when all damage is confined to the component part. Resultant damage to other components is reportable, but do not cost the excepted component. Only NAVSAFECOM can approve a wear and tear exception.

Note: This exception also may apply during UAV landing or recovery operations when the UAV strikes the landing area or capture mechanism on parameters and is damaged. The single component rule still applies.

c. Intentional or expected damage to DoD equipment or property incurred during NAVAIRSYSCOM, U.S. Naval Research Laboratory, or Naval Postgraduate School developmental testing or combat training, including missile and ordnance firing. This expected damage must be documented in the test plan. Intentional or expected damage to UAVs being used as a weapon is also exempted if the UAV is damaged in the target area as opposed to during launch, recovery or en route.

Note: UAS HPOL does not constitute a mishap exception or alleviate the reporting custodian from mishap investigation and reporting.

d. Property damage, death or injury as a result of vandalism, riots, civil disorders, sabotage, terrorist activities or criminal acts such as arson. Negligence, whether criminal or not, is not considered a mishap exception because the damage or injury was not intended.

e. FOD events to aircraft, air-breathing missiles or drone engines discovered during scheduled engine disassembly. This scheduled disassembly would occur at an intermediate, depot, or manufacturer's facility, not during organizational maintenance.

1008. SUAS Investigations. Since Group 1 and 2 UAVs are not defined as naval aircraft, SUAS mishaps and HAZREPs must be investigated under the OPNAVINST M-5102.1/MCO 5100.29C series as ground events. Unlike naval aviation mishaps, ground investigation and reporting of Class E mishaps is optional.

1009. SUAS Investigation Responsibility. The SUAS's reporting custodian (i.e. ground unit, ship, shore activity) will conduct the SUAS mishap investigation and report the mishap in RMI. If multiple units are involved, the reporting custodian who has the preponderance of damage will be the accounting organization responsible for investigating and reporting the mishap. Refer to the OPNAVINST M-5102.1/MCO 5100.29C paragraph 503 for oversight and investigation responsibilities.

1010. Mishap Recovery. While not disposable, Group 1 and 2 UAVs are designed to be expendable in support of combat operations. If a UAV is lost during training, make every reasonable effort to recover it. If a UAV is lost during combat operations, attempt a recovery only if it is tactically prudent and the environment is permissive enough to execute a recovery without undue risk to personnel.

1011. SUAS Mishap Costing. The total cost of an event is determined by adding all actual or estimated costs. For initial estimates, include costs that are both known and reasonably available. If the UAV is lost or destroyed, use the initial unit cost to determine total cost. If the UAV or system can be repaired, and costs are unavailable from a repair facility, then use 15 percent of the initial unit cost as the total. For specifics, see paragraph 210 of the OPNAVINST M-5102.1/MCO 5100.29C.

1012. Non-Aviation UAS Investigation Training Requirements. If in a USN command, complete the Naval Safety Environmental Training Center's Mishap Investigation course (A-493-0078) as well as the Safety Programs Afloat (A-493-2098), the Aviation Safety Specialist (A-493-0665), the Afloat Safety Officer's course (A-4J-0020) or the Submarine Safety Officer's course (F-4J-0023). If in a USMC command, attend Ground Safety for Marines Course and the Ground Mishap Investigation Course. Marines can substitute the Naval Safety Environmental Training Center's Mishap Investigation course (A-493-0078) for the Ground Mishap Investigation Course.

1013. Non-Aviation SUAS Unit Policy Exceptions. All non-aviation SUAS units are only required to meet the policy described in this chapter of the OPNAV M-3750.6. Non-traditional aviation units are not required to maintain an aviation safety program unless required by a memorandum of understanding between the ACC and COMNAVSAFECOM.

1014. Biological samples. Biological samples referenced in subparagraph 509d(3)(d) are not a required investigative item for non-aviation SUAS investigators unless the SIB feels it would be appropriate.

1015. Non-Aviation UAS Unit Use of Privilege. See Chapter 8 of the OPNAVINST M-5102.1/MCO 5100.29C for specifics on offering promises of confidentiality. Regardless of whether or not a promise of confidentiality is offered, the factors, analysis, and recommendations of the SIR are privileged and must be handled appropriately.

CHAPTER 11
RMI ACCOUNT MANAGEMENT

1101. Purpose. To explain the roles, permissions and terminology for RMI account management.

1102. Background. RMI roles, permissions and terminology are significantly different from that used for the legacy Web-enabled safety system (WESS) and apply to users irrespective of functional community. WESS used centralized account management; RMI does not. WESS account roles and permissions are no longer applicable in RMI.

1103. Policy

a. All DON RMI users must have a U. S. Navy (USN) or U. S. Marine Corps (USMC) workplace assigned to use the RMI.

b. Only RMI account roles applicable to Navy and Marine Corps RMI users can be assigned. See subparagraph 1105c for additional details.

c. Commands must have a UA assigned or coordinate with higher headquarters to fulfill UA responsibilities on behalf of the command. See paragraph 1106 for details.

d. All units must have at least one .mil email address assigned to their UIC via the organization hierarchy page to Receive RMI unit messages.

1104. Assignment of RMI Permissions. RMI account type, category, module access and job functions are identified during RMI account creation process and elevated and approved by a UA at or above the unit level.

1105. User Account Types and Categories. There are two account types in the RMI, basic and elevated and two account categories, primary and secondary.

a. Account Types

(1) Basic Account. A basic account permits access to common, open areas of the RMI, such as publications and references and file sharing. This type of account will have the basic account role and a workspace.

(2) Elevated Account. Elevated accounts have access to unprotected information and one or more types of protected information. Information may be protected by safety privilege, Privacy Act, Health Insurance Portability and Accountability Act (HIPAA) or another formal mechanism. Security roles are used to provide and control appropriate access. This account will have additional roles than those found in a basic account.

b. Account Categories

(1) Primary Category. By default, every RMI user has a primary account. This account contains their demographic information (e.g., employment status, grade, name, assigned organization, assigned office symbol, email, etc.) and assigned RMI roles (permissions).

(2) Secondary Category. A secondary account is required when a user needs an account listing an organization different from the one on their primary account. Examples of when a secondary account is necessary include:

(a) An RMI user is assigned to two or more organizations with separate reporting hierarchies. For example, a user may work Monday through Friday as a civilian in a DON safety office and periodically works as a military member in a reserve organization's safety office.

(b) An RMI user is assigned to one organization and because of geographic proximity, is assigned to manage users at a geographically nearby organization with a separate reporting hierarchy.

c. RMI Account Roles. There are two broad kinds of RMI account roles, those roles that are applicable to Navy and Marine Corps RMI users and those that are listed in the RMI, but never assigned to Navy and Marine Corps users.

(1) Appendix 11A provides the list of RMI account roles that are applicable to Navy and Marine Corps RMI users and their definitions.

(2) Appendix 11B provides the list of RMI account roles that can be seen when using RMI but are never assigned to Navy and Marine Corps RMI users.

Note: RMI was developed from and is closely associated with the U.S. Air Force's Air Force Safety Automated System (AFSAS). Some account roles that are visible in the RMI are never assigned to Navy and Marine Corps users. These roles are applicable to AFSAS users from other Services and defense activities. Some RMI account roles that are applicable to Navy and Marine Corps users may not yet be available until full RMI implementation is achieved. Until then, specific availability of account roles for Navy and Marine Corps users will be disseminated by NAVSAFECOM via All Safety messages.

(3) Appendix 11C provides the recommended RMI account roles for Navy and Marine Corps RMI users based on functional roles and billet types.

1106. UA. UAs perform an important role in RMI account management. Specific policies, requirements and responsibilities assigned to UAs are delineated in this paragraph.

a. UA Policies and Requirements

(1) UAs fulfill an inherently governmental role; therefore, the UA role must only be assigned to DON uniformed Service members or U.S. Government civilians.

(2) Only two UAs are authorized per unit (e.g., Unit Identification Code) unless a waiver is granted.

Note: Units requesting more than two UAs, must submit a waiver request in writing to NAVSAFECOM (Attn: Executive Director) with sufficient justification.

(3) UAs must be designated in writing by the command or activity commander or commanding officer. A template for the designation letter is available in Appendix 11D.

(4) UAs must sign an RMI User Agreement acknowledging their responsibilities and the limitations of their authority. A template for the user agreement is available in Appendix 11E.

Note: Both the designation letter and the RMI User Agreement must be uploaded to the UA's profile in the RMI.

(5) NAVSAFECOM assigns the UA role to Navy echelon 2 and Marine Corps major command UAs. Navy echelon 2 UAs and Marine Corps major command UAs then assign the UA role to those in subordinate commands. In all cases, the UA designation letter and RMI User Agreement must have been uploaded to the UA's profile in the RMI, before the UA assignment can be made.

