




UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
CHIEF ADMINISTRATIVE OFFICER

September 7, 2017

MEMORANDUM FOR: Non-Bargaining Employees

FROM: Edward C. Horton 

SUBJECT: Implementation of *NOAA Manual 209-10: Occupational Safety and Health Management System*

The purpose of *NOAA Manual 209-10: Occupational Safety and Health Management System* as ordered by Section 8 of NOAA Administrative Order *NAO 209-1A: NOAA Safety Policy* is to administer processes that provide in-depth coverage of Occupational Safety and Health subjects too complex or extensive to include in the NAO.

This manual is effective immediately for non-bargaining unit employees. The policies identified in this announcement will not be implemented for bargaining unit employees unless the bargaining obligations of NOAA line/staff offices are satisfied in accordance with the Federal Labor Relations statute (5 U.S. Code Chapter 71).

National Oceanic and Atmospheric Administration	NOAA Manual 209-10
 <p>NOAA ADMINISTRATIVE MANUALS AND GUIDES</p>	EFFECTIVE DATE: September 7, 2017
<p>SUBJECT</p> <p>NOAA Occupational Safety and Health Management System</p>	
<p>Official: </p> <p>Edward C. Horton Chief Administrative Officer</p>	
<p>Summary: This manual implements the National Oceanic and Atmospheric Administration (NOAA) Occupational Safety and Health Management System (OHSMS). It assigns responsibilities and prescribes procedures for implementing safety and health guidelines throughout NOAA. It establishes Risk Management (RM) as NOAA's principal risk reduction methodology and ensures regulatory and statutory compliance.</p> <p>Applicability: This NOAA Manual is applicable to all Line Offices, Staff Offices (LO/SO), and activities assigned, attached, and under operational control or in direct support of NOAA. This NOAA Manual applies to all NOAA employees, volunteers, student interns, and NOAA affiliates.</p> <p>Deviations: Deviations from mandatory provisions of this NOAA Manual require a waiver with full justification and must be submitted to noaa.safety@noaa.gov.</p> <p>Interim changes: Interim changes to this NOAA Manual are not official unless they are authenticated by the NOAA Chief Administrative Officer (CAO). Users will destroy interim changes on their expiration date unless superseded or rescinded.</p> <p>Suggested Improvements: The proponent agency of this NOAA Manual is the NOAA Safety and Environmental Compliance Office (SECO). Users are invited to send comments and suggested improvements to NOAA, ATTN: SECO, 1305 East-West Highway, OFA541, SSMC 4, Room 11109, Silver Spring, MD 20910.</p> <p>Restrictions: Approved for public release, distribution unlimited. Local reproduction is authorized.</p> <p>Disclaimer: This NOAA Manual is not an all-inclusive document. It is supplemental to the policies and procedures outlined in NAO 209-1A, NOAA Occupational Safety and Health and those listed in the References section contained in this document.</p> <p>Distribution: Electronic Media Only.</p>	

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**PART ONE: NOAA OCCUPATIONAL SAFETY AND
HEALTH MANAGEMENT SYSTEM**

SECTION 1. SCOPE PURPOSE AND APPLICATION.

1.1. Scope.

Policy, performance standards, and guidance outlined in this manual apply to all activities and operations performed in and for NOAA by all NOAA employees, student interns, volunteers, and NOAA affiliates. To facilitate the application of policy, performance standards, and guidance, the NOAA OSH organizational structure at regional/program level offices and above shall be:

- A. Structured and staffed to administer an OSHMS through the organizational leadership chain based upon the organization's operation, goals, and objectives, as well as statutory requirements.
- B. Funded and fully resourced to execute all responsibilities and functions designated in this NOAA Manual to ensure the effectiveness of the OSHMS.

1.2. Purpose.

The [NAO 209-1A, NOAA OSH](#) establishes NOAA safety policy, prescribes procedures for implementing Occupational Safety and Health (OSH) activities throughout NOAA, and establishes the OSHMS. The [NAO 209-1A, NOAA OSH](#) establishes regulatory and statutory compliance and establishes RM as NOAA's principal risk reduction methodology. This manual, NOAA Manual 209-10, NOAA OSHMS, defines additional OSH policies, provides implementation guidance on NOAA's OSHMS, and provides details on policies defined in the [NAO 209-1A, NOAA OSH](#). Additionally, this manual defines minimum OSH performance standards.

1.3. Application.

This NOAA Manual delineates the roles, responsibilities, and processes necessary to promote a safe and healthful work environment for all NOAA employees, student interns, volunteers, and NOAA affiliates. The Manual implements the requirements of [Executive Order \(EO\) 12196, OSH Programs for Federal Employees](#), [5 U.S.C 7902, Safety Programs](#), and Sections 19 and 24 of the [OSH Act of 1970](#).

SECTION 2. DEFINITIONS.

2.1. Acronyms.

AA – Assistant Administrators
ACGIH – American Conference of Government Industrial Hygienists
ANSI – American National Standards Institute
ALSE – Aviation Life Support Equipment
AOC – Aviation Operations Center
ASO – Aviation Safety Officer
ATV – All Terrain Vehicle
CAO – Chief Administrative Officer
CDSHP – Collateral Duty Safety and Health Professional
COR – Contracting Officer's Representative
COTR – Contracting Officer's Technical Representative
DAA – Deputy Assistant Administrators

DART – Days Away, Restricted, or Transferred
DASHO – Designated Agency Safety and Health Official
DRO – Designated Responsible Official
DUSO – Deputy Under Secretary for Operations
EO – Executive Order
ESS – Environmental, Safety, and Sustainability
FAR – Federal Acquisition Regulation
GFE – Government-Furnished Equipment
GHS – Globally Harmonized System
HLA – Helicopter Landing Area
JHA/JSA – Job Hazard Analysis/Job Safety Analysis
IRC – Inouye Regional Center
ISO – International Organization for Standardization
LESCO – Line Office Environmental and Safety Compliance Officer
LO/SO (LOs/SOs) – Line Office(s)/Staff Office(s)
MOC – Management of Change
NECSAS – NOAA Environmental Compliance and Safety Assessment System
NEOSHC – NOAA Executive Occupational Safety and Health Council
NOSH – NOAA Occupational Safety and Health Division
OMAO – Office of Marine and Aviation Operations
ORM – Operational Risk Management
OSH – Occupational Safety and Health
OSHA – Occupational Safety and Health Administration
OSHMS – Occupational Safety and Health Management System
OSV – Other Specialty Vehicle
PBA – Program Baseline Assessment
PDCA – Plan, Do, Check, Act
PEL – Permissible Exposure Limit
POV – Personal Owned Vehicle
PPE – Personal Protective Equipment
RM – Risk Management
SDS – Safety Data Sheet
SECO – NOAA Safety and Environmental Compliance Office
SOP – Standard Operating Procedure
SRV – Small Research Vessel
SSMC – Silver Spring Metro Center
TCIR – Total Case Incident Rate
TDY – Temporary Duty
TLV – Threshold Limit Value
UAS – Unmanned Aerial System
WRC – Western Regional Center

2.2. Terms and Definitions.

- A. Accident: A NOAA accident is defined as an unplanned event, or series of unplanned events, which results in one or more of the following:
- (1) Occupational illness to NOAA employees, volunteers, student interns, NOAA Corps personnel, or NOAA affiliates.

- (2) Injury to on-duty NOAA employees, volunteers, student interns, or NOAA affiliates.
 - (3) On or off-duty injury to NOAA Corps personnel.
 - (4) While at sea, on or off-duty injury to NOAA employees, volunteers, student interns, NOAA affiliates, or NOAA Corps personnel.
 - (5) Damage to NOAA property.
 - (6) Damage to public or private property, and/or injury or illness to non-NOAA personnel caused by NOAA operations (e.g. NOAA had a causal or contributing role in the accident).
- B. Charter: NOAA's use and control of a marine vessel or aircraft pursuant to contracts, purchase orders, and task orders (including those provided at no cost).
- C. CDSHP: CDSHP are employees designated in writing by the head of a field or program office to be responsible for managing the OSH program/OSHMS within their field or program office and who may work under the direction of a higher headquarters' OSH Manager. The CDSHP is assigned by a field or program office whose operation involves lower risk activities or activities that have JHA detailing hazard controls and abatements. The CDSHP shall:
- (1) Meet or will meet the training requirements outlined for CDSHPs in Section 5.2 below within six months of appointment.
 - (2) Coordinate OSH activities with their LO/SO or regional office OSH staff.
- D. Contractor/Contract Employees: NOAA contracts with private sector organizations to provide resources that supplement its workforce and to provide goods and services. The term contractor/contract employee represents personnel retained under such contracts to provide these goods and services. The following categorizes the type of contractors retained by NOAA.
- Note: The generic use of the term contractor includes but is not limited to the three types of contractors defined below.*
- (1) Direct support contractors/contract employees: Direct support contracts provide personnel that directly supplement NOAA's employee workforce. NOAA refers to these types of contractors as NOAA affiliates.
 - (2) Support services contractors: Support services contracts provide personnel that perform specific services to NOAA such as building maintenance, repair, and janitorial services. These contractors are not considered NOAA affiliates.
 - (3) Other contractor relationships: NOAA often charters aircraft and marine vessels in support of its operations. The crews are often included in the contract package. As with support services contractors, aircraft and ship crews are not considered NOAA affiliates.
- E. Crewmember: A person, either licensed or unlicensed, assigned to a vessel whose primary purpose is to contribute to the safe and efficient navigation, operation, and maintenance of the vessel or its equipment and provisions.
- F. DASHO: The DASHO is the designated NOAA official with sufficient authority to represent the interest and support of the NOAA Administrator and is responsible for the management and administration of NOAA's OSH program. The CAO is the DASHO for NOAA.
- G. DRO: The DRO/Senior Site Manager is the senior NOAA official at a site/establishment. This official has authority over operations or activities which are subject to safety statutes. The responsibility of the DRO/Senior Site Manager is inherent in their position and need not be

formally designated or ascribed. OSHA regulations refer to the Senior DRO/Site Manager as the senior establishment management official.

H. Diving Operations: Diving operations consist of:

- (1) Scientific Dives: Diving operations performed solely as a necessary part of a scientific, research, or educational activity by employees whose sole purpose is to perform scientific research tasks. Scientific diving does not include performing any tasks usually associated with commercial diving such as placing or removing heavy objects underwater, inspection of pipelines and similar objects, construction, demolition, cutting, welding, or the use of explosives.
- (2) Working Dives: Underwater tasks that fall outside of the Occupational Safety and Health Administration scientific exemption that do not require scientific expertise, may not lead to the advancement of science, and involve tools and techniques beyond those required to perform scientific dives.

I. Duty Status: Duty status is defined by the following:

- (1) On Duty: NOAA personnel are on duty when they are:
 - (a) Physically present at any location where they are to perform their officially assigned work or telework. This includes those activities related to normal work activities that occur on NOAA facilities such as coffee or rest breaks, and all activities (including personal time) onboard NOAA aircraft and marine vessels.
 - (b) Being transported by NOAA or commercial conveyance for the purpose of performing officially assigned work. This includes reimbursable travel in POVs for performing TDY.
- (2) Off Duty: NOAA personnel are off duty when they:
 - (a) Are not in an on-duty status, whether on or off NOAA facilities.
 - (b) Are on leave status.
 - (c) Are traveling before and after official duties such as routine driving to and from regular work location.
 - (d) Are participating in voluntary athletic activities.
 - (e) Are on lunch or other rest break while engaged in activities unrelated to eating or resting.

J. Energized Electrical Components: Components that are electrically connected to or having a source of voltage or electrically charged to have a potential significantly different from that of earth in the vicinity.

Note: 'De-energized' parts that have not been verified, and locked out, and tagged in accordance with established standards are considered energized.

K. Hazard: A condition with the potential to cause injury, illness, death, property damage, or operational degradation.

L. Helicopter Landing Area: A term sometimes used to describe a minimally developed heliport or landing site for boarding and discharging passengers or cargo.

M. Incident: A NOAA incident is defined as an event (planned or unplanned), or series of events (planned or unplanned), which results in one or more of the following:

- (1) A NOAA accident.
 - (2) The release of a hazardous substance into the environment.
 - (3) The exposure of a NOAA employee, volunteer, student intern, NOAA affiliate, or the general public to a radioactive substance.
 - (4) A near-miss event that could have resulted in a NOAA incident.
- N. LO/SO: NOAA LOs/SOs are organizational entities outside the Office of the Under Secretary that are charged with carrying out specific functions of the NOAA OSH program/OSHMS.
- O. LESCO: The LESCO is the employee designated or appointed in writing by the head of a Line Office to be responsible for managing OSH within the Line Office.
- P. Marine Vessel: A ship, boat, or other watercraft that's owned, operated, or otherwise managed by NOAA to collect oceanographic, atmospheric, geodetic, hydrographic, fisheries, and other data. NOAA's marine vessel fleet consists of small boats, hydrographic survey vessels, oceanographic research vessels, and fisheries survey vessels.
- Q. NOAA Affiliates: NOAA affiliates are personnel other than NOAA Federal Employees or NOAA Corps Officers that perform functions directly in support of NOAA's operation or as a partner alongside NOAA employees. This includes NOAA direct support contractors, foreign nationals in support of NOAA operations, and external researchers/grantees working under NOAA oversight and control. NOAA affiliates are responsible for complying with all NOAA rules, regulations, policies, and procedures.
- Note: NOAA volunteers and student interns are not considered NOAA affiliates.*
- R. NOAA Employee: NOAA Employees, as referred to in this Administrative Order, consist of government civilian employees working for NOAA and NOAA Corps Officers.
- S. NOAASafe: NOAASafe is an enterprise electronic records management and analysis tool designed to assist in the management of an OSHMS. It is hosted on a SharePoint server that is managed by SECO. NOAASafe is the preferred method for OSH recordkeeping and reporting.
- T. OSH Manager: Safety management personnel that perform OSH functions as their primary duties. This includes all LO/SO, field/program office, and SECO personnel filling fulltime safety or safety and environmental compliance positions at national, regional, or field/program office levels. The OSH Manager reports directly to their Line Office AA/DAA, Staff Office Director, or field/staff office director/manager (as applicable) on safety-related matters.
- U. PDCA. Plan-Do-Check-Act is a four-step management method used in business for the control and continuous improvement of processes and products. Just as a circle has no end, the PDCA cycle should be repeated again and again for continuous improvement. PDCA is the continual improvement foundation of NOAA's OSHMS.
- V. Program Official: A government or direct support contract employee in charge of, and having oversight over, a specific operation, activity, or scientific investigation within a NOAA LO/SO.
- W. Public vessel: A vessel that is owned or demise chartered, and operated by the U.S. Government, a state government, or the government of a foreign country and not engaged in commercial service.
- X. Risk: The effect of uncertainty on objectives where the effect is a deviation from the expected. Risk is often expressed in terms of a combination of the consequences of an event (including changes in circumstances) and the associated likelihood of occurrence.

- Y. RM: RM is the systematic application of management policies, procedures and practices to the activities of communicating, consulting, establishing the context, and identifying, analyzing, evaluating, treating, monitoring, and reviewing the risk arising from work activities and operational factors. It involves making decisions that balance risk with operational benefits. The following terms represent core elements of risk management:
- (1) Consequence: The expected outcome of an event in terms of degree of injury, illness, property damage, or other operational-impairing factors. A consequence can be certain or uncertain and expressed qualitatively or quantitatively.
 - (2) Controls: Actions taken to eliminate hazards or reduce their risk.
 - (3) Exposure: The extent to which an organization and/or stakeholder is subject to a risk/event.
 - (4) JHA/JSA: A JHA/JSA is a procedure that integrates accepted safety and health principles and practices into a particular task or job operation. In a JHA, each basic step of the job is assessed to identify potential hazards and determine risk. Controls are then put into place to reduce risks associated with the hazard. ORM (see below) is required in conjunction with a JHA when the operation includes variables that can affect the level of risk associated with the operation (e.g. weather, lighting, sea state, etc.).
 - (5) Likelihood: The chance or likelihood of something happening, whether defined, measured, or determined objectively or subjectively, qualitatively or quantitatively, and described using general terms or mathematically.
 - (6) ORM: ORM is the systematic process of identifying hazards, assessing risk, analyzing risk control options and measures, making control decisions, implementing control decisions, accepting residual risks, and supervising/reviewing the activity for effectiveness. ORM extends the functionality of a JHA by providing for variability associated with an operation.
 - (7) Residual risk: The risk associated with a hazard that remains after implementing all planned countermeasures or controls to eliminate, reduce, or control the impact of the hazard. The residual risk may be equal to the initial risk, especially when the initial risk was so low that the hazard did not warrant expenditure of resources to mitigate.
 - (8) Risk Assessment: The overall process of risk identification, risk analysis, and risk evaluation.
 - (9) Risk Matrix: A tool for ranking and displaying risks by defining ranges for consequence and likelihood.
 - (10) Risk Source: Any element that has the intrinsic potential to give rise to risk.
- Z. Senior Site Manager: The Senior Site Manager is the senior NOAA official on-site. This official has authority over operations or activities which are subject to safety statutes. The responsibility of the Senior Site Manager is inherent in their position and need not be formally designated or ascribed. OSHA regulations refer to the Senior Site Manager as the senior establishment management official.
- AA. Small Boat: A small boat owned, operated, maintained by, or on behalf of NOAA. This includes boats that are leased, loaned, bare boat chartered (also referred to as demise chartered), or operated under any cooperative agreement with other government agencies, universities, or scientific organizations by or from NOAA, but does not include boats time chartered by NOAA. The definition includes every description of watercraft less than 300 gross tons capable of being used as a means of transportation of persons on water.

SECTION 3. MANAGEMENT LEADERSHIP AND EMPLOYEE PARTICIPATION.

3.1. Management Leadership.

Senior management leadership and effective employee participation are crucial for the success of NOAA's OSHMS. Senior management in NOAA holds the key role in development, implementation and maintenance of its OSHMS. As such, senior management must actively participate in every level of NOAA's OSHMS.

3.1.1. Occupational Safety and Health Management System.

NOAA's OSHMS is designed around ANSI Z10's Plan-Do-Check-Act framework for improving the workplace environment. The management system cycle starts with the initial planning processes (Plan – Section 4), followed by implementation of the management system (Do – Section 5). The subsequent performance of these activities are evaluated and appropriate actions should be taken in order to make corrections or improvements (Check – Section 6). The next step of the cycle involves management review of the system for suitability, adequacy, and effectiveness, to be measured against the standards outlined in this NOAA Manual (Act – Section 7 with return to Section 4). The complete cycle is repeated, resulting in continual improvements to OSH.

The ultimate goal of NOAA's OSHMS is the reduction of hazards, risks, injuries, illnesses, fatalities, lost time, workers' compensation costs, and equipment damage. Further benefits from complying with this NOAA Manual are:

- ◆ Improved employee productivity and job satisfaction.
- ◆ Better organizational image and employee morale.
- ◆ Fulfillment of legal obligations (compliance with laws and regulations).
- ◆ Reduced turnover of personnel.
- ◆ Improved employee health status.
- ◆ Improved product quality.
- ◆ Reduction or elimination of property damage due to incidents.
- ◆ Reduced operational interruption costs.
- ◆ Reduced impact on the environment due to incidents.

3.1.2. Policy.

- A. NOAA is committed to protecting the health and safety of each NOAA employee, student intern, volunteer, and NOAA affiliate. There can be no compromise of an individual's well-being in anything we do. Senior management is responsible for implementing the actions to maintain a healthy, injury-free work environment.
- B. Senior management in NOAA is charged with promoting proactive accident prevention and safety performance through effective implementation of RM and the NOAA OSHMS within their organizations. Senior management must also hold leaders at all levels accountable for their risk and safety-related decisions.
- C. NOAA sets high standards in all aspects of its mission. Safety is no different. NOAA must conduct operations in compliance with applicable laws and regulations as well as our own health and safety standards. NOAA will strive to exceed minimum standards outlined in regulatory guidance by applying the latest safety-related nationally or internationally accepted consensus standards and best practices in safety and health as part of its general safety practices.

D. NOAA is committed to continual improvement of employee safety and health. To that end, we recognize the importance of employee participation in helping to ensure these policy commitments are translated into appropriate actions.

3.1.3. Responsibility and Authority.

A. The Under Secretary of Commerce for Oceans and Atmosphere (NOAA Administrator) and DUSO provides top management support to the development and implementation of a comprehensive NOAA OSHMS consistent with Section 1.1 above, and shall hold senior management accountable for fulfilling their safety and health responsibilities, including ensuring that appropriate performance criteria addressing safety responsibilities are incorporated into work plans and performance reviews. Additionally, the DUSO shall:

- (1) Ensure that periodic OSH evaluations are conducted of LO/SO and field/program offices to determine the effectiveness of the OSHMS.
- (2) Ensure the development, issuance, and maintenance of adequate OSH guidelines so that LO/SO and field/program offices can implement an appropriate OSHMS.
- (3) Be responsible for Agency OSH activities, including compliance with Federal regulations.
- (4) Chair the NOAA's Executive Safety and Health Council.

B. The NOAA Executive OSH Council shall:

- (1) Review and comment on the NOAA Strategic Plan and the NOAA OSH Strategic Plan to ensure that OSH issues are appropriately addressed.
- (2) Assist in the development of the annual PBA and program plan for the NOAA Safety Program, and review PBAs and program plans for each goal to ensure that safety is appropriately addressed.
- (3) Review proposed changes to NOAA OSH policies and OSH supplemental guidance and recommend changes as appropriate.
- (4) Identify opportunities for NOAA-wide improvements in the Safety Program. Set goals and objectives for reducing and eliminating occupational accidents, injuries, and illnesses.
- (5) Review OSH trends to determine if appropriate corrective actions are being taken to address the underlying conditions contributing to hazards, accidents, injuries, and illnesses.
- (6) Review and approve annual NOAA and LO/SO safety action plans and performance measures to ensure that these support the NOAA OSH program/OSHMS.

C. The NOAA CAO serves as the NOAA DASHO, and is responsible for:

- (1) Establishing the OSH program/OSHMS to include policies and procedures to carry out the provisions of Section 19 of the OSH Act and EO 12196.
- (2) Ensuring the comprehensive OSH program complies with all applicable federal and Department of Commerce OSH standards.
- (3) Establishing and maintaining the NOAA OSH Division with adequate budget and staff to implement the NOAA OSHMS.

- D. The Director of NOAA SECO has overall responsibility for management and oversight of NOAA's Environmental Compliance Division, OSH Division, and Energy and Sustainability Division. Additionally, the Director of SECO shall:
- (1) Assess the staff technical competencies required within SECO to fulfill the requirements of the NOAA OSH program/OSHMS and implement necessary training to ensure a skilled SECO workforce.
 - (2) Provide administrative support and resources necessary to support the NOAA OSH program/OSHMS.
- E. The Chief of NOAA OSH Division serves as the director of NOAA's OSH program/OSHMS and shall:
- (1) Report to the DASHO on all matters involving OSH.
 - (2) Act as principal advisor to the NOAA DUSO and staff elements on all safety matters affecting the agency. Elevate OSH issues to senior management with recommendations to ensure compliance.
 - (3) Establish requirements for safety training across NOAA, concerning both frequency and required content, to ensure compliance with NOAA-wide safety policy, and implement appropriate monitoring systems to assess compliance with these requirements, ensuring that OSH training developed by LOs/SOs complies with NOAA safety guidance. Provide technical assistance and training concerning health and safety issues across NOAA.
 - (4) Conduct annual OSH review and develop resource plans with specific performance measures and milestones for NOAA-wide requirements. Complete the Annual OSH Report to the Secretary of Labor. Publish an annual report for senior management that encompasses all the requirements of the annual report to the Secretary of Labor and additional trend analysis information that identifies accident causation, hazard, and risk trends.
 - (5) Ensure that safety performance measurement systems are developed and implemented, and that regular safety performance data reports are prepared for NOAA senior management.
 - (6) Sustain, update, and implement NECSAS facility assessments to ensure that NOAA worksites and personnel are in compliance with safety policies and standards. This responsibility includes identifying appropriate criteria to prioritize deficiencies, monitoring the development and implementation of corrective action plans to address non-compliance, and reporting assessment results and progress in taking corrective actions. Assessments may be either announced or unannounced.
 - (7) Develop and implement a safety incident investigation process under the general provisions established in Section 6.2 below that supports the expeditious investigation of safety incidents and implementation of corrective actions.
 - (8) Assist NOAA Project Planning and Management Division (PPMD) in ensuring all construction/repair projects comply with appropriate OSH compliance standards. Assist NOAA Real Property Management Division (RPMD) in ensuring property under consideration for leasing by NOAA complies with NOAA OSH standards.
 - (9) Ensure that NOAA OSH policies, plans, and procedures continue to comply with all applicable federal and Department of Commerce standards. Establish supplemental guidance, as necessary, to assist in implementing this requirement.

- (10) Advise, support, and oversee execution of NOAA's OSH program/OSHMS, synchronize risk management integration efforts across NOAA, and serve as the RM advocate to senior leadership. Provide RM information and RM guidelines as needed to ensure NOAA assets are prepared to conduct safe operations.
 - (11) Provide direct safety support to NOAA corporate staff elements and the Office of the Under Secretary.
 - (12) Collect, analyze, disseminate, and maintain accident information on NOAA assets. Develop and distribute accident prevention countermeasures to reduce adverse trends.
 - (13) Develop and manage NOAA's OSHMS management of change process. Key elements of the OSH management of change process include:
 - (a) Developing and maintaining the NOAA Safety Strategic Plan.
 - (b) Developing NOAA Annual Safety Action Plans.
 - (c) Assessing the effectiveness of action plan elements in achieving strategic goals and objectives.
 - (14) Establish and maintain a NOAA-wide hazard/deficiency and recommendation tracking system to monitor the status of actions taken at all levels to address mitigation of risk, elimination of regulatory safety violations, and regarding recommendations made as a result of Class A accidents, Class B aviation, marine vessel or diving accidents, and Class C aviation accident reports. The hazard/deficiency and recommendation tracking system should include tracking of any and all systemic deficiencies that impact the safety and health of the NOAA workforce.
 - (15) Provide on-site OSH support during training and/or contingency operations.
 - (16) Ensure the NOAA Accident Prevention Awards Program is effectively administered and funded.
- F. The Director of OMAO is responsible for OSH oversight of NOAA marine and aviation operations. The OMAO Director shall:
- (1) Establish and maintain a system to oversee NOAA aviation and ship/afloat safety. Conduct and/or monitor OSH compliance/assistance inspections of NOAA's Marine Operation Centers, NOAA port facilities, and NOAA owned or contracted marine vessels. Monitor and oversee the conduct of accident investigations involving NOAA marine vessel operations.
 - (2) Establish and maintain a system to oversee the safety of NOAA's Small Boat Program. Conduct and/or monitor OSH compliance/assistance inspections of organizations/activities using NOAA small boats. Inspections may be either announced or unannounced. Monitor and oversee the conduct of accident investigations involving NOAA small boat operations.
 - (3) Establish and maintain a system to oversee the safety of NOAA's marine vessel charter process. Establish and maintain minimum charter vessel safety standards. Provide for safety approval process of all NOAA vessel charter requests.
 - (4) Manage a system to oversee the safety of NOAA's Dive Units. Administer and/or monitor OSH assessments of all organizations/activities conducting NOAA dive operations. Inspections shall be conducted in accordance with [OMAO Policy 0350, Diving Unit Safety Assessment Program](#). Monitor accident investigations involving NOAA dive-related operations.
 - (5) Establish and maintain a system to oversee the safety of NOAA's Aviation Program to include the aircraft charter process. Administer and/or monitor OSH compliance/assistance inspections

of organizations/activities conducting NOAA aviation operations. Inspections may be either announced or unannounced. Oversee accident investigations involving NOAA aviation operations.

- G. NOAA AAs, DAAs, and Corporate Staff Office Directors are responsible for achieving goals and implementing the requirements of the NOAA OSH program/OSHMS within their organization. They are responsible for the safety of their employees and shall:
- (1) Establish and maintain comprehensive accident prevention processes. Implement policies, standards, and guidance outlined in Section 2 above to provide a safe and healthful work environment. Ensure OSH policies, procedures, performance standards, and training are established, implemented, and maintained within their organization as an integral part of business operations and facilities.
 - (2) Ensure that OSH responsibilities are incorporated into LO/SO management performance criteria, and that all personnel understand and carry out their OSH responsibilities as specified in this order.
 - (3) Designate an LO/SO OSH Manager (LESCO), who will report to the AA/DAA or SO Director on OSH issues, to provide leadership and support in OSH within their organization, and to work in cooperation with SECO in supporting the NOAA OSH program/OSHMS.
 - (4) Ensure that OSH requirements are integrated within their budget and program planning. Prepare annual safety action plans with included performance measures.
 - (5) Ensure an ongoing program of OSH inspections/assessments within LO/SO worksites is developed and implemented to ensure personnel are in compliance with safety policies and standards. This responsibility includes identifying appropriate criteria to prioritize the extent of deficiencies, monitoring the development and implementation of corrective action plans to address issues of non-compliance, and reporting assessment results and corrective progress.
 - (6) Ensure incidents, accidents, injuries, and illnesses are investigated and reported in accordance with the procedures outlined in this manual. Develop countermeasures for mitigation and abatement processes to prevent recurrence of accidents, injuries, and illnesses.
 - (7) Promote the goals and implement the requirements of the NOAA OSH program/OSHMS within their organization.
 - (8) Take appropriate action to expeditiously correct discrepancies with OSH regulatory requirements.
 - (9) Ensure CDSHPs are appointed in writing, to accomplish assigned safety duties and responsibilities in activities where a full-time safety professional is not assigned. Ensure CDSHPs complete training requirements as outlined in this manual.
 - (10) Establish a management climate that promotes safety through all levels of leadership.
 - (11) Ensure that risk management is integrated into all operations. Ensure that the RM process is incorporated into policies, directives, SOPs, special orders, training plans, and operational plans in order to minimize accident risk.
 - (12) Serve as voting members of the NEOSHC.

- H. DROs/Senior Site Managers have overall responsibility for promoting the goals and implementing the requirements of the NOAA OSH program/OSHMS within their site/campus. They are responsible for the safety of their employees and operations and shall:
- (1) Ensure OSH policies and procedures are established, implemented, and maintained within their scope of responsibility as an integral part of business operations and facilities.
 - (2) Ensure on-site personnel are aware of OSH requirements and are appropriately trained.
 - (3) Designate a safety manager (or CDSHP) who will report to the Senior Site Manager on OSH issues.
 - (4) Ensure that OSH requirements are integrated within program planning and budgeting.
 - (5) Ensure all occupational accidents, injuries, and illnesses are reported within seven days of the event. Ensure investigations are conducted in accordance with the procedures outlined in this manual. Develop countermeasures for mitigation and abatement processes to prevent recurrence of accidents, injuries, and illnesses.
 - (6) Maintain site/campus injury and illness records in accordance with the requirements outlined in 29 CFR 1904, specifically:
 - (a) Maintain site/campus OSHA 300 Log in accordance with § 1904.7. Ensure all occupational injuries and illnesses are recorded in the OSHA 300 Log within seven days of the injury.
 - (b) At the end of each calendar year, review the OSHA 300 Log to verify that the entries are complete and accurate, and correct any errors. Publish and certify the OSHA Form 300A, Summary of Work-Related Injuries, and Illnesses. Post a copy of the annual summary in a conspicuous place or places where notices to employees are customarily posted. Post the summary no later than February 1 of the year following the year covered by the records and keep the posting in place until April 30. Ensure that the posted annual summary is not altered, defaced, or by other material.
 - (7) Promote the goals and implement the requirements of the NOAA OSH program/OSHMS within their scope of responsibility.
 - (8) Establish and maintain comprehensive and aggressive accident prevention processes for all activities and operations.
 - (9) Implement the standards outlined in Section 1 above to provide a safe and healthful work environment.
 - (10) Develop and manage the Occupant Emergency Plan for the site/campus.
 - (11) Organize and manage the training of select personnel on the following topics:
 - (a) AED use and CPR (if applicable).
 - (b) Use of Evacuation Chairs (if applicable).