(6) UAs must be completely familiar with the special handling requirements of PSI per this manual.

(7) UAs must administer the guidelines for special handling of PSI per this manual within their unit.

Note: UAs who fail to protect PSI will have their UA and RMI account roles suspended or revoked.

(8) UAs are responsible for ensuring that roles are properly assigned and only given to those with a legitimate need. UAs are permitted to assign RMI roles per the guidelines in this chapter applying the specific restrictions explained in subparagraphs 1106a(8)(a) through 1106a(8)(c):

(a) RMI roles must only be assigned to DON uniformed and Government civilian personnel within their unit or subordinate units. For all other categories of personnel, UAs must forward RMI access requests to NAVSAFECOM for consideration.

(b) RMI roles must not be assigned to other personnel including those from other DON organizations, other Military Services, non-DoD U.S. Government agencies, contractors, foreign exchange personnel, or any other non-DON personnel unless a Non-Disclosure Agreement (NDA) has been approved by NAVSAFECOM. If NAVSAFECOM has approved an NDA, UAs are permitted to assign RMI roles in strict compliance with the NDA, but only for personnel from approved categories who are assigned within their unit or subordinate units. Contact the NAVSAFECOM Deputy Director, Aviation Safety Programs (Code 10A) for requests regarding NDAs at DSN 564-3520, extension (Ext) 7226 or commercial (757) 444-3520, Ext 7226).

(c) RMI roles must not be assigned to contractors, foreign exchange personnel or any non-DON civilians, unless an NDA has been approved by NAVSAFECOM. If an NDA has been approved, UAs are permitted to assign RMI roles in strict compliance with the NDA, but only for contractors, foreign exchange or non-DON civilians within their unit or subordinate units.

b. UA Responsibilities

(1) UAs assign RMI account roles for personnel in their organization and those personnel below their command or activity in the organizational hierarchy, including subordinate command UAs. Appendix 11C provides important information for making RMI account role determinations based on functional roles and billet types.

Note: In some cases, personnel will be assigned multiple RMI account roles simultaneously, while in other cases, a single RMI account role is all that is required.

(2) UAs must validate requester need before assigning RMI roles to personnel. RMI roles must only be assigned to personnel with a legitimate need. Additionally, only the account roles necessary to complete assigned tasks will be assigned to personnel.

(3) UAs manage RMI account roles for personnel in their organization and those personnel below their command or activity in the organizational hierarchy, including subordinate command UAs. This includes making RMI account changes and addressing issues with RMI accounts they administer.

(4) UAs must ensure those assigned access to PSI, have read paragraph 508 in this manual and understand all special handling requirements before RMI account roles are assigned.

(5) UAs must associate at least one .mil email address assigned to their UIC via the organization hierarchy page to receive RMI unit messages. NAVSAFECOM strongly recommends this email address be a functional command email account associated with the command's safety department, e.g. VFAXX-safety@navy.mil. If a functional account does not exist for the safety department or unit, NAVSAFECOM Strongly recommends creating one via

flank speed or using their command's IT support. Individual personal emails may be associated with RMI UICs at the discretion of the user administrator but will require updates as personnel turnover.

APPENDIX 11A
RMI ACCOUNT ROLES APPLICABLE TO NAVY AND MARINE CORPS USERS

1. RMI account roles, descriptions and amplification and role assignment authority applicable to Navy and Marine Corps RMI users are shown in table 11-A-1.

2. See the RMI Streamlined Incident Reporting (RMI-SIR) User Administrator's Guide, dated August 2020 for more detailed information about RMI account roles.

Account Role	Description and Amplification	Role Assignment Authority
Event: ASAP Triage	This role allows the user to triage ASAP submissions.	Local UA
Dive-Jump Reporting System (DJRS): DJRS User	Gives the user access to the DJRS. Applicable only to the dive and jump communities.	Local UA
Data extraction Access: Events	Gives the user access to retrieve event data using the AFSAS data extraction tool (AFSAS DET) or International Business Machines Corporation (IBM) Cognos business intelligence tool.	Local UA
Data Extraction Access: OSHA 300/300A	Allows the user to build Occupational Safety and Health Administration OSHA 300 and OSHA 300A forms in the AFSAS DET or IBM Cognos business intelligence tool.	Local UA
Data Extraction Access: Inspection	This role grants the user access to inspection data via the data extraction tool for the purpose of developing reports.	Local UA
Data extraction Access: Recommendations	Allows the user to retrieve recommendation data using the AFSAS DET or IBM Cognos business intelligence tool.	Local UA
Event Tabs: Access Approval (Convening Authority only)	Allows the user to approve safety investigation briefings by the convening authority within the exhibit section of the report.	Higher Organization UA
Event Tabs: View (org & time restricted)	Provides automatic exhibit access to any event whose convening authority is within their organizational hierarchy for two years after the release of the investigation. After the two-year time period and for events outside their unit hierarchy, you need to request exhibit access.	Local UA

Account Role	Description and Amplification	Role Assignment Authority
Event Tabs: Waiver Coordination (step 1)	Provides the user the ability to approve or disapprove Part One waiver requests for which the convening authority has oversight.	Higher Organization UA
Event: Data Viewer	Allows the user to view all event data entry fields except DoD ID.	Local UA
Event: Investigator	Grants users the ability to create investigations for any category or class, view their investigations, take action on investigations, granted access to, search investigations, set message rules, grant and request access to investigations and create hazard management events. Also, allows the user to create a preliminary message for review and approval by the designated convening authority. This role maintains all permissions previously assigned to "Event: Data Viewer" and "Event: Message (view only)." This role is required to enter memorandum of final evaluation (MOFE) comments.	Local UA
Event: Message (view only)	Allows the user to only view released messages	Local UA
Event: Message Approval	Allows the user to review and approve all messages for their organization and subordinate commands before quality control by the Naval Safety Command. This role cannot create event investigations or enter data for event investigations.	Local UA
Event: Provider	Allows the user to enter event person physiological information.	Local UA
Event: Supervisor Investigator	Allows the user to enter data for any report for which the convening authority is below their organization and in their chain of command. User will also be able to view, search and comment on MOFEs. This role maintains all permissions previously assigned to "Event: investigator."	Do not assign to aviation units
Inspections: Data	Allows the user the ability to view the read-only	Local UA

Account Role	Description and Amplification	Role Assignment Authority
Viewer	data presented in the safety inspection data viewer.	with same role
Inspections: Safety Inspector	Allows the user the ability to manage safety inspection investigations.	Local UA with same role
Inspections: Supervisor Inspector	Allows the user access and edit ability for any inspection identifying their organization or below as the inspecting organization.	Local UA
Message Approver	This role grants the user the ability to review and approve all messages for their organization and subordinate commands.	Local UA
MUSTT: Motorcycle Safety Representative	Allows the user the ability to manage the tracking of motorcycle riders at their organization and below.	Local UA
OSHA: Event Investigator	Allows the user the ability to create, update, request closure, request deletion and request to open OSHA event visits at their assigned base. However, they can search and view ANY OSHA event report.	Do not assign to aviation units
OSHA: Event Supervisor	Allows the user to create, update, request and coordinate closure and request open and deletion at their organization and below. They can search and view ANY OSHA event report.	Higher Organization UA
Recommendation: Approval	Allows the user to approve closure of recommendations. The recommendation must have the user's organization assigned as an approval authority.	Local UA
Recommendation: Coordination	Allows the user to coordinate recommendations. The recommendation must have the user's organization assigned as a coordination authority.	Local UA
Recommendation: Office of Collateral Responsibility (OCR) Management	Allows access to update the OCR page and change the OCR within their chain of command. It cannot change the actions completed field if the recommendation is in work	Local UA
Recommendation: Supervisor (safety only)	Allows the user to manage recommendations. Supervisor access is granted where the supervisor is at or above the office of primary responsibility (OPR) organization hierarchy.	Local UA

Account Role	Description and Amplification	Role Assignment Authority
	This security permission grants access to specialized management functions, such as reopen a recommendation, change the recommendation narrative, etc. These special management functions are the special cases that arise from peculiar circumstances.	
Recommendation: Update (OPR or OCR)	Allows the user to edit and update open recommendations as an OPR or OCR. The recommendation must have the user's organization and office assigned as either the OPR or OCR. Safety offices or organizations higher in the organizational structure with this role may access a subordinate organization's recommendation.	Local UA
Recommendation: View only	Allows the user to only view any recommendation in the recommendation's module.	Local UA
Training: Records Administrator	Allows the user the ability to manage training records for any person in their organization, a subordinate organization or assigned to their assigned base. They may view the Training Transcript for any person in their organization, a subordinate organization or assigned to their assigned base.	Local UA with same role
User Administrator	Allows the user to add, edit or remove users in their current or subordinate organizations.	Higher Organization UA
Workflow: Explosive Site Plan Administrator	Allows the user the ability to create an explosive site plan and be assigned as the explosive site plan workflow action officer.	Local UA
Workflow: Explosive Site Plan Coordinator	Allows the user the ability based on organization and office symbol to be assigned as an Explosive Site Plan Coordinator.	Local UA
Workflow: Tasker Initiator	Allows the user the ability to create a workflow tasker and be assigned as the workflow action officer.	Local UA
Workflow: Tasker	Allows users to be assigned as OCR or OPR of a	Local UA

Account Role	Description and Amplification	Role Assignment Authority
POC	workflow tasker.	
Workspace: Navy and Marine Corps	This role provides access to the workspace containing USN and USMC records. Other roles control the actions a user may perform (e.g., create new investigations, read messages, retrieve data, etc.) in this workspace. All DON RMI users must have this role assigned.	Local UA

Table 11-A: RMI Account Roles Applicable to Navy and Marine Corps Users

APPENDIX 11B
RMI ACCOUNT ROLES NOT APPLICABLE TO NAVY AND MARINE CORPS USERS

1. Account roles that exist in RMI but are not applicable to Navy and Marine Corps RMI users are shown in table 11-B-1.

2. The account roles in table 11-B-1 must never be requested by or assigned to Navy and Marine Corps personnel.

Account Role	
Data Extraction Access: OCC Illness	Workspace: Defense Contract Management Agency
Event Tabs: View (JA time restricted)	Workspace: Defense Health Agency
OCC Illness: Bioenvironmental Engineer Note: Bioenvironmental Engineers are U.S. Air Force military personnel that have similar roles and responsibilities to that of the combined USN Industrial Hygiene Officer, Environmental Health Officer and Radiation Health Officer subspecialties.	Workspace: Defense Intelligence Agency
OCC Illness: Data Viewer	Workspace: Other DoD Agency
OCC Illness: Message (view only)	Workspace: U.S. Air Force
OCC Illness: Provider	Workspace: U.S. Army
OCC Illness: Public Health	Workspace: U.S. Coast Guard
OCC Illness: Supervisor Investigator	Workspace: Unified Command
Workspace: Defense Commissary Agency	

Table 11-B-1: RMI Account Roles Not Applicable to Navy and Marine Corps Users

APPENDIX 11C
RECOMMENDED RMI ACCOUNT ROLES FOR NAVY AND MARINE CORPS RMI USERS BASED ON FUNCTIONAL ROLES AND BILLET TYPES

1. Recommended RMI account roles for Navy and Marine Corps RMI users based on functional roles are provided in table 11-C-1. Recommended RMI account roles for Navy and Marine Corps RMI users based on billet type are provided in table 11-C-2. Use tables 11-C-1 and 11-C-2 as guides.

2. UAs must be familiar with this information to ensure they assign RMI account roles appropriately.

Functional Role	Recommended RMI Account Role(s)	Amplification
DON RMI User	"Workspace: Navy and Marine Corps"	All DON personnel using the RMI must be assigned this account role to operate within the Navy and Marine Corps RMI domain.
UA	"User Administrator"	Applies to UAs at all levels of command.
Data Analyst	"Data Extraction Access: Events," "Data Extraction Access: OSHA 300/300A," and "Data Extraction Access: Recommendations"	Applies to personnel at all levels of command. Necessary to conduct data analysis.
Mishap or Hazard Investigator	"Event: Data Viewer," "Event: Investigator," "Event: Message (View Only)," "Recommendation: Coordination," and "Recommendation: View only" Also, "Event: Provider" for medical personnel Event: ASAP Triage	Applies to personnel (normally assigned to reporting custodians and commands acting as the accounting organization) assigned to investigate a mishap or hazard either as a single investigating officer (SIO) or as a member of an aviation mishap board (AMB).
Investigation	"Access Approval (Convening	Applies to safety managers and

Functional Role	Recommended RMI Account Role(s)	Amplification
Oversight	Authority only)," "Event: Message Approval," and "Event: Investigator"	safety officers from echelons above the accounting organization who are responsible for investigation oversight.
Recommendation Management	"Recommendation: Approval," "Recommendation: Coordination," "Recommendation: OCR Management," "Recommendation: Update (OPR/OCR)," and "Recommendation: View Only"	Applies to all personnel responsible for recommendation management.
Message Approver	"Event: Message Approval"	This role grants the user the ability to review and approve all messages for their organization and subordinate commands.

Table 11-C-1. Recommended RMI Account Roles for Navy and Marine Corps RMI Users Based on Functional Roles

Billet Type	RMI Account Role(s)	Amplification
Accounting Organization or Reporting Custodian Command Safety Manager or Safety Officer	"Event: Message Approval" "Event: ASAP Triage"	See RMI account roles assigned to the following functional areas - UA, Data Analyst, Mishap or Hazard Investigator and Recommendation Management.
Accounting Organization or Reporting Custodian Command Commanding Officer	"Event: Message (View Only)"	Required to see messages.
	"Event: Investigator"	Required to enter the commanding officer's comments on non-endorsed reports and MOFE comments when endorsement is required.
Accounting Organization or	"Event: Provider"	Required to enter medical information into RMI.

Billet Type	RMI Account Role(s)	Amplification
Reporting Custodian Command Medical Officer, Representative		
Immediate Superior in Command (ISIC) or Chain of Command Safety Manager or Safety Officer	"Event: Message Approval" "Event: ASAP Triage"	See functional roles for UA, Data Analyst, Investigation Oversight minus (Conv Auth Only) account role and Recommendation Management.
ISIC or Chain of Command Commanding Officer	"Event: Message (View Only)	Required to see messages.
	"Event: Investigator"	Required to enter MOFE comments.
ACC Safety Manager or Safety Officer	"Event Tabs: View (Org & Time Restricted)" "Recommendation: Supervisor (Safety Only)," and "Event: Investigator" "Event: Message Approval" "Event: ASAP Triage"	Also, see RMI account roles assigned to the following functional areas - UA, Data Analyst, Investigation Oversight (including "Access Approval (Conv Auth Only)," and Recommendation Management.
Aircraft Controlling Custodian	"Event: Message (View Only)"	Required to see messages.
	"Event: Investigator"	Required to enter MOFE comments and to edit all reports submitted by UIC or subordinate UICs.

Table 11-C-2. Recommended RMI Account Roles for Navy and Marine Corps RMI Users Based on Billet Type

APPENDIX 11D
TEMPLATE FOR APPOINTMENT OF RMI SYSTEM USER ADMINISTRATOR

SSIC
Code/Ser 001
Date

From: Commanding Officer, Command Name
To: Commander, Naval Safety Command, 375 A Street, Norfolk, VA 23511

Subj: APPOINTMENT OF (persons full name, rank/grade) AS A RISK MANAGEMENT INFORMATION (RMI) SYSTEM USER ADMINISTRATOR

Ref: (a) COMNAVSAFECEN NORFOLK VA 272058Z Aug 20 (ALSAFE 017/20)
(b) COMNAVSAFECEN NORFOLK VA 181825Z Nov 20 (ALSAFE 021/20)
(c) OPNAVINST M-3750.6
(d) OPNAV M-5102.1 / MCO 5100.29C volume 9

1. Reference (a) explained the process, roles, responsibilities and timelines to review, endorse, finalize and close out safety investigation reports and hazard reports upon the initial release of the Risk Management Information (RMI) program of record. Reference (b) then updated the roles and responsibilities using RMI. Per reference (b), (Name) is designated as the RMI User Administrator (UA) for (Command) under the unit identification code (UIC) listed in subparagraph 1.b.

a. Rank/Rate/Grade First Name Last Name:
b. User Administrator's UIC:
c. Official Email Address:
d. Telephone Number:
e. DSN:

2. (Name) is tasked with the specific duties and responsibilities of a RMI UA as directed in reference (b) and the protection of privileged safety information following reference (c) and (d). To be granted and maintain UA permissions, this letter and a user acknowledgement must be on file in the RMI system.

I. M. SIGNATURE

APPENDIX 11E
TEMPLATE FOR RMI SYSTEM USER ADMINISTRATOR ACKNOWLEDGEMENT

RISK MANAGEMENT INFORMATION (RMI) SYSTEM USER ADMINISTRATOR ACKNOWLEGEMENT BY (Name) OF (Command)

I , (NAME), have been assigned to serve as the Unit Administrator (UA) for (COMMAND). I certify that I am familiar with the U.S. Department of Defense (DOD) approved methods for protecting, handling, storing, releasing, disposing, and use of privileged safety information (PSI) and Personally Identifiable Information (PII) as defined in DoD Instruction 6055.07 of 6 June 2011, OPNAV M-5102.1/MCO 5100.29C VOL 9, and OPNAVINST 3750.6T, and that I will conform to the measures the Naval Safety Command has implemented to safeguard PSI and PII in an appropriate manner to prevent unauthorized access or disclosure.