- (c) First aid/emergency response training (for rural locations greater than ten minutes away from first responders).
- (12) Ensure Evacuation/Shelter in Place Drills are conducted.
- (13) Develop standard operating procedures related to facility/site safety in accordance with the requirements outlined in this manual.
- (14) Take appropriate action to expeditiously correct discrepancies with OSH regulatory requirements.
- (15) Establish a management climate that promotes safety throughout all levels of leadership.
- (16) Train all newly assigned personnel on the hazards inherent in their job and work environment within 60 days of arrival and maintain a record of this training. Training records shall be maintained in accordance with Section 5.2.1.6 of this manual. At a minimum, new employee OSH training will include the following:
 - (a) Seasonal safety training on hazards associated with the time of year in which the newcomer arrives.
 - (b) Hazard Communication/GHS.
 - (c) Task-specific workplace hazards.
 - (d) Location-specific workplace and environmental hazards.
 - (e) Fire safety/Fire Prevention Plan and the campus/facility Occupant Emergency Plan.
- (17) Ensure that RM is integrated into all operations. Ensure that the RM process is incorporated into policies, directives, SOPs, training plans, and operational plans in order to minimize accident risk.
- I. OSH Managers and Coordinators: OSH Managers and Coordinators at all levels exercise staff supervision over the organization's safety and health and accident prevention activities. Duties performed by the safety manager include the full range of OSH program management responsibilities. Specifically, OSH Managers and Coordinators shall:
 - (1) Implement proactive OSH processes in accordance with this manual, [NAO 209-1A](#), [NOAA Occupational Safety and Health](#), applicable Department policies, OSHA policies, and other applicable OSH policies and manuals affecting the organization.
 - (2) Inform the senior site/program manager of all accidents, injuries, illnesses, safety violations, and recommend risk reduction/control measures designed to eliminate the hazard or reduce risk to acceptable levels (e.g. implement engineering controls, conduct task/site specific training, apply administrative controls, provide PPE, etc.).
 - (3) Conduct investigations of all accidents/incidents occurring within their organization or subordinate organizations to determine the root cause and develop risk prevention strategies.
- J. Senior executives and managers at all levels of the organization are responsible for actively promoting and protecting the safety and health of NOAA employees, student interns, volunteers,

NOAA affiliates, and the public by providing safe workplaces and operations. To fulfill this responsibility, each senior executive and manager shall:

- (1) Review OSH assessment reports and take appropriate measures (including, as warranted follow-up assessments) to ensure that violations and unsafe conditions/acts have been appropriately addressed.
- (2) Report all OSH incidents in accordance with the procedures outlined in Section 6.2 of this manual.
- (3) Actively discuss safety concerns and the importance of safety in the workplace with employees, student interns, volunteers, and NOAA affiliates.

K. Supervisors at all levels of the organization are responsible for actively promoting and protecting the safety and health of NOAA employees, student interns, volunteers, NOAA affiliates, and the visiting public by providing safe workplaces and operations. To fulfill this responsibility, each manager and supervisor shall:

- (1) Ensure that employees are provided appropriate safety training to accomplish their assigned duties in compliance with NOAA OSH regulations, guidelines, and standards.
- (2) Leaders at all levels shall encourage employee participation in the design, implementation, and ongoing operation of the site's OSH program/OSHMS.
- (3) Conduct periodic workplace safety inspections in accordance with Section 6.3 of this manual, and ensure that the safety of personnel and equipment is well maintained.
- (4) Provide OSH leadership examples by following established rules, policies, procedures, training, and the execution of standards.
- (5) Support the reporting of suspected hazards by employees without any type of reprisal. Forward all reports that cannot be addressed at the local level to the next higher level OSH office.
- (6) Integrate RM into operations during the planning, preparation, and execution phases of the operation.
- (7) Establish accountability for OSH through the performance evaluation system and performance counseling sessions.
- (8) Ensure that all regular work operations conducted by NOAA personnel and NOAA affiliates have an approved JHA in place.

L. Employees, volunteers, student interns, and NOAA affiliates' success of NOAA's OSH program/OSHMS is dependent on employees meeting their OSH responsibilities. As such, each employee, volunteer, student intern, and NOAA affiliate shall:

- (1) Comply with established OSH rules and policies, procedures, and guidelines, including the attendance of required safety training. Following safe procedures is a condition of employment for all employees.
- (2) Immediately correct unsafe conditions and unsafe acts that are under their control. Promptly report all unsafe conditions and OSH incidents to their immediate supervisor.

- (3) Perform work in such a manner so as not to jeopardize the safety and health of themselves, fellow workers, or the public.
- (4) Correct and/or report unsafe conditions, report all accidents, and warn others of known hazards or of their failure to observe safety rules and policies. No reprisal activities shall be taken against employees for reporting any OSH hazard. The CD-351, Report of Possible Safety/Health Hazard is the preferred method for reporting and documenting these hazards.

3.2. Employee Participation.

Effective employee participation is fundamental to the success of NOAA's OSH program/OSHMS. Involving employees in decisions that affect their safety and health encourages them to participate in reducing risk and establishing a safe workplace. Employees can contribute valuable insight from a "hands-on" perspective. Leaders at all levels should encourage employee participation in the design, implementation, and ongoing operation of the site's OSH program/OSHMS. Employee participation should be tailored to each organization's culture and operational needs. Success in OSH requires sufficient direction, authority, resources, and training to effectively support employee participation in these activities. To facilitate effective employee participation in NOAA's OSH program/OSHMS:

- A. Employees are encouraged to participate in employee OSH committees. NOAA and Line Office OSH offices shall provide guidance, resourcing, and training in support of OSH committees.
- B. Employees may decline to perform their assigned task because of a reasonable belief that the task or situation poses an imminent risk of death or serious bodily harm, and that there is insufficient time to reduce the risk through normal hazard reporting and abatement procedures. Employees shall immediately report the hazard to their supervisor (if time permits, by submitting a Form CD-351) and request that the danger be eliminated. The employee's right to decline a task shall not take precedence over an aircraft manager's or ship captain's ultimate responsibility to make command decisions to protect the safety of the crew and aircraft or vessel while underway, in response to an emergency, or in the performance of normal duties.

SECTION 4. PLANNING.

Planning is the first step in the PDCA process. The objective of the planning process defined in this section is to identify and prioritize OSH issues in order to develop effective strategies. The process requires LOs/SOs and field/program offices to:

- A. Determine all relevant OSH issues applicable to the organization and its operations. The purpose of this process is to assure, as far as practicable, that all OSH issues are identified so that they can be assessed and prioritized. OSH issues are hazards, risks, system deficiencies, and opportunities for system improvement.
- B. Prioritize the identified OSH issues to determine those that are most important.
- C. Create objectives to improve the effectiveness of the management system and reduce the level of OSH risk.
- D. Implement plans for OSH objectives that specify the tasks and responsibilities.

4.1. Initial and Ongoing Reviews.

A. The purpose of the review process is to identify OSH issues that can be assessed and prioritized according to their importance to the organization. Multiple methods can be used to assess and prioritize OSH issues, and the method could be either qualitative or quantitative. Priorities should be situational and reflect the needs of a particular location at a given time. Priorities should be periodically reviewed so as to reflect the current situation in an operation.

Note: SECO shall provide performance indicators and metrics that may be used for quantitative and qualitative analyses.

- B. As part of this review process, all NOAA LO/SO and field/program offices shall, at a minimum, conduct and document the following:
- (1) Periodic review of safety policies, procedures, and guidelines to assess effectiveness. Policies, procedures, and guidelines shall be assessed at least every two years.
 - (2) Periodic review and analyses of accident/incident trends and statistics. At a minimum, review and analyses shall be conducted at least quarterly.
 - (3) Periodic reviews and analyses of audit and inspection result trends. At a minimum, review and analyses shall be conducted at least annually.
 - (4) Periodic review and analyses of safety training records to determine performance. At a minimum, review and analyses shall be conducted at least annually.
 - (5) Periodic review of supervisor periodic workplace safety inspections. At a minimum, review shall be conducted at least annually.

4.2. Assessment and Prioritization.

In assessing the significance of identified issues and opportunities to determine which should be given higher priority, several factors should be considered. Among these are the following:

- A. Issues with the greatest potential consequence, such as processes related to energized electrical work, motor vehicle safety, maritime safety, aviation safety, diving safety, confined spaces, or working at heights.
- B. Issues with the greatest prevalence and greatest frequency of occurrence.
- C. Issues related to the management system, such as organization, resource, participation or accountability. For example, supervisory accountability may need to be modified in order to improve incident reporting.
- D. Opportunities with the greatest potential for improvement, including opportunities for increasing employee participation that may assist in detecting previously unknown hazards as well as creating new approaches to hazard control.
- E. Situational factors such as a new or modified business process, acquisitions, recent serious incidents within and external to one's organization, or new information.

The assessment and prioritization process contrasts with the more detailed risk assessment processes intended to define applicable hazard controls associated with specific equipment or processes. However, as with risk management, prioritization should be based on risk, number of personnel exposed, and cost effectiveness to correct.

4.3. Objectives – Strategic Goals and Strategic Planning.

The strategic planning process and resulting strategic goals, objectives, and annual action plans are essential to NOAA's performance improvement and management of change processes. It is through the strategic and action planning processes that NOAA sustains continuous improvement in its OSH program/OSHMS. The results of the periodic reviews described in Sections 4.1 and 4.2 above should refine the focus of NOAA and LO/SO strategic and action planning activities. The following section outlines the requirements and implementation of strategic planning in NOAA.

- A. The NOSH office, with input from LO/SO and field/program offices, will develop NOAA's overall safety strategic plan with specific safety strategic goals and objectives. The NOAA safety strategic plan should support and align with the NOAA Strategic Plan. It should also support NOAA's corporate and safety operation and vision statements. The strategic plan shall be updated no less than every four years.
- B. The NOAA Safety Strategic Plan shall be provided to the DUSO for review and approval.
- C. Each LO/SO safety office should develop a safety strategic plan with goals and objectives that are specific to their organizational requirements. The LO/SO safety strategic plan should support and align with the NOAA Strategic Plan and the NOAA Safety Strategic Plan. It should also support the LO/SO's operation and vision statements.
- D. The LO/SO strategic planning package should be provided to the organization's AA or DAA for review and approval.

4.4. Action Plans and Allocation of Resources.

Annual action plans establish measurable activities designed to achieve strategic goals and objectives. Action plans will include consideration for safety climate survey results, accident and incident trends, hazard trends, and management system weaknesses. Action plans will be developed and implemented based on the following guidance:

- A. The NOSH office, with input from LO/SO and field/program offices, shall develop and execute an annual action plan that implements the NOAA Safety Strategic Plan. The annual action plan will be published no later than September 15 of each year for the following fiscal year.
- B. Each LO/SO safety office should develop an annual action plan to implement their safety strategic plan.
- C. Action plans shall contain direction that is specific, measurable, actionable, realistic, and accomplishable within the plan's designated time period (usually for the period of one fiscal year). Planning within LO/SO safety offices should focus on achieving progress toward the organization's strategic goals and objectives. Action plan development should be conducted in time to identify the performance targets to be achieved and the resources needed to achieve those goals, and to obtain the required funding.
- D. Action plans for the upcoming fiscal year shall be developed in support of the review process defined in Sections 4.1 and 4.2 above. Progress in implementing the action plan should be reviewed at least quarterly. The frequency of the review depends on the activity level and changes that may affect the plan.
- E. NOAA and its LOs/SOs shall include the necessary funding and resource requirements to execute the action plan as part of its annual budgeting process.

SECTION 5. IMPLEMENTATION AND ORGANIZATION.

Do is the second step in the PDCA process. The Do step implements the plan and executes its processes. The following defines NOAA's approach to implementing its OSHMS processes.

5.1. Occupational Safety and Health Management System Operational Elements.

5.1.1. Managing Risk.

RM involves identifying, assessing, and controlling risks arising from operational and workplace factors and making decisions that balance risk with operational benefits. The process analyzes the operation and workplace, focuses on key capabilities, and takes into account the availability and mix of resources. Managing risk can be broken into two general categories: 1) ORM and 2) JHA. ORM focuses on risks associated with dynamic activities where operational variables can significantly affect the associated risk. A JHA focuses on jobs and operations with minimal variability in hazards and risks. A JHA also provides the foundation for which ORM is conducted. The JHAs address constant risks not impacted by variables such as weather, crew mix, etc. ORM focuses on variables to address risk under the current operational conditions and environment. Both ORM and JHA require appropriate risk acceptance authorities to execute the operation.

5.1.1.1. Job Hazard Analysis.

A JHA/JSA is a RM technique used to identify and control workplace hazards with the overall aim of preventing personal injury or damage to government or private property. In a JHA, each basic step of the job is assessed to identify potential hazards and determine risk. Controls are then put in place to reduce the risks associated with a particular hazard. Some of the tools used to identify and assess hazards may include research of available engineering and safety data, use of diagram and analysis tools, incident and safety performance trends, formal testing, or long-term tracking of the hazards associated with the operation or activity. The following outlines the fundamental steps in the JHA process and specific requirements for NOAA leaders, employees, volunteers, student interns, and NOAA affiliates:

- A. The JHA Process shall consist of the following five steps:
 - (1) Break the job into a sequence of steps or tasks and identify hazards or potential hazards associated with each step that could lead to accidents, injuries, damage to the environment, or possible occupational illness.
 - (2) Assess risks associated with the hazards.
 - (3) Identify and develop actions necessary to eliminate, control, or minimize hazards.
 - (4) Implement controls.
 - (5) Provide supervision and oversight.
- B. The JHA shall be documented on the NOAA Form 64-2977, RM Worksheet (see Appendix B) or on a similar worksheet that provides for measurement of risk.
- C. LO/SO and field/program offices shall develop and implement processes and procedures to ensure that a JHA is conducted for organizational operations. JHAs shall be completed in accordance with the following guidance:
 - (1) JHAs for new work activities shall be completed prior to initiating the work activity. Note: JHAs shall be completed on all existing work activities no later than one year after the publication of this manual.

- (2) Completed JHAs shall be approved in accordance with risk acceptance guidelines outlined in Section 5.1.1.3 below.
- D. ORM is required in conjunction with a JHA when the operation includes variables that can affect the level of risk associated with the operation (e.g. weather, lighting, sea state, etc.).
- E. A JHA is closely tied to procedures and controls outlined in the organizations SOP for the operations. LO/SO and field/program offices shall review and update JHAs at least every two years as part of SOP review or when one of the following occurs (whichever comes first):
- (1) Equipment used in the job or operations is modified or replaced.
 - (2) Procedures for conducting the job or operation changes.
 - (3) Accident trends indicate a need for modifications to controls or the inclusion of additional controls.
 - (4) Regulatory change requires alterations to operational practices.
 - (5) As part of the management of change process as outlined in Section 5.1.3 below.

5.1.1.2. Operational Risk Management.

ORM is an operational-focused decision-making process used to systematically identify risks and benefits and determine the best course of action for a given situation. ORM enables executives, functional managers, supervisors, and individuals to maximize operational capabilities while limiting all dimensions of risk by applying a simple, systematic process appropriate for all personnel and functions. Appropriate use of ORM increases both an organization's and individual's ability to accomplish the task. Whether the operation involves flying an aircraft, driving to a sensor site, conducting research at sea, or conducting a scientific dive, application of the ORM process ensures more consistent results. ORM techniques and tools add consistency to the traditional approach to accomplishing operations, thereby directly strengthening NOAA's ability to conduct its operations. ORM extends the functionality of a JHA by addressing variability associated with an operation. The following outlines NOAA's fundamental goals in implementing an ORM program, principles of ORM, and specific requirements for NOAA leaders, employees, volunteers, student interns, and NOAA affiliates:

- A. The fundamental goals of ORM are to: 1) enhance operational effectiveness at all levels, while preserving assets and safeguarding health and welfare, 2) integrate ORM into operational processes, ensuring decisions are based upon assessments of risk integral to the activity and operation, 3) create a culture in which every leader, employee, volunteer, student intern, and NOAA affiliate is trained and motivated to manage risk in all their on and off-duty activities, and 4) identify opportunities to increase NOAA's operational capabilities at the least possible risk and cost.
- B. The four guiding principles of ORM are: 1) accept no unnecessary risk, 2) make risk decisions at the appropriate level, 3) accept risk only when benefits outweigh the costs, and 4) integrate ORM into operations and planning at all levels. To support these principles, NOAA will apply ORM during all aspects of preparation (planning, organizing, training, equipping, and sustaining) and execution of NOAA operations.
- C. The ORM process shall be documented on the NOAA Form 64-2977, RM Worksheet located in Appendix B or on a similar worksheet that provides for measurement of risk.
- D. The ORM process is composed of the following five steps:
- (1) Identify hazards.

- (2) Assess risk.
 - (3) Analyze risk control measures and make risk decisions.
 - (4) Implement risk controls.
 - (5) Supervise and review.
- E. Application of ORM principles should be consistent with NOAA’s Hierarchy of Controls as outlined in Section 5.1.2 below. An elevated risk should only be accepted when the implementation of controls based on this hierarchy cannot reduce risk to an acceptable low risk situation and the benefit of execution outweighs the potential cost of the risk.
- F. NOAA shall integrate ORM principles, techniques, and tools into doctrine, policy, planning, education, and training to induce application by personnel at all levels and in all functional areas.
- G. LO/SO and field program offices will integrate the ORM process, principles, and techniques into curricula for all education and training programs to the extent that it is possible. ORM integration into curriculum will be tailored to meet the unique operations of the program in consideration of the goals outlined in this Manual.
- H. Supervisors at all Levels will:
- (1) Tailor ORM application and techniques to accommodate the unique needs of their organization.
 - (2) Develop and maintain ORM implementation and sustainment plans for their organization that direct the integration of ORM into all operational decision-making processes.
- I. All NOAA personnel will apply ORM principles, concepts, and techniques to assess the risks associated with their daily operations and duty-related activities.

5.1.1.3. Risk Acceptance Authority.

RM ensures that no unnecessary risks will be accepted. RM directs resources to be applied against hazards on a priority basis to mitigate risks. When controls and abatements impact the success of an operation, the importance of the operation may dictate the need to accept risks. The level of leadership authorized to accept a risk (risk acceptance authority) is determined by the level of risk associated with the task or operation and the duration of risk.

- A. The level of risk is derived from the likelihood and consequence of loss linked to hazards. NOAA will classify level of risk associated with the task or operation based on guidance outlined in Appendix A.
- B. The length of time the operation, personnel, equipment, property, or environment will be exposed to significant risk is defined as the duration of risk. When determining the duration of risk for Table 5-1, consideration must be given to whether the operation is recurring or nonrecurring.
 - (1) **Recurring operations:** Recurring operations are those operations which are anticipated to occur again in the near future, such as flight operations, routine dive operations, and so on. For recurring operations, the duration should be based on the anticipated total period to accomplish all recurring operations. For example, if the operation will be conducted for one week every month for three years, then the duration used would be three years, not one week or one month.
 - (2) **Nonrecurring operations:** Nonrecurring operations are operations that are not anticipated to occur again in the near future. Normally, these types of operations occur during contingency or unique operational situations.

- C. Risk decisions must be made at the appropriate level of authority. Risk decisions should be made at the lowest level capable of designating resources to address the risk and accept the possible consequences related to the level of risk associated with a hazard. The greater the risk, the higher that decision must be elevated. Table 5-1 below defines the risk acceptance authority based on level of risk and duration of risk.
- D. RM is a continual process. If the risk associated with a task or operation increases while it is being executed, then the appropriate risk acceptance authority should be notified before proceeding any further with the task or operation.
- E. Under certain conditions, the risk acceptance authority may delegate their risk acceptance responsibilities to a lower level of authority. The risk acceptance authority may only be delegated down one level as outlined in Table 5-1 below. Before the risk acceptance authority can be delegated to lower levels, tasks or operations must have clearly defined procedures, a completed JHA, clear guidelines, and prior approved controls in place. When making the decision to delegate, follow these four basic guidelines:
- (1) Don't push decision-making down any faster than the learning level will accommodate.
 - (2) Get decisions to the right level and create a trail of accountability.
 - (3) Assure like decisions are made at like levels.
 - (4) Assure the decisions are made in a timely fashion and provide flexibility as required by NOAA operation/operations.

Table 5-1 Risk Acceptance Authority

Levels of risk	Duration of risk				
	24-hours or less	1 month or less	1 year or less	More than 1 year, less than 5 years	Permanent or greater than 5 years
High risk	Flag Officers/SES Leaders ¹	DAAs ¹	AAs ¹ /DAAs	AAs	DUSO
Serious risk	Program Directors/DROs	Program Directors/DROs	DAAs ¹	AAs	AAs
Medium risk	Supervisors	Supervisors	Supervisors	Program Directors ¹ /DROs	Program Directors ¹ /DROs
Low risk	Supervisors	Supervisors	Supervisors	Supervisors	Supervisors

¹ May delegate in writing to accept at the next lower level in accordance with paragraph E above.

5.1.2. Hierarchy of Controls.

A hierarchy of controls is used to select ways of dealing with workplace hazards. The hierarchy of controls prioritizes intervention strategies and controls based on the premise that the best way to control a hazard is to systematically remove it from the workplace, rather than relying on workers to reduce their exposure. Organizations at all levels shall establish a process for achieving feasible risk reduction based upon the hierarchy of controls listed below.

- A. Elimination of hazard.

- B. Substitution of less hazardous materials, processes, operations, or equipment.
- C. Engineering controls.
- D. Warnings.
- E. Administrative controls.
- F. Personal protective equipment.

5.1.3. Design Review and Management of Change.

Ineffective Management of Change (MOC) is one of the leading causes of serious accidents. The objective of a MOC process is to minimize the introduction of new hazards and risks into the work environment when changes are made in technology, equipment, facilities, work practices and procedures, design specifications, raw materials, organizational staffing changes, and standards or regulations. Applying the change analysis concept is essential within the MOC process:

- A. Management of change process follows a PDCA model of continual improvement. The key factor is to identify the level of change, thus triggering the MOC process. When changes are overlooked, additional hazards and risks may be introduced into the workplace. To address this concern, the management of change process shall be tied into the following:
 - (1) The management of change process shall be integrated with planning tools outlined in Section 4.0 above. In particular, LO/SO and field/program offices shall incorporate MOC processes into the development and execution of strategic objectives and action plans.
 - (2) Abatement of hazards and findings often involves changes in procedures, personnel, training, and equipment. As such, LO/SO and field/program offices shall incorporate MOC processes into their abatement activities. MOC processes shall be integrated into the Hazard/Deficiency Tracking Log tool outlined in Section 6.5 below.
 - (3) As with all PDCA activities, MOC processes require management review. LO/SO and field/program offices shall ensure MOC processes are integrated into management review processes outlined in Section 7.0 below.
- B. LO/SO and field/program offices shall establish a process to manage changes to operational procedures, processes, and guidelines, whether the changes are temporary or permanent, to ensure they do not cause a deterioration in OSH performance. The list below indicates activities which should be considered when determining when to initiate a MOC process:
 - (1) Resolution of incident and non-conformance findings and trends.
 - (2) Non-routine and unusual work that will change a process or equipment (other than replacement in kind).
 - (3) A change in high-risk exposures such as sources of high-energy or highly-toxic materials.
 - (4) Substantial equipment replacement.
 - (5) New or modified technology is introduced, including software.
 - (6) Modifications are made in equipment, facilities, or processes.
 - (7) New or revised work practices or procedures are introduced.
 - (8) Design specifications or standards are changed.
 - (9) Different raw materials are to be used.

- (10) Modifications to existing health and safety devices and equipment will be made.
- (11) Significant changes to the site's organization.
- (12) Staffing changes will be made, requiring a review of skill levels.
- (13) A change in the use of contractors (e.g. introducing contract labor) who service vital processes or equipment is made.
- (14) Significant changes in existing resource allocation.

5.1.4. Procurement and Contracting.

Procurement processes vary depending on the size and complexity of operational need. OSH issues can arise when persons without safety or process knowledge are tasked with purchasing decisions. This section establishes specific design review and management of change controls related to how new procurements are conducted in NOAA to prevent the introduction of hazards associated with purchasing new products, tools, services, and equipment. This control process should include normal purchasing channels as well as other sources, such as samples brought in by vendors. LO/SO and field/program offices shall take the following steps to ensure OSH issues are addressed in the procurement process:

- A. Identify hazards associated with the proposed purchase.
 - (1) Review Safety Data Sheets (SDS) for hazards and compatibility with existing materials, products, and processes.
 - (2) Evaluate the physical/mechanical compatibility of the proposed purchase(s) with existing materials, equipment, and processes.
- B. As standard practice in NOAA, design review and management of change procedures described in Section 5.1.3 above, shall be conducted prior to procurement activities.
- C. Ensure review by knowledgeable person before purchase is initiated. Consider the hierarchy of controls.
 - (1) Solicit employee input.
 - (2) Review should include but not be limited to the evaluation of health, safety, environmental, waste disposal, and human factors.
- D. Analyze the capabilities and limitations of the employees who will be using the proposed goods and services.
- E. Develop purchase specifications to communicate the organizations OSH requirements to suppliers and users.
- F. Incorporate cost effectiveness considerations which may include value of warranties, costs of maintenance and operation, employee training, and end-of-life/disposal costs.
- G. Include OSH background check of the vendor or supplier in previous interactions.
- H. Gather input from the employees using the new product, tool, or equipment.
- I. Review any incidents associated with the new purchase.
 - (1) Near misses.
 - (2) Unintended consequences.

- J. Evaluate how well the proposed goods and services contribute to the overall goals of the organization.
- K. Compute financial consideration which may include return on investment, cost benefit analysis, and/or other methods.

5.1.4.1. Commercial Off-The-Shelf Purchases.

Commercial off-the-shelf purchases can provide a convenient and economical means of purchasing supplies and equipment. In many cases, these purchases adequately meet NOAA's operational needs and pose no additional risks. However, in some cases, commercial off-the-shelf purchases can pose potential problems concerning operational support and maintenance. Often, these problems result from the fact that the item may have been built to generic commercial standards. Many of NOAA's operational environments may include conditions that are harsher and more specialized than the generic standard calls for. As a result, the product may introduce hazards into the workplace. The purchaser must compare the intended commercial application of the product with NOAA workplace and environmental requirements to ensure the product is adequate for use in NOAA. Prior to purchasing products or services, consider the following:

- A. Has the system been designed and built to meet applicable safety standards?
- B. Have hazard analyses been performed?
- C. What is the accident history of the system?
- D. Is protective equipment or special procedures needed during the operation, maintenance, storage, or transport of the system?
- E. Is the system designed to operate in the operational environments where NOAA intends to use them?
- F. Does the system contain or use any hazardous materials? Is an SDS available in English? Note: Products that include the use of hazardous materials shall be reviewed and approved prior to purchase by proper management authority within each organization. At minimum the local safety office or LO/SO safety office shall be contacted for consultation.
- G. Are special licenses or certificates required to own, store or use the system?
- H. Do electrical devices comply with the requirements of OSHA 29 CFR 1910, Subpart S? Note: Nationally Recognized Testing Laboratories (NRTLs) use certain marks to certify products for purposes of OSHA product-approval requirements. However, the presence of the mark on a product does not necessarily mean that it meets OSHA requirements, since NRTLs sometimes use these same or similar marks for non-OSHA purposes. OSHA accepts only those products that contain the NRTL's mark and that the NRTL has certified within its scope of recognition, which includes the test standards and testing sites that OSHA has recognized for the NRTL. See the [OSHA NRTL web page](#) for information on each NRTL's scope of recognition, or contact OSHA or the NRTL for additional information.
- I. If onsite electrical modifications are required, will the modifications meet NFPA 70E specifications?
- J. Does office furniture and equipment comply with ergonomic specifications found in ANSI HFES 100-2007 Human Factors Engineering of Office Workstations for all office furniture purchases?

5.1.4.2. OSH Concerns for Contractors and Contracting.

OSH must be a critical consideration in the pre-solicitation phase of each contract awarded to determine OSH requirements. The capability of a contractor to define and achieve system safety requirements will be evaluated during the source selection process when required by the solicitation package.

5.1.4.2.1. *Types of Contractual Purchases.*

Contracts and contractual purchases may be broken down into two general categories:

- A. Equipment purchases: Equipment purchases include purchasing of custom and off-the-shelf equipment, materials, consumables, and other merchandise utilized in NOAA operations.
- B. Contracted services: Contracted services utilized in NOAA include:
 - (1) Direct Support Contracts: Direct support contracts provide personnel that supplement our government employee workforce. NOAA refers to this type of personnel as NOAA affiliates.
 - (2) Marine and Aviation Charter Contracts: Marine vessel and aircraft charter contracts are used to supplement the marine and aviation fleets owned and operated by NOAA.
 - (3) Diving Contracts: NOAA contracts for various levels of diving requirements. Some of the diving contracts utilize divers that are NOAA affiliates working completely within the boundaries of the NOAA dive program. Other diving contracts are more service-oriented, looking for a deliverable product. These diving contracts sometimes operate independent of the NOAA diving program.
 - (4) Support Services Contracts: Support services contracts provide a service such as building maintenance, janitorial services, etc. Support services contractors work independently of NOAA policies and procedures.
 - (5) New Construction and Lease Renewal Contracts: Through PPMD and RPMD, OCAO provides contracted services for new construction and lease renewal on existing facilities for all of NOAA.

5.1.4.2.2. *General Solicitation and Contracting Requirements.*

All NOAA-funded contracts shall comply with federal, state, and local OSHA and applicable US Coast Guard regulations at all times. Contract safety and health requirements shall be added to all solicitations and contracts to protect the contractor from harmful work activities or processes and prevent contractor activities from presenting a hazard to the public, NOAA personnel, property, or NOAA operation.

- A. Provisions and clauses: Provisions and clauses prescribed elsewhere in the FAR (e.g. FAR 52.223.3) will be used in relevant solicitations and contracts when the conditions specified in the prescriptions for the provisions and clauses are applicable.
- B. On contracts for construction or dismantling, demolition, or removal of improvements, the contract solicitation shall:
 - (1) Include FAR Clause 52.236–13, Accident Prevention in solicitations and contracts when a contract for services to be performed at Government facilities (see 48 CFR 36.513) is contemplated.
 - (2) Include requirements for the contractor to comply with all pertinent provisions of the latest version of EM 385-1-1, U.S. Army Corps of Engineers Safety and Health Requirements Manual in effect on the date of the solicitation.