In my role as UA, I understand that I am only authorized to grant and update RMI account permissions for Department of the Navy (DON) uniformed and DON Government civilian personnel in my organization to ensure accurate and thorough mishap reporting, investigation, and analysis. I acknowledge I am not authorized to grant permissions to personnel from other DON organizations, military Services, or U.S. Governmental Agencies, nor am I authorized to grant RMI access to contractors, foreign exchange or liaison personnel, or any non-DON civilians. All requests for RMI access by individuals other than DON uniformed and government civilian personnel must be referred to the Naval Safety Command for action and approval by the Executive Director.

I understand it is my responsibility to terminate RMI access for personnel who no longer are serving in safety billets or no longer need access. If, in the execution of my duties, I become aware of individuals from my organization with RMI access who improperly release PSI, I agree to terminate their access and advise the Naval Safety Command immediately. This also applies to non-DON personnel who have been given RMI accounts without written approval from the Naval Safety Command's Executive Director.

I understand that if I fail to protect privileged safety information or adhere to the items stated in this acknowledgement my UA and RMI account privileges will be suspended or revoked.

This acknowledgement was executed by me, freely and voluntarily in my individual capacity and will continue to be in effect indefinitely or upon revocation.

_____
Signature

_____
Print

_____
Date

APPENDIX A
GENERAL REPORTING REQUIREMENTS

Type Report	Severity	60 Minutes	24 Hours	48 Hours	72 Hours	7 Days	30 Days
HAZREP	Severe HAZREC RAC 1&2				HAZREP Submitted		
	Routine HAZREC RAC 3-5						HAZREP Submitted
Mishap	A	Phone Report To NSC	PM Submitted				SIR Submitted
	B&C		PM Submitted				SIR Submitted
	D&E						SIR Submitted
Combat Zone Mishap	A	Phone Report To NSC When Able		PM Submitted			SIR Submitted
Combat Zone Mishap	B&C					PM Submitted	SIR Submitted
Combat Zone Mishap	D&E						SIR Submitted
In addition to the standard Class A mishap requirements, the death of an on-duty civilian in the United States requires an OSHA notification within 8 hours.							
Friendly Fire events will adhere to the combat or non-combat Class A-E or HAZREP requirements with the addition of a phone report to the Joint Staff J-6 within 48 hours of the event.							
Laser Strikes will adhere to the combat or non-combat Class A-E or HAZREP requirements with the addition of a phone report to the DoD Laser Safety Event Hotline. Note: Laser Strikes by hostile forces is a DEA.							

Figure A-1. General Reporting Requirements

APPENDIX B

RISK ASSESSMENT

1. Risk assessment is the process of determining the level of risk associated with hazards that have been identified. A risk assessment matrix is used to obtain a measure of the level of risk in terms of severity and probability, expressed as a RAC. Although risk matrices vary in the number and exact definition of categories, the basic concept of measuring degree of severity and probability remains the same.

a. Hazard Severity. This is an assessment of the potential consequence that can occur as a result of a hazard and is defined by the degree of injury, property or environmental damage, loss of assets (time, money, personnel), or effect on the mission or task. Consideration must be given to exposure potential. For example, the more resources exposed to a hazard, the greater the potential severity. Severity categories are assigned Roman numerals according to the criteria set in subparagraphs 1a(1) through 1a(4):

(1) Category I. Loss of the ability to accomplish the mission. Death or permanent total disability. Loss of a mission-critical system or equipment. Major facility damage. Severe environmental damage. Mission-critical security failure. Unacceptable collateral damage. (i.e., Class A level damage).

(2) Category II. Significantly degraded mission capability or unit readiness. Permanent partial disability or severe injury. Extensive damage to equipment or systems. Significant damage to property or the environment. Security failure. Significant collateral damage. (i.e., Class B level damage).

(3) Category III. Degraded mission capability or unit readiness. Minor damage to equipment, systems, property, or the environment. Minor injury. (i.e., Class C or D level damage).

(4) Category IV. Little or no adverse impact on mission capability or unit readiness. Minimal threat to personnel, safety, or health. Slight equipment or systems damage, but fully functional and serviceable. Little or no property or environmental damage.

b. Mishap Probability. This is a measure of the likelihood that given exposure to a hazard a potential consequence will occur and is defined by the assessment of such factors as location, exposure (cycles or hours of operation), affected populations, experience, or previously established statistical information. Probability categories are assigned a letter according to the subparagraphs 1b(1) through 1b(4):

(1) Subcategory A. Likely to occur immediately. Continuously experienced by an individual item or person; or continuously over a service life for an inventory of items or group. (one or more times within the next year).

(2) Subcategory B. Probably will occur in time. Expected to occur frequently to an individual item or person; or continuously over a service life for an inventory of items or group.

(3) Subcategory C. Possible to occur in time. Expected to occur several times to an individual item or person; or frequently over a service life for an inventory of items or group.

(4) Subcategory D. Unlikely to occur. Unlikely to occur, but possible in the service life for an inventory of items, or group.

Hazard Severity		Mishap Probability			
Description	Code	A Likely to occur immediately	B Probably will occur in time	C Possible to occur in time	D Unlikely to occur
Death, permanent total disability, or loss of facility or asset	I	1 Critical	1 Critical	2 Serious	4 Minor
Permanent partial disability or major property damage	II	1 Critical	2 Serious	3 Moderate	4 Minor
Lost workday injury or compensable injury, or minor property damage	III	2 Serious	3 Moderate	4 Minor	5 Negligible
Injury involving first aid or minor supportive medical treatment, a minimal threat to personnel or property, or a violation of a standard	IV	4 Minor	4 Minor	5 Negligible	5 Negligible

Figure B-1. RAC Matrix – DODI 6055.01

c. RAC. Combine the severity with the probability to determine the risk assessment code (RAC) or level of risk for each hazard, expressed as a single Arabic number. Although not required, the use of a matrix, as illustrated in table B-1, is helpful in identifying the RAC. In some cases, the worst credible consequence of a hazard may not correspond to the highest RAC for that hazard. For example, one hazard may have two potential consequences. The severity of the worst consequence (I) may be unlikely (D), resulting in a RAC of 4 (Minor). The severity of

the lesser consequence (II) may be probable (B), resulting in a RAC of 2 (Serious). Therefore, it is important to consider less severe consequences of a hazard if they are more likely than the worst credible consequence, since this combination may present a greater overall risk.

d. Routine and Severe Hazards. A further breakdown of RACs is necessary for the Naval Aviation Safety Program. A RAC of 1 (Critical) or 2 (Serious) is considered a severe hazard while a RAC of 3 (Moderate), 4 (Minor), or 5 (Negligible) is considered routine. Severe hazards receive priority by COMNAVAIRSYSCOM for MISREC or HAZREC responses and when allocating resources for corrective actions. Severe hazards have a 72-hour deadline for HAZREP submission and require endorsement.

Note: RMI lists a RAC of 1 as "Immediate Danger," all other descriptions and codes match Figure B-1.

2. A scenario is provided as an example of risk assessment:

a. A squadron is preparing a HAZREP in response to simultaneous precession of both the pilot and copilot attitude-direction indicators (ADI) on an aircraft. Circumstances surrounding the event were as follows: Shortly after taking off into the visual flight rules landing pattern, both the pilot's and copilot's ADIs began to precess. By the time the aircraft had turned to downwind, both ADIs indicated 30 degrees nose up and 20 degrees left wing down while the aircraft was in level flight. The crew executed a normal landing and the ADIs remained precessed while on the ground.

(1) The squadron's ASO gathers information through community and NAVSAFECOM data.

(2) This event is the seventh dual ADI failure documented in the last 3 years. The reason for the failures has not been identified.

(3) The aircraft has no standby ADI. When dual ADI failure occurs, the pilots must rely on external visual references or altitude and compass indicators for attitude information. These alternate indications are not accurate reflections of the aircraft attitude. Flying the aircraft in instrument meteorological conditions (IMC) with dual ADI failure would demand extraordinary concentration and skill of the pilots and is likely to result in loss of control of the aircraft. As long as the aircraft is in visual meteorological conditions when dual ADI failure occurs, safe recovery is considered likely.