- (3) Include requirement to comply with all applicable building standards (such as IBC, UBC, ASTM, etc.) that were in effect on the day of the solicitation.
- C. The COR/COTR, with support from LO/SO and/or field/program office safety personnel, shall meet with contractors prior to the start of contract work to discuss and develop a mutual understanding about the administration of safety and health as it relates to the contract.
 - D. For direct support contracts and construction contracts, the solicitation shall include the following requirements:
 - (1) Offerors shall be required to submit their 3-year TCIR and DART rates as part of their proposal. The TCIR and DART rates will be considered during the contractor selection process.
 - (2) Offerors shall be required to submit documentation on safety and health performance on similar contracts for the past five years.
 - (3) Offerors shall be required to submit a site-specific Safety and Health Plan for their workforce at the worksite. Contractor safety and health plans must be reviewed and approved by the Contracting Officer Representative/Contracting Technical Representative (COR/COTR), with input from LO/SO and field/program office safety personnel. Site specific safety and health plans shall be submitted to the COR/COTR no later than 30 days prior to commencing work on the contract.

5.1.4.2.3. **Contractor Responsibilities.**

The following responsibilities shall be included in the contract:

- A. All contractors and their subcontractors are responsible for complying with applicable OSHA standards, as well as state and local OSH requirements. The contractor is directly responsible for the health and safety of the contractor's employees, as determined by federal, state, or local OSHA requirements. Additionally, direct support contractors are also responsible for complying with all DOC and NOAA safety and health policies, procedures, and guidelines.
- B. A system to report unsafe or hazardous conditions caused by elements outside of their control (e.g., public or NOAA personnel, adjacent process or work activity, etc.) to the contracting officer or authorized representative.
- C. A system to report all accidents, injuries, and illnesses occurring on the project to the COR/COTR and the requirement to provide a copy of the contractor accident report in accordance with the contract's accident-reporting procedures. Note: Upon notification, the COR/COTR shall contact the LO/SO or field/program safety manager and report the incident.
- D. It is the contractor's responsibility to provide for OSHA-mandated training and currency requirements and documentation of training as defined in the SOW/contract. Unless otherwise specifically defined in the contract, contractors will be responsible for initial and periodic training of their employees as required by 29 CFR 1910. As a matter of practice, NOAA shall provide only NOAA-specific and site-specific safety and health training for operations unique to NOAA or the worksite. Examples of NOAA-specific and site-specific safety and health training include but are not limited to NOAA dive training and NOAA IT security training. The direct support contractor shall provide safety and health training records upon request by the COR/COTR.
- E. Subcontracting: Contractors shall insert the complete FAR clause and any additional contract requirements as applicable with appropriate changes in the designation of the parties in all subcontracts.

5.1.4.2.4. *Evaluation of Offeror Safety and Health Capabilities.*

Each offeror shall be evaluated during the selection process to ensure compliance with the solicitation safety requirements. The COR/COTR and the selecting officials are responsible, with input from the LO/SO or program/field office OSH personnel, for evaluating and assuring contract compliance with the OSH requirements outlined in the SOW/contract. The COR/COTR and selecting officials shall evaluate offeror safety and health provisions based on the following:

- A. Safety performance as demonstrated during previous contracts may be used, at the discretion of the selecting officials, in the evaluation and selection of a contractor in direct support contracts and contracts to build, design, construct, develop, field or operate a system, building, or facility.
- B. The contractor site-specific safety and health plans shall be reviewed and approved by the COR/COTR, with input from LO/SO and field/program office safety personnel, for each site where the contractor conducts work.

5.1.4.2.5. *COR/COTR Requirements.*

To ensure minimal performance standards in safety on all NOAA contracts:

- A. LO/SO and field/program safety offices, with assistance from SECO, shall provide training for COR/COTRs and other contracting personnel on the following specific safety requirements and considerations associated with NOAA contracts:
 - (1) The contractor's obligation for training of their personnel, and exceptions that allow the use of appropriated funds for contractor training.
 - (2) Site-specific safety considerations.
 - (3) NOAA operation-specific safety considerations.
 - (4) Review and evaluation of contractor safety submission materials as outlined in Section 5.1.4.2.2 above.
- B. COR/COTR should attend an OSHA 10-hour industry outreach course or similar course of instruction within 180 days of assuming duties as a COR/COTR. SECO and/or LO/SO and field program safety offices can provide online resources for this training.

5.1.4.3. **Contracting Support for NOAA Marine Operations.**

In addition to conducting marine support operations by NOAA personnel on NOAA-owned and operated marine vessels, NOAA also contracts marine vessels for support of its operations. NOAA also contracts private sector diving organizations to support its underwater operations. Marine contracting activities shall comply with the following:

- A. Diving service and support contracts shall comply with [OMAO Policy 0307, Diving Services Contract Language](#).
- B. Marine charter service contracts shall be reviewed by the OMAO Director SECD prior to solicitation. The OMAO Director SECD shall identify OSH deficiencies and return to requesting office for action.
- C. The OMAO Director, SECD shall:
 - (1) Provide technical guidance and assistance to those NOAA programs contracting charter vessel services when requested by program officials or NOAA Contracting Officers.

- (2) Assist line office programs (utilizing the NOAA Small Boats Program Office) in preparing procurement packages, evaluating proposals, and arranging for necessary examinations and inspections as requested.

5.1.5. Emergency Preparedness and Emergency Management.

This section prescribes NOAA safety policy for planning emergency response to save lives and protect the health and safety of NOAA personnel, the public, responders, and recovery workers.

- A. ORM will be applied to all emergency response scenarios to identify the required equipment and response procedures to increase efficiency and effectiveness.
- B. The requirements of 29 CFR 1910.38, Emergency Action Plans and 29 CFR 1910.39, Fire Prevention Plans, will be complied with and incorporated into local plans.

5.1.5.1. Facility Occupant Emergency Response Plan.

Senior Site Managers responsible for managing NOAA sites/campuses shall develop written Occupant Emergency Plans (OEP) and Emergency Response Plans (ERP) covering situations requiring evacuations, sheltering in place, or an emergency response for each site/campus. Specifically, the OEP/ERP shall:

- A. Provide guidance addressing fires, spills, and natural disasters. Areas identified as at-risk to hurricanes, flooding, earthquakes, tsunamis, and other natural disasters shall specifically address responses to these events.
- B. Provide guidance defining situations when facility evacuations are required and when sheltering in place is required (e.g. response to medical emergencies, bomb threats, demonstrations and civil disorder, workplace violence, hostage situations, etc.).
- C. Procedures for the orderly and safe evacuation of the facility.
- D. Procedures for sheltering in place.
- E. Specify duties, responsibilities, and immediate actions for personnel involved in evacuation procedures, search and rescue operations, clean-up operations, first-aid support, and equipment recovery.

5.1.5.2. Response to Natural and Man-made Disasters.

Upon notification, NOAA's Homeland Security Program Office (HSPO) shall respond to natural and man-made disasters. HSPO is responsible for strengthening NOAA's ability to prepare for, respond to, and recover from terrorist attacks, major natural and man-made disasters, disruption of NOAA's essential functions, and other emergencies. In catastrophic events that impact NOAA operations, HSPO activates and oversees the Continuity of Operations (COOP) plan. In some instances, SECO and LO/SO and field/program OSH personnel may be tasked to provide support for disaster response. The following outlines general guidelines for providing OSH support to COOP and disaster response operations. Specific response requirements are outlined in [NAO 210-100: All Hazards Incident Management](#) and [NAO 210-100 Handbook](#).

- A. The level of OSH support provided for disaster response is determined by the scope of NOAA deployment to the response site.

- (1) Catastrophic Oil Spills: The National Ocean Service, Office of Response and Restoration (ORR) is prepared to participate in responses to catastrophic spills. Most responses are supported within the scope of ORR resources. For operations requiring support from NOAA

offices outside ORR, SECO shall coordinate for OSH support at the NOAA Emergency Operations Center and for additional OSH support at the response locations.

(2) Other Disaster Responses.

- (a) When a single LO/SO or field/program office is involved in a disaster response, the LO/SO and/or field/program safety office shall provide OSH support for the response package. The scope and complexity of the disaster response shall determine if OSH support is provided from home base locations or if OSH personnel are deployed to provide support directly at the response site.
 - (b) When multiple LOs/SOs or multiple field/program offices from different LOs/SOs are involved in a disaster response, the following support shall be provided:
 - (i) SECO shall provide OSH support to the NOAA Emergency Operations Center.
 - (ii) SECO shall provide OSH support to the field Incident Command Center.
 - (iii) LO/SO and/or field/program offices shall provide OSH support for their specific operations. The scope and complexity of the disaster response shall determine if LO/SO and/or field program office OSH support is provided from home base locations or if OSH personnel are deployed to provide support directly at the response site.
- B. SECO shall provide OSH support at COOP alternate operating sites as required to support a continuity of operations.
- C. HSPO shall, with support from SECO, develop OSH plans and annexes in support of specific disaster scenarios.

5.2. Education, Training, Awareness, and Competence.

5.2.1. Safety Education and Training.

The NOAA goal is to have a well-trained cadre of safety professionals providing leadership in safety and to maintain an employee workforce knowledgeable in the practical application of safety. This section establishes the safety training requirements for NOAA.

5.2.1.1. Safety Training Roles and Responsibilities.

A. SECO shall:

- (1) Publish annual safety training guidance no later than June of each year for the following fiscal year. Training guidance will focus on new regulatory requirements, emerging issues, addressing NOAA accident and hazard trends, and general safety refresher training requirements. SECO will include a sample list of sources that may be used to meet the annual safety training requirements.
 - (2) Develop and field a comprehensive safety training matrix. The training matrix shall be integrated with the Commerce Learning System when qualifying courses are available.
- B. LO/SO and field/program offices: Each LO/SO and field/program office shall provide appropriate job-specific OSH training for employees. For example, welding, crane operations, forklift operations, chemical analysis, and computer/administrative operations. Such training shall also inform employees of the agency's OSH program/OSHMS, with emphasis on the employees' rights and responsibilities. Matrices that identify required/recommended safety training for employees,

supervisors, employees working in specific environments, maintenance and facility employees, and for emergency preparedness and response personnel shall be posted to the [NOAA ESS \(SECO\) Intranet Site](#). In addition to identifying the training required, the matrices also identify the required frequency of training.

C. NOAA OSH Training Workgroups: NOAA OSH Training Workgroups are established by SECO and the ESS Committee to develop common OSH training requirements. Each NOAA OSH Training Workgroup shall:

- (1) Develop specific standardized OSH training programs based on requirements identified by SECO and the ESS Committee.
- (2) Meet at least quarterly (or more often as needed) to address NOAA safety training needs.
- (3) Coordinate with SECO for funding and fielding of training program resources.
- (4) Develop training program fielding and implementation strategies.
- (5) Coordinate with SECO and the Chief, NOSH to present courses of action and funding requests to the NEOSHC.

D. Managers and Supervisors.

- (1) Managers/supervisors will conduct a safety briefing for all newly assigned personnel within 60 days of arriving at a new work location. Material covered will include the individual's safety rights and responsibilities and information on the hazards associated with his/her assignment, seasonal training for the upcoming season, Hazard Communications, and all annual training requirements for the assigned position.
- (2) Specialized task and risk-specific safety training of employees will be conducted on the job by supervisors, safety managers, or through formalized training mechanisms. This training will include, but not be limited to, precautions to prevent injuries from hazardous machinery, equipment, dangerous chemicals, hazardous operations, and the use and management of required PPE.

NOAA organizations at all levels shall conduct a Training Needs Assessment to identify and evaluate the OSH training needs of the organization. The purpose of a training needs assessment is to identify performance requirements and the knowledge, skills, and abilities needed by the workforce to safely achieve the operational requirements. An effective training needs assessment will help direct resources to areas of greatest demand. The following requirements apply to the training needs assessment:

A. LOs/SOs and field/program offices shall conduct and document training needs assessments at least every two years. The training needs assessment shall identify:

- (1) The skills required to perform the work activity.
- (2) The agency requirements for OSH training.
- (3) The existing skill level of the staff performing the work, and whether there is a training gap between the employee's skill level and the skills needed to perform their work.

B. LOs/SOs and field/program offices shall identify generic and risk-specific OSH competencies based on the following mechanisms:

- (1) Legislative requirements.
- (2) Review of employees injury/illness performance.
- (3) Consultation with managers, supervisors, and/or employee representatives.

- (4) As a result of the management review process outlined in Section 7 below.

5.2.1.2. Managing and Scheduling Training.

All NOAA personnel will be provided the training and education necessary to meet the safety requirements as outlined in 29 CFR 1960, 29 CFR 1910, Department of Commerce Safety and Health Training Guidelines, this NOAA Manual, and other applicable NOAA policies and publications. In addition to the general training guidance outlined in OSHA, DOT, and other agency regulatory guidance, NOAA shall establish the following safety training requirements:

5.2.1.2.1. General Safety Training.

LOs/SOs and field/program safety offices shall provide general safety training to NOAA employees, student interns, and volunteers covering general safety requirements and specific hazards and risks that personnel may encounter. Training for all NOAA-specific (such as RM Training) and site-specific safety concerns (such as occupant emergency plans) must also be provided to direct support contract employees. The following outlines the minimum generic safety training requirements for NOAA personnel:

- A. **RM Training:** Managers and supervisors will ensure that all NOAA employees complete RM Training. Newly assigned personnel must complete the training within 60 days of assignment. Managers will also ensure that all assigned personnel are briefed on their organization's RM procedures.
- B. **New Employee Safety Training:** Managers and supervisors will ensure that all NOAA employees, volunteers, and student interns, complete the new employee safety training. Training shall address generic, NOAA-specific, and site-specific safety requirements for the job the newly assigned employee will perform. NOAA affiliates shall also receive initial and refresher training in NOAA-specific and site-specific safety requirements. Newly assigned employees, volunteers, student interns, (and NOAA affiliates as applicable) must complete the training within 60 days of assignment.
- C. **Employee (Non-Supervisory Personnel) Safety Training:** OSH training for non-supervisory personnel should include specialized job OSH training appropriate to the work performed by the employees. This specialized training should be directed to the individual's work site and should include an examination of relevant NOAA and DOC policy, as well as an analysis of material and equipment hazards associated with the work site. Employee training should be conducted with input and direction from the workplace supervisor and shall include instructions on employee rights and responsibilities under relevant OSH statutes, regulations, and the NOAA OSH program/OSHMS. Arrangements should be made to provide training to all new personnel as close to the time of their appointment as possible. Initial training for new employees should include:
 - (1) Individual responsibility for OSH.
 - (2) Employee reporting procedures for hazardous operations/conditions.
 - (3) Awareness of hazards common to the individual's work site, trade, occupation, or tasks.
 - (4) NOAA's policy on OSH.
- D. **Manager and Supervisor Safety Course:** All supervisors and managers must complete the NOAA Supervisor Safety Course within 12 months of assuming supervisory duties. Training for supervisors and managers shall include introductory and specialized courses and materials which will enable them to recognize unsafe/unhealthy working conditions and practices in the workplace. Newly appointed supervisors are required (under the provisions of [DAO 202-411 Supervisory and Management Development](#)) to receive OSH-related training prior to completion of

their probationary period. Supervisors and managers shall also take the online Supervisor Safety Refresher Course every three years thereafter.

- E. Senior Leader Safety Course: All NOAA senior leaders/executives (Select GS15 and equivalent, SES employees, and above) must complete the NOAA Senior Leader Safety Course within 12 months of assuming their management positions. Senior leaders/executives shall also take the online NOAA Senior Leader Safety Refresher Course every three years thereafter.
- F. Safety Personnel Training: Fulltime OSH manager and collateral duty safety and health personnel provide safety guidance and oversight of OSH within their area(s) of responsibility. They advise their supervisors and managers on safety issues and policy and ensure that OSH policy is implemented within the organization. Due to the variety of functions that each OSH staff member may be required to perform, it is essential that they be knowledgeable in all aspects of OSH, including changes in public law and DOC/NOAA policies on hazards and safe operations. Below is a list of training requirements for these personnel:
 - (1) Fulltime OSH manager: Each full-time OSH manager is responsible for his or her own career planning and professional development. Paramount to success is the establishment of individual career goals, identifying necessary training and development to achieve those goals, then actively seeking out and pursuing the required training and development. Equally important to success as a manager is the continuation of education and training to sustain existing skills. To foster new skills as well as maintaining existing skills, safety management career personnel will meet the following training requirements:
 - (a) Complete 8 Continuing Education Units (CEUs) or equivalent each year in a safety or occupational health related topic to add new safety management skills or maintain and refresh existing skills.
 - (b) In addition, individuals are strongly encouraged to obtain as much education as possible, to include advanced degrees and professional certifications in OSH.
 - (c) Training and education shall be provided in accordance with professional development plans and the needs of the organization to support an effective OSH program/OSHMS.
 - (2) CDSHP: NOAA program offices and field offices that do not have an assigned safety professional shall assign a CDSHP for the office. The CDSHP will meet the following training requirements:
 - (a) Within six months after appointment, the individual must complete the required online prerequisite training courses. The list of required prerequisites are available at the [NOAA ESS \(SECO\) Intranet Site](#).
 - (b) Within 12 months after appointment, the individual must complete the NOAA instructor-led CDSHP Course. SECO will coordinate the training of this course in each region or activity as required.
- G. Employee Representative Safety Training: OSH training for representatives of employee groups, such as labor organizations which are recognized by the agency, will include both introductory and specialized courses and materials. This will enable such groups to function appropriately, ensuring safe and healthful working conditions and practices in the workplace and to effectively assist in conducting workplace OSH inspections.

5.2.1.2.2. *Risk-Specific Safety Training.*

LOs/SOs and field/program offices shall provide risk-specific safety training to NOAA employees, student interns, and volunteers specific to the hazards and risks the personnel may encounter. Training for all NOAA-specific and site-specific safety concerns (such as spill plans, SDS, and local HAZCOM programs) must also be provided to direct support contract employees. The following outlines the minimum risk-specific safety training requirements for NOAA personnel based on the specific hazards and risks to which they are exposed:

- A. Hazard Communication (HAZCOM)/GHS Training: HAZCOM/GHS Right-to-Know training will be completed for all NOAA employees within 60 days of arrival at their organization. Training records shall be maintained in accordance with section 5.2.1C.
- B. Seasonal Safety Training: Prevention of hot and cold weather injuries depends largely on the education of personnel exposed and especially upon the actions undertaken by responsible supervisors and managers. Prior to the onset of extreme weather, every NOAA employee that may be exposed will receive training on the potentially serious results of hot or cold weather injuries, the general nature of these conditions, and how they can be prevented. Training will be conducted in accordance with the following guidelines:
 - (1) Cold weather injury prevention training will be completed no later than October 15 of each year. Personnel arriving after this training has been conducted, but before March, will be given a briefing as part of the safety in-briefing/orientation.
 - (2) Hot weather injury prevention training will be completed no later than April 15 of each year. Personnel arriving after this training has been conducted, but before September, will be given a briefing as part of the safety in-briefing/orientation.
- C. Radiation Safety Training: Users of ionizing radiation sources shall receive specialized safety training as required by the Nuclear Regulatory Commission (NRC). The following defines specific training requirements based on employees' use and management of radioactive sources:
 - (1) Radiation Safety Officer Training: Radiation Safety Officers shall complete a 40-hour course of instruction in the safe handling of radioactive materials and in the characteristics of ionizing radiation, units of radiation dose and quantities, radiation detection instrumentation, and biological hazards of exposure to radiation specific to the byproduct material to be used. The course shall be repeated every three years to ensure currency with NRC and OSHA requirements.
 - (2) Users/Authorized Users: Authorized users shall receive initial radiation safety training prior to working with radioactive sources and annual refresher training thereafter. Training should cover program management requirements outlined in the NRC license, emergency and spill procedures, and basic radiation safety practices. Training may consist of instructor-led or on-the-job training.
 - (3) Incidental Workers: Incidental workers are NOAA employees and NOAA affiliates that do not regularly use radioactive commodities but may come into proximity with radioactive sources incidentally as a result of their routine work. These employees should be given safety orientation/safety awareness training on safety precautions for the radioactive sources annually. Training may be included as part of their general safety awareness training.

5.2.1.2.3. *Task-Specific Safety Training.*

LOs/SOs and field/program safety offices shall provide task-specific safety training to NOAA employees, student interns, and volunteers specific to the hazards and risks associated with the tasks

being performed. Training for all NOAA-specific and site-specific safety concerns must also be provided to direct support contract employees. The following outlines the minimum generic safety training requirements for NOAA personnel based on the tasks being performed:

- A. Driver Training: At a minimum, all government vehicle drivers must complete the following requirements prior to being authorized in the use of government vehicles:
 - (1) Complete online GSA Defensive Driver Training Course or equivalent at <http://www.gsa.gov/portal/content/102674>. Refresher training of the online course is required for all GOV operators every three years thereafter and for any vehicle operator involved in a motor vehicle accident.
 - (2) All newly assigned government vehicle operators shall receive orientation on local driving conditions, laws, and policies. Training may consist of live instruction, online training, or a video presentation. Organizations should contact their in-state department of licensing office for training materials.
 - (3) All operators of Law Enforcement vehicles will receive emergency vehicle operator training. Law enforcement offices and activities are responsible for providing this training as part of their motor vehicle driver training requirements.

- B. Hazardous Material Shipping/Transportation Training: All employees transporting and shipping hazardous materials shall complete hazardous material shipping and transportation training in accordance with regulations outlined in the Department of Transportation and Federal Aviation Administration regulations as applicable. Initial and refresher training for shippers and transporters must include, at a minimum:
 - (1) General hazardous material awareness/familiarization training.
 - (2) Shipping and transport-specific training.
 - (3) General safety training.
 - (4) Security awareness training.
 - (5) In-depth security training.
 - (6) Testing.

- C. Material Handling Equipment/Powered Industrial Truck Training: OSHA regulations require that only trained and competent operators be permitted to operate a powered industrial truck. All powered industrial truck operators must be trained and certified by their organizations in accordance with the requirements outlined in [29 CFR 1910.178](#). Material Handling Equipment/Powered Industrial Truck Training programs shall provide for the following:
 - (1) Truck-related Topics (§ 1910.178(l)(3)(i)).
 - (a) Operating instructions, warnings, and precautions for the types of truck the operator will be authorized to operate.
 - (b) Differences between the truck and the automobile.
 - (c) Truck controls and instrumentation: where they are located, what they do, and how they work.
 - (d) Engine or motor operation.
 - (e) Steering and maneuvering.

- (f) Visibility (including restrictions due to loading).
 - (g) Fork and attachment adaptation, operation, and use limitations.
 - (h) Vehicle capacity.
 - (i) Vehicle stability.
 - (j) Any vehicle inspection and maintenance that the operator will be required to perform.
 - (k) Refueling and/or charging and recharging of batteries.
 - (l) Operating limitations.
- (2) Workplace-related Topics (§1910.178(l)(3)(ii)).
- (a) Surface conditions where the vehicle will be operated.
 - (b) Composition of loads to be carried and load stability.
 - (c) Load manipulation, stacking, and unstacking.
 - (d) Pedestrian traffic in areas where the vehicle will be operated.
 - (e) Narrow aisles and other restricted places where the vehicle will be operated.
 - (f) Hazardous (classified) locations where the vehicle will be operated.
 - (g) Ramps and other sloped surfaces that could affect the vehicle's stability.
 - (h) Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust.
 - (i) Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation.
- (3) Trainees may operate a powered industrial truck only.
- (a) Under the direct supervision of persons who have the knowledge, training, and experience to train operators and evaluate their competence.
 - (b) Where such operation does not endanger the trainee or other employees.
- D. ATVs, OSVs, and Snowmobile Training: Operators of government-owned or leased ATVs, OSVs, and snowmobiles (including private vehicles on official business) shall receive specialized training by a nationally recognized, specialized vehicle training provider (such as those provided by the [Specialized Vehicles Institute of America](#)) in the safe operations of the specialized vehicle. Training shall, at a minimum, include the following:
- (1) Proper operation and use of the specific type of ATV, OSV, or snowmobile.
 - (2) Use of DOT-compliant helmet, goggles, long sleeves, long pants, over-the-ankle boots, and gloves.
 - (3) Operation of specialized vehicles on improved roads.
 - (4) Carrying of passengers and cargo.

5.2.1.3. Sources of Training.

All safety training at NOAA shall be provided through one or more of the sources of training listed below. Unless otherwise directed by this manual as part of the standardized program of instruction

package, LOs/SOs and field/program offices shall select the most appropriate source of training based on their specific training needs.

- A. Instructor-Led Training.
- B. Blended Learning (a combination of instructor-led training, online computer-based training, and/or webinars).
- C. Webinars.
- D. Online Computer-Based Training (Through the Commerce Learning Center or similar online training system).
- E. On-the-Job Training.

5.2.1.4. Assessment of Competency.

An assessment of competency should be conducted to ensure that an employee has successfully attained the necessary skill or knowledge upon completion of training.

- A. There are numerous methods available to administer an assessment of competency, and the method to determine competency will vary depending on the type of training delivered. For example, the assessment of competency may take the form of a written test, verbal test, or demonstration. LOs/SOs and field/program offices should choose the appropriate assessment method according to the nature of the competency. Agencies must document all competency assessments.
- B. Any person whom the LO/SO and field/program office deems to have sufficient experience in the task being conducted is able to assess the competency of others. The LO/SO and field/program office should determine an assessor's competency based on education, training, and experience. An assessor must demonstrate competency through the application of their specific knowledge and skills.
- C. Training, Licensing, and Qualification: Managers and supervisors will ensure and make a documented record of review attesting that each employee has sufficient documented training, licensing, qualification, certification, and/or experience prior to assigning said employee to a particular job or activity. Only properly trained and licensed personnel are authorized to operate machinery, motor vehicles, watercraft, and material-handling equipment. Qualified employees shall maintain licenses, certifications, and other documented qualification requirements. Renewals of licenses, certifications, and other documented qualification requirements shall be completed no later than 30 days prior to expiration.

5.2.1.5. Safety Training Record Keeping.

Records for all safety training shall be maintained for each individual employee using the following guidelines:

- A. Agencies shall maintain training records as evidence of training delivery and assessment of competency. Each agency shall establish procedures for collecting and compiling OSH training records, including documentation of competency, for proper evaluation and necessary corrective action. Training records must be maintained for five years or longer as required by regulatory guidance.
- B. Each organization shall maintain records of safety training of NOAA employees in the Commerce Learning System or similar training recordkeeping system. NOAA employee safety training records may be inspected as part of OSHMS audits.
- C. Safety training records for direct support contractors shall be maintained by the contractor and provided upon request to the COR/COTR.

5.2.2. Safety Promotion and Awareness.

Resources to promote safety and health increase awareness of OSH hazards associated with a wide variety of safety topics. The following defines the minimum requirements for the development and distribution of safety promotional and awareness materials in NOAA:

- A. SECO shall develop OSH promotional resources and awareness materials to emphasize specific OSH concerns and raise OSH awareness. Recreational and family safety topics may also be included in these promotional materials.
- B. SECO shall host all OSH promotional and awareness material at <https://secure.seco.noaa.gov>. LOs/SOs and field/program offices are encouraged to provide suggestions and ideas for safety promotional materials to be added to the site.
- C. Safety education and promotional materials such as posters, films, technical publications, pamphlets, incentive items, and related materials are proven cost-effective safety awareness tools and therefore will be budgeted for and used by all offices and activities within NOAA to promote safety.

5.2.3. Safety Awards.

The purpose of this section is to establish safety awards for recognizing organizations and individuals for their contributions and enhancements to the NOAA OSH program/OSHMS:

- A. General: Safety awards enhance NOAA operations and improve safety awareness through recognition and promotion of individual and organizational accident-prevention efforts and successes.
 - (1) Awards will be made to individuals and organizations based on their overall safety achievements. A nomination for an award should be submitted to the appropriate approval authority within two years of the action or period under consideration.
 - (2) Managers/Safety Managers of LOs/SOs will ensure nominations for NOAA safety awards are properly documented and submitted through leadership channels in accordance with this NOAA Manual to noaa.safety@noaa.gov.
 - (3) The Director of SECO will ensure that the Safety and Accident Prevention Awards Program is effectively administered, including record keeping requirements and procurement of NOAA safety and occupational health awards.
 - (4) The Director of SECO will provide separate guidance on procurement, replenishment, and record-keeping requirements for NOAA Impact Safety and Health Awards.
 - (5) Records of awards will be maintained in accordance with [NAO 205-1, NOAA Records Management Program](#). The Chief of NOAA Occupational Safety and Health will maintain records for NOAA level awards outlined in this NOAA Manual.
- B. Promotion of Prevention Awards Program: Managers and supervisors at all levels will promote the prevention awards program using all available means. The NOSH office will develop and distribute educational and marketing information on the NOAA and the NOAA's Safety Awards Program. Safety managers will ensure all members of the organization are aware of this program.

5.2.3.1. NOAA Occupational Safety and Health Awards.

5.2.3.1.1. NOAA *Exceptional Organization Safety Award*.

- A. **Recipients:** NOAA field offices, regions, facilities, LOs/SOs, or equivalent are eligible to receive this award.
- B. **Eligibility requirements:** Organizations for consideration of this award are selected based on the effectiveness of their overall OSH management system and their risk-reduction efforts in the workplace. The performance period for the award is one fiscal year. Demonstrations of merit may be made using both subjective and objective criteria.
- (1) Information required for inclusion in the submission packet is listed below:
 - (a) The organization's operation, location, type, and number of assigned personnel.
 - (b) Accident statistics and experiences for the past three years.
 - (c) Workers' compensation costs for the past three years.
 - (d) NECSAS assessment results for the past three years.
 - (e) Other audit/assessment results (OSHA, EPA, etc.) for the past three years.
 - (f) Organization's major accomplishments in OSH.
 - (2) Examples of criteria that may be used to support the nomination are listed below:
 - (a) Management's support of higher headquarters and NOAA safety campaigns.
 - (b) Methods used to effect or sustain accident reduction (e.g., safety training, new initiatives, etc.).
 - (c) Objectives for the coming year.
 - (d) Injury and illness-reduction processes and systems.
 - (e) Examples of employee involvement (submitted hazard reports (CD 351), employee safety committee involvement, etc.).
 - (f) Strategies, controls, or policies that have contributed to operation's success. Include circumstances, hazards, movements, evidence of success, potential for organization wide applicability, etc.
 - (g) Proactive measures taken to enhance risk-management implementation.
 - (h) Description of total leadership involvement and support of OSH program/OSHMSs.
 - (i) Description of initiatives that are not required but will enhance OSH, such as the purchase of ergonomic equipment or work stations, partnering with the community, or other activities.
- C. **Initiator:** LO/SO or field/program office managers, supervisors, or organization safety managers may be the initiators.
- D. **Nominations:** Prepare a memorandum with supporting documentation as needed through your local management chain through LO/SO AA/DAA to the attention of the Director, SECO, 1305 East-West Highway, OFA541, SSMC4, Room 11109, Silver Spring, MD 20910. The nomination will include narrative text and may provide tables, charts, diagrams, and/or photographs to clarify accomplishments. When printed, the nomination will consist of no more than seven standard-size, single-spaced pages. The nomination will include a concise introduction which describes specific

achievements that merit consideration and a summary explanation of what is being done toward continued accident reduction and details on unique/specific initiatives. Initiator point of contact information will include an e-mail address and telephone number. Approved nominations may be electronically sent to noaa.safety@noaa.gov no later than June 30 of each year.

- E. **Judging:** The Director of SECO or a designated representative will convene a panel to make recommendations for recipients of this award. The panel will consist of at least two safety directors or safety managers from different NOAA LOs/SOs and two SECO safety managers.
- F. **Presentation:** The DUSO will present the award at a venue to be determined.
- G. **Approval authority:** The DUSO is the award approval authority.
- H. **Award composition:** A plaque will be presented in recognition of the accomplishment.

5.2.3.1.2. *NOAA Exceptional Ship Safety Award.*

- A. **Recipients:** Officers and crew of NOAA Class I, Class II, or Class III Ships.
- B. **Eligibility requirements:** NOAA Ships for consideration of this award are selected based on the effectiveness of their overall OSH management system and their risk-reduction efforts in the workplace. The performance period for the award is one fiscal year. Demonstrations of merit may be made using both subjective and objective criteria.
 - (1) Information required for inclusion in the submission packet is list below:
 - (a) The ship's operation, home port, type, and number of assigned personnel.
 - (b) Accident statistics and experiences.
 - (c) Workers' compensation costs.
 - (d) Audit/assessment experience and results.
 - (e) Ship's major accomplishments in OSH.
 - (2) Examples of criteria that may be used to support the nomination are listed below:
 - (a) Ship commander's support of higher headquarters and NOAA safety campaigns.
 - (b) Methods used to effect or sustain accident reduction (e.g., safety training, new initiatives, etc.).
 - (c) Objectives for the coming year.
 - (d) Injury and illness-reduction processes and systems.
 - (e) PPE utilization rates.
 - (f) Examples of employee involvement (submitted hazard reports (CD 351), employee safety committee involvement, etc.).
 - (g) Strategies, controls, or policies that have contributed to operation's success. Include circumstances, hazards, movements, evidence of success, potential for organization wide applicability, etc.
 - (h) Proactive measures taken to enhance risk-management implementation.
 - (i) Description of total leadership involvement and support of OSH program/OSHMSs.

- (j) Description of initiatives that are not required but will enhance OSH, such as the purchase of ergonomic equipment or work stations, and partnering with the community or other activities.
- C. **Initiator:** NOAA ship commanders, officers, supervisor, safety manager, or OMAO/MOC leadership may be the initiators. LO/SO or field/program office leadership that conducts operations on NOAA Ships may also be initiators based on observations of exceptional OSH practices.
- D. **Nominations:** Prepare a memorandum with supporting documentation as needed through your local management chain through LO/SO AA/DAA to the attention of the Director, SECO, 1305 East-West Highway, OFA541, SSMC4, Room 11109, Silver Spring, MD 20910. The nomination will include narrative text and may provide tables, charts, diagrams, and/or photographs to clarify accomplishments. When printed, the nomination will consist of no more than seven standard-size, single-spaced pages. The nomination will include a concise introduction which describes specific achievements that merit consideration and a summary explanation of what is being done toward continued accident reduction and details on unique/specific initiatives. Initiator point of contact information will include an e-mail address and telephone number. Approved nominations may be electronically sent to noaa.safety@noaa.gov no later than June 30 of each year.
- E. **Judging:** The Director of SECO or a designated representative will convene a panel to make recommendations for recipients of this award. The panel will consist of at least one safety director or safety manager from a NOAA LOs/SOs, the OMAO Safety Director, and two SECO safety managers.
- F. **Presentation:** The DUSO will present the award at a venue to be determined.
- G. **Approval authority:** The DUSO is the award approval authority.
- H. **Award composition:** A NOAA Safety Flag will be presented in recognition of the accomplishment. The NOAA Safety Flag should be flown at the homeport of the ship for the fiscal year following the award.

5.2.3.1.3. *NOAA Individual Award for Excellence in Safety.*

- A. **Recipients:** All NOAA employees, volunteers, student interns, and NOAA affiliates are eligible to receive this award.
- B. **Eligibility requirements:** An individual selected at any level of the organization as having made the most significant contribution to the organization's or activity's accident-prevention effort. A plaque may be awarded each fiscal year in any of four categories as follows: NOAA Corps officer, NOAA manager/supervisor, NOAA employee (including volunteers and student interns), and/or NOAA affiliate. LOs/SOs will develop policies and procedures that foster the competitive and progressive nature of this award. The performance period for the award is one fiscal year. Demonstration of merit may be made using both subjective and objective criteria.
 - (1) Information required for inclusion in the submission packet is list below:
 - (a) Discussions on the organization's operation, location, and number and type of assigned personnel as it relates to overall OSH.
 - (b) Individual's major accomplishments in OSH.
 - (2) Examples of criteria that may be used to support the nomination are listed below:
 - (a) Methods used to effect or sustain accident reduction (e.g., safety training, new initiatives, etc.).

- (b) Individual's major accomplishments.
 - (c) Through personal emphasis a supervisor/manager reduces their organization's accident rate by a measurable level.
 - (d) A NOAA employee or NOAA affiliate implements activity-level OSH processes that result in sustained accident reduction and/or increased safety awareness.
 - (e) An individual's achievements relating to safety and methods used to effect or sustain accident reduction.
- C. **Initiator:** LO/SO or field/program office managers, supervisors, or organization safety managers may be the initiators.
- D. **Nominations:** Prepare a memorandum with supporting documentation as needed through your local management chain, through the LO/SO AA/DAA to the attention of the Director, SECO, 1305 East-West Highway, OFA541, SSMC4, Room 11109, Silver Spring, MD 20910. The nomination will include narrative text and may provide tables, charts, diagrams, and/or photographs to clarify accomplishments. When printed, the nomination will consist of no more than seven standard-size, single-spaced pages. The nomination will include a concise introduction which describes specific achievements that merit consideration and a summary explanation of what is being done toward continued mishap reduction and details on unique/specific initiatives. Initiator point of contact information will include an e-mail address and telephone number. Approved nominations may be electronically sent to noaa.safety@noaa.gov no later than June 30 of each year.
- E. **Judging:** The Director of SECO or a designated representative will convene a panel to make recommendations for recipients of this award. The panel will consist of at least two safety directors or safety managers from different NOAA LOs/SOs and two SECO safety managers.
- F. **Presentation:** The DUSO will present the award at a venue to be determined.
- G. **Approval authority:** The DUSO is the award approval authority.
- H. **Award composition:** A plaque will be presented in recognition of the accomplishment.

5.2.3.2. Impact Safety and Health Awards.

Impact safety awards support the safety strategy of NOAA to further operation effectiveness through risk reduction and management. It serves to recognize and reward significant accomplishments in safety and health as they occur. The NOAA Environmental, Safety, and Sustainability Coin provides real-time recognition of OSH accomplishments as they occur.

- A. **Recipients:** All NOAA employees, volunteers, student interns, and NOAA affiliates are eligible to receive this award.
- B. **Eligibility requirements:** An individual selected by any NOAA leader as having made a significant contribution to the organization's or activity's accident-prevention effort. Demonstration of merit may be assessed using both subjective and objective criteria.
- C. **Initiator:** Leaders at all levels or the organization's safety manager may be the initiators.

- D. **Approval authority:** The field/program manager, NOAA ship commander, or their equivalent is the award approval authority.
- E. **Presentation:** Field/program managers, NOAA ship commanders, or their equivalent should present the award at an appropriate venue to increase recognition of the safety and health accomplishment.
- F. **Award composition:** A NOAA Environmental, Safety, and Sustainability Coin will be presented in recognition of the accomplishment.

5.3. Communication.

Communication of information about the OSHMS within NOAA is critical for sustaining a system of continual improvement. To ensure effective communication of the OSHMS, organizations at all levels within NOAA shall establish policies and processes to:

- A. Communicate information about the OSHMS and implementation plan progress within affected levels of the organization and to relevant external parties, including direct support contractors.
- B. Achieve prompt employee reporting of work-related injuries, illnesses, incidents, hazards, and risks.
- C. Encourage employees to make recommendations regarding possible hazard control and reporting procedures.
- D. Consult with direct support contractors and relevant external interested parties when there are any changes that affect the OSHMS.
- E. Identify and remove barriers to all of the above.

5.3.1. Safety Bulletin Boards.

- A. LOs/SOs and field/program offices shall have a safety bulletin board to communicate information related to the OSHMS as described in Section 5.3 above. All information posted to a safety bulletin board shall emphasize accident prevention and or lessons learned, with the following information posted at a minimum:
 - (1) Name of the organization manager and safety manager.
 - (2) Safety Events Calendar (e.g. Yearly Training Calendar).
 - (3) Minutes of safety council/safety board meetings.
 - (4) Manager's safety philosophy/statement (Signed Memorandum).
 - (5) Department of Commerce Occupational safety and health Protection Program poster.
 - (6) The OSHA Job Safety and Health "It's the Law" poster.
 - (7) The OSHA 300A Summary of Work-Related Injuries and Illnesses (posted from February 1 through April 30 of each year for the previous calendar year).
 - (8) A reasonable supply of the following blank forms shall be made readily available:
 - (a) NOAA Form 64-137, Initial Incident Report.
 - (b) CD-351 Report of Possible Safety/Health Hazard.

- (c) CA-1 Federal Notice of Traumatic Injury and Claim for Continuation of Pay/Compensation.
 - (d) CA-2 Notice of Occupational Disease and Claim for Compensation.
- B. Safety bulletin boards may be electronic in format and hosted on a NOAA/LO/SO intranet/internet site. Electronic safety bulletin boards must be readily accessible by all employees in the workplace. If this is not possible then traditional format bulletin boards are required.
 - C. For teleworking employees, access to a safety bulletin board shall be made readily available electronically through an intranet or internet site. The site shall include downloadable forms and other pertinent information needed to ensure that teleworking employees have the same information at home that can be found at their respective duty station.

5.3.2. NOAA Environmental, Safety, and Sustainability Newsletter.

Newsletters are an effective means of communicating information about the OSHMS. Newsletters provide an opportunity to examine particular aspects of the OSHMS further than may be afforded by other methods of communication. The following outlines requirements for establishing and maintaining an environmental, safety, and sustainability newsletter:

- A. SECO shall develop and publish a newsletter addressing issues, trends, successes, and current events related to environmental compliance, the OSHMS, and sustainability. At a minimum, the newsletter shall be published semi-annually.
- B. LOs/SOs and field/program offices are encouraged to solicit input from their workforce to ensure a broad range of topics are covered. Recommendations and article suggestions shall be submitted to noaa.safety@noaa.gov.

5.3.3. Reporting Unsafe or Unhealthful Working Conditions.

Detection of unsafe or unhealthful working conditions at the earliest possible time and the prompt correction of hazards at the lowest possible working level are essential elements of a safety program. NOAA employees, volunteers, student interns, and NOAA affiliates are often the first to recognize hazards and unsafe conditions in the workplace. To ensure an effective means of communicating possible hazards identified by NOAA employees, volunteers, student interns, and NOAA affiliates, the following guidance shall be implemented.

- A. NOAA employees, volunteers, student interns, and NOAA affiliates shall report unsafe or unhealthful conditions and practices to their supervisor or area safety representative using a [CD-351, Report of Possible Safety/Health Hazard](#). If conditions warrant, the NOAA employee, volunteer, student intern, or NOAA affiliate may request an inspection of the workplace.
- B. Managers and supervisors at all levels shall encourage NOAA employees, volunteers, student interns, and NOAA affiliates to report unsafe or unhealthful working conditions to their immediate supervisor.
- C. Managers and supervisors shall promptly investigate issues reported in the [CD-351, Report of Possible Safety/Health Hazard](#) and take the appropriate actions to resolve the safety condition/issue. Supervisors shall contact their Safety Office or CDSHP for assistance as needed.
- D. Issues not immediately corrected shall be reported on the organization hazard tracking system in accordance with requirements outlined in Section 6.4.1 below.

5.4. Document and Record Control and Retention.

Records created as a result of processes prescribed by the NAO 209-1A, NOAA Safety and Health and this NOAA Manual must be identified, maintained, and disposed of in accordance with [NAO 205-1, NOAA Records Management Program](#) and the applicable NOAA Records Management Schedule. The following additional guidelines also apply:

- A. All safety records may be kept in electronic format using NOAASafe, the organization's intranet site, SharePoint portal, or a similar secure electronic means. In addition to electronic copies, paper copies of all Class A accidents and Class B aviation, marine vessel, or diving accidents, and Class C aviation accidents must be kept on file for five years. The official repository for Class A accidents and Class B aviation, marine vessel, or diving accidents, and Class C aviation accidents investigation reports is SECO in Silver Spring, MD.
- B. All OSH files shall also comply with record keeping requirements outlined in [29 CFR 1904](#) and [§1910](#).
- C. Record titles, dispositions, and descriptions are available on the NOAA Records Information Management System website at http://www.corporateservices.noaa.gov/audit/records_management/schedules/index.html.

5.4.1. Protection of Sensitive Information.

- A. By nature, accident records and many safety and health files contain Personally Identifiable Information (PII), Personal Health Information (PHI), and information covered under the Privacy Act and the Health Insurance Portability and Accountability Act (HIPAA). Care must be taken to ensure that personal information is protected. Accident reports and other files containing this type of information may only be used for the intended purpose disclosed when the information was gathered. The following is provided as basic guidance for the storage of these type of documents:
 - (1) Paper copies of files containing PII, PHI, or HIPAA-protected information shall not be left unattended and shall be stored in a locked room or locked container when not in use.
 - (2) Electronic files containing PII, PHI, or HIPAA-protected information may only be stored on systems certified for the storage of moderate-risk information. Electronic access to these type of records shall be limited to authorized personnel. Computer screens must be locked when electronic access to this type of information is left unattended. Refer to [NAO 212-14, NOAA Information Technology Security Policy](#) for further guidance on electronic storage and use of sensitive information. Additional information related to the protection of sensitive information is available at <https://www.csp.noaa.gov/noaa/security-program/PII/>.
- B. Accident investigation, reporting, and recordkeeping information.
 - (1) Safety accident investigation reports are official documents. The investigation, reporting, and recordkeeping information derived from these reports will be used solely for accident prevention purposes or by court order that has been verified by NOAA legal counsel. These reports and their attachments, or copies and extracts, will not be enclosed in any other report or document unless the sole purpose of the other report or document is accident prevention. Common-source documents, photographs, and those documents (other than witness statements) containing purely factual information that are available to other NOAA-authorized investigations are an exception to this rule.
 - (2) Personnel may not use safety accident reports or the privileged documents contained therein as evidence or to obtain evidence in any disciplinary, administrative, or legal action such as:

- (a) Determining or defending the determination of misconduct or line-of-duty status of NOAA personnel.
 - (b) Determining liability in claims for or against the Government.
 - (c) Determining pecuniary liability.
 - (d) Any other adverse personnel action.
- (3) Violations of requirements outlined in this section by NOAA employees may result in administrative disciplinary actions without regard to otherwise applicable criminal or civil sanctions for violations of related laws.

5.4.2. Release of Information from Safety Accident Investigation Reports.

A. Privileged information: For a safety investigation, privileged safety information includes:

- (1) 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.
- (2) Products of deliberative processes of safety investigators, including:
 - (a) Draft and final findings, evaluations, opinions, preliminary discussions, conclusions, accident causes, recommendations, analyses, and other material that would reveal the deliberations of safety investigators.
 - (b) Draft and final diagrams and exhibits if they contain information that depicts the analysis by safety investigators.
 - (c) Photographs, films, and videotapes that are staged, reconstructed, or simulated reenactments of possible or probable scenarios developed by or for the analysis of the safety investigator. However, photographs depicting a measuring device or object contrasted against accident evidence for the sole purpose of demonstrating the size or scale of the evidence are not considered privileged safety information and may be released.
 - (d) Life sciences material that contains analysis by a safety investigator.
 - (e) Notes taken by safety investigators in the course of their investigation, whether or not they are incorporated, either directly or by reference, in the final safety investigation report.
 - (f) Reviews and endorsements of safety investigation reports.

B. All requests under the provisions of FOIA for information from, or copies of, safety accident investigation reports will be referred through management channels to Director, SECO, 1305 East-West Avenue, Room 11109 (OFA541, SSMC 4), Silver Spring, MD 20910. The SECO is the repository for all safety accident reports. The Director of SECO, with advice from NOAA legal counsel, has been delegated authority to act as the initial denial authority on requests for information from NOAA safety accident reports.

C. If a safety accident investigation report is properly sanitized, the privileged portions may be released. Only the Director of SECO is authorized to sanitize and release a safety accident investigation report.

- D. Requests received directly from members of Congress or their staffs for access to accident reports will be referred to DOC, Office of the Chief of Legislative Liaison. That office will then relay the request to the SECO. The request for information will be conducted in accordance with DOC policy.
- E. Requests from other Federal agencies for access to reports are governed by other provisions of this NOAA Manual and, in many instances, by interagency agreements or specific administrative orders. LOs/SOs or activities shall forward such requests to the Director of SECO for guidance.
- F. Subpoenas for the request of accident reports or for the testimony of accident investigators will be referred to NOAA Office of General Counsel for representation and review.
- G. Requests for access to accident reports from other staff sections and NOAA organizations are governed by the restrictions in this paragraph. The procedures below will be followed in response to these requests:
 - (1) The requester must state the reason the information is needed and the purpose for which it will be used. If the requester's purpose is not solely for accident prevention and a legal investigation was conducted, the requester will state the reason the legal investigation will not satisfy the requester's need.
 - (2) If the requester's sole purpose for requesting the report is accident prevention, the entire report may be released with a warning that further disclosure by the requester is not authorized.
 - (3) If the requester intends to use the information for any purpose other than accident prevention, only common source data, the names of witnesses, photographs, diagrams, and the results of scientific or technical tests will be disclosed. Personnel will not release the following information:
 - (a) The report's findings, recommendations, and the investigator's analysis.
 - (b) The content of witness statements if they were obtained on the promise that they would not be used for purposes other than accident prevention.
 - (c) Medical records.
- H. In addition to NOAA reporting forms, a copy of the non-privileged portions of safety accident investigation reports in which a NOAA employee is injured or property is damaged in a NOAA employee work area may be provided to the exclusive representative of the employee involved and to the appropriate OSH committee, if requested. This information is provided for purposes of safety and/or accident prevention purposes only.
- I. Violations of requirements outlined in this section by NOAA employees may result in administrative disciplinary actions without regard to otherwise applicable criminal or civil sanctions for violations of related laws.

SECTION 6. EVALUATION AND CORRECTIVE ACTION.

Check is the third step in the PDCA process. To be effective, an OSHMS needs to measure the performance and the effectiveness of controls developed and implemented. Accurately measuring these performance factors is fundamental to the accident prevention process. SECO and Line Offices shall develop performance indicators based on NOSH performance standards outlined in this manual, OSH strategic goals, LO/SO operation requirements, and regulatory guidance. Examples of metrics that may be applied to safety are the rate of accident occurrence, the severity and cost, compliance with reporting requirements, corrective action/performance tracking, regular worksite walkthrough inspections for

safety, evaluation of employee/management training programs, management solicitation, and employee comments.

6.1. Monitoring, Measurement, and Assessment.

- A. Metrics will include both quantitative and qualitative measures that provide NOAA senior leadership with a means of evaluating the OSHMS. SECO and Line Offices shall develop metrics for each OSH process to determine Measures of Performance and Measures of Effectiveness.
- (1) Measures of Performance: Measures of performance are direct measurements of an organization's accident prevention activities. Examples include measurements of safety training attendance, percent of required personnel in respiratory protection program, performance on safety surveys, etc.
 - (2) Measures of Effectiveness: These measurements represent a quantification of how effective a particular control or process is at preventing accidents. For example, measuring the number of motor vehicle accidents that resulted in injuries prior to implementing a mandatory seatbelt rule and after implementation would represent a measure of effectiveness.
 - (3) Metrics developed by SECO and Line Offices shall not be limited to capturing information associated with incidents, accidents, and injuries. Metrics shall consist of leading, current, and lagging indicators as defined below:
 - (a) Lagging Indicators: Lagging indicators measure the outcome of an operational activity, as well as failures in the OSHMS. They are the traditional safety metrics used to indicate a measure of the results of an intervention strategy after the fact. They consist of accidents, injuries, and near misses. Findings from assessments, accidents, and similar activities are also considered lagging indicators. Benchmarking metrics such as traditional injury rates, vehicle accident rates, and aircraft accident rates are also lagging indicators.
 - (b) Current Indicators: Current indicators measure the resources used, actions taken, and the output of operational activities within an organization. They represent current system defects, effectiveness in addressing the defects, and frequency with which defect types occur. They are valuable indicators of hazards and risks that could lead to an accident. Current indicators measure the activities and results associated with the OSH program/OSHMS.
 - (c) Leading Indicators: Leading indicators measure the performance of the OSHMS, and the effectiveness of actions taken to improve the OSHMS. These include measuring the quality and depth of employee involvement, the safety climate of the organization, and preventive actions undertaken by the organization. These measures are proactive in nature and report what employees are doing on a regular basis to prevent accidents and injuries. Leading indicators include the frequency of safety inspections, attendance in safety training, time to correct findings and deficiencies, time to report an accident, and safety climate surveys.
- B. Metric Documentation and Review: Data for each NOAA-level metric must be defined and reviewed with the DASHO as part of the DASHO's regular oversight process. Similarly, LO/SO metrics shall be defined and reviewed with the LO/SO AA/DAA.

6.2. Accident Investigation and Reporting – Lagging Indicators.

This section provides policies and procedures for initial notification, reporting, investigating, and recordkeeping of NOAA accidents and incidents.

6.2.1. Accident Investigation Policy.

It is NOAA's policy is to investigate and report all NOAA accidents and incidents to prevent like occurrences. All NOAA accidents and incidents will be investigated and reported (to include initial notification) according to the requirements of [NAO 209-1A](#), [NOSH](#), this NOAA Manual, and the NOAA Handbook 209-40, NOAA Accident Investigation, Reporting and Recordkeeping. Visit the SECO Intranet site for additional accident investigation and reporting tools (see <https://secure.seco.noaa.gov/program.html>).

6.2.2. Accident and Incident Classes.

Accident and incident classes are used to determine the appropriate investigative and reporting procedures. Accident and incident classes are as follows:

A. Class A Incident.

- (1) An incident in which:
 - (a) The resulting total cost of property damage or environmental clean-up is \$1,000,000 or more.
 - (b) A NOAA aircraft or NOAA Class I, Class II, or Class III ship is destroyed, missing, or abandoned.
- (2) An injury and/or occupational illness that results in:
 - (a) A fatality.
 - (b) A permanent total disability.

B. Class B Incident.

- (1) An incident in which:
 - (a) The resulting total cost of property damage is \$200,000 or more, but less than \$1,000,000.
 - (b) A NOAA marine vessel of any size that is destroyed, missing, or abandoned that does not result in a Class A incident.
- (2) An injury and/or occupational illness that results in:
 - (a) Permanent partial disability.
 - (b) Any work-related amputation of a limb.
 - (c) Any work-related loss of an eye.
 - (d) When one or more personnel are hospitalized as inpatients (for other than the sole purpose of observation) as the result of a single accident.
- (3) An environmental incident that results in:
 - (a) The release of a listed environmental pollutant in a quantity greater than or equal to the chemical's Reportable Quantity (RQ).

- (b) The release of an environmental pollutant outside the boundaries of a NOAA Facility that requires notification and a cleanup response in accordance with applicable regulations.

C. Class C Incident.

- (1) An incident in which the total cost of property damage is \$20,000 or more, but less than \$200,000.
- (2) A nonfatal injury or occupational illness that causes:
 - (a) One or more days away from work beyond the day or shift on which the accident occurred.
 - (b) A disability at any time (that does not meet the definition of Class A or B and is a lost time case).
- (3) An environmental incident that results in the release of a listed environmental pollutant approaching but not at the Reportable Quantity (RQ).

D. Class D Incident.

- (1) An incident in which the resulting total cost of property damage is less than \$20,000.
- (2) A nonfatal injury or illness resulting in:
 - (a) Restricted work activity.
 - (b) Work-related loss of consciousness.
 - (c) Transfer to another job.
 - (d) Medical treatment greater than first aid.
 - (e) Needle stick injuries and cuts from sharps that are contaminated from another person's blood or other potentially infectious material.
 - (f) Medical removal under medical surveillance requirements of an OSHA standard.
 - (g) Occupational hearing loss.
 - (h) Work-related tuberculosis case.
- (3) An environmental incident that results in the unintentional release of materials into the secondary containment.

6.3 What to Report.

Managers and/or supervisors shall investigate and report any unplanned event that result in one or more of the following:

A. Injury and Occupational Illness.

- (1) Injury or occupational illness (fatal or nonfatal) to on-duty or off-duty NOAA Corp personnel.
- (2) Injury or occupational illness (fatal or nonfatal) to on-duty NOAA employees volunteers, student interns, and NOAA affiliates, when the injury is incurred while performing work-related duties.
- (3) Injury or occupational illness (fatal or nonfatal) to NOAA employees, volunteers, student interns, and NOAA affiliates while aboard NOAA aircraft or marine vessels.

- (4) Persons who are missing and/or presumed dead as the result of a potential accident will be reported as accident fatalities until proven otherwise.
 - (5) Injury or illness to non-NOAA personnel as a result of NOAA operations.
 - (6) On-duty occupational injuries and illnesses reported by a NOAA contractor or subcontractor.
 - (7) Occupational injuries and illnesses reported by other NOAA affiliates.
 - (8) Off-duty fatalities or serious injuries that may impact NOAA procedures through lessons learned.
- B. Accidents involving NOAA employees, volunteers, student interns, and/or NOAA affiliates injured as a result of violence in the work environment.
 - C. Damage to or loss of NOAA property. This includes Government furnished material, Government furnished property, or Government Furnished Equipment (GFE) provided to a contractor.
 - D. Damage to public or private property caused by NOAA operations (NOAA had a causal or contributing role in the accident) will be reported.

6.3.1 Investigation of Accidents Occurring at Telework Locations.

In accordance with [29 CFR1904.5\(b\)\(7\)](#), injuries and illnesses that occur while an employee is working at an alternate workplace (e.g. from home) will be considered work-related if the injury or illness occurs while the employee is performing work for pay or compensation in the home, and the injury or illness is directly related to the performance of work, rather than to the general home environment or setting. For example, if an employee drops a box of work documents and injures his or her foot, the case is considered work-related. However; if an employee is injured because he or she trips on the family dog while rushing to answer a work phone call, the case is not considered work-related. LOs/SOs and field/program offices shall ensure that supervisors and employees understand the following injury and illness investigation and reporting requirements as they pertain to telework at an alternate workplace (e.g. from home).

- A. The employee shall notify his/her supervisor immediately of any accident or injury that occurs at an alternate workplace.
- B. The supervisor shall investigate all accidents occurring at a telework/alternate workplace as soon as possible.

6.3.2 Investigating and Reporting Contractor-Involved Accidents.

In most incidences, NOAA conducts the investigation and reporting of accidents involving contractors. In such cases, the Contractor will cooperate and assist NOAA personnel until the investigation is complete. Contractors shall ensure all pertinent facts relating to any incidents, accidents, injuries, or illnesses as defined above involving contract employees are also promptly reported to the COR/COTR. The COR/COTR shall follow-up with SECO to ensure the accident/incident was reported in accordance with Section 6.3.5 below.

6.3.3 Initial Notification and Reporting of NOAA Accidents and Incidents.

- A. All NOAA accidents, injuries, and illnesses shall be reported in accordance with Table 6-1 below:

Table 6-1 Initial Accident Notification and Reporting

Accident Classification	NOAA Notification	OSHA Notification
Class A Fatality	Report to LO/SO and SECO within 8 hours of the fatal accident	Within 8 hours of the fatal injury or illness
Class A Permanent Total Disability	Report to LO/SO and SECO within 8 hours of the disabling accident	Within 24 hours of the occupational injury or illness
Class A Other	Report to LO/SO and SECO within 8 hours of the incident	IAW Section 6.2.5B below
Class B	Report to LO/SO and SECO within 24 hours of incident	IAW Section 6.2.5B below
Class C	Written or electronic report to SECO within 7 days of incident	Recorded on OSHA 300 log within 7 days of an occupational injury or illness
Class D	Written or electronic report to SECO within 7 days of incident	Recorded on OSHA 300 log within 7 days of an occupational injury or illness
All other accidents/incidents	Written or electronic report to SECO within 14 days of incident	NA

- B. The manager or supervisor who first becomes aware of the accident shall report injuries and illnesses by meeting the following criteria to the Occupational Safety and Health Administration (OSHA). All notifications to OSHA shall be conducted by the field/program office where the individual was assigned.
- (1) OSHA shall be notified within 8 hours after the death of any NOAA employee from a work-related accident or illness.
 - (2) OSHA shall be notified within 24 hours of the following:
 - (a) All work-related inpatient hospitalizations of one or more employees.
 - (b) All work-related amputations.
 - (c) All work-related losses of an eye.
 - (3) Supervisors or managers have three options for reporting events to OSHA:
 - (a) By telephone to the 24-hour OSHA hotline at 1-800-321-OSHA (6742).
 - (b) By telephone to the nearest [OSHA Area Office](#) during normal business hours.
 - (c) Electronically at <https://www.osha.gov/pls/ser/serform.html>.
- C. The manager or supervisor who first becomes aware of a Class A or Class B NOAA accident or a Class C NOAA aviation (flight, flight-related or UAS) accident will, through their leadership chain, immediately notify:
- (1) The immediate manager or supervisor of personnel involved.
 - (2) The LO/SO safety manager for the LO/SO involved.
 - (3) The Director of SECO. The method for immediate notification is by telephone at (301) 713-2870 or (301) 943-2267. Instructions for immediate notification are contained on the NOAA OSH website at <https://secure.seco.noaa.gov/program.html>.
- D. All accident and incident reports shall be submitted online in accordance with this manual and the NOAA Handbook 209-40, NOAA Accident Investigation, Reporting and Recordkeeping at

https://docs.google.com/a/noaa.gov/forms/d/1cV0_Tppt-SNHMFxRx7gnaQVXrhrCodGUOMXxR3uwr7k/viewform.

- E. NOAA personnel who are involved in a motor vehicle accident while operating a government vehicle shall immediately contact local law enforcement officials in accordance with State motor vehicle accident reporting requirements. NOAA personnel involved in these type of accidents shall also complete a SF 91, Motor Vehicle Accident Report. A complete SF 91 is required even if the damage to the motor vehicle is not noticeable. The operator of the vehicle will furnish copies of the completed SF 91 to the DOC Office of General Council.