(4) Over the past 5 years, this aircraft averaged 18 percent of their total flight time in actual IMC. Significant change in flight hours or scheduling is not anticipated.

b. Given the provided information, the ASO can assess the risk of this hazard and develop the corresponding HAZREC addressing the lack of a standby or alternate ADI in a fairly

quantitative manner. If dual ADI failure occurs in certain conditions, loss of the aircraft, its crew and passengers is a credible outcome. Therefore, hazard severity in this case is I. The mishap probability (the probability that a severity I mishap will occur) depends on several factors. Since there have been seven dual ADI failures in the lasts 3 years, and the reasons have not been identified, it is reasonable to assume that failures will continue at the same rate 2.33 events per year. If a mishap of severity I is only likely if the aircraft is in IMC, multiply 2.33 by .18 (the average percentage of time this aircraft spends in IMC) to obtain a predicted rate of 0.42 severity I mishaps per year. This gives it a probability of B, and a corresponding RAC of 1. Other factors that would influence the probable outcome (i.e., pilot experience, altitude, flight configuration, etc.) should also be considered. If historical data is not available, the best estimate from available information should be used to assign the HAZREC RAC.

3. Although hazard severity is normally based on the worst credible consequence, there may be situations in which evaluation of a lower category of severity is appropriate. For example, a multi-engine aircraft with an engine HAZREC may have an "unlikely to occur" (probability D) of category I severity, resulting in a RAC of 2. However, this same engine HAZREC may be much more likely (probability A or B) to result in category II damage, resulting in a RAC of 1 or 2. In this case, the more severe RAC should be reported.

APPENDIX C
GLOSSARY

Note: This compendium of terms and their definitions, listed in alphabetical order, will aid in interpreting this manual and in the continued administration of the Navy Aviation Safety Program.

1. Accounting Organization. The reporting custodian that experienced the loss of or damage to, an owned asset; or the fatality, injury or work-related illness of an assigned person or persons in a mishap; and is responsible for or is assigned responsibility for, safety reporting, regardless of any determination as to the responsibility for the event's occurrence. There is one accounting organization for each mishap. See paragraph 503 for additional detail.

2. Action Agency. A command or activity that has an office of primary responsibility (OPR) or office of collateral responsibility (OCR) assigned responsibility for the completion of a mishap recommendation (MISREC) or hazard recommendation (HAZREC). See also "Office of Primary Responsibility (OPR)" and "Office of Collateral Responsibility (OCR)."

3. Aircraft Controlling Custodian (ACC). Aircraft controlling custodians administratively control the assignment, employment, and logistic support for specified aircraft. Additionally, they provide safety oversight of reporting custodians and enforcement of the policies, procedures and requirements of this manual for safety management, safety investigation, and safety reporting. In some cases, non-aviation commands may be designated as an ACC, particularly when they are designated to operate defined naval aircraft and UAS. ACCs will be used synonymously with controlling custodian in this manual. See subparagraph 107g for more information.

4. Appointing Authority. [Term is no longer used] See "Convening Authority (CA)."

5. Aspin-Rice Agreement. An informal agreement between the DoD Safety Centers/Commands and the United States House of Representatives Armed Services Committee (HASC), signed by then-Chairman Honorable Les Aspin, dated 12 September 1989; wherein, the HASC agreed to protect safety privileged information. The specific details of the agreement are covered in chapter 8 and DoDI 6055.07 of 6 June 2011.

6. Aviation Event. A broad term used to describe an occurrence or series of occurrences. For DON safety reporting purposes, an aviation event can be a mishap, hazard or an incident.

7. Aviation Ground Operations Mishap (AGM). A mishap involving one or more defined naval aircraft where there is no intent for flight that results in reportable damage, injury, or death. This applies to both on land and on-board ship. See subparagraph 317a for more information.

8. Aviation Incident. A planned or unplanned occurrence or series of occurrences resulting in injury or damage that does not meet aviation mishap reporting criteria or is exempt from aviation safety reporting. This does not necessarily mean reporting is not required as a ground mishap under the OPNAV M-5102.1 / MCO 5100.29C VOL 9.

9. Aviation Mishap. A naval aviation mishap is an unplanned event or series of events, directly involving a defined naval aircraft or UAV, that results in damage to DoD property; work related illness to DoD personnel; injury to on or off-duty DoD military personnel; injury to on-duty DoD civilian personnel; or damage to public or private property, or injury or illness to non-DoD personnel, caused by DoD activities.

10. Aviation Mishap Board (AMB). An AMB is a type of SIB specific to aviation. Individuals are assigned to the AMB because either they are a SME, or they have specific expertise necessary to the investigation. Members of an AMB must be designated in writing for each specific safety investigation. One member of the AMB must be designated the senior member. Aviation reporting custodians are required to designate standing and alternate AMBs for mishap investigation purposes.

11. Casualty. Any person who is a loss to the organization by being declared dead, duty status - whereabouts unknown, missing, ill or injured.

12. Causal Factor. Factors which caused the mishap. If the factor was corrected, eliminated or avoided, the mishap, hazard or incident would not have happened.

13. Causal Finding. Findings that identify data points in the mishap sequence that resulted in damage or injury. They are identified with the word "Causal" at the start of the text of the finding and support causal factors within the report analysis.

14. Class A Mishap. A mishap which the total cost of damage to DoD or non-DoD property or aircraft is $2.5 million or more, or a naval aircraft is destroyed or missing, or any fatality or permanent total disability of personnel results from the direct involvement of naval aircraft. A destroyed or missing UAV is not a Class A unless the cost is greater than $2.5 million or there is any fatality or permanent total disability of personnel.

15. Class B Mishap. A mishap which the total cost of damage to DoD or non-DoD property or aircraft is $600,000 or more, but less than $2.5 million, or results in a permanent partial disability, or when three or more personnel are hospitalized for inpatient care as a result of a single mishap (which, for mishap reporting purposes only, inpatient care does not include individuals hospitalized for observation, diagnostic reasons, or for administrative purposes that were treated and released).

16. Class C Mishap. A mishap which the total cost of damage to DoD or non-DoD property or aircraft is $60,000 or more, but less than $600,000, or a nonfatal injury that results in one or more days away from work, not including the day or shift of the injury.

17. Class D Mishap. A reportable event in which the resulting total cost of damage to DoD or non-DoD property is $25,000 or more, but less than $60,000; or, an on-duty injury or illness not otherwise classified as a Class A, B or C mishap (e.g., illness or injury that involves medical treatment beyond first aid, loss of consciousness, light or limited duty for military personnel or restricted work or job transfer for on-duty Navy and Marine Corps civilian employees).

18. Class E Mishap. An event which the resultant total cost of damages to DoD or non-DoD property or aircraft is greater than $0, but less than $25,000 or there was a reportable injury requiring only first aid treatment or is not otherwise characterized in paragraph 316. Naval aviation Class E mishap reporting is mandatory per this manual.

19. Component. Is the smallest, most specific part, assembly or system that can be identified as failed item.

20. Confidentiality, Promise of. The promise of confidentiality is used to encourage free and open disclosure of safety information during an investigation. Military and Federal courts recognize that the information given under the promise of confidentiality is protected from release. The AMB or command safety investigator must give the promise of confidentiality to witnesses to ensure that the information provided is used solely for safety purposes. The promise of confidentiality extends to the AMBs, SIOs, SIR endorsers' and command safety investigator's analysis of the information gathered during a safety investigation or included in a SIR which leads to the development of conclusions, causes and recommendations or in the SIR endorsers analysis of the causes and recommendations in the SIR.

21. Controlled Unclassified Information (CUI). Unclassified information that requires safeguarding or dissemination controls, pursuant to and consistent with applicable law, regulations and Government-wide policies. Use of "CUI" has replaced use of both legacy terms "FOR OFFICIAL USE ONLY" and "FOUO." Additional guidance on CUI is available in DoDI 5200.48 of 6 March 2020.

22. Controlling Custodian. A term used synonymously with Aircraft Controlling Custodian. See Aircraft Controlling Custodian for more information.

23. Controlling Command. Navy Echelon 2 commands and fleet type commands and Marine Corps major commands that provide oversight of subordinate units and enforcement of the policies, procedures and requirements of this manual for safety investigation and safety reporting.

24. Convening Authority (CA). (Formerly "Appointing Authority"). The commander or accountable person who has the authority to appoint a safety investigation board (SIB) or single investigating officer (SIO) to conduct a safety investigation. Convening authority is normally held by the ACC but can be delegated to subordinate commanders for class C-E mishap investigations. The convening authority also provides administrative oversight during the investigation to include report quality control, timeline management to include extensions, and mandatory endorser.

25. Deficiency. A characteristic or condition that fails to meet a standard or is not in compliance with a requirement, specification, instruction or manual.

26. Defined Naval Aircraft. Aircraft and UAVs of the USN, USNR, USMC, and USMCR for which the naval aircraft accounting system requires accountability. For the purpose of this manual, the unmanned aerial vehicle (UAV), not the whole UAS, is considered the aircraft and will be included in subsequent discussions under the terms "defined naval aircraft," "naval aircraft," or "aircraft," unless otherwise specifically annotated separately for clarity. Included in this definition are all manned, weight-carrying devices supported in flight by buoyancy or dynamic action, man-rated aircraft when operated remotely as drones with no live operator on board (except when designated as a target), and Group 3-5 UAVs including aerostat balloons.