6.3.4 Accountability for NOAA Accidents.

The purpose of accountability in this NOAA Manual is to identify the organization best able to achieve corrective actions. Accountability for accidents normally will be determined in this order of precedence:

- A. The organization or element having operational control of the equipment or facility.
- B. The organization having operational control of the individual responsible for the accident/incident.
- C. The organization to which the injured person(s) (including a NOAA affiliate) is assigned.

6.3.5 Accident Investigation Authority.

- A. SECO will take the accident investigation lead on all Class A accidents and select Class B accidents.
- B. SECO will take the accident investigation lead on all NOAA Corporate Services accidents.
- C. The NOAA DASHO may direct SECO to take the accident investigation lead on any accident regardless of accident classification.
- D. The LO/SO AA/DAA may request that SECO take the accident investigation lead on any accident regardless of classification.
- E. LOs/SOs are responsible for the investigation of all other accidents and incidents.
- F. All accidents and incidents, regardless of accident type and Class, shall be reported to SECO. SECO is responsible for gathering all initial incident data as required by 29 CFR 1904 using the NOAA Form 64-137 or electronic equivalent. This data shall be gathered and posted to the OSHA 300 Log (or electronic equivalent) within seven days following an incident. Initial reports must be received by SECO no later than 7 days after the incident occurred. Additional guidance and accident and incident investigation and reporting requirements can be found in the NOAA Handbook 209-40, NOAA Accident Investigation, Reporting and Recordkeeping.

6.3.6 Accident Investigation Boards.

All accidents must be investigated to determine the cause and to assist in developing controls to prevent future accidents. The scope and complexity of the investigation is determined by the type and severity of the accident based on the following guidance:

- A. Formal accident investigation boards.
 - (1) Formal accident investigation boards are required for all Class A accidents and Class B aviation, marine vessel, or diving accidents, Class C aviation accidents, as well as other accidents selected by the DASHO. These boards shall be composed of at least three subject matter expert investigators. The president of the accident investigation board must be appointed

from outside the LO/SO responsible for the accident. One member of the board should be a safety professional with accident investigation experience. Note: The DASHO may direct that select personnel be appointed as members of the formal accident investigation board.

- (2) Other Class B accidents shall be investigated by at least one subject matter expert or safety professional designated by the LO/SO. Note: Designation of accident investigation personnel may be defined in LO/SO policy.
- B. Informal accident investigations. All other classes and types of accidents shall be investigated in accordance with the NOAA Handbook 209-40, NOAA Accident Investigation, Reporting and Recordkeeping.
- C. The SECO will coordinate directly with LO/SO safety personnel for the appointment of board members for those accidents where the DASHO is the appointing authority. To carry out its assigned operation as coordinating authority, the DASHO designates the Director of SECO the authority to delegate tasks to NOAA organizations in order to assist in accident investigations.
- D. The LO/SO experiencing the accident will provide the name, title, phone number/cell phone number, and email of the LO/SO POC assigned to assist the accident board to the Director of SECO.
- E. Accident investigation board appointing authority. The following are responsible for appointing accident investigation boards as required by this NOAA Manual:
- (1) Class A accidents: The DASHO is the accident investigation board appointing authority for all Class A accidents.
 - (2) Class B and Class C aviation accidents: The Director, NOAA Corps and OMAO is the accident investigation board appointing authority for Class B and Class C aviation accidents.
 - (3) Class B marine vessel or diving accidents: The Director, NOAA Corps and OMAO is the accident investigation board appointing authority for all Class B marine vessel and diving accidents.
 - (4) All other Class B accidents: Each LO/SO shall define in policy the Class B accident investigation appointing authority. The Class B accident investigation appointing authority must not be below regional headquarters/program office level.
 - (5) All other classes of accidents and near misses shall be investigated in accordance with the NOAA Handbook 209-40, NOAA Accident Investigation, Reporting, and Recordkeeping, and LO/SO policy.
 - (6) The accident investigation board appointing authority shall also designate the senior board member of each board as the board president. The board president shall be senior in rank/grade to the most senior individual involved in the accident. Exceptions to grade requirements may be granted by the DUSO.
- F. Accident investigation board responsibilities:
- (1) The accident investigation board president is responsible for supervising all activities connected with the accident investigation (e.g., witness interviews, photographic evidence, operations orders, collection, and analysis of factual data, etc.).
 - (2) Accident investigation board members may not serve as board members of legal investigations (e.g. fault-finding investigations) to the same accident. Employees currently performing safety duties may not serve as accident legal investigation board members.

- (3) Board accident investigation reports will be completed no later than 45 days after the accident. The reviewing officials will concur or non-concur with each finding and note any actions taken or recommendations for action from headquarters. The original copy of the report will be forwarded to SECO no later than 45 days after an accident. Requests for extensions should be coordinated to the accident investigation board appointing authority.
- (4) The official copy of an accident report will be retained at SECO. A file copy may be maintained at the LO/SO safety office for future accident prevention, evaluation, and education processes and systems. Release of accident information is limited to accident-prevention purposes only. Accident reports shall be released in accordance with instructions outlined in Section 5.4 above.
- (5) All Class A accidents and Class B aviation, marine vessel, or diving accidents, and select Class C aviation accidents will be out-briefed to the DASHO. Scheduling and read-ahead information for out briefings will be coordinated through the SECO.
- (6) The LO/SO and/or field/program office is responsible for funding the costs of the accident investigation board.

6.3.7 Accident Investigation Report Review and Processing.

All accident investigation reports will be reviewed and processed in accordance with the following:

- A. The AA or DAA from the LO/SO responsible for the accident shall review all Class A accident, Class B aviation, marine vessel, or diving accident, and Class C aviation accident reports. Following a review of the accident report, the AA/DAA will provide written concurrence or non-concurrence with the findings/recommendations outlined in the report. All non-concurrences require full explanation. The AA/DAA will also ensure that factual data are circulated within the organization and that recommendations that can be put into effect at the organization level are implemented. The AA/DAA will forward the signed original report to SECO.
- B. The Director of OMAO shall also review all Class A and B aviation, marine vessel, or diving accident, and Class C aviation accident reports. Following a review of the accident report, the Director of OMAO will provide written concurrence or non-concurrence with the findings/recommendations outlined in the report. All non-concurrences require full explanation. The Director of OMAO will also ensure that factual data are circulated within OMAO and that recommendations that can be put into effect at OMAO are implemented. The Director of OMAO will forward the signed original report to SECO.
- C. The DASHO shall provide final review of all Class A accident, Class B aviation, marine vessel, or diving accident, and Class C aviation accident reports. Following a review of the accident report, the DASHO will provide written concurrence or non-concurrence with the findings/recommendations outlined in the report. All non-concurrences require full explanation. The DASHO will also ensure that factual data are circulated across all NOAA organizations as applicable and that recommendations requiring actions above the organization level are implemented. The DASHO will forward the signed original report to SECO.
- D. All other accident investigation reports shall be reviewed by the appropriate level of management in accordance with LO/SO policy.

6.3.8 Dissemination of Accident and Injury Information.

- A. Safety accident investigations and reports are intended to assess incidents in order to prevent future occurrences of similar incidents. They rely on employee confidential and unsworn statements concerning incident causes and factors, and can contain private, personal physical, medical and

sensitive employee information. Great care must be taken to protect and respect the privacy and confidentiality of all employees and employee information identified in accident investigations and reports. Care must specifically be taken to guard against release of employee personal information in violation of FOIA or the Privacy Act (e.g., concerns relating health and medical conditions, as well as to the assignment of fault, culpability, disciplinary action, job performance).

- B. The extent of safety incident report release is dependent on the type of report generated and the legal authority under which it was created. Under the OSH Act, 29 U.S.C.A. § 651 et seq. (OSHA), and as discussed below in Section 6.3.9, federal agencies are required to maintain a log of all injuries and illnesses, as well as supplemental records for all incidents resulting in a fatality, hospitalization of one or more employees, loss of an eye or limb, or lost time. Safety incident logs and supplemental reports must be made available to agency managers, employees, and employee representatives. They are also generally releasable to the public under the Freedom of Information Act, 5 U.S.C.A. § 552 et seq. (FOIA). However, certain confidential and private personnel information in the safety incident reports is entitled to specific protection under OSHA, as well as under FOIA and the Privacy Act of 1974, 5 U.S.C.A. § 552 et seq. (the Privacy Act). Protected information must be redacted prior to distribution.
- C. Consistent with 29 C.F.R. § 1960.29(d), distribution of safety investigations and reports addressing accidents resulting in a fatality, hospitalization of one or more employees, loss of an eye or limb, or lost time is limited to officials in charge of the workplace, appropriate safety committees and the exclusive representative of subject employees, if any. With the exception of factual material in the Reports, the Reports are not releasable to employees or the general public, to other internal or external investigative bodies, or in litigation.
- D. All questions related to the dissemination, distribution or release of any accident investigation report should be directed to NOAA's Office of General Counsel for Environmental Compliance and Safety (GCECS).

6.3.9 Accident Recordkeeping.

In accordance with NOAA recordkeeping and retention policy, paper copies of all Class A accidents and Class B aviation, marine vessel, or diving accidents, and Class C aviation accidents must be kept on file for the current calendar year plus the previous five calendar years. The official repository for Class A accidents and Class B aviation, marine vessel, or diving accidents, and Class C aviation accidents investigation reports is SECO. Records associated with all other classes of accidents may be kept in an electronic format only. In addition to standard recordkeeping requirements outlined in this NOAA Manual, accident records shall also comply with following standards:

- A. Accident records shall be maintained in accordance with the requirements outlined in 29 CFR 1904, and this NOAA Manual.
- B. Accident records may be kept in an electronic format using the organization's secure intranet site or SharePoint portal. Refer to Section 5.4 for further guidance on the protection and use of accident records and reports.
- C. Accident recordkeeping shall be used for accident-prevention purposes only. Necessary precautions will be implemented to ensure that accident documents are secured from unauthorized access. Refer to Section 5.4 for further guidance on the protection and use of accident records and reports.
- D. OSHA 300 Injury Log and the OSHA Form 300A:
 - (1) Each NOAA complex/campus shall maintain an OSHA Form 300 log for all OSHA recordable injuries (NOAA Class A through Class D injuries) experienced by NOAA Corps officers,

NOAA employees, student interns, and volunteers on that complex/campus in accordance with the requirements defined in 29 CFR 1904. A SECO-approved centralized automated accident reporting system may be used for this purpose.

- (2) Each NOAA complex/campus shall post the OSHA Form 300A in a prominent location accessible to the entire workforce from 1 February through at least 30 April of each year. Note: The OSHA 300 log contains PII and shall not be posted with the OSHA Form 300A. Electronic/virtual locations such as intranet websites and other electronic sources may be used as long as the entire workforce represented on the report has access to the site.

Note: Accidents are recorded on the OSHA Form 300 and 300A for the calendar year, not the fiscal year.

6.3.10 Accident Rates and Cost Calculations.

- A. Accident and injury cost computations: Computations for accident costs will be done in accordance with the NOAA Handbook 209-40, NOAA Accident Investigation, Reporting, and Recordkeeping. Material damage costs will be determined using an estimated cost of damage (ECOD) (or actual cost of damage if available) to include Tort claims against the government. Injury costs will be calculated using chargeback and continuation of pay data only.
- B. Injury and accident rates: These rates include recordable injuries (Class A through Class D injuries), and/or accidents with property damage meeting the following criteria:
 - (1) NOAA employee injury rate: The NOAA employee injury rate is the total number of recordable injuries (Class A through Class D injuries) per 200,000 employee work hours during a specific period of time. Rates are computed using the following formula:

$$\frac{\text{number of recordable injuries X 200,000}}{\text{the actual hours worked for the time period}}$$

Note: OMAO shall calculate injury rates based on the total number of recordable injuries (Class A through Class D injuries) per each 100 employees (to include NOAA Corps personnel) during a specific period of time.

$$\frac{\text{number of recordable injuries X 100}}{\text{the number of employees for the time period}}$$

- (2) NOAA employee lost time injury rates: The NOAA employee lost time injury rate is the total number of lost time injuries (Class A through Class C injuries) per 200,000 employee work hours during a specific period of time. Rates are computed using the following formula:

$$\frac{\text{number of recordable lost time injuries X 200,000}}{\text{the actual hours worked for the time period}}$$

Note: OMAO shall calculate injury rates based on the total number of recordable lost time injuries (Class A through Class C injuries) per each 100 employees (to include NOAA Corps personnel) during a specific period of time.

$$\frac{\text{number of recordable lost time injuries X 100}}{\text{the number of employees for the time period}}$$

- (1) NOAA aircraft accident rate: The rates for NOAA aircraft accidents will be computed in both Class A rates and Classes A through C rates per 100,000 flight hours. These rates will include flight accidents only.

$$\frac{\text{number of recordable Classes A through C Aircraft Accidents} \times 100,000}{\text{the actual flight hours flown for the time period}}$$

- (2) NOAA motor vehicle accident rates: The rates for NOAA motor vehicle accidents will be computed in Classes A through D rates per 1,000,000 driving miles.

$$\frac{\text{number of recordable Classes A through D Motor Vehicle Accidents} \times 1,000,000}{\text{the actual miles driven for the time period}}$$

6.4. Assessments, Inspections, and Audits – Current and Lagging Indicators.

This section provides policy and guidance for conducting OSHMS audits, workplace inspections, and safety program/process assessments. It implements the requirements of the OSH Act and prescribes NOAA policy to protect and preserve personnel and property against accidental loss, provides for safe and healthful workplaces, and assures regulatory compliance.

6.4.1. Workplace Inspections.

Workplace inspections are the first level OSH evaluations and are primarily focused on compliance with regulatory requirements and best practices. This section provides policy on workplace inspections and hazard recognition. Whenever possible, recognized hazards will be corrected on the spot. The organization's safety office shall track and manage all uncorrected hazards and inspection findings on the organization's hazards/deficiencies tracking log as defined in Section 6.3.2 below.

6.4.1.1. Periodic Workplace Safety Inspections.

Supervisors are responsible for conducting periodic documented inspections of their workplaces to identify hazards. Periodic workplace safety inspections shall be conducted at least quarterly or more frequently based on risks identified during JHA or a similar activity. Periodic workplace safety inspections shall be conducted and documented using work area-specific checklists. The following outlines the additional requirements for periodic workplace inspections:

- A. Facilities and operations involving higher-risk hazards will be inspected more frequently as determined by a JHA.
- B. SECO shall develop standardized work area-specific checklists. LO/SOs and field/program offices may modify standardized checklists or develop similar work area-specific checklists for their operations. Assistance can also be requested from SECO to develop customized checklists. Accepted checklists shall be made available at the SECO Intranet site at <https://secure.seco.noaa.gov>.
- C. Follow-up inspections shall be conducted for all moderate, high, and extremely high-risk findings to ensure that hazards are corrected.

6.4.1.2. OSHA Inspections.

OSHA conducts periodic OSH inspections of federal facilities. Notices of Violations identified during OSHA facility inspections represent failures to comply with regulatory guidance. The following section outlines LO/SO and field/program office responsibilities when receiving OSHA Notices of Violations.

- A. Each NOAA activity shall notify their respective LO/SO safety office and SECO of OSHA inspections conducted at their facilities within twenty-four hours of OSHA's visit.

- B. Copies of all citations (Notice of Unsafe and Unhealthful Working Conditions) shall be forwarded to the activity's LO/SO safety office and to SECO within forty-eight hours of being issued the citation.
- C. The official in charge of the workplace where the condition was discovered will post notices. Where it is not practical to post the notice at or near the hazard, it will be posted in a prominent place where all affected personnel will readily see it.
- D. All citations shall be corrected within the time limit defined in the citation. Copies of the completed Certification of Corrective Action Worksheet shall be forwarded to the activity's LO/SO safety office and to SECO within forty-eight hours of completing the report.

6.4.2. Audits and Assessments.

Unlike workplace safety inspections, audits and assessments are system oriented rather than compliance oriented. They should be designed to assess the health of the OSH program/OSHMS and its effectiveness in preventing accidents and injuries. The following outlines NOAA's OSHMS audit and assessment program:

6.4.2.1. OSHMS Self-Assessments.

- A. LOs/SOs and field/program offices shall complete an annual OSHMS self-assessment using the NOAA OSHMS Audit/Self-Assessment Guide (or other appropriate checklist as applicable). Completed self-assessments shall be forwarded electronically to the LESCO and made available during Line Office OSH program/OSHMS audits and NECSAS inspections.
- B. LOs/SOs and field/program offices may request an assistance visit from SECO to improve their management systems and facilitate compliance. Assistance visits shall not be conducted within 90 days of a scheduled OSH program/OSHMS audit or NECSAS assessment.
- C. Self-Assessments should be kept confidential and be marked "Self-Audit Privileged, Not for Release."

6.4.2.2. NOAA Environmental Compliance and Safety Assessment System (NECSAS).

The NECSAS is an environmental, health, and safety assessment program designed to identify potential environmental, health, and safety findings that may adversely affect NOAA employees, student interns, volunteers, contractors, NOAA Affiliates, and visitors. Discovery of environmental, health, and safety findings during such assessments allows the facility to correct the problem without the immediate threat of adverse actions by regulatory agencies (e.g., citations, Notice of Violations, and/or monetary fines). These findings are good indicators for planning purposes and application of funding to areas where corrections are needed to minimize operational interruptions at the facility. The basic requirements of the NECSAS are outlined in the [NECSAS Program Policy 97-01](#).

6.4.2.3. OSH Program/OSHMS Audits.

- A. SECO shall conduct an OSH program/OSHMS audit of each Line Office safety program every 24 to 36 months in accordance with the NOAA OSHMS Audit/Self-Assessment Guide. The OSH program/OSHMS audit is a measure of the LO/SOs implementation of the NOSH program/OSHMS; it is not a compliance inspection.
- B. Similarly, each LO shall conduct an OSH program/OSHMS audit of subordinate organizations using the NOAA OSHMS Audit Guide and Checklist (or other approved checklist as applicable) at

least every 24 to 36 months. LOs shall develop criteria for selection of subordinate organizations to be audited based on organizational structure, operation, risk, and overall safety performance.

6.4.3. Documenting Inspections and Findings.

- A. LOs/SOs and field/program offices shall maintain a record of all workplace inspections, audits, and assessments. Records shall be made available upon request during OSHA inspections, NECSAS assessments, and NOAA OSH program/OSHMS audits.

Note: Self-Assessment details, reports and findings shall be kept confidential and be marked "Self-Audit Privileged, Not for Release."

- B. Written reports of OSH findings and violations resulting from safety inspections, assessments, and audits, as well as occupational health inspections conducted by OSHA, will be provided to the head of the activity or the manager of the inspected organization. These reports will cite hazards and safety management deficiencies and will recommend corrective actions.
- C. A copy of the written report shall be forwarded to the organization's next higher safety office. High and extremely high-risk findings shall be reported to the LO/SO Safety Office.
- D. Hazards and findings that cannot be immediately corrected shall be recorded on the organization's Hazards/Deficiency Tracking Log (HAZLOG). The HAZLOG shall be managed in accordance with Section 6.5.1 below.

6.5. Corrective and Preventive Action – Leading Indicators.

Effective OSH inspections, audits, and assessments should identify hazards and OSH program/OSHMS deficiencies. This section provides policy and guidance for abating identified hazards and correcting OSH program/OSHMS deficiencies. It outlines the requirements for managing systems and programs that eliminate or reduce workplace hazards and risks.

6.5.1. Hazard Reporting and Tracking Management.

- A. OSH hazards should be abated at the lowest operational levels (preferably field/ program office) capable of allocating resources.
- B. LOs/SOs shall determine the lowest level of command responsible for tracking and managing organizational hazards and deficiencies. Responsible safety offices shall maintain a Hazard/Deficiency Tracking Log to track and manage hazards and deficiencies. Hazards and deficiencies shall be tracked and managed using NOAA Form 64-5382, Hazard/Deficiency Tracking Log (see Appendix B) or a locally developed electronic or paper Hazard/Deficiency Tracking Log.
- C. Safety managers at all levels are responsible for maintaining a hazard tracking and management system. This system, known as a Hazard/Deficiency Tracking Log (HAZLOG), may be in paper or electronic format and should encompass the following requirements:
 - (1) Prioritized hazards based on the level of risk (e.g. higher risk = higher priority). Hazard abatement activities shall address higher-risk hazards first.
 - (2) Findings and recommendations from facility inspections, assessments, and program audits shall be added to the HAZLOG.

- (3) Findings and recommendations from incidents, accidents, injuries, and illnesses may be added to the HAZLOG.
- (4) Assessment of risk and inclusion of the appropriate risk assessment code with the hazard entry on the HAZLOG.
- (5) Tracking and management of preventive and corrective actions shall be managed on the HAZLOG.
- (6) Minimize introduction of new hazards and risk into the work environment when changes are made by following the principles of Management of Change (see Section 5.1.3).
- (7) Posting of unsafe and unhealthful working conditions:
 - (a) Within eight hours of identifying a high or extremely high-risk finding.
 - (b) Within five working days of identifying a moderate-risk finding.
- (8) Prohibition of work in areas where high or extremely high-risk findings are identified until an interim or permanent abatement is identified and implemented.
- (9) Elevation of OSH hazards which are not corrected to higher-level offices as listed below:
 - (a) Safety and health hazards which are not corrected within 6 months shall be elevated to the LO/SO LESCO. LESCOs shall maintain elevated OSH hazards in the LO/SO Hazard/Deficiency Tracking Log. The LESCO should inform the AA/DAA of the unresolved issues in accordance with Line Office reporting procedures.
 - (b) Safety and health hazards which are not corrected within 12 months shall be elevated to the NEOSHC. SECO shall maintain elevated OSH hazards in the NOAA HAZLOG.

6.5.2. Management and Validation of Corrective Actions.

A. Senior Leaders, managers, and supervisors will:

- (1) Provide funds to correct safety and occupational health violations. If funds cannot be provided, interim abatements should be put in place, and the funding requested for the next funding cycle.
- (2) Ensure safety and occupational health standards violations that can be corrected with funds associated with operation, maintenance, or repair, are processed in an expedient manner.
- (3) Maintain copies of abatement plans that cover outstanding safety deficiencies of all serviced units.
- (4) Ensure abatement actions do not become delinquent. Note: All high and extremely high hazards shall be reported to the activity's senior leadership within one week of discovery.

B. Reports of workplace and operational hazards will be handled at the lowest operating level capable of allocating resources to assure prompt and efficient processing. Managers and supervisors will ensure that personnel who report hazardous conditions or practices are protected from adverse actions or reprisals. All personnel will be advised of their rights and responsibility to report unsafe or unhealthy conditions.

C. Safety managers shall validate the effectiveness of abatements and controls through analysis of after-action reviews, audit results, and similar fact-finding processes. Hazards that have ineffective abatements and controls shall be re-entered on the HAZLOG so additional corrective actions can be applied.

6.6. Feedback and Planning Process.

Feedback is an important part of evaluating the OSH program/OSHMS. Systematically collecting feedback from the evaluation of controls that have been enacted in response to facility inspections and annual OSHMS reviews is necessary to improve safety and health outcomes. LOs/SOs and field program offices shall develop policies and procedures to:

- A. Evaluate abatement actions for previously corrected OSH hazards and findings on a routine basis to determine the effectiveness of applied solutions.
- B. Include the capability to add additional controls in order to address any remaining OSH hazards or to identify alternative approaches and abatement procedures.
- C. Identify sources of feedback to be included in evaluations. Sources of feedback include but are not limited to the following:
 - (1) Solicitation of feedback as part of a NECSAS assessment.
 - (2) ECS Committee review or an Action Plan activity, OSH initiative, or OSH issue.
 - (3) A complete safety culture assessment and review.
 - (4) Safety training feedback.

SECTION 7. MANAGEMENT REVIEW AND SYSTEM IMPROVEMENTS.

The purpose of the management review is for senior management, with assistance from OSH managers and process owners, to undertake a strategic and critical evaluation of the performance of OSH programs and the OSHMS. The review must provide a critical examination of performance results and opportunities for continual improvement.

7.1. Management Review Process.

NOAA's management review process consists of formal and informal programs and processes to review the performance of the OSHMS and its associated OSH programs. These include but are not limited to the NEOSHC, LO/SO and field/program office OSH councils, employee safety committees, specialized program safety boards, and periodic performance reviews. Regardless of the vehicle, the management review process shall:

- A. Focus on the evaluation of lagging, current, and leading performance indicators to identify and exploit opportunities for continual improvement of the OSHMS.
- B. At a minimum, include the following in the evaluation of performance of the OSHMS:
 - (1) Progress in achieving strategic goals and objectives as well as action plan targets.
 - (2) Progress in reduction of risks and elimination of hazards.
 - (3) Effectiveness of processes to identify, assess, and prioritize risks and system deficiencies.
 - (4) Effectiveness in addressing the underlying causes of risks and system deficiencies.
 - (5) System improvement input from employees and employee representatives.
 - (6) The status of corrective and preventive actions being implemented.
 - (7) Follow-up actions from OSHMS audits and NECSAS assessments.
 - (8) The performance of the OSHMS relative to organizational expectations.

- C. Provide a mechanism to implement program and process improvements recommended by senior management.

7.1.1. NOAA Executive OSH Council.

The NEOSHC consists of a panel of NOAA senior executives who convene to review the performance of the NOAA OSHMS and its associated OSH programs. The NEOSHC provides guidance and makes strategic decisions to eliminate workplace hazards and reduce workplace risks. The following details the makeup and role of the NEOSHC:

- A. The NEOSHC will convene at least semi-annually or at the call of the chairman. The Council:
 - (1) Reviews NOAA accident trends.
 - (2) Discusses reports of fatal and other serious accidents, and recommends appropriate countermeasures.
 - (3) Provides OSHMS improvement guidance based on evaluation of lagging, current, and leading performance indicators.
 - (4) Discusses and recommends measures to control or eliminate hazards, formulate changes in accident prevention policies, and oversee accident-prevention processes.
 - (5) Provides guidance on resourcing and improvements of the OSHMS.
- B. The NEOSHC is chaired by the DUSO. The Chair is responsible for the effectiveness of the council. The DASHO, or their designated representative, will approve the meeting agenda and council minutes.
- C. The Chief of NOSH will be the Council recorder and has the following responsibilities:
 - (1) Prepares meeting agenda.
 - (2) Maintains records of approved recommendations and monitors the implementation of recommendations.
 - (3) Ensures that NEOSHC issues are entered into the NOAA HAZLOG as applicable.
- D. The positions below are designated as members of the NEOSHC:
 - (1) DUSO (Chair).
 - (2) DASHO/NOAA CAO (represents NOAA Corporate Services).
 - (3) NESDIS AA/DAA.
 - (4) NMFS AA/DAA.
 - (5) NOS AA/DAA.
 - (6) NWS AA/DAA.
 - (7) OAR AA/DAA.
 - (8) The Director of OMAO.
 - (9) The Chief of NOSH (Recorder).
- E. The following OSH subject matter experts are also expected to attend the NEOSHC:
 - (1) LO/SO OSH manager.
 - (2) OWCP Program Manager.

- (3) The Director of NOAA Homeland Security Program Office.
 - (4) The Director of SECO.
 - (5) Other Corporate Staff Office directors as directed by the DUSO or as dictated by the meeting agenda.
 - (6) The representative from NOAA's employee bargaining unit.
 - (7) Other subject matter experts as requested.
- F. Other LO/SO and field/program managers and safety managers are encouraged to attend and participate in the council meetings. The council meetings shall be web cast whenever practical to ensure the widest participation.
- G. NEOSHC members will:
- (1) Attend meetings and perform special assignments as directed by the Chair.
 - (2) Identify and report to the NEOSHC, OSH deficiencies with recommendations found in their area of responsibility.
 - (3) Ensure approved recommendations are fully implemented within their areas of responsibility as appropriate.
- H. Formal minutes of the meetings, designating action officers, and suspense for items requiring action will be provided in the meeting minutes. A copy of the minutes will be forwarded to the DASHO for review and approval. All council members will receive copies of the minutes.

7.1.2. Line Office Safety Councils.

NOAA LOs shall convene a LO-level safety council at least semi-annually or at the call of the Chair. The LO AA/DAA or their designated representative will chair their respective safety council. The safety council chairperson will:

- A. Ensure members are designated in writing and membership is appropriate for the organization.
- B. Ensure discussion at the council meetings include discussions and decisions on relevant OSH issues such as:
 - (1) Review of changes in OSH guidelines.
 - (2) Analysis of hazard reports.
 - (3) Analysis of accident experience.
 - (4) Summary of safety inspections and evaluations.
 - (5) Installation hazard abatement processes, including all unabated safety, fire, and health hazards.
 - (6) Review of construction projects as they relate to safety monitoring and compliance.
 - (7) Occupational Health Medical Examination Program.
 - (8) Status of HAZCOM activities.
 - (9) Review of annual accident-prevention goals and objectives.
- C. Formal minutes of the meetings, designating action officers, and suspense for items requiring action will be provided in the meeting minutes. A copy of the minutes will be forwarded to the DAA for review and approval. All council members will receive copies of the minutes.

7.1.3. Safety Boards and Safety Committees.

NOAA has established safety boards and safety committees to provide review and oversight of local OSH programs or OSH review and oversight of NOAA specialized programs. Safety committees focus on OSH activities for field and program offices. Safety board's focus on NOAA specialized programs such as the small boats program and the diving program. This section provides the basic requirements that these boards and committees shall follow. Each board or committee charter provides additional requirements and details the function of the board or committee.

- A. Employee Safety and Health Committee: The purpose of the employee OSH committee is to develop and promote a healthy and safe environment for employees through the involvement of individuals in the management review process of the OSHMS and associated OSH programs. The following requirements apply to employee OSH committees:
- (1) Field and program offices shall provide for employee OSH committees. Employee OSH committees should hold meetings at least semi-annually.
 - (2) The site/program office manager shall chair the employee OSH committee and shall appoint committee members. At a minimum, the committee membership shall consist of:
 - (a) Employee bargaining unit representatives.
 - (b) Contractor supervisory official to represent the direct support contract employees (to represent contract OSH issues).
 - (c) Specialty area representatives as needed (e.g. science/lab safety representatives, facility management/maintenance representatives, etc.).
 - (3) The site/program office CDSHP shall act as the recorder of the employee OSH committee.
- B. NOAA Small Boat Safety Board: The NOAA Small Boat Safety Board provides OSH management review and oversight of small boat programs and OSH issues as they pertain to small boat operations. The Small Boat Safety Board comprises members from NOAA LOs/SOs that operate NOAA small boats. Refer to Section 11 below for more details.
- C. NOAA Diving Control and Safety Board: The NDCSB is an appointed board of representatives from NOAA LOs/SOs that conducts reviews of diving operations and management, and provides oversight for the safety and effectiveness of the NOAA Diving Program. Refer to Section 12 below for more details.
- D. NOAA Radiation Safety Board: The NOAA Radiation Safety Board provides OSH management review and oversight for the use of ionizing and non-ionizing radioactive commodities. The Radiation Safety Board comprises members from NOAA LOs/SOs that use ionizing and non-ionizing radioactive commodities. Refer to Section 17 below for more details.

7.1.4. Other Management Review Processes.

NOAA conducts OSH management review processes in addition to safety councils, boards, and committees. The following guidance applies specifically to the listed management review processes. LOs/SOs and field/program offices may develop additional management review processes as they deem necessary.

- A. Quarterly Line Office OSH performance review: SECO shall conduct an OSH performance review of all Line Offices. The review shall consist of an analysis of lagging, current, and leading OSH performance indicators. SECO shall present their findings to Line Office senior management and its

OSH managers quarterly. The Line Office AA/DAA should participate at least semi-annually in the review process.

- B. Annual OSHMS Performance Report: In accordance with reporting procedures outlined in 29 CFR 1904 and 1960, NOAA shall complete an annual report representing an analysis into the performance of its OSHMS. SECO shall complete this report no later than March 1 of each year and the report shall encompass performance for the previous calendar year. In addition to the OSHA required reporting elements, the annual report shall include an analysis of lagging, current, and leading OSH performance indicators to assess the overall health of the OSHMS. The report shall also provide an assessment of progress in achieving strategic goals and objectives as well as action plan targets.
- C. Semi-annual DUSO/DASHO update: SECO shall conduct a review of the NOAA OSHMS and its associated OSH programs. The review shall consist of an analysis of lagging, current, and leading OSH performance indicators. SECO shall present their analysis findings to the DUSO/DASHO semi-annually. One of the semi-annual briefings shall include a review of the annual OSHMS performance report described in paragraph B above.

7.2. Management Review of Outcomes and Systems Improvements.

The purpose of the management review process is to identify actions that lead to the elimination of workplace hazards, reductions in workplace risks, and the continuous improvement of the OSHMS. The following provides outcome actions and follow-up activities to facilitate this purpose:

- A. The management review process should result in providing:
 - (1) Guidance in developing strategic goals and objectives.
 - (2) Guidance in developing annual safety action plans and the development of performance targets.
 - (3) Guidance leading to necessary changes in NOAA level and LO/SO level policies, priorities, objectives, resource allocation, and other OSHMS elements.
- B. SECO shall develop a system to track and manage NOAA-level action items generated by the management review process. The tracking mechanism at a minimum shall include the following information:
 - (1) A description of the underlying systemic deficiency that the action is intended to address.
 - (2) Risk assessment associated with the underlying systemic deficiency.
 - (3) The action to address the systemic deficiency.
 - (4) The organization responsible for the action.
 - (5) The cost of the action.
 - (6) The action point of contact.
 - (7) Current status toward completion of the action.

- C. Line Offices shall develop a similar tracking mechanism for Line Office-level action items. At a minimum, Line Office tracking systems shall contain the same information as defined in paragraph B above. The Line Office tracking mechanism shall be inspected as part of the OSH self-assessment and the OSHMS audit.
- D. The status of action items shall be included in NOAA-level and Line Office-level management review processes.

PART TWO: OPERATION SUPPORT AND FIELD OPERATIONS SAFETY AND HEALTH PERFORMANCE STANDARDS

SECTION 8. MOTOR VEHICLE SAFETY.

8.1. Scope.

This section applies to all NOAA Corps officers at any time, NOAA employees, volunteers, and student interns, in an on-duty status, and to all NOAA affiliate personnel who are drivers of motor vehicles on official NOAA business. For the purposes of this section, a motor vehicle on official business (government vehicle) includes NOAA-owned or leased vehicles (to include commercial rental vehicles) and privately-owned vehicles driven while on official NOAA business. This section applies to all locations where NOAA personnel are driving motor vehicles on or off a NOAA site/campus while on official NOAA business.

8.2. Purpose.

This section defines high-level OSH performance requirements and establishes OSH responsibilities to provide a safe working environment for its workforce and for NOAA affiliates exposed to the risks associated with motor vehicle and traffic safety. It defines core requirements for motor vehicle safety and loss-prevention activities within NOAA that are designed to reduce the risk of death or injury to NOAA personnel from motor vehicle accidents.

8.3. Roles and Responsibilities.

A. Managers/supervisors will:

- (1) Enforce the motor vehicle safety standards and guidelines outlined in this NOAA Manual, [NAO 209-1A](#), [NOSH](#), and DAO 209-4, OSH Program. Any deviations from these established standards will be a conscious decision based on prudent risk management. Specific control measures for any deviations will appear in plans and orders. Note: NOAA drivers are not authorized to deviate from DOT, state, and local motor vehicle regulations and standards.
- (2) Ensure that NOAA drivers under their supervision comply with distracted driver restrictions outlined in Section 8.4.2 below.
- (3) Ensure all drivers are trained in accordance with Section 5.2.1.3.2 above.
- (4) Ensure drivers of NOAA emergency vehicles comply with all local traffic laws governing the operating speeds of such vehicles and traffic control devices on public roads. Local laws will govern the use of sirens and rotating or flashing lights on public roads.

B. The driver of a vehicle is responsible for the safe operation of the vehicle, to include:

- (1) Complying with local traffic laws and posted speed limits.
- (2) Ensuring all vehicle occupants wear available restraint devices.
- (3) Complying with distracted driver restrictions listed in Section 8.4.2 below.
- (4) Not exceeding the authorized seating capacity of the vehicle.

8.4. Application.

NOAA personnel routinely operate motor vehicles in urban and rural locations often under challenging conditions. Operations range from routine administrative travel to first responder/law enforcement

actions, sometimes under extreme weather and traffic conditions. The following actions shall be implemented at all LO/SO and field/program office activities to reduce risks associated with motor vehicle operations.

8.4.1. Risk Management – Motor Vehicles.

RM is an operationally focused decision-making process to systematically evaluate possible courses of action, identify risks and benefits, and determine the best course of action for any given situation. The RM process ensures more consistent results and adds rigor to the traditional approach of accomplishing operations. For the purposes of this section, all government vehicle operations shall include RM as part of the risk mitigation process. To ensure consistent implementation of RM in government operations requiring the use of a government vehicle as defined by Section 8.1 above, LO/SO and field/program offices shall develop a RM plan, in accordance with Section 5.1 above, applicable to their government vehicle operational requirements. At a minimum, the RM plan shall include requirements for the use of generic (see Appendix B) or motor vehicle operations-specific RM worksheets.

8.4.2. Defensive Driving.

Safer vehicles and highway designs may save many lives, but even transportation safety engineers cannot design safe drivers. Safe drivers are created through a personal commitment to drive in ways that saves lives, time, and money in spite of the conditions around them or the actions of other drivers. In other words, the person behind the wheel is responsible for helping reduce traffic collisions and violations by learning to drive more safely and defensively. To address concerns for defensive driving, the following applies to all NOAA drivers (NOAA employees, volunteers, student interns, and NOAA affiliates):

- A. At a minimum, LO/SO and field/program office drivers shall receive the National Safety Council's Defensive Driving Course or the equivalent prior to the operation of any government vehicle as defined by Section 8.1 above. LOs/SOs may require more comprehensive defensive driving training programs based on their operational requirements. LOs/SOs shall ensure these other defensive driving training programs at least deliver the minimum content provided in the National Safety Council's Defensive Driving Course.
- B. NOAA drivers of GOV's shall complete defensive driver refresher training at least every three years. SECO shall provide training resources designed to meet this requirement. LOs/SOs may provide alternative defensive driving refresher training based on their operational requirements as long as it delivers the minimum content provided by the SECO defensive driving training.

8.4.3. Distracted Driving.

The person behind the wheel is also responsible for avoiding distractions while driving. Distractions can manifest in a variety of forms, such as mobile phones, texting, the actions of other drivers, global positioning systems, and eating or drinking while driving. To address concerns related to distracted driving, the following applies to all NOAA drivers of GOV's (NOAA employees, volunteers, student interns, and NOAA affiliates):

- A. All drivers are prohibited from texting or talking on any personal or government-provided mobile phone (including hands-free device) while operating a government vehicle as defined in Section 8.1 above.
- B. All drivers are prohibited from texting or talking on any government-provided mobile phone (including hands-free devices) while operating any motor vehicle or marine vessel.

- C. All drivers are prohibited from programming vehicle electronic devices (including computers, radios, and global positioning system devices) while driving a government vehicle as defined by Section 8.1 above.
- D. LO/SO and field/program offices may require distracted driving awareness training as dictated by the needs of their operational requirements and environments.

8.4.4. Use of Safety Equipment.

- A. Safety equipment shall be used in accordance with the risk assessment results based on exposure to hazards. Equipment may include snow chains, tow bars, roadside emergency equipment, signaling devices, etc.
- B. Specialty vehicles (e.g. slow-moving equipment such as golf carts, utility vehicles, and powered industrial trucks (forklifts)), that are allowed to operate outside of a controlled work area and on streets, roads, and highways will meet the minimum vehicle safety standards according to [49 CFR 571.500](#), to include rollover protection, occupant protective devices, and placement of “Slow Moving Vehicle” emblems where required. Contractor equipment in this category shall also comply with these requirements.

8.4.5. Use of Tobacco Products and eCigarettes.

Use of all tobacco products, including vaping and eCigarettes, is prohibited while operating or riding as a passenger in a government-leased or owned motor vehicle. This policy does not carry over to POV’s.

8.4.6. Spotters/Ground Guides.

Spotters/ground guides are required for backing of all NOAA cargo trucks (1 ton and larger) and for any NOAA vehicle towing a trailer. Spotters/ground guides will not stand between the vehicle being guided and any object where an inadvertent engine surge or momentary loss of vehicle control could result in injury or death.

8.4.7. Vehicle Backing.

Operators of NOAA motor vehicles (as described in Section 8.1 above) shall verify that the area around and behind the vehicle is clear of all obstructions prior to backing, when feasible. It is recommended to use backing guides if available. It is also highly encouraged to use cones (one in front and one in rear of vehicle) when the vehicle is parked and no operator is in the vehicle.

SECTION 9. FIELD SUPPORT SAFETY AND HEALTH.

9.1. Scope.

This section applies to all NOAA Corps officers at any time, NOAA employees, volunteers, student interns, and NOAA affiliates in an on-duty status while conducting NOAA field support/research activities. For the purposes of this section, field support activities include all non-boating activities conducted in the field/undeveloped locations. Activities include, but are not limited to, the following:

- A. Shore-based dive operations.
- B. Protected species response (oil spill, field necropsy, disentanglement, etc.).

- C. Shore-based research (beach seining, instrument installation/removal/calibrations, etc.).
- D. Marine mammal research in remote land-based locations.
- E. Marine debris cleanup.

9.2. Purpose.

This section defines high-level OSH performance requirements and establishes OSH responsibilities to provide a safe working environment for its workforce and for NOAA affiliates exposed to risks associated with NOAA field operations. Its primary focus is to ensure NOAA field operations are conducted in a manner that will maximize the protection of NOAA employees, volunteers, student interns, and NOAA affiliates from accidental injury and/or illness. This applies to all field activities as described in Section 9.1 above.

9.3. Roles and Responsibilities.

- A. LO/SO and field/program offices: LO/SO and field/program offices participating in activities described in Section 9.1 above shall:
 - (1) Make this manual available to all NOAA personnel within their organization and ensure all safety policies are adhered to by their organization.
 - (2) Ensure that NOAA personnel receive appropriate training as prescribed by their risk analysis.
 - (3) Ensure that all required equipment and safety supplies, including personal protective equipment, is provided as prescribed by the risk analysis.
 - (4) Support teams conducting investigations of field incidents.
- B. NOAA, Office of the CAO: NOAA's CAO will:
 - (1) Ensure that all NOAA safety policies are adhered to by the program.
 - (2) Assist in the development of field support safety and health policies and procedures.
 - (3) Participate in all Class A, B, or C accident investigations involving operations in remote field locations.

9.4. Application.

NOAA personnel routinely conduct field support activities and operations in remote locations often under challenging conditions. Operations range from non-routine responses to oil spills to routine marine mammal research. In all situations, however, special precautions and actions must be taken to ensure a safe and healthful work environment. To address these requirements, the following actions shall be implemented during all LO/SO and field/program office activities engaged in field operations at remote locations.

9.4.1. Risk Management – Field Support Safety and Health.

RM is an operationally focused decision-making process to systematically evaluate possible courses of action, identify risks and benefits, and determine the best course of action for any given situation. The RM process ensures more consistent results and adds rigor to the traditional approach of accomplishing operations. All field operations and support activities shall include risk management as part of the risk-

mitigation process. To ensure consistent implementation of RM in operations occurring at remote field locations, LO/SO and field/program offices shall develop a risk-management plan, in accordance with Section 5.1 above, applicable to their field operational requirements. At a minimum, the RM plan shall include requirements for the use of generic (see Appendix B) or operational-specific RM worksheets.

9.4.2. Basic Operational Requirements.

In addition to general risk-management methodologies, other considerations for inclusion into the risk analysis worksheet should include:

- A. Location of operations: Location will make a huge difference in the RM process. For example, RM for shore-based diving operations in Seattle will be very different from monk seal surveying in the northwestern Hawaiian Islands.
- B. Communications: Develop procedures/protocols for communicating with personnel who are working in the field at all times. Communication methods may include the use of equipment (i.e. satellite telephones, cellular telephones, and hand-held radios), maintaining check-out/check-in boards and third party points of contact. For remote areas where communications are limited, an early extrication plan shall be determined by all parties involved (Note: activities in these type of locations require advanced medical training and supplies).
- C. Emergency Preparedness: Each field activity will differ depending on the environmental conditions and type of work activities scheduled. At a minimum, all personnel working in the field will be equipped with basic first aid supplies (unless the RM process determines otherwise) and first aid training. In addition, each team shall receive appropriate training in the recognition and protection from adverse environmental changes such as severe storms, earthquakes and fire events.
- D. Personnel Safety: All team members will receive appropriate personal protective equipment based on the hazards identified through a JHA (performed by safety and supervisory personnel). Employees shall receive training on using, maintaining, and storing PPE.
- E. Medical Evacuation: Procedures for the immediate medical evacuation of personnel shall be developed and shared with all team members. Procedures shall include at minimum, the contact information of responding company, location of emergency (latitude/longitude), and specific extrication points.
- F. Working Alone: Working alone in a remote field environment is an inherently risky activity and shall be discouraged. In those field operations where working alone is the only reasonable means to accomplish a task and risks are determined to be greater than a low risk, approval from senior leadership will be required. In addition to the RM elements previously addressed in this document, special attention must be taken when considering working alone. Special attention includes continuous communications capabilities, emergency response protocols, self-rescue training/protocols, and required PPE and other safety equipment and materials. In areas where dangerous wildlife exists, the use of firearms for self-defense may be required and authorized.

9.4.3. Field Sanitation.

The U.S. Department of Labor has developed specific minimum requirements for agriculture employees working in field operations. NOAA has similar exposures where several organizations have employees working in remote locations and in areas with no common utilities such as running water, power, etc. For these type of working operations, this section provides the minimum requirements for those employees exposed to these conditions:

- A. Drinking Water: LOs/SOs and field/program offices conducting field operations must provide potable drinking water in suitably cool and in sufficient amounts, dispensed in single cups or by fountains that are readily accessible to NOAA employee, student interns, volunteers, and NOAA affiliates.
- B. Toilets and Handwashing Facilities: LOs/SOs and field/program offices conducting field operations must also provide at least one toilet and handwashing facility for every 20 employees. Pre-moistened towelettes cannot be substituted for handwashing facilities. LO/SO and field program offices responsible for field operations shall maintain such facilities in accordance with public health sanitation practices, including:
 - (1) Upkeep of water quality.
 - (2) Serviceable toilets (kept sanitary and operational).
 - (3) Handwashing facilities refilled with potable water as necessary and kept clean, sanitary, and safe.
 - (4) Proper disposal of waste from the facilities.

9.4.4. First Aid.

LO/SO and field/program offices shall conduct a risk assessment to determine the proximity of supporting medical facilities and the response capabilities of emergency responders to identify the need for on premise first-aid capabilities. First aid policies and processes shall be developed in the absence of an infirmary clinic, hospital, or physician services that are reasonably accessible in terms of time and distance to the worksite, which is available for the treatment of injured employees. Policies and processes shall address the following.

- A. Personnel must be trained and certificated in first aid by the American Red Cross or a similar accredited first aid training program. The number of personnel to be trained shall be based on providing continuous coverage while the facility is occupied.
- B. In addition to general first aid requirements, all field operations with AEDs shall develop policies and processes for the use of AEDs. Policies and processes shall include requirements for the training of personnel in CPR and AED use by the American Red Cross or a similar accredited CPR/AED training program. The number of personnel to be trained shall be based on providing continuous coverage while the facility is occupied. Make sure to include vacation time and field research time in determining the number of personnel to train.
- C. Advanced Medical Training: For employees working remotely and beyond the capability of contacting an emergency responder (i.e., 911), it is critical that employees receive advanced medical training appropriate to their environmental exposures. Wilderness medical courses offer training suitable to these conditions and exposures. Wilderness medicine encompasses the prevention, diagnosis, and treatment of injuries and medical conditions that may occur during activities in remote locations.
- D. Medical Supplies: In addition to advanced medical training, employees shall also be equipped with the advanced medical supplies appropriate for the conditions and any expected medical emergencies. A job hazard analysis will help determine the type of medical supplies needed based on potential hazard exposures.

9.4.5. Operations in Extreme Environments.

NOAA conducts operations in extreme environments, such as tropical islands and both polar caps. This section provides guidance on the protection of employees working under extreme conditions.

9.4.5.1. Arctic and Extreme Cold Environments.

LO/SO and field/program offices that conduct operations in extreme cold environments shall develop and implement specific policies, procedures, and guidance related to the hazards common to cold weather (e.g. hypothermia, frostbite, trench foot, etc.). LO/SO and field/program offices shall, at a minimum, address the following in their guidance:

A. Medical.

- (1) Hypothermia.
- (2) Frostbite.

B. Exposure Issues.

- (1) Extreme Temperatures.
- (2) Wind-chill.
- (3) Snow and Ice.

C. Special Equipment.

- (1) Appropriate Clothing.
- (2) Communication.
- (3) First Aid.
- (4) Sanitation.

D. Training.

- (1) Cold Weather Survival Training.
- (2) Emergency Response Training.

9.4.5.2. Tropical and High Heat and Humidity Environments.

LO/SO and field/program offices shall develop policies, procedures and guidance when working in tropical and high heat and humidity conditions. Common symptoms of high heat or humid conditions include nausea, seizures, confusion, disorientation, and sometimes loss of consciousness or coma. LO/SO and field/program offices shall, at a minimum, provide guidance for the following:

A. Medical Considerations.

- (1) Heat Stroke.
- (2) Heat Exhaustion.
- (3) Forced Hydration.

B. Exposure Issues.

- (1) Extreme Temperatures.
- (2) Humidity.
- (3) Heat Index.

- (4) Extreme Weather Conditions.
- C. Special Equipment.
 - (1) Appropriate Clothing.
 - (2) Communication.
 - (3) First Aid.
 - (4) Ice Sheets (if possible).
 - (5) Sanitation.
- D. Training.
 - (1) Hot Weather Survival Training.
 - (2) Emergency Response Training.

SECTION 10. NOAA MARINE OPERATIONS AND SUPPORT SAFETY.

10.1. Scope.

This section applies to all NOAA employees, volunteers, student interns, NOAA affiliates, other agency personnel, and other researchers supported by NOAA-owned or chartered marine vessels. This section also provides limited guidance on marine research operations supported by vessels managed outside NOAA control (e.g. foreign vessels, non-NOAA-chartered commercial marine vessels).

10.2. Purpose.

This section defines high-level OSH performance requirements and establishes OSH responsibilities to provide a safe working environment for workers who are exposed to the risks associated with marine vessels owned and/or operated by NOAA. Its primary focus is to ensure that NOAA marine vessel support operations are conducted in a manner that will maximize protection of crewmembers and other personnel aboard NOAA vessels from accidental injury and/or illness. Specific guidance for NOAA scientists embarked on a non-NOAA vessel can be found in [NAO 209-115, NOAA Employees Aboard Non-NOAA Vessels](#).

10.3. Roles and Responsibilities.

- A. The Director of OMAO is responsible for:
 - (1) Managing and maintaining the NOAA Ship Safety Program.
 - (2) Establishing policies and procedures to ensure safe marine operations that support NOAA's program needs.
 - (3) Managing the NOAA vessel charter program.
- B. The OMAO Director, SECD shall:
 - (1) Establish and maintain a system to oversee NOAA Ship safety.
 - (2) Conduct and/or monitor safety and health compliance/assistance inspections of NOAA's Marine Operation Centers, NOAA port facilities, and NOAA-owned or contracted

- marine vessels.
- (3) Provide safety and health management and oversight of marine vessel activities. This oversight includes:
 - (a) Management and oversight of ship safety and health programs.
 - (b) Management and oversight of ship crew safety and health requirements.
 - (4) Monitor and oversee the conduct of investigations of NOAA marine vessel accidents.
 - (5) Review and provide safety approval for marine vessel charter requests.
 - (6) Provide technical guidance and assistance to those NOAA programs contracting for charter vessel services when requested by program officials or NOAA Contracting Officers.
- C. Scientists/Researchers: Scientists/researchers working aboard NOAA ships, non-NOAA marine vessels, foreign marine vessels, and marine vessels chartered by NOAA:
- (1) Shall follow their Line Office-established policies and procedures for boarding and working safely on marine vessels.
 - (2) Coordinate with OMAO Director, SECD to review safety and health guidance when conducting activities on non-NOAA marine vessels.
 - (3) Visiting scientist shall also be provided and shall follow NOAA policies and procedures for working safely on NOAA-owned and leased marine vessels.

10.4. Application.

NOAA personnel are routinely conducting operations on NOAA-owned and chartered marine vessels. Operations range from marine research to the charting of US coastal areas. The following actions shall be implemented for marine vessel support activities (excludes small boat operations) to facilitate the reduction of risks.

10.4.1. Risk Management – Marine Vessels.

RM is an operationally focused decision-making process to systematically evaluate possible courses of action, identify risks and benefits, and determine the best course of action for any given situation. The risk-management process ensures more consistent results, and adds rigor to the traditional approach of accomplishing operations. All marine vessel support activities shall include risk management as part of the risk-mitigation process. To ensure consistent implementation of risk management in operations conducted on marine vessels, supported LO/SO and field/program offices, with assistances from OMAO SECD, shall develop a risk-management plan, in accordance with Section 5.1 above, applicable to their specific marine support requirements. At a minimum, the RM plan shall include requirements for the use of generic (see Appendix B) or operational-specific RM worksheets.

10.4.2. NOAA Marine Vessel Accident Reporting and Review.

All NOAA marine vessel accidents and incidents, to include accidents and incidents involving supported personnel, shall be reported in accordance with Section 6.2 above and the following guidance:

- A. Formal accident investigation boards are required for all Class A and Class B marine vessel accidents, as well as other marine vessel accidents selected by the Director of OMAO or the DASHO.

- (1) The DASHO is the accident investigation board appointing authority for all Class A NOAA marine vessel accidents.
- (2) The Director of OMAO is the accident investigation board appointing authority for all Class B NOAA marine vessel accidents.

B. All other accidents shall be investigated in accordance with Section 6.2 above.

10.4.3. Marine Vessel Charter.

All marine vessel / small boat chartering activities shall be conducted in accordance with the following:

A. The Director OMAO / OMAO Director, SECD shall:

- (1) Provide technical guidance and assistance to those NOAA programs contracting for charter vessel services when requested by program officials or NOAA Contracting Officers.
- (2) Assist line office programs (utilizing the NOAA Small Boats Program Office) in preparing procurement packages, evaluating proposals, and arranging for necessary examinations and inspections, as requested.
- (3) Establish and maintain minimum charter vessel safety standards.

B. Program officials requiring charter vessel support shall:

- (1) Submit procurement requests to their respective contracting office for acquiring charter vessel services, identifying vessel needs, and developing Statements of Work and other contract documentation as may be required by their contracting office.
- (2) Ensuring that solicitation packages and corresponding statements of work for charter vessel services identify minimum safety requirements.

C. NOAA Contracting Officers and COR/COTRs are responsible for ensuring the following:

- (1) Solicitation packages and corresponding statements of work for charter vessel services shall identify minimum safety requirements.
- (2) Procurement of charter vessel services shall include an evaluation of offerors' technical capabilities, and those evaluations shall consider whether offers meet all safety standards.
- (3) No contract shall be awarded to an offeror that does not meet the minimum safety standards.

10.4.4. Use of Tobacco Products and eCigarettes.

The use of tobacco products, including vaping and eCigarettes, is strictly prohibited while operating a NOAA marine vessel. The use of tobacco products, including vaping and eCigarettes, on marine vessels shall only be allowed in designated areas.

SECTION 11. SMALL BOAT SAFETY.

11.1. Scope.

This section applies to all NOAA employees, volunteers, student interns, NOAA affiliates, other agency personnel, and researchers operating NOAA-owned or chartered small boats as defined in Section 6.01 of [NAO 209-125, NOAA Small Boat Safety Program](#).

11.2. Purpose.

This section defines high-level OSH performance requirements and establishes OSH responsibilities to provide a safe working environment for its workforce and for NOAA affiliates who are exposed to the risks associated with small boats owned and/or operated by NOAA as prescribed in [NAO-209-125, NOAA Small Boat Safety Program](#). Additional safety guidance and information may be found in the [NOAA Small Boat Standards and Procedures Manual](#), [Supplemental Small Boat Policy](#), and Small Boat Operating Manual for detailed information.

11.3. Roles and Responsibilities.

- A. Director of OMAO: Under the charge of the OMAO Director, OMAO is responsible for administering NOAA's Small Boat Program (SBP), establishing policies and procedures to ensure a safe small boat program to support NOAA's program needs, identifying applicable regulations, providing operator training, staffing guidance, and marine engineering assistance on boat alterations, boat design and selection criteria.
- B. NOAA, Office of the CAO: NOAA's CAO will appoint a representative from SECO to the Small Boat Safety Board to:
- (1) Ensure that all NOAA safety policies are adhered to by the program.
 - (2) Assist in the development of small-boat policies and procedures.
 - (3) Participate in all small boat accident investigations.
- C. NOAA Small Boat Program Manager: The Manager is the functional head and communications focal point of the SBP. The Manager, in conjunction with the Small Boat Safety Board (SBSB), is responsible for:
- (1) Managing operator training program development.
 - (2) Inspection program criteria and enactment.
 - (3) [NOAA Small Boat Standards and Procedures Manual](#).
 - (4) NOAA boat inventory.
 - (5) Program compliance and monitoring for all NOAA small boats and operators.
 - (6) Budget development and implementation, both short and long term.
 - (7) Accident and incident reporting and tracking in accordance with Section 6.2.
 - (8) Investigating and/or assisting in the investigation of all small boat-related accidents.
 - (9) Small boat operations RM development.
 - (10) Website development and maintenance.
 - (11) Development and maintenance of the program's organizational and communication structure.
- D. NOAA Small Boats Program Inspection Coordinator: The SBP Inspection Coordinator shall:
- (1) Coordinate, schedule, and conduct boat inspections of Class III boats and SRVs.
 - (2) Identify applicable regulations and provide guidance.
 - (3) Coordinate and review small boat stability standards.
 - (4) Provide engineering and technical support to LOs/SOs.

- (5) Maintain SBP files for inspections and status.
- E. NOAA Small Boats Engineering Coordinator: The SBP Engineering Coordinator shall:
- (1) Review and provide engineering and technical guidance for boat alterations and repairs.
 - (2) Coordinate, assist, and provide training for the SBP's preventive maintenance program and maintain files for vessel alterations and repairs.
 - (3) Review and assist Vessel Operations Coordinators with contracted repairs and maintenance specifications.
 - (4) Conduct marine surveys and assessments of boat hulls, structures, and overall vessel condition.
 - (5) Assist the Small Boat Inspection Coordinator with annual inspections of Class III boats and SRVs.
 - (6) Perform the duties as a technical advisor to the COR/COTR for small boat contracted construction, repairs, and maintenance as requested by a Line Office.
- F. NOAA Small Boat Safety Board: The NOAA Small Boat Safety Board is composed of members from NOAA LOs/SOs that operate NOAA small boats. Organizations include NMFS, NOS, OAR (NWS), OMAO, and OCAO (SECO). The objective and purpose of the Small Boat Safety Board is reflected in its [charter](#).
- G. LO/SO Assistant Administrator: The Assistant Administrator (AA) maintains overall responsibility for compliance with policies and for the safe use and management of all small boats within the LO/SO.
- H. LO/SO Small Boat Officer (LOSBO): The LOSBO represents both individual programs and the LO/SO as a whole on all matters pertaining to small boat operations. The LOSBO often serves on NOAA's Small Boat Safety Board and the LO/SO's Small Boat Committee. The LOSBO assists LO/SO Regional Programs in carrying out safe and effective small boat operations, and coordinates LO/SO compliance with [NAO-209-125, NOAA Small Boat Safety Program](#). The LOSBO will have authority from his/her Director or AA to issue "No Sail" orders to all boats within his/her purview that are operating out of compliance.

11.4. Application.

NOAA relies on small boats to achieve operation requirements. Operations range from marine sanctuary support to diving support activities. Operating small boats in support of NOAA operations involves unique risks. The following actions shall be implemented at all LO/SO and field/program office activities that operate NOAA-owned or leased small boats in order to reduce risks associated with small boat operations.

11.4.1. Risk Management – Small Boats.

RM is an operationally focused decision-making process to systematically evaluate possible courses of action, identify risks and benefits, and determine the best course of action for any given situation. The RM process ensures more consistent results, and adds rigor to the traditional approach of accomplishing operations. All small boat operations shall include RM as part of the risk-mitigation process. To ensure the consistent implementation of RM in small boat operations, LO/SO and field/program offices shall develop a risk-management plan, in accordance with Section 5.1 above, applicable to their small boat operational requirements. At a minimum, the RM plan shall include requirements for the use of generic (see Appendix B) or operational-specific RM worksheets.

11.4.2. Use of Safety Equipment.

- A. Crewmembers and passengers shall use the required safety equipment and devices while onboard NOAA-owned and leased marine vessels as directed by the Commanding Officer or Small Boat Captain. Training in the use of safety equipment shall be completed prior to departure by the responsible authority.
- B. Equipment related to moving small boats (i.e., tow bars, trailers, hitches, safety chains, etc.) shall be used in accordance with the manufacturer's specifications.

11.4.3. Use of Tobacco Products and eCigarettes.

The use of tobacco products, including vaping and eCigarettes, is strictly prohibited while operating a NOAA marine vessel. The use of tobacco products, including vaping and eCigarettes, on marine vessels shall only be allowed in designated areas.

11.4.4. Small Boat Accident/Incident Reporting and Review.

All NOAA small boat accidents and incidents, including accidents and incidents involving supported personnel, shall be reported in accordance with Section 6.2 above and the following guidance:

- A. Formal accident investigation boards are required for all Class A small boat accidents, as well as other small boat accidents selected by the Director of OMAO or the DASHO. The DASHO is the accident investigation board appointing authority for all Class A small boat accidents.
- B. All other accidents shall be investigated in accordance with Section 6.2 above.

SECTION 12. DIVING SAFETY.

12.1. Scope.

This section applies to all NOAA employees, volunteers, student interns, and NOAA affiliates who are engaged in diving activities as part of their official duty, as well as non-NOAA personnel performing dives under the direct supervision of a NOAA Divemaster or Lead Diver, where compressed gas is breathed in a hyperbaric environment.