27. Deliberative Process. The investigator's analysis of the information gathered during a safety investigation, which leads to the development of subjective conclusions, causes and recommendations.

28. Direct Enemy Action (DEA). Any injury or death occurring within a combat zone as a result of direct action with an opposing or hostile force is considered DEA. Although a mishap exception, DEA reports must be reported in RMI as an incident. See paragraph 415. All injury or death caused by "friendly fire" is considered a mishap.

29. DoD Contractor. A non-Federal employer performing under a DoD contract, whether as prime contractor or subcontractor.

30. DoD Human Factors Analysis and Classification System (DoD HFACS). The standardized taxonomy used throughout DoD for safety investigations to satisfy the requirement to collect, maintain, analyze and report human error, human factors and human performance data. DoD HFACS draws upon Reason's (1990) and Wiegmann and Shappell's (2003) concept of active and latent failures. DoD HFACS categorizes these data into four main tiers: (1) organizational influences, (2) supervision, (3) preconditions and (4) acts. Use of DoD HFACS fulfills the requirement of DoDI 6055.07 of 6 June 2011. Its use is mandatory.

31. DoD Personnel

a. DoD Civilian Personnel. General schedule, administratively determined, and wage grade employees (including National Guard and reserve technicians, unless in military duty status), non-appropriated fund employees (except military members employed part time), Corps of Engineers Civil Works employees, youth or student assistance program employees, foreign nationals employed by DoD components, and military exchange employees. This excludes civilians paid by appropriated funds on a contract or fee basis.

b. Military Personnel. All DoD military personnel, including members of the Army, Marine Corps, Navy and Air Force Reserves, the Army National Guard of the United States and Air National Guard of the United States, on active duty or inactive duty for training under the provisions of Title 10, U.S.C. or Title 32, U.S.C.; cadets of the United States Military Academy; midshipmen of the United States Naval Academy; cadets of the United States Air Force Academy; midshipmen of the U.S. Merchant Marine Academy when engaged in directed training activities with a DoD component; Reserve Officer Training Corps (ROTC) cadets or midshipmen when engaged in directed training activities; Officer Candidate School students when engaged in directed training activities; and foreign national military personnel assigned to DoD components.

32. Echelon. A subdivision of a military or naval force numbered from highest to lowest in ascending numerical order (e.g., echelon 1 is higher than echelon 2).

33. Factor. Any action or condition discovered in the course of a safety investigation, which in the opinion of the AMB or SIO, contributed to the eventual outcome. Determining mishap factors (and eliminating non-factors) enables safety investigators to focus the investigation to those specific areas that are significant in the mishap. See subparagraph 509e(2) for more information.

34. Factors (Non-Causal but Contributing). Factors which were present but not necessarily causal.

35. Findings (Primary Causal, Primary Non-Causal, and Other Findings of Significance). They are statements of each significant event, condition, or data point sustaining the sequence leading to the event. Findings establish lines of evidence.

36. First Aid. Medical attention that is usually administered immediately after the injury occurs and at the location where it occurred. See subparagraph 315e for more information.

37. Flight Mishap (FM). A mishap involving one or more defined naval aircraft where there is intent for flight and reportable damage to a DoD aircraft or UAV or the loss of a DoD manned aircraft. See subparagraph 317b for more information.

38. Flight Related Mishap (FRM). A mishap involving one or more defined naval aircraft where there is intent for flight and no reportable damage to the aircraft or UAV itself, but the mishap involves a fatality, reportable injury, or reportable property damage (which may include another aircraft). See subparagraph 317c for more information.

39. Freedom of Information Act (FOIA) Request. A written request for records from the Navy or Marine Corps. Such requests may be from any member of the public (including persons employed by the government, but acting in their personal capacity), commercial entities, news media or State and local governments. FOIA requests cannot be made by any part of the United States Government, including the Federal courts.

40. Friendly Fire. A circumstance in which authorized members of U.S. or friendly military forces, U.S. or friendly official government employees, U.S. DoD or friendly nation contractor personnel and nongovernmental organizations or private volunteer organizations, who, while accompanying or operating with the U.S. Armed Forces, are mistakenly or accidentally killed or wounded in action by U.S. or friendly forces actively engaged with an enemy or who are directing fire at a hostile force or what is thought to be a hostile force. This also includes incidents that result in only damage or destruction of U.S. or friendly nation's military property mistakenly or accidentally damaged in action by U.S. or friendly forces actively engaged with an enemy or who are directing fire at a hostile force or what is thought to be a hostile force.

41. Hazard. Any real or potential condition that can cause injury, illness or death to personnel or damage to or loss of equipment or property or mission degradation. Hazards are divided into two categories:

a. An act or event (i.e., near miss) that may have resulted in a mishap where the fatality, injury, illness, property damage or loss of an asset was avoided merely by chance, the actions of an individual or individuals, a small measure of distance or a few moments in time.

b. A workplace condition that might result in injury, health impairment, illness, disease or fatality to any person who is exposed to the condition, or which might result in damage to or loss of property or equipment.

42. Hazard Report (HAZREP). A report of a hazardous condition or near-miss that occurred.

43. Hazard Review Board (HRB). An entity established to evaluate hazards that exist within the operating environment of a command and its subordinate commands, to better understand the risks associated with those hazards, determine whether stronger risk controls are needed and keep the commander informed of those risks. HRBs are required at the aircraft controlling custodian level and are encouraged at lower levels of command. See paragraph 908 for details.

44. Hazard Severity. An assessment of the worst potential consequence is likely to occur as a result of deficiencies. See Appendix B.

45. Hospitalization. The admission of personnel to a hospital or shipboard medical facility on an in-patient basis.

46. Human Factors. Human, machine or environmental interactions in a sequence of events that were influenced by or the lack of human activity, which resulted or could result in a mishap.

47. Human Factors Analysis and Classification System (HFACS). See "DoD HFACS."

48. Incident. A planned or unplanned occurrence or series of occurrences resulting in injury or damage that does not meet mishap reporting criteria or is exempt from safety reporting.

49. Injury. A traumatic wound or other condition of the body caused by an external force received while involved with manned or unmanned defined naval aircraft. The injury must be caused by a specific event or series of events in a single day or work shift. See paragraph 307, 311, and 315 for specifics.

50. Installation. Navy and Marine Corps bases, air stations, centers, depots, facilities, or other organizational properties owned by DON.

51. Joint Service Mishap. A single mishap involving two or more Services in which one or more Services experiences reportable injuries or damages.

52. Key Performance Indicators (KPI). Primarily a lagging indicator of the effectiveness of the overall SMS. It's a lag indicator because metrics are based on historical data showing how well the SMS functioned at keeping people and materiel free from harm. KP Is comprise metrics derived from: number and rate of mishaps; enforcement action, lost work time, lost equipment availability, lost capability, financial losses, etc.

53. Key Risk Indicators (KRI). Primarily a leading indicator of the effectiveness of a risk control system (or risk management system). KRIs inform and update risk models to reduce uncertainty and judge impact against a capability need. KRIs comprise metrics derived from: audits, inspections, hazard reports, health and medical surveillance, competence availability, benchmarking, surveys, etc.

54. Light Duty. A duty status recommended after treatment of an injury that stipulates exactly the limitations on a military member during the recommended period. When an injury or work-related illness results in light-duty days, assigned light duty days are not counted as lost workdays. On light duty, the military member normally remains at their original duty station but is gainfully employed even though not performing their normal duties. Applicable only to military personnel. The civilian equivalent of light duty is restricted work activity or job transfer. A minimum of a Class D investigation must be conducted for all light duty aviation mishaps.

55. Limited Duty. A military duty status formally assigned as a result of a medical board. Time spent on limited duty is not chargeable as lost time regardless of the cause for assignment to limited duty. Under limited duty, the military member may be reassigned from their permanent duty station to a temporary duty station until the medical issue is resolved. Applicable only to military personnel. The civilian equivalent of limited duty is restricted work activity or job transfer. A minimum of a Class D investigation must be conducted for all limited duty aviation mishaps.

56. Major Command (MAJCOM). For the purposes of reporting in RMI, the term MAJCOM refers to the Echelon II commander included in RMI hierarchy. MAJCOM is not directly associated with ACC, CA or other authorities specified in this manual.

57. Materiel. All items necessary to equip, operate, maintain and support military activities without distinction as to its application for administrative or combat purposes.

58. Material Factor. Material failures or deficiencies that are causal or contributory to a mishap or hazard. The set of elements for material factors are component, mode, and agent.