12.2. Purpose.

This section defines high-level OSH performance requirements and establishes OSH responsibilities to provide a safe working environment for its workforce and for NOAA affiliates exposed to the risks associated with NOAA Diving Operations as prescribed in [NAO-209-123, NOAA Diving Program](#). Its primary focus is to ensure that NOAA diving operations are conducted in a manner that will maximize the protection of divers from accidental injury and/or illness. This applies to all diving activities conducted by NOAA divers and reciprocity partners as part of their official duty, regardless of the types of tasks performed underwater (i.e., working or scientific diving). Additional safety guidance and information may be found in the [NOAA Diving Standards and Safety Manual](#).

12.3. Roles and Responsibilities.

- A. The Director of OMAO is responsible for the NOAA Diving Program (NDP) and is responsible for the following:
- (1) Delegating responsibility for administering and managing the NDP to the NOAA Diving Program Manager.
 - (2) Ensuring that a NOAA Diving Control Safety Board (NDCSB) is established and in place.
 - (3) Approving the appointment of NOAA Diving Control and Safety Board members.
- B. The NOAA's CAO will appoint a non-voting representative from SECO to the NOAA Diving Control and Safety Board to:
- (1) Ensure all NOAA safety policies are adhered to by the program.
 - (2) Assist in the development of dive-related policies and procedures.
 - (3) Participate in all diving accident investigations.
- C. The NOAA Diving Program Manager (NDPM):
- (1) Reports to the OMAO Director and is responsible for the management of the NDP.
 - (2) Works with and implements all policies and decisions prescribed by the NDCSB.
 - (3) Reviews all recommendations by the NOAA Diving Safety Officer (NDSO).
 - (4) Reviews all diving service contracts to ensure compliance with [NOAA Diving Standards and Safety Manual](#) where applicable.
- D. NOAA Diving Control and Safety Board (NDCSB): The NDCSB is an appointed board of representatives from NOAA Line and Staff Offices who report to the Director of OMAO and is responsible for the safety and effectiveness of the NOAA Diving Program:
- (1) The NDCSB advises NOAA leadership on all working diving operations in accordance with [29 CFR 1910 Subpart T](#), this manual, and the [NOAA Diving Standards and Safety Manual](#).
 - (2) The NDCSB exercises autonomous and absolute authority over the scientific diving operations in accordance with [29 CFR 1910 Subpart T](#) and the [NOAA Diving Standards and Safety Manual](#). This authority extends to the following:
 - (a) Reviews and approves all official diving operations.
 - (b) Advises the OMAO Director of circumstances adversely affecting safety and/or efficiency of the NDP.
 - (c) Approves and monitors science diving projects.
 - (d) Reviews and revises the science diving safety manual.
 - (e) Assures compliance with the science diving safety manual.
 - (f) Certifies the depths to which a diver has been trained.
 - (g) Takes disciplinary action for unsafe practices.
 - (h) Assures adherence to the buddy system (a diver is accompanied by and is in continuous contact with another diver in the water) for SCUBA diving (detailed instruction can be found in the NOAA Diving Standards and Safety Manual).
- E. The Chairperson of the NOAA Diving Control and Safety Board:

- (1) Is selected from the voting members of the NDCSB by a majority vote of all NDCSB voting members.
- (2) Is a current and active NDP scientific diver.
- (3) Reports directly to the OMAO Director on all matters of diving safety.

F. The NDSO:

- (1) Is selected by the OMAO Director / OMAO Director, SECD from a WFMO-certified list of candidates with recommendation from the NDCSB.
- (2) Is assigned as a staff member within OMAO SECD.
- (3) Provides advice to the NDCSB, NOAA Managers, and divers for working and scientific diving safety and health-related issues.
- (4) Investigates or assists in the investigation of all diving-related accidents.
- (5) Manages the NOAA Dive Unit Safety Assessment (DUSA) Program in accordance with [NOAA Diving Standards and Safety Manual](#).
- (6) Assesses the appropriateness and consistency of diving safety requirements for NOAA federal, grant and contract procedures, and provides recommendations to appropriate NOAA Managers and the NDCSB.

G. The LO/SO AA maintains overall responsibility for compliance with policies and for the safe use and management of all diving operations within the LO/SO. The AA appoints a LO/SO diving officer to be their representative on the NDCSB.

H. Line and Staff Office Diving Officers (LODO) serve on the NDCSB as subject matter experts. They provide technical support to Class A and Class B diving accident investigation boards (may also serve on the board as directed by the board appointing authority).

12.4. Application.

NOAA diving operations shall be conducted in accordance with [NAO-209-123, NOAA Diving Program](#) including all Diving Safety Manuals authorized by [NAO-209-123, NOAA Diving Program](#). All NOAA working diving operations shall also be conducted in accordance with OSHA commercial diving regulations as codified in [29 CFR 1910 Subpart T](#), or applicable alternate standards approved by OSHA.

12.4.1. Risk Management – Diving Safety.

RM is an operationally focused decision-making process to systematically evaluate possible courses of action, identify risks and benefits, and determine the best course of action for any given situation. The RM process ensures more consistent results, and adds rigor to the traditional approach of accomplishing operations. All dive operations shall include RM as part of the risk-mitigation process. To ensure consistent implementation of RM in dive operations, the NDCSB shall develop a RM plan, in accordance with Section 5.1 above, applicable to working and scientific diving operations. At a minimum, the RM plan shall assess and manage risk based on specifications outlined in individual Dive Operations Plans.

12.4.2. Diving Accident/Incident Reporting and Review.

All diving accidents and incidents shall be reported in accordance with this manual and the NOAA Diving Standards and Safety Manual. Diving accident investigations shall be conducted in accordance with Section 6.2 above and the following guidance:

- A. Formal accident investigation boards are required for all Class A and Class B diving accidents, as well as other diving accidents selected by the Director of OMAO, or the DASHO.
 - (1) The DASHO is the accident investigation board appointing authority for all Class A diving accidents.
 - (2) The Director of OMAO is the accident investigation board appointing authority for all Class B diving accidents.
- B. The LODO, with support of LO/SO and NDSO, investigates Class C and Class D diving accidents. Full copies of dive accident investigation reports, including findings and corrective recommendations, shall be forwarded to the NDSO and SECO. The LODO conducts or delegates annual onsite dive organization inspections and forwards reports to the NDSO each year.

SECTION 13. AVIATION SAFETY.

13.1. Scope.

This section applies to all NOAA employees, volunteers, student interns, and NOAA affiliates flying on any aircraft in the performance of their official duties, and to all individuals flying on aircraft owned or operated by NOAA. For purposes of this order, aircraft operated by NOAA includes aircraft:

- A. Rented, chartered, leased, or owned by NOAA or NOAA personnel, and used to conduct official business.
- B. Operated by public or private entities on behalf of NOAA through written support agreements with NOAA.

13.2. Purpose.

This section defines high-level OSH performance requirements and establishes OSH responsibilities to provide a safe working environment for its workforce, and for NOAA affiliates exposed to the risks associated with using aircraft owned, chartered, or operated by NOAA as prescribed in [NAO-209-124, NOAA Aviation Safety Policy](#). Additional safety guidance and information may be found in the [NOAA Aviation Safety Policy Handbook](#) and aircraft-specific operating manuals.

13.3. Roles and Responsibilities.

- A. Director of OMAO: Under the charge of the OMAO Director, OMAO is responsible for administering NOAA's Aviation Safety Program, establishing policies and procedures to ensure a safe aviation program to support NOAA's program needs, identifying applicable regulations, providing operator training, staffing guidance, and aviation engineering assistance on aircraft alterations and selection criteria.
- B. The NOAA's CAO will appoint a representative from SECO to the NOAA Aviation Safety Board to:

- (1) Ensure all NOAA safety policies are adhered to by the program.
 - (2) Assist in the development of aviation safety policies and procedures.
 - (3) Participate in all aviation accident investigations.
- C. The NOAA Aviation Safety Program Manager shall:
- (1) Maintain the Aircraft Operator Database (AOD).
 - (2) Facilitate the acquisition of aviation safety training.
 - (3) Acquire, distribute, and maintain Aviation Life Support Equipment.
 - (4) Provide aviation safety tools and instruction.
 - (5) Provide assistance to NOAA contracting officials by providing contract language for inclusion in all relevant contracts and agreements that set forth airworthiness and safety standards.
 - (6) Serves as a source evaluation board and technical evaluation panel advisor to evaluate offeror's aviation-related technical proposals.
- D. The NOAA Aviation Safety Officer (ASO): All actions involving aviation safety that have NOAA implications, or require NOAA input or approval, will be coordinated directly with the ASO. The ASO is responsible for:
- (1) NOAA aviation safety policies and guides.
 - (2) Aviation accident and incident-reporting protocol and tracking as described in Section 6.2 above.
 - (3) RM development.
 - (4) Website development and maintenance.
 - (5) Development and maintenance of the program's organizational and communication structure.
- E. NOAA Aviation Safety Board.
- (1) The NOAA Aviation Safety Board works in partnership with the NOAA Aviation Safety Program Manager (ASPM) to support the effective implementation of NOAA's Aviation Safety Program and NOAA's Aviation Safety Policy set forth in [NAO-209-124, NOAA Aviation Safety Policy](#). The direct involvement of Line and Staff Offices in helping to shape and implement the NOAA Aviation Safety Program is critical to the success of the Program.
 - (2) The NOAA Aviation Safety Board is composed of members from NOAA LO/SO. Organizations include OMAO Aircraft Operations Center (AOC), SECO, NMFS, NOS, NWS, OAR, and NESDIS. The objective and purpose of the Aviation Safety Board is reflected in its [charter](#).

13.4. Application.

NOAA personnel routinely perform aircraft crew duties or conduct research and observation activities supported by NOAA-owned or chartered aircraft. Operations range from aerial observation of climatic conditions to flying into active hurricanes. The following actions shall be implemented for aviation activities to facilitate the reduction of risks.

13.4.1. Risk Management.

RM is an operationally focused decision-making process to systematically evaluate possible courses of action, identify risks and benefits, and determine the best course of action for any given situation. The risk-management process ensures more consistent results, and adds rigor to the traditional approach of accomplishing operations. All aviation operations shall include RM as part of the risk-mitigation process. To ensure consistent implementation of RM in aviation operations, AOC shall develop a risk-management plan, in accordance with Section 5.1 above, that's applicable to aviation operations. At a minimum, the RM plan shall include requirements for the use of generic (see Appendix B) or aviation-specific RM worksheets.

13.4.2. Aviation Accidents.

The Commander of AOC will:

- A. Take immediate action and initial notification procedures as described in Section 6.2.5 of this manual for Class A, B, and C aviation mishaps.
- B. Conduct preliminary actions and reporting procedures outlined in Section 6.2 of this manual for Class D mishaps.
- C. Ensure aircraft damaged or suspected of damage will not be flown until cleared for flight by qualified maintenance personnel.
- D. Conduct an immediate stand-down of the organization any time a Class A or B aviation accident occurs.
 - (1) This stand-down has no specific duration and is meant to present the known facts of the accident to all organization members. The safety stand-down also provides time to check aircraft in the organization for faults, which may be germane to the accident.
 - (2) During the stand-down, an internal review will be conducted to preclude further accidents.

13.4.3. Aviation Life Support Equipment (ALSE).

ALSE is equipment designed to protect crewmembers and others aboard an aircraft, or to assist in their safe escape, survival, and recovery during an accident or other emergency. All users of ALSE shall comply with ALSE guidance outlined in the NOAA Aviation Safety Policy Handbook while performing duties as aircraft crewmembers and qualified non-crewmembers (e.g. OR&R response personnel using ALSE). The following are specific requirements for using ALSE:

- A. OMAO AOC has the overall responsibility for establishing ALSE policy and for oversight of NOAA's ALSE program.
- B. ALSE equipment shall be inspected and certified for use annually (or sooner based on equipment manufacturer recommendations) for serviceability by trained ALSE technicians in AOC or by a qualified commercial vendor.
- C. Personnel authorized use of NOAA provided ALSE shall receive ALSE training in accordance with Section 8 of the [NOAA Aviation Safety Policy Handbook](#).
- D. ALSE shall be maintained in accordance with the requirements outlined in the [NOAA Aviation Life Support Equipment Program Guide](#).

13.4.4. Helicopter Landing Areas.

Helicopter Landing Areas (HLA) are areas other than airfields and heliports designated for routine helicopter landings and departures. The following requirements apply to all HLAs:

- A. Managers of NOAA field offices and activities requesting an HLA must submit a request in writing to the NOAA ASO stating specific operational requirements that warrant an HLA. A completed NOAA Form 64-90, Survey of Helicopter Landing Area (see Appendix B) for the requested site will be included with the request. The senior manager of the field office or activity requesting the HLA must state in the request that they assume responsibilities for the HLA and that HLA requirements outlined in this NOAA Manual shall be maintained.
- B. Managers of NOAA field offices and activities that have HLAs shall conduct surveys of each HLA using the NOAA Form 64-90, Survey of Helicopter Landing Area (see Appendix B) at least semi-annually or when changes to the HLA occur. Copies of completed surveys shall be forwarded to the ASO. Completed surveys shall be maintained on file for two years.
- C. Managers of NOAA field offices and activities that have HLAs are responsible for coordinating emergency services support with local emergency response agencies.
- D. The ASO is responsible for processing and approving all HLA requests. The ASO shall also review all HLA surveys to ensure that they continue to meet operational safety requirements.
- E. Managers of NOAA field offices and activities that have HLAs are responsible for keeping these areas in operational condition and shall develop SOPs to describe the actions needed to maintain this condition.

13.4.5. Aviation Charter Safety.

All aircraft chartering activities shall be conducted in accordance with [NAO 209-124, Aviation Safety Policy](#), [NAO 216-104-A, Management and Utilization of Aircraft](#), and the NOAA Aviation Safety Policy Handbook.

- A. The NOAA ASPM shall:
 - (1) Provide technical guidance and assistance to those NOAA programs contracting for charter aircraft services when requested by program officials or NOAA Contracting Officers.
 - (2) Assist program offices in preparing procurement packages, evaluating proposals, and arranging for necessary examinations and inspections, as requested.
- B. Program officials requiring charter aircraft support shall:
 - (1) Submit procurement requests to their respective contracting office for acquiring charter aircraft services, identifying aircraft needs, and developing Statements of Work and other contract documentation as may be required by their contracting office.
 - (2) Ensure that solicitation packages and corresponding statements of work for charter aircraft services identify minimum safety requirements.
- C. NOAA Contracting Officers and CORs shall:
 - (1) Ensure that solicitation packages and corresponding statements of work for charter aircraft services shall identify minimum safety requirements. Note: Contracting Officer or representatives shall seek consultation from the NOAA ASPM.

- (2) Procurement of charter aircraft services shall include an evaluation of offerors' technical capabilities, and those evaluations shall consider whether offers meet all safety requirements.
- (3) Aircraft which exceed safety-related capabilities and attributes shall be evaluated more favorably, using safety-related technical evaluation factors, than those which do not.
- (4) No contract shall be awarded to an offeror that does not meet minimum safety requirements.

**PART THREE: NOAA GENERAL OCCUPATIONAL SAFETY AND HEALTH
PERFORMANCE STANDARDS**

SECTION 14. OCCUPATIONAL SAFETY AND HEALTH AND GENERAL REQUIREMENTS

This chapter prescribes the procedures and responsibilities for implementing OSHA compliance procedures. This section also implements NOAA OSH program/OSHMS general, construction, and industrial OSH requirements. NOAA general and industrial operations comprise activities that contribute to the logistical support of NOAA equipment and marine systems.

14.1. Scope.

This section applies to all NOAA employees, volunteers, student interns, and NOAA affiliates in the performance of their official workplace duties and activities.

14.2. Purpose.

This section defines high-level OSH performance requirements and establishes OSH responsibilities to provide a safe working environment for the NOAA workforce and for NOAA affiliates who are exposed to the risks associated with general workplace practices and operations. Its primary focus is to ensure that NOAA operations are conducted in a manner that will maximize the protection of personnel from accidental injury and/or illness and to prevent property damage.

14.3. Roles and Responsibilities.

- A. NOAA officials at each management level shall promote strong OSH program/OSHMSs, safe working conditions, and safe performance to prevent accidents, injuries, and occupational illnesses.
- B. SECO shall:
 - (1) Provide NOAA-level administrative orders, policies, procedures, and supplemental guidelines covering all aspects of OSH and OSHMS.
 - (2) Provide OSH oversight and assess the OSH performance of LOs/SOs and field/program offices in meeting the requirements of this section.
- C. Line Offices shall:
 - (1) Provide Line Office policies, procedures, and supplemental guidelines covering all aspects of OSH and OSHMS.
 - (2) Provide OSH oversight and assess the OSH performance of field/program offices in meeting the requirements of this section.
- D. Field/program offices shall:
 - (1) Provide office/site-level policies, procedures, and supplemental guidelines covering all aspects of OSH and OSHMS.
 - (2) Post the OSH Protection for Employees of the US Department of Commerce poster and/or equivalent posters in all workplaces.

- (3) Implement the requirements outlined in this manual within their organization.

14.4. Application.

OSHA regulatory requirements and national consensus standards shall be applicable to and integrated into all NOAA operations and workplaces.

14.4.1. Standing Operating Procedure (SOP) Requirements.

- A. Each LO/SO and field/program office shall develop written OSH policies or SOPs for all hazardous operations in accordance with the requirements of this NOAA Manual, [NAO 209-1A](#), [NOSH](#), DAO 209-4, Occupational Safety and Health Program, and OSHA regulatory requirements. OSH policy and SOP development and revision shall be based on the results of a complete JHA of all phases of the activities or operations and the recommended controls. Accident trends, NECSAS findings, and findings from other sources shall also be taken into consideration when developing or revising OSH policies and SOPs.
- B. LO/SO and field/program offices shall ensure OSH policies/SOPs are designed to provide supervisors and operators with the level of detail necessary to execute the task or operation in an efficient, effective, and safe manner. Written standards (e.g., work plans, student internal operating plans, operating manuals, work instructions, technical manuals, etc.) may be substituted for OSH policies/SOPs when they provide the level of detail necessary to execute the task or operation in an efficient, effective, and safe manner. Lower-level organizations may be directed to develop written plans applicable to their operations. Input from task supervisors shall be solicited to ensure applicability and process efficiency.
- C. LO/SO and field/program offices shall review their safety policy/SOPs at least every two years for effectiveness, accuracy, and compliance with current standards and regulations. The LO/SO AA or DAA shall approve/endorse the biannual reviews for LO/SO safety policies/SOPs. Field and Program Office Directors shall approve/endorse their respective safety policies/SOPs as applicable.
- D. Managers and supervisors will train, observe, and enforce all requirements of the OSH policies and SOPs.
- E. Managers, supervisors, and employees will read and indicate that they understand all the requirements of the SOP relative to the operation and that the requirements can be executed in an efficient, effective, and safe manner. LO/SO and field/program offices shall document this in their training recordkeeping system.

14.4.2. SOP Content Requirements.

LO/SO and field/program offices shall incorporate the following requirements into their OSH SOPs:

14.4.2.1. Hazard Communication Standard.

LO/SO and field/program offices shall conduct a JHA to identify hazardous materials used in the workplace. Hazard Communication programs shall address identified hazards and meet the general requirements of 29 CFR 1910.1200. Specifically, Hazard Communication programs shall address the following:

- A. Transition and implementation to the updated Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

- B. SDS familiarization.
- C. SDS locations.
- D. Hazardous material inventory requirements.
- E. Classroom and on-the-job training requirements.
- F. Training shall be documented in accordance with requirements outlined in Section 5.2.1.6 above.

14.4.2.2. Personal Protective Equipment (PPE).

LO/SO and field/program offices shall conduct a JHA of the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of PPE. PPE policies, procedures, and processes shall include the following:

A. The term PPE includes but is not limited to:

- (1) Head protection (helmets, hardhats, etc.) – see ANSI Z89.1 for specific requirements and definitions.
- (2) Face protection (face shields) – see ANSIZ87.1 for specific requirements and definitions.
- (3) Hearing protection (ear muffs, ear plugs, etc.) – see ANSI S12.6 for specific requirements and definitions.
- (4) Eye protection (goggles, safety glasses, face shields, etc.) – see ANSI Z87.1 for specific requirements and definitions.
- (5) Respirators (half-face, powered air respirators, SCBA, etc.) – see ANSI Z88.2 for specific requirements and definitions.
- (6) Hand protection (leather gloves, flame retardant gloves, etc.) – see ANSI/ISEA 105 for specific requirements and definitions.
- (7) Protective clothing (fire resistant clothing, arc flash protection, aprons, etc.).
- (8) Foot protection (steel toe shoes, slip resistant shoes, etc.) – see ANSI Z41 for specific requirements and definitions.

- B. NOAA employees, student interns, volunteers, and NOAA affiliates will use PPE in accordance with 29 CFR 1910.132 through 29 CFR 1910.138, Subpart I, as required. All PPE shall be tested and certified in accordance with ANSI/ISEA 125.
- C. LO/SO and field/program offices shall provide PPE and PPE training at no cost to NOAA employees, student interns, or volunteers. Provisions for PPE and PPE training for direct support contract employees shall be outlined in contract documents. Initial training in the proper care, wear, and use of PPE shall be conducted prior to an employee being exposed to a new hazard for the first time. Training shall be specific to the hazards the employee is exposed to or expected to be exposed to.

D. Specific PPE Guidance: In addition to the requirements outlined in applicable OSHA and ANSI specifications, LO/SO and field/program offices shall address the following specific PPE requirements:

14.4.2.2.1. **Hearing Conservation.**

- A. LO/SO and field/program offices shall conduct a JHA and accurately determine when workplace activities/operations expose employees to noise levels at or above an 8-hour time-weighted average (TWA) sound level of 85 decibels, measured on the A scale (dBA). The JHA shall determine the most appropriate type of hearing protection practices and equipment based on the type of hazard exposure.
- B. Protection against the effects of noise exposure shall be provided at no cost to the employee when noise exposure levels for activities/operation are at or above 85 dBA TWA. Levels and types of hearing protection shall be appropriate for the levels of noise exposure and the activities/operations taking place.
- C. Where there is a possibility of noise levels from activities/operation to exist at or above 85 dBA, but where monitoring data is unavailable, at least single level hearing protection will be worn.
- D. LO/SO and field/program offices shall establish formal hearing conservation programs in accordance with the requirements outlined in 29 CFR 1910.95 whenever employee noise exposure levels meet or exceed an 8-hour TWA of 85 dBA. The hearing conservation program shall include:
 - (1) Requirements for annual audiograms.
 - (2) Identification of noise hazard areas.
 - (3) Identification of areas where high-impact noise exists.
 - (4) Acceptable hearing protection for the type of exposure

Note: Headphones or earbuds intended for use as a music listening devices shall not be used as an acceptable form of hearing protection).

- (5) Management and oversight of employee hearing test results and medical records as they relate to hearing conservation (medical surveillance).
- E. Hazardous noise warning signs shall meet the requirements outlined in Section 14.4.4 below.

14.4.2.2.2. **Eye and Face Protection.**

- A. LO/SO and field/program offices shall conduct a JHA of the workplace when workers are exposed to hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation. The JHA shall determine the most appropriate type of eye and face protection based on the type of hazard exposure.
- B. All operations involving vehicle, vessel, or aircraft maintenance shall require the use of face and eye protection that meet ANSI Z87.1 specifications for the hazards they encounter.

- C. NOAA employees, student interns, volunteers, and NOAA affiliates who are exposed to hazards identified in paragraph A above shall wear face and eye protection that meet ANSI Z87.1 specifications for the hazards they encounter.
- D. Laboratory chemical hygiene plans shall include requirements for eye protection and the definition of acceptable types of eye protection based on hazards associated with known or possible chemical exposures.
- E. Organizations shall ensure personnel are trained in the correct care and use of their protective eyewear in accordance with ANSI Z94.3.1-09. Training shall be documented in accordance with requirements outlined in Section 5.2.1.6 above.

14.4.2.3. Material Handling and Storage.

LO/SO and field/program offices shall conduct a JHA of the workplace to determine the need for material handling and storage policies and procedures. Material handling and storage policies and procedures shall address the following:

- A. Material handling and storage policies and procedures shall meet the requirements outlined in 29 CFR 1910.176.
- B. Supervisors shall review operations to identify where mechanical Material Handling Equipment (MHE) can be used to eliminate excessive and repetitive manual material handling.
- C. Operators will inspect MHE prior to the start of operations to ensure current certification and that the MHE meets the operation's requirements.
- D. Employees who perform material handling and storage as a regular part of their work activities shall receive training in proper lifting techniques and injury-prevention practices. Operators of forklifts and other types of mechanical MHE shall receive specific training in the safe use and operation of the equipment. Only licensed/authorized personnel may operate forklifts and other types of mechanical MHE. Training shall be documented in accordance with the requirements outlined in Section 5.2.1.6 above.

14.4.2.4. Lifting and Hoisting Devices.

LO/SO and field/program offices shall conduct a JHA of the workplace to determine the need for safety and health policies that address lifting and hoisting devices. Lifting and hoisting device policies and processes shall address the following:

- A. Prior to initial use, all new, extensively repaired, or altered lifting or hoisting devices shall be given a rated load test and a functional test. Manufacturers and repair activities should perform this test and provide written certification of load testing. If load test certification is not obtained or available, using activities shall arrange for testing. Manufacturer's certification or other records of rated load testing shall be maintained on file by the using activity.
- B. Lifting devices which have been idle for one year or more shall be functionally tested in accordance with manufacturer specifications at 100 percent of the rated load prior to use.
- C. Periodic inspections shall be conducted by qualified inspectors at least every twelve months and prior to the use of lifting devices which have been idle for six months or more. Manufacturer documentation and applicable equipment manuals shall be used to conduct these inspections.

- D. All lifting and hoisting devices shall be visibly marked with the maximum load capacity and the date of the last inspection.
- E. All operators of lifting and hoisting devices shall be trained in the proper use of the equipment. Training shall be documented in accordance with the requirements outlined in Section 5.2.1.6 above.

14.4.2.5. Welding, Cutting, and Brazing.

LO/SO and field/program offices shall conduct a JHA of all welding, cutting, and brazing operations to identify and address associated hazards. Welding, cutting, and brazing policies and procedures shall comply with 29 CFR 1910 Subpart Q. Welding, cutting, and brazing policies and procedures will also specifically address the following:

- A. Required PPE such as protective clothing, gloves, face, and eye protection.
- B. Specific respiratory protection requirements such as ventilation and use of respirators.
- C. NOAA Form 64-5383, Hot Work Permit (see Appendix B) or similar approved hot work permit shall be required whenever welding, cutting, brazing, or using any other ignition source in a workspace where flammables and combustibles are present. All work involving welding, cutting, or brazing shall be evaluated prior to commencing work to determine the need for a hot work permit.

14.4.2.6. Machine Safeguarding.

LO/SO and field/program offices shall conduct a JHA on all machines and equipment to identify point-of-operation hazards and other hazards associated with actuating parts (e.g. moving belts, rotating components, etc.) and equipment, and will provide guards or other means to protect operators and other personnel in accordance with 29 CFR 1910, Subpart O.

- A. Machine safety and machine guarding processes shall meet the requirements outlined in 29 CFR 1910, Subpart O. ANSI B11 Machine Safety Standards shall be followed when these standards are more stringent than regulatory requirements outlined in 29 CFR, Subpart O.
- B. PPE for specific machine operations used in accordance with 29 CFR 1910.132 through 29 CFR 1910.138, Subpart I.
- C. LO/SO and field/program offices shall ensure older equipment still in use in the workplace is updated to current machine guarding and that overvoltage/under-voltage protection is installed. Machines that cannot be brought into compliance with current OSHA requirements and ANSI guidelines shall be removed from service. Items removed from service shall be clearly marked/labeled as unserviceable.

14.4.2.7. Protection from Bloodborne Pathogens.

LO/SO and field/program offices shall conduct a JHA of all laboratories and necropsy facilities processing human blood or other infectious materials to identify hazards associated with bloodborne pathogens. JHA shall also be completed where NOAA employees, student interns, volunteers, and NOAA affiliates may have the potential for exposure to bloodborne pathogens. This includes, but is not limited to, law enforcement officers, first responders, employees who are required to take first aid training, employees providing first aid in remote locations, and employees decontaminating areas after an incident response. Bloodborne pathogen programs shall meet the requirements of 29 CFR 1910.1030. Bloodborne pathogen programs shall distinguish between exposures to potentially

infectious materials from human sources and exposures to potentially infectious materials from animal and other sources. Refer to Section 16 below for additional information.

14.4.2.8. Confined Space Entry Program.

LO/SO and field/program offices shall conduct a JHA to identify and classify all confined spaces. When confined spaces are identified in the workplace, LO/SO and field/program offices shall comply with the following guidance:

- A. LO/SO and field/program offices shall develop policies and procedures that meet the requirements outlined in 29 CFR 1910.146 for operations requiring entry into permit-required confined spaces.
- B. NOAA Form 64-937, Confined Space Entry Permit (see Appendix B) or similar approved confined space entry permit shall be completed for operations requiring entry into permit-required confined spaces.
- C. For permit-required confined spaces, LO/SO and field/program offices will inform personnel exposed by posting danger signs or by any other equally effective means, of the existence and location of and the danger posed by the permit spaces.
- D. LO/SO and field/program offices will take effective measures to prevent personnel from entering permit-required confined spaces when entry into permit-required confined spaces is not required or authorized by the Supervisor.

14.4.2.9. Electrical Safety.

LO/SO and field/program offices shall conduct a JHA of all facilities to identify electrical hazards in the workplace. Electrical safety JHAs must include an arc flash hazard analysis (or determination of risk based on requirements outlined in Tables 130.7(C)(15)(A) of NFPA 70E) of all electrical service panels, breakers, motor control panels, and similar electrical control devices. Policies and processes shall be developed to address identified hazards as well as general operating requirements in accordance with 29 CFR 1910 Subpart S. Electrical safety policies and procedures will also specifically address the following:

- A. All electrical work activity shall comply with safety guidelines specified in NFPA 70E.
- B. Only trained and qualified personnel shall be authorized to work on energized electrical components or to verify the energized state of electrical components.
- C. Electrical safety policies must include guidance on the control of hazardous energy (lock out/tag out) in accordance with requirements outlined in Section 14.4.2.14 below and those outlined in §1910.147.
- D. All electrical devices used in NOAA workplaces shall be certified by an OSHA Nationally Recognized Testing Laboratory in accordance with §1910.7.
- E. Multi-outlet surge protectors shall be connected directly to the power outlet. No daisy chaining is authorized. Electrical loads on multi-outlet surge protectors shall not exceed their rated capacity.
- F. Multi-outlet surge protectors, extension cords, and office cubicle outlets shall not be used for microwaves, motorized equipment, (refrigerators, treadmills, etc.) or products with heating elements (electric heaters, coffee pots, hot plates, etc.).

- G. Facilities under occupancy agreements with General Services Administration (GSA) must comply with GSA rules for the location and use of appliances. Facilities managers have the authority to enforce rules of appliance use and to disallow proposed appliances if they do not meet OSHA, GSA, or NAO requirements and criteria.