59. Memorandum of Final Evaluation (MOFE) Message. The final endorser's independent final evaluation and position on causes, recommendations, and DoD Human Factors Analysis and Classification System codes. It is published in RMI along with other messages related to the mishap and does not replace the investigation's final message or final supplemental message. The investigation's final message (or final supplemental message) and all tabs remain available in the RMI database as part of the official record. The acronym "MOFE" and the term "final endorsement" may be used interchangeably.

60. Mishap Categories. DoD mishaps are divided into the six categories: Aviation, weapons, space, motor vehicles, ground and afloat.

61. Mishap Causes. Conditions or events that explain why a mishap occurred. Events within a mishap may have multiple causes assigned. Causes are the genesis of the mishap, not the reason that damage or injury occurred. For example, a fire may have damaged a room, but the mishap was not caused by the fire - it was caused by "personnel error - failure to follow procedures" because someone stored a flammable near a heat source, resulting in a fire.

62. Mishap Costs. Includes the cost of all fatalities, injuries, DoD property damage, non-DoD damage, compensation for damage or loss and restitution.

63. Mishap Probability. The likelihood that a hazard will result in a mishap or loss, based on an assessment of such factors as location, exposure (cycles or hours of operation), affected populations, experience or previously established statistical information. See Appendix B.

64. Mishap Subcategories. There are three mishap subcategories: flight mishaps (FM), Flight Related Mishaps (FRM), and Aviation Ground Operations Mishaps (AGM).

65. Non-Factors. These factors are items that were investigated and ruled out and require no additional justification or explanation. Although not required, non-factors may be entered at the bottom of the Sequence of Events narrative section. Non-factors should be standalone, succinct statements that require no further explanation.

66. Non-Factors Worthy of Discussion (NFWOD). Non-factors worthy of discussion are rejected factors which typically fall into one of three categories: areas uncovered during the investigation that did not cause the event or influence the outcome but should be fixed due to the potential to be a factor in a future event (e.g., incorrect information in a maintenance technical order), areas that were thoroughly investigated and subsequently ruled out as factors (i.e., in order to provide context to the audience on why these areas are not factors) and areas that may be considered an interest item to the convening authority (e.g., risk management and crew resource management). Other findings of significance are the basis for NFWOD and recommendations of significance.

Example: Implementation of flight data recorders, not causal or contributory, but important for the organization's safety posture.

67. Notification. To give notice or to inform. For DON safety reporting purposes, notification means an event has occurred which is expected to meet defined thresholds and that certain individuals, commands or activities must be informed of the event. The method of notification (e.g., telephonic, naval message) and the timeliness of notification will often be prescribed.

68. Office of Collateral Responsibility (OCR). The individual or individuals assigned by an action agency to assist the office of primary responsibility (OPR) in completing mishap or hazard recommendations (MISREC or HAZREC). Assignment of an OCR is not required. Action agencies may assign multiple OCRs to each MISREC or HAZREC.

69. Office of Primary Responsibility (OPR). The point of contact (POC) of an action agency assigned as the primary contact for a MISREC or HAZREC. The OPR is a specifically named individual; however, action agencies have the authority to assign a specific command job billet instead of a name to ensure better continuity for MISREC or HAZREC management. OPRs have the authority to update recommendations and recommend MISREC or HAZREC closure.

70. Operate Safely. Operate safely is executing the mission within the designed safety envelope, while controlling unforeseen anomalies as they arise. The safety envelope is normally maintained by operating within established procedures and applying the risk management principles when challenges push operations outside the envelope.

71. Other Finding of Significance. This occurrence neither resulted in the event nor contributed to the event. This is something that is completely independent of the event occurring and was identified as an issue through the process of the investigation. Other findings of significance are the basis for NFWOD and other recommendations of significance.

72. Other Recommendations of Significance (ORS). A recommendation that addresses an Other Findings of Significance.

73. Permanent Partial Disability. An injury or work-related illness that does not result in death or permanent total disability, but, in the opinion of competent medical authority (CMA), results in permanent impairment through loss of the use of any part of the body with the following exceptions: teeth, fingernails, toenails, tips of fingers or tips of toes without bone involvement, repairable hernia, disfigurement or sprains or strains that do not cause permanent loss of motion.

74. Permanent Total Disability. A non-fatal injury or work-related illness, in the opinion of competent medical authority, permanently and totally incapacitates a person to the extent that he or she cannot follow any gainful occupation. (The loss or loss of use, of both hands, both feet, both eyes, or a combination of any of these parts of the body as a result of a single mishap, must be considered as a permanent total disability.)

75. Personally Identifiable Information (PII). Information that can be used to distinguish or trace an individual's identity, either alone or when combined with other information that is linked or linkable to a specific individual such as, but not limited to: name, Social Security Number, DoD ID or other identification number, date and place of birth, mother's maiden name, photograph, biometric records, etc.

76. Primary Causal Finding. Occurrence of this data point directly resulted in event. If this finding does not occur, the event does not happen.

77. Primary Non-Causal Finding. This occurrence either contributed to the event occurring or was a subsequent result of the event. Examples include: subsequent damage caused by the event, weather, injuries, and events that were part of the "Swiss cheese" model but did not singly cause the event to occur.

78. Primary Recommendation. A recommendation that fixes primary causal and primary (contributory) factors.

79. Privileged Safety Information (PSI). Information that is reflective of a deliberative process in the safety investigation or given to a safety investigator pursuant to a promise of confidentiality, which the safety privilege protects from being released outside safety channels or from being used for any purpose except mishap prevention. It includes products such as draft and final factors, evaluations, opinions, preliminary discussions, conclusions, mishap causes, recommendations, analyses and other material that would reveal the deliberations of safety

investigators, including reviews and endorsements. It also includes information given to a safety investigator pursuant to a promise of confidentiality and any information derived from that information or direct or indirect references to that information.

Note: Information in a statement given under a promise of confidentiality that is also available in a source that is not privileged, may be releasable, but that determination can only be made by COMNAVSAFECOM.

80. Probability. A measure of the likelihood that given exposure to a hazard, a potential consequence mishap will occur.

81. Recommendations. Feasible and effective solutions to eliminate identified hazards or if the hazard cannot be eliminated, to mitigate the hazard's potential consequences. Actions taken to prevent a similar mishap or to reduce its effects. There are two types of recommendations: Primary recommendations and other recommendations of significance.

82. Recordable Injury. An occurrence involving a civilian or contractor employee that requires the creation of a record due to a work-related injury or illness that met specified criteria established by the OSHA per part 1904 of Title 29, Code of Federal Regulations (CFR). For the purposes of Navy and Marine Corps safety reporting, the term's use will be limited to events involving Government civilian and contractor work-related injury and illness reporting to the OSHA. Contractors must meet the subpart 1904.31 applicability and be supervised by Government personnel on a day-to-day basis. Day-to-day supervision includes supervising not only the output, product or result to be accomplished by the person's work, but also the details, means, methods and processes by which the work objective is accomplished.

83. Reportable Mishap. An event that meets or exceeds mishap damage thresholds or mishap injury or illness thresholds of civilian, contractor and military personnel and must be investigated and reported. Per this manual, all Class A, B, C, D, and E aviation mishaps are reportable.

84. Reporting Custodian. Reporting Custodian. Commanding officers and, in some cases, OIC of detachment operations of Navy and Marine Corps organizations who are responsible for or otherwise provide information about, assigned manned or unmanned aircraft.

85. Risk. Chance of adverse outcome or bad consequence, such as injury, illness or loss. Risk level is expressed in terms of hazard probability and severity.

86. Risk Assessment Code (RAC). An expression of the risk associated with a hazard that combines the hazard severity and mishap probability into a single Arabic numeral that is used for hazard assessments and to help determine hazard abatement priorities. See Appendix B for more information.

87. Risk Management Information (RMI) Program of Record (POR). The sole official DON Web-based database application for safety reporting. The shortened acronym RMI is synonymous with the RMI POR.

Note: Navy and Marine Corps personnel must use RMI to report mishaps, hazards (including near misses) and incidents required by this manual.

88. Safe-to-Operate. Safe-to-operate are the conditions which support and define the envelope where a unit can operate safely. Safe-to-operate considerations are often resource driven, including but not limited to, manpower, funding, training, aircraft design, and sustainment.

89. Safety Investigation. A general term that refers to the investigation of mishaps, hazards (including near misses) and incidents by either a single investigating officer (SIO) or a safety investigation board (SIB). The purpose of a safety investigation is to prevent mishaps. A safety investigation is not a legal investigation or command investigation used to assign personnel accountability and must not be used to place blame or punish those involved.

90. Safety Investigation Board (SIB). A group of individuals who have been directed to complete a safety investigation by a convening authority. An Aviation Mishap Board (AMB) is a type of SIB specific to aviation. Individuals are assigned to the SIB because either they are a SME, or they have specific expertise necessary to the investigation. Members of an SIB must be designated in writing for each specific safety investigation. One member of the SIB must be designated the senior member.

91. Safety Investigation Report (SIR). A report generated by and AMB or SIO following a safety investigation into a mishap that provides factual and analytical information about the mishap including findings, factors, and the recommended corrective actions to prevent similar mishaps or near mishaps.

92. Safety Management Plane (SMP). A framework of policies and procedures aimed at achieving the desired outcomes of a safety management system.

93. Safety Management System (SMS). A formal, top-down and bottom-up, organization-wide approach to managing safety risk and assuring the effectiveness of risk controls to achieve the safety management system desired outcomes.

94. Safety Privilege. A DoD term used to describe privileges recognized by the courts that protect safety information from release. It is an executive privilege afforded a head of an agency to protect information from release that would hamper the efficient operation of an important government program and perhaps impair the national defense or security.

95. Sanitized Information. Safety investigation information in which certain identifying information has been removed to protect the disclosure of privileged safety information (PSI)

and the identity of the specific mishap. Once PSI has been successfully sanitized, the factors, conclusions, causes, recommendations, opinions, analyses and other indications of the deliberative processes of safety investigators, safety investigation boards, endorsers and reviewers are no longer considered privileged. Within DON, only the NAVSAFECOM is authorized to sanitize safety investigation information.

96. Severity. This is an assessment of the potential consequence that can or could occur as a result of a hazard and is defined by the degree of injury, illness, property or environmental damage, loss of asset (e.g., time, money, personnel) or effect on the mission or task. When analyzing risk, it is based on the worst credible outcome.

97. Single Investigating Officer (SIO). An Aviation Safety Officer (ASO) who has been directed to perform a safety investigation by a convening authority. If investigating a hazard, the SIO may be a trained aviation safety specialist. This individual is solely responsible for completing the safety investigation and drafting and submitting required report(s) and records. The SIO may receive assistance from subject matter experts (SME) in the performance of their duties.

98. Staged Photographs. Staged photographs are those constructed to gain a better understanding of the sequence of events surrounding a mishap. Staged photographs may include but are not limited to photos of mishap sites with personnel pointing to various objects, a series of photographs showing similar personal actions which may have led to a mishap, equipment which is highlighted or specifically identified for mishap investigators, etc. Photographs of the actual mishap site, a broken piece of equipment, injured or deceased personnel are not considered staged photographs unless the photos have been marked by mishap investigation personnel.

APPENDIX D
ABBREVIATIONS AND ACRONYMS

ACC	Aircraft Controlling Custodian
AFMES	Armed Forces Medical Examiner System
AFOPS	Airfield Operations (Event)
AGM	Aviation Ground Operations Mishap
ALSS	Aviation Life Support System
AMAN	Abrupt Maneuver (Event)
AMB	Aviation Mishap Board
AMSO	Aeromedical Safety Officers
APA	Aerospace Physician Assistant
ASAP	All-hands Safety Action Program
ASC	Aviation Safety Council
ASO	Aviation Safety Officer
ATC	Air Traffic Control
BASH	Bird/Wildlife (Animal) Aircraft Strike Hazard
BUMED	Bureau of Medicine and Surgery
CA	Convening Authority
CAB/CAR	Cabin and Cargo (Event)
CFA	Cognizant Field Activities
CFIT	Controlled Flight into Terrain (Event)
CMAV	Controlled Movement Area Violation (Event)
CMC	Commandant of the Marine Corps
CMC (SD)	Commandant of the Marine Corps, Safety Division
CNAFINST	Commander, Naval Air Forces Instruction
CNIC	Commander, Navy Installations Command
CNO	Chief of Naval Operations
CNO N09F	Special Assistant to the Chief of Naval Operations for Safety Matters
CO	Commanding Officer
COMNAVAIRLANT	Commander, Naval Air Force U.S. Atlantic Fleet
COMNAVAIRFOR	Commander, Naval Air Forces
COMNAVAIRPAC	Commander, Naval Air Force U.S. Pacific Fleet
COMNAVAIRSYSCOM	Commander, Naval Air Systems Command
COMNAVSAFECOM	Commander, Naval Safety Command
CRM/I	Crew Resource Management / Instructor
CUI	Controlled Unclassified Information
DEA	Direct Enemy Action
DoD	Department of Defense
DoDI	Department of Defense Instruction
DON	Department of the Navy
EI	Engineering Investigation
EMI	Electromagnetic Interference

ENV/WX	Environment and Weather (Event)
EOD	Explosive Ordnance Disposal
EPA	Environmental Protection Agency
EXT OPS	External Operations (Event)
FAA	Federal Aviation Administration
FF	Friendly Fire
FFPB	Field Flight Performance Boards
FIRE/EXP	Fire or Explosion (Event)
FM	Flight Mishap
FNAEB	Field Naval Aviator Evaluation Boards
FOD	Foreign Object Damage (Event)
FOIA	Freedom of Information Act
FRM	Flight Related Mishap
FUEL	Fuel-Related (Event)
GFR	Government Flight Representatives
GHAND	Ground Handling and Servicing Operations (Event)
HATR	Hazardous Air Traffic Report (Event)
HAZREC	Hazard Recommendation
HAZREP	Hazard Report
HFACS	Human Factors Analysis and Classification System
HFB	Human Factors Boards
HFC	Human Factors Councils
HRB	Hazard Review Board
HUD	Heads-up Display
ILARTS	Integrated Launch and Recovery Television System
IPOWER	Insufficient Power (Event)
ISIC	Immediate Superior in Command
JAGMAN	Judge Advocate General Manual
JDRS	Joint Deficiency Reporting System
KPI	Key Performance Indicator
KRI	Key Risk Indicator
LAA	Local Area Assessment
LSO	Landing Signal Officer
LSRST	Laser Strike (Event)
MAJCOM	Major Command
MCO	Marine Corps Order
MIDAIR	Midair Collision (Event)
MISREC	Mishap Recommendation
MOFE	Memorandum of Final Endorsement
MOU	Memorandum of Understanding
N09F	Special Assistant for Safety Matters
NATO	North Atlantic Treaty Organization
NATOPS	Naval Air Training and Operating Procedures Standardization

N-CFIT	Near Controlled Flight into Terrain (Event)
NCIS	Naval Criminal Investigative Service
NDA	Nondisclosure Agreement
NFWOD	Non-Factors Worthy of Discussion
NMAC	Near Midair Collision (Event)
NTSB	National Transportation Safety Board
OCR	Office of Collateral Responsibility
OFRP	Optimized Fleet Response Plan
OIC	Officer in Charge
OPNAV	Office of the Chief of Naval Operations
OPNAVINST	Office of the Chief of Naval Operations Instruction
OPR	Office of Primary Responsibility
ORM	Operational Risk Management
ORS	Other Recommendations of Significance
OSHA	Occupational Safety and Health Administration
PE	Physiological Event (Event)
P&E	Planning and Estimate
PEP	Personnel Exchange Program
PHI	Protected Health Information
PHYSEP	Physiological Episode (Event)
PII	Personally Identifiable Information
PLAT	Pilot Landing Aid Television
PLOC	Pilot Loss of Control In-Flight (Event)
PM	Preliminary Message
POC	Point of Contact
POR	Program of Record
POWER	Power Plant Failure or Malfunction (Event)
PSI	Privileged Safety Information
RAC	Risk Assessment Code
RMI	Risk Management Information
SAFTE-FAST	Sleep Activity Fatigue Task Effectiveness-Fatigue Avoidance Scheduling Tool
SECNAV	Secretary of the Navy
SECNAV M	Secretary of the Navy Manual
SECNAVINST	Secretary of the Navy Instruction
SHIP/EMBLAND	Ship-Related/Embarked Landing (Event)
SIB	Safety Investigation Board
SIO	Single Investigating Officer
SIR	Safety Investigation Report
SME	Subject Matter Expert
SMP	Safety Management Plan
SMS	Safety Management System
STANAG	NATO Standardization Agreement

SUAS	Small Unmanned Aircraft System
SYSTEM	System Failure or Malfunction (Event)
TFOA	Things Falling Off Aircraft (Event)
UA	User Administrator
UAS	Unmanned Aircraft System
UAV	Unmanned Aerial Vehicle
UIC	Unit Identification Code
USA	United States Army
USAF	United States Air Force
USCG	United States Coast Guard
USFLTFORCOM	United States Fleet Forces Command
USMC	United States Marine Corps
MARFORPAC	United States Marine Corps Forces, Pacific
USN	United States Navy
USSF	United States Space Force
U.S.	United States
WOBO	Whiteout or Brownout (Event)