14.4.2.9.1. *Energized Electrical Work and Arc Flash Protection.*

NOAA and its contractors shall comply with energized electrical work and arc flash protection requirements outlined in NFPA 70E. Specifically, policies and procedures will address the following:

- A. Labeling of electrical panels and equipment: Electrical panels shall be labeled with arc flash warning labels. For exposures not requiring arc flash PPE as defined in Tables 130.7(C)(15)(A) of NFPA 70E, generic arc flash labels warning of an arc flash hazard may be used. For all other categories of exposure, arc flash labels shall include nominal system voltage, arc flash boundary, minimum arc rating of clothing, and the site-specific level of PPE in accordance with NFPA 70E Article 130.5C.
- B. Calculations of arc flash hazards are based on available short circuit current, protective device clearing time and distance from the arc. Calculations of incident energy levels and flash protection boundaries will be completed for all relevant equipment busses. The magnitude of arc hazards shall be determined using methods from NFPA 70E, IEEE 1584 or NEOSC Tables 410-1 and 410-2, as applicable. Calculations of incident energy levels and flash protection boundaries using formulas found in NFPA 70E and IEEE 1584 is preferred. However, in the absence of detailed arc flash incident energy levels and flash protection boundaries, found in NFPA 70E Tables 130.7(C)(15)(A) may be used.
- C. Policies and use of energized electrical work permits shall be developed in accordance with NFPA 70E Article 130.2(B). NOAA Form 64-70, Energized Electrical Work Permit (see Appendix B) or similar approved energized electrical work permit shall be used as the permit for all energized electrical work.
- D. All personnel who may conduct energized electrical work or who may be exposed to arc flash hazard categories greater than Category 0 shall be identified and formally trained in the requirements of NFPA 70E. Training shall be documented in accordance with the requirements outlined in Section 5.2.1.6 above.
- E. Support services contracts involving energized electrical work shall include mandated compliance with the most current version of NFPA 70E as part of the Statement of Work.

14.4.2.9.2. *Use of Portable Electric Heaters.*

The use of portable space heaters in Federal facilities is permitted only if the Federal building manager allows their use (Federal Management Regulation 102-74.190). NOAA facility management may allow the use of portable space heaters, provided that supervisors, employees, contractors, and other agency personnel follow all of the requirements below which promote a safe and energy-efficient workplace. Please contact your LO/SO safety and health representative or the NOSH Office at noaa.safety@noaa.gov, if you have questions or need additional information.

- A. Space heaters must be plugged directly into a floor or wall outlet. They must not be plugged into cubicle outlets, surge-protectors, power strips, or extension cords.

- B. Space heaters must have all of the following safety features:
- (1) Thermostat: switches off the space heater once the desired temperature is reached.
 - (2) Tilt switch: switches off the space heater if it tips over.
 - (3) Thermal cut-out switch: prevents the space heater from overheating if the thermostat fails.
 - (4) Timer switch: automatically turns off the space heater at a specified time.
 - (5) Grounded three-pronged plug: protects against short circuits.
- C. Use of any of the following space heaters/heating methods is prohibited because they pose potential fire and combustion hazards:
- (1) Space heaters with open faces.
 - (2) Non-electric space heaters with a fuel supply.
 - (3) Oil-filled electric space heaters.
 - (4) Candles and other open flame devices.
- D. The use of space heaters of any type is strictly prohibited in laboratories.
- E. Space heaters must be approved by a nationally recognized testing laboratory (NRTL) and display an NRTL-approved label (e.g., UL, FM, or CSA). For a list of OSHA-recognized NRTLs go to <http://www.osha.gov/dts/otpca/nrtl/>.
- F. Space heaters must be placed so that they comply with the minimum clearance distances specified in the manufacturer's specifications or user manuals. For ceramic and fan-type resistance space heaters the following minimum clearance distances must be maintained unless otherwise specified by the manufacturer:
- (1) Clearance in front of the space heater: 36 inches.
 - (2) Clearance at the sides, back, and top of the space heater: 18 inches.
- G. Space heaters may not be placed directly under a desk if the minimum clearance distances are not maintained.
- H. Space heaters that do not meet all of the requirements above or have been recalled are prohibited and must be removed from NOAA facilities immediately. For information on space heater recalls go to cpsc.gov.

14.4.2.10. Fire prevention.

LO/SO and field/program offices shall conduct a JHA of all facilities to identify fire prevention hazards in the workplace. Fire prevention policies and procedures shall meet the requirements of 29 CFR 1910 Subpart L, local and national fire codes, and the most current version of the NFPA 101 Life Safety Code. Fire prevention policies and procedures will also specifically address the following:

- A. Fire prevention plans: Each facility/complex shall develop an occupant emergency/fire prevention plan in accordance with §1910.38. The plan shall be reviewed during pre-operational planning and

design to ensure it provides the level of protection necessary to address possible fires in the facility. It shall also be reviewed annually and whenever facility renovations occur to ensure that it continues to provide adequate fire prevention. Emergency action/fire prevention plans will, at a minimum address the following:

(1) Fire extinguisher use and training.

(2) Employee alarm systems.

(3) Means of egress/emergency exits.

(4) Fire suppression/detection systems.

(5) Special site-specific considerations (e.g. flammable compressed gases, flammable and combustible liquids, and electrical systems).

B. Fire suppression and detection systems: Fire suppression and detection systems shall be maintained in accordance with manufacturer specifications.

C. Fire extinguishers: Fire extinguishers of adequate type and rating shall be placed in the workplace in accordance with the requirements outlined in local, state, and federal fire safety ordinances and regulations. Fire extinguisher inspection and maintenance schedules shall also comply with the guidance specified in §1910.157 and NFPA 10.

D. Fire brigades: NOAA in general does not train its personnel to perform duties as part of organizational firefighting brigades for its land based facilities. The safety of NOAA employees, volunteers, student interns, and NOAA affiliates takes highest priority. Fire extinguishers are primarily used for self and colleague rescue. Based on risk and exposures to hazardous conditions, certain positions and operations within NOAA may require the use of a fire extinguisher in the event of a workplace fire. Based on identified hazards and risks, NOAA employees, volunteers, student interns and NOAA affiliates working in the following environments shall be trained on the proper operation of fire extinguishers with focus on self and colleague rescue:

(1) Laboratory employees.

(2) Machine shop employees.

(3) Aircraft and vehicle mechanics.

(4) Electrical workers.

(5) Facility maintenance and support personnel.

(6) Personnel handling or storing flammable and combustible chemicals.

(7) Other employees and operations as identified in a JHA.

E. Fire extinguisher and fire brigade training shall be documented in accordance with the requirements outlined in Section 5.2.1.6 above.

- F. **Emergency Exits and Egress Routes:** Emergency exits and egress routes will meet the requirements of §1910 Subpart E, the facility fire prevention plan, the most current NFPA 101, Life Safety Code, and local and national fire code requirements. Facilities with emergency evacuation chairs shall have policies and procedures in place to ensure that adequate numbers of personnel at each location where chairs are located are trained in the proper use of the equipment.

14.4.2.11. Respiratory Protection.

LO/SO and field/program offices shall conduct a JHA to determine the need for a respiratory protection program. Particular attention should be given to personnel who perform welding and spray painting operations. Respiratory Protection programs shall be established and documented in accordance with 29 CFR 1910.134 and ANSI Z88.2.

14.4.2.12. Walking and Working Surfaces (Fall Protection).

LO/SO and field/program offices shall conduct a JHA to identify hazards associated with workplace walking and working surfaces. Walking and working surface programs (fall protection) shall meet the requirements of 29 CFR 1910 Subpart D, §1910.66, and §1910.272.

14.4.2.13. Ergonomics.

LO/SO and field/program offices shall conduct a JHA to identify operations and workplace configurations that could contribute to musculoskeletal disorders. Ergonomic policies and processes shall be developed where operations and workplace configurations that could contribute to musculoskeletal disorders exist. Policies and processes shall include the following:

- A. Office workstations shall conform to the specifications outlined in the most current version of ANSI/HFES 100.
- B. LOs/SOs and field/program offices are encouraged to field height-adjustable workstation to accommodate standing and sitting work activities. Fitness workstations such as treadmill and stationary bicycle workstations shall not be fielded without LESCO approval.
- C. Other workplace and job-specific ergonomics processes shall comply with OSHA and NIOSH general guidance.

14.4.2.14. Hazardous Energy Control (Lockout/Tag out).

LO/SO and field/program offices shall conduct a JHA to identify equipment and operations requiring the control of hazardous energy. Policies for controlling hazardous energy (lockout/tag out) shall be developed for each piece of equipment being used and provided to personnel, servicing and maintaining that equipment in accordance with 29 CFR 1910.147, §1910.269, §1910.306, §1910.333, 1926.417, or §1926.702, as applicable.

14.4.2.15. Construction Safety and Health.

Construction projects shall comply with requirements outlined in 29 CFR 1926. Every effort shall also be made to ensure construction projects comply with the safety requirements outlined within the [Army Corps of Engineers Manual, EM 385-1-1, Safety and Health Requirements Manual](#).

14.4.2.16. Hazardous Material and Hazardous Waste.

14.4.2.16.1. *Hazardous Material Transportation, Storage, and Use.*

LO/SO and field/program offices shall conduct a JHA to identify hazards associated with the transportation, storage, and use of hazardous materials in the workplace. Hazardous material transportation, storage, and use policies and procedures will comply with the following:

- A. Hazardous Material Shipping and Transportation: Hazardous material will be shipped and transported in accordance with 49 CFR 172 DOT regulations. Employees involved in the packaging, shipping, and/or transportation of hazardous materials will meet applicable training requirements. Training shall be documented in accordance with requirements outlined in Section 5.2.1.6 above.
- B. Shipping and Transportation of Materials Containing Radioactive Isotopes: Hazardous materials containing radioactive isotopes will be shipped and transported in accordance with U.S. Department of Transportation, Nuclear Regulatory Commission, student international Air Transport Association, and the Environmental Protection Agency regulations. Employees involved in the packaging, shipping, and/or transportation of hazardous materials containing radioactive isotopes will meet applicable training requirements (Note: general hazardous material shipping and transportation training defined in paragraph A above does not meet the training requirements for the shipment of hazardous materials containing radioactive isotopes). Training shall be documented in accordance with requirements outlined in Section 5.2.1.6 above.
- C. Hazardous material will be stored in accordance with 29 CFR 1910, Subpart H and NFPA 30.
- D. ACGIH Threshold Limit Values: NOAA shall rely on ACGIH TLV for limits of exposure to hazardous materials unless the OSHA PEL is lower. Exposure to levels of hazardous materials that exceed TLVs but remain below PELs place NOAA employees, volunteers, student interns, and NOAA affiliates at greater risk of injury or illness. LO/SO and field/program offices may exceed TLVs (but not PELs) by assigning appropriate risk and risk-approval authorities in accordance with risk-management guidance defined in Section 5.1.1 above.

14.4.2.16.2. *Hazardous Materials Found in Buildings and on Facilities.*

- A. Asbestos awareness/removal: No one will attempt to remove, drill, sand, or disrupt any material, which could or is known to contain asbestos. Asbestos will only be removed or otherwise handled by qualified personnel and only then after appropriate controls such as permits, control access, etc., are in place.
- B. Lead Abatement: Lead abatement programs shall meet the requirements outlined in 29 CFR 1910.1025.

14.4.2.16.3. *Hazardous Waste Operations and Emergency Response Standard (HAZWOPER).*

LO/SO and field/program offices shall conduct a JHA to identify hazards associated with the Hazardous Waste Operations and Emergency Response Standard (HAZWOPER). HAZWOPER policies and procedures will comply with the following:

- A. HAZWOPER applies to five distinct groups of employers and their employees This includes any employees who are exposed or potentially exposed to hazardous substances, including hazardous waste, and who are engaged in operations specified by [29 CFR 1910.120\(a\)\(1\)\(i-v\)](#).

- B. Where chemical spill response is part of the duties of employees in a workplace, HAZWOPER training is required for those employees. The level of HAZWOPER training will depend on the chemical spill plan and the roles and responsibilities of the employees involved. Training shall be documented in accordance with the requirements outlined in Section 5.2.1.6 above.

14.4.2.17. Compressed Gas Cylinder Safety.

LO/SO and field/program offices that use compressed gas cylinders shall conduct a JHA of all areas where compressed gas cylinders are used or stored to identify compressed gas cylinder characteristics, safety features, and precautionary measures. Policies for proper transportation, storage, and use of compressed gas cylinders shall be developed in accordance with 29 CFR 1910.101 and CGA Pamphlet 1-1965. Policies governing the transportation, storage, and use of specialty gases shall comply with the following guidance: Acetylene – §1910.102; Hydrogen – §1910.103; Oxygen – §1910.104; Nitrous Oxide – §1910.105. Compressed gas cylinder safety policies and procedures shall also include the following:

- A. NOAA employees transporting, storing, or using compressed gases shall be properly trained in the safe use and handling of such substances and equipment. Training shall be documented in accordance with the requirements outlined in Section 5.2.1.6 above.
- B. Visual inspections of equipment, including portable cylinders is required prior to each use to ensure equipment is in safe operating condition.
- C. Approval and marking: All portable cylinders used for the storage and shipment of compressed gases shall be constructed and maintained in accordance with 49 CFR Parts 171-179. This must be included as a requirement in any purchase or use agreement to ensure that the vendor is supplying approved cylinders.
- D. Compressed gas cylinders shall be legibly marked, for the purpose of identifying the gas content, with either the chemical or the trade name of the gas. Such a marking shall be made by means of stenciling, stamping, or labeling, and shall not be readily removable.
- E. All cylinders with a water weight capacity of over 30 pounds (13.6 kg) shall be equipped with a means of connecting a valve protection cap or with a collar or recess to protect the valve.

14.4.2.18. Occupational Health, Medical Surveillance, and Fitness for Duty.

LO/SO and field/program offices shall conduct a JHA to identify the need for occupational health, medical surveillance, and fitness for duty programs. LO/SO and field/program offices shall develop policies and procedures addressing occupational health, medical surveillance, and fitness for duty programs and policies to address the following:

- A. Medical surveillance programs in accordance with OSHA standards where exposures to chemical and physical stressors are above a specified action level as demonstrated through employee monitoring.
- B. Post-exposure evaluation and follow-up of all potential exposures to bloodborne pathogens.
- C. Medical consultation for chemical exposures as part of OSHA's laboratory standard.
- D. Fitness for Duty for certain positions at NOAA prior to the start of the job and in the event of an injury or illness that may impact fitness.

- E. Ergonomic evaluations by safety professionals or ergonomists when a new workstation is being set up, or in response to the emergence of a repetitive motion injury.

14.4.3. Site/Campus OSH Plans.

Each site/campus shall develop a site/campus OSH plan addressing OSH requirements as they relate to the site/campus. All tenants shall comply with the site/campus OSH plan. The site/campus OSH plan requirements listed below may be incorporated as part of other plans such as the site/campus occupant emergency plan. At a minimum, the site/campus OSH plan must include the following:

- A. Policies and procedures addressing hazardous material storage and handling in accordance with NFPA 101 and federal, state, and local fire ordinances.
- B. Policies and procedures addressing management of the campus/facility AED program as applicable.
- C. Policies and procedures to expeditiously correct campus/facility OSH discrepancies.
- D. Guidance on emergency evacuation procedures, shelter in place procedures, initial response to emergencies, and contacting first responders. Guidance should include sections addressing the following:
 - (3) Fire safety and egress.
 - (4) First aid/emergency response (for rural locations greater than ten minutes away from first responders).
 - (5) Management and use of Evacuation Chairs (if applicable).
 - (6) Conduct of Evacuation/Shelter in Place Drills.
- E. A detailed fire prevention plan as outlined in Section 14.4.2.10 above.
- F. Other applicable safety and health guidance as it applies to the facility (e.g. ammunition storage, firearms storage, radioactive commodities, etc.). Information related to the type and location of storage shall be provided to local first responders.

14.4.4. Warning Signs, Labels, and Hazard Markings.

LOs/SOs and field/program offices shall conduct a JHA of the workplace to determine if hazards are present or are likely to be present, necessitating the use of safety signs and labels. Warning signs, labels, and hazard markings policies and procedures will also specifically address the following:

- A. Warning signs and hazard markings shall meet the specifications and requirements outlined in ANSI Z535.
- B. Ensure required warning signs and hazard markings are bilingual when non-English speaking personnel may be exposed to the hazard or condition.

SECTION 15. SEASONAL SAFETY AND HEALTH.

Once properly trained, NOAA employees, volunteers, student interns, and NOAA affiliates can work safely in both hot and cold weather environments. The RM process must be applied at all levels to hot and cold weather operations. Leaders must also ensure that workers become acclimated to their relevant outdoor work. Although adaptation strengthens our ability to operate safely under extreme weather conditions, our best protection against hot and cold weather injuries is proactive leader supervision and proper RM.

15.1. Scope.

This section applies to all NOAA employees, volunteers, student interns, and NOAA affiliates in the performance of their official workplace duties and activities.

15.2. Purpose.

This section defines high-level OSH performance requirements and establishes OSH responsibilities to provide a safe working environment for NOAA employees, student interns, volunteers, and NOAA affiliates who are exposed to the risks associated with working in hazardous seasonal weather conditions.

15.3. Roles and Responsibilities.

A. SECO shall:

- (1) Provide seasonal safety training guidance and support materials.
- (2) Provide oversight for the NOAA Seasonal Safety Program through the LESCOs.
- (3) Review and assess LO/SO Seasonal Safety programs and initiatives.
- (4) Provide guidance for LO/SO Seasonal Safety programs.
- (5) Participate in all weather-related accident investigations.

B. LO/SO and field/program offices shall:

- (1) Develop and implement site-specific seasonal safety policies, procedures, and training that identifies their internal organizational responsibilities and defines seasonal safety practices.
- (2) Provide site-specific RM evaluations of seasonal hazards at each operational location.

15.4. Application.

NOAA personnel routinely conduct operations under hazardous seasonal conditions. Operations range from driving under seasonally hazardous road conditions to conducting outdoor research in extreme environments. In all situations, special precautions and actions must be taken to ensure a safe and healthful work environment under these conditions. To address these requirements, the following actions shall be implemented at all LO/SO and field/program office activities and operational locations (local, marine, and field operations).

15.4.1. Spring and Summer Safety and Heat Injury Prevention.

- A. Each field/program activity shall conduct a risk assessment whenever working outdoors while the heat index is forecasted to be moderate (Extreme Caution) or higher in the areas where work is taking place. Risk assessments shall be based on heat index data found at https://www.osha.gov/SLTC/heatillness/heat_index/about.html. The following risk guidance applies to all hot weather exposure operations:
- (1) Operations conducted within the caution exposure criteria shall be considered at least moderate risk.
 - (2) Operations conducted in the extreme caution exposure criteria shall be considered high risk.
 - (3) Operations conducted in the danger exposure criteria or above shall be considered extremely high risk. Operations will not take place in high (Danger) heat indexes or above without providing a rapid response solution such as an Iced Sheet Kit. Note: An Iced Sheet Kit consists of an ice chest filled with ice and water and a plastic bag holding a minimum of 8 standard-sized bed sheets.
 - (4) Additional hot weather injury prevention guidance can be found at https://www.osha.gov/SLTC/heatillness/heat_index/about.html.
- B. Each LO/SO and field/program office will develop a Spring and Summer Safety/Accident Prevention Plan by 15 April of each year for their areas of operation (e.g. facilities, field research, coastal work, remote facility support, etc.). The Spring and Summer Safety/Accident Prevention Plan may be incorporated as part of other LO/SO and field/program office policies and plans. Additional guidance can be found on NWS Seasonal Safety Campaign website: <http://www.weather.gov/safetycampaign>. At a minimum, plans will include the following:
- (1) Actions to be taken to mitigate seasonal risk associated with site-specific seasonal severe weather such as tornados, lightning, flash flooding, monsoons, typhoons, and operations undertaken in extreme heat and humidity. Sections addressing seasonal destructive weather may be incorporated into other facility, LO/SO, and field/program office policies and plans.
 - (2) Spring and summer safety training requirements as outlined in Section 5.2.1C above.
 - (3) Seasonal safety awareness initiatives.
 - (a) Severe weather awareness and heat injury prevention promotional initiatives.
 - (b) Motor vehicle and pedestrian safety/accident-prevention initiatives.
 - (4) Plans must be reviewed annually and updated as needed by April 15 of each year.
- C. LOs/SOs are also encouraged to develop seasonal recreation and off-duty accident-prevention initiatives as appropriate.

15.4.2. Fall and Winter Safety and Cold Weather Injury Prevention.

- A. Each field/program activity shall conduct a risk assessment whenever working outdoors in cold environments based on exposure/wind chill data found at <http://www.nws.noaa.gov/om/winter/windchill.shtml>. Proper precautions shall be taken to mitigate the risks of frostbite and hypothermia. The following risk guidance applies to all cold weather exposure operations:
- (1) Operations conducted within the 30-minute exposure limit shall be considered at least moderate risk.

- (2) Operations conducted in the 10-minute exposure limit shall be considered high risk.
 - (3) Operations conducted in the 5-minute exposure limit shall be considered extremely high risk.
 - (4) Additional winter and cold weather guidance can be found at https://www.osha.gov/dts/weather/winter_weather/beprepared.html.
- B. Each LO/SO and field/program office will develop a Fall and Winter Safety/Accident Prevention Plan by 15 October of each year for their areas of operation (e.g. facilities, field research, coastal work, remote facility support, etc.). The Fall and Winter Safety/Accident Prevention Plan may be incorporated into other LO/SO and field/program office policies and plans. Additional guidance can be found on NWS Seasonal Safety Campaign website: <http://www.weather.gov/safetycampaign>. At a minimum, seasonal plans will include the following:
- (1) Actions to be taken to mitigate seasonal road conditions, snow and ice removal (to include required support equipment such as snow shovels and salt) and operations in extreme cold. Sections addressing seasonal destructive weather may be incorporated into other facility, LO/SO, and field/program office policies and plans.
 - (2) Fall and Winter safety training requirements as outlined in Section 5.2.1C of this NOAA Manual.
 - (3) Seasonal safety awareness initiatives.
 - (a) Severe weather awareness and cold weather injury prevention promotional initiatives.
 - (b) Motor vehicle and pedestrian safety accident-prevention initiatives.
 - (4) Plans must be reviewed annually and updated as needed by October 15 of each year.
- C. LOs/SOs are also encouraged to develop seasonal recreation and off-duty accident prevention initiatives as appropriate.

SECTION 16. LAB SAFETY, BIOHAZARDS, INFECTIOUS AGENTS, AND TOXINS.

This section establishes NOAA laboratory, biohazards, infectious agents, and toxins OSH management policies and procedures.

16.1. Scope.

This section applies to all NOAA employees, volunteers, student interns, and NOAA affiliates who are engaged in work activities in laboratories and other work activities with a potential for exposure to biohazards, infectious agents, and toxins.

16.2. Purpose

This section defines high-level OSH performance requirements and establishes OSH responsibilities to provide a safe working environment for workers exposed to the risks associated with laboratory operations. It also defines high-level OSH performance requirements for workers with potential risk of exposure to biohazards, infectious agents, and toxins.

16.3. Roles and Responsibilities.

- A. Laboratory Director: Laboratory directors have ultimate responsibility for lab safety/chemical hygiene within their facility and shall:
- (1) Provide continuing support for institutional overall lab safety/chemical hygiene.
 - (2) Appoint a Chemical Hygiene Officer (CHO) to develop and implement a Chemical Hygiene Plan (CHP). The CHO must be qualified, by training or experience, to provide technical guidance in developing and implementing the provisions of the CHP.
- B. Laboratory Supervisors: Laboratory supervisors have overall responsibility for lab safety in their areas and shall:
- (1) Ensure that laboratory workers know and follow the lab safety/chemical hygiene rules.
 - (2) Determine the required levels of PPE and equipment and ensure that protective equipment is available and in working order.
 - (3) Ensure that appropriate training has been provided.
 - (4) Provide regular, formal laboratory inspections, including routine inspections of emergency equipment.
 - (5) Know the current legal requirements concerning regulated substances.
- C. The CHO shall:
- (1) Develop and implement appropriate chemical hygiene policies and practices.
 - (2) Provide the written CHP.
 - (3) Monitor the procurement, use, and disposal of chemicals used in the lab.
 - (4) Ensure that appropriate audits are maintained.
 - (5) Help project managers develop precautions and adequate facilities.
 - (6) Know the current legal requirements concerning regulated substances in the lab.
 - (7) Seek ways to improve the lab safety/chemical hygiene program.
- D. SECO shall:
- (1) Review the overall lab safety management processes in NOAA.
 - (2) Set the policy for safety and health directives.
- E. Researchers and lab technicians are responsible for following the procedures required by this section and shall:
- (1) Utilize PPE appropriate for the laboratory function conducted.
 - (2) Seek ways to improve the lab safety program.
 - (3) Notify supervisor of any safety concerns.
 - (4) Take laboratory training as required.

16.4. Application.

- A. LOs/SOs and field/program offices with laboratory and research facilities shall conduct a JHA to identify physical, chemical, radiological, and biological hazards that may be encountered by its workforce.
- B. All containers for chemicals must be clearly labeled. Labels on chemical containers must not be removed or defaced. Safety Data Sheets (SDSs) must be supplied by the manufacturer, distributor, or importer and must be maintained and readily accessible to laboratory workers.

16.4.1. Chemical Hazards.

- A. LOs/SOs and field/program offices operating laboratory and research facilities in NOAA must develop an operation-specific CHP. The purpose of the CHP is to provide guidelines for prudent practices and procedures regarding the use of chemicals in the laboratory. The CHP should set forth procedures, equipment, PPE and work practices capable of protecting workers from the health hazards presented by laboratory chemicals. The CHP applies to all individuals engaged in laboratory use of hazardous chemicals and biohazards. The CHP consists of eight major elements:
 - (1) Standard Operating Procedures: Prudent laboratory practices which must be followed when working with chemicals in a laboratory.
 - (2) Criteria for Exposure Control Measures: Criteria used by the LOs/SOs and field/program offices to determine and implement control measures to reduce worker exposure to hazardous chemicals including engineering controls, the use of PPE, and hygiene practices.
 - (3) Adequacy and Proper Functioning of Fume Hoods and other Protective Equipment: Specific measures that must be taken to ensure proper and adequate performance of protective equipment, such as fume hoods.
 - (4) Information and training: LOs/SOs and field/program offices must provide the information and training required to ensure that workers are apprised of the hazards of chemicals in their work areas.
 - (5) Requirement of Prior Approval of Laboratory Procedures: The circumstances under which certain laboratory procedures or activities require approval from the LOs/SOs or field/program office before work is initiated (e.g. working alone, working with extremely toxic material).
 - (6) Medical Consultations and Examinations: Provisions for medical consultation and examination when exposure to a hazardous chemical has or may have taken place.
 - (7) CHO Designation: Identification of the laboratory CHO and the outline of his or her role and responsibilities.
 - (8) Particularly Hazardous Substances: Outlines additional worker protections for work with particularly hazardous substances. These include select carcinogens, reproductive toxins, and substances which have a high degree of acute toxicity.
- B. Training: Laboratory workers must be provided with information and training relevant to the hazards of the chemicals present in their laboratory. The training must be provided at the time of initial assignment to a laboratory and prior to assignments involving new exposure situations. Training must include the following:
 - (1) Methods and observations used to detect the presence or release of a hazardous chemical. These may include monitoring, continuous monitoring devices, and familiarity with the appearance and odor of the chemicals.

- (2) Signs and symptoms associated with exposure to hazardous chemicals in the laboratory.
 - (3) The content of the OSHA Laboratory standard.
 - (4) The physical and health hazards of chemicals in the laboratory work area.
 - (5) The measures that workers must take to protect themselves from these hazards, including protective equipment, appropriate work practices, and emergency procedures.
 - (6) Applicable details of the written CHP.
 - (7) The location and availability of the CHP.
 - (8) The location of SDS.
- C. Exposure monitoring: NOAA must conduct exposure monitoring through air sampling if there is reason to believe that workers may be exposed to chemicals above the action level or, in the absence of an action level, the PEL. Some OSHA chemical standards have specific provisions regarding exposure monitoring and worker notification, and shall be followed (e.g. formaldehyde, asbestos, lead, methylene chloride). Periodic exposure monitoring shall be conducted in accord with the provisions of the relevant standard. The LOs/SOs or field/program office shall notify workers of the results of any monitoring within 15 working days of receiving the results.

16.4.2. Biohazards.

Biohazardous material and Biologically Active Select Agents and Toxins (BSAT): NOAA lab workers and field researchers may be exposed to biological hazards and BSAT. These hazards are present in various sources throughout the laboratory setting and in the course of field research such as human and animal blood, bodily fluids, cultures of microorganisms, body tissue, carcasses, infected animals, and toxins of biological origin. Law enforcement officers, first responders, and employees who are required to take first aid training, employees providing first aid in remote locations, and employees decontaminating areas after an incident response may also encounter these hazards when coming into contact with infected individuals. The following minimal requirements for work with biohazards shall be implemented in accordance with OSHA 29 CFR 1910.1030 (infectious material of human origin), the most current edition of the Center for Disease Control (CDC) Biosafety for Microbiological and Biomedical Laboratories (BMBL), and the Federal Select Agent Program. In addition to the requirements outlined in the references above, LOs/SOs and field/program offices shall ensure the following:

- A. SDS on infectious and select agents (microorganisms, toxins of biological origin) must be available to NOAA employees, student interns, volunteers, and NOAA affiliates.
- B. NOAA employees, student interns, volunteers, and NOAA affiliates must be trained on handling biohazardous material and toxins of biological origin with which they work.
- C. Appropriate PPE is provided, free of charge, to NOAA employees, student interns, volunteers, and NOAA affiliates (e.g. goggles, gloves, surgical caps, shoe covers, respirators, etc.).
- D. Laboratory design, effective engineering controls, and work practice controls shall be implemented to reduce or eliminate exposures to biohazards in accordance with BMBL guidelines.

- E. Whenever any biohazards are present in the work area, a biohazard warning sign must be posted on all access doors in accordance with requirements outlined in 29 CFR 1910.1030(e).
- F. LOs/SOs and field/program offices must ensure that activities involving Potentially Infectious Materials (PIM) and BSAT are conducted in Biological Safety Cabinets or other physical containment devices in accordance with the BMBL and OSHA 29 CFR 1910.1030 (where human pathogen cultures and human OPIM are involved).
- G. Each work area must contain a sink for washing hands and a readily available eyewash facility. When working with human PIM, the sink must be foot, elbow, or automatically operated and must be located near the exit door in accordance with requirements outlined in 29 CFR 1910.1030(e). For other pathogenic materials (active cultures and select toxins), follow the specific requirements in the BMBL with respect to sink design.
- H. Medical surveillance may be required for working with specific microorganisms or biohazardous materials in accordance with the CDC guidelines.
- I. All regulated solid waste must be incinerated or decontaminated to effectively destroy animal and human pathogens. All wastewater must be decontaminated according to local, state, and federal environmental regulations.
- J. The surfaces of doors, walls, floors, and ceilings in work areas must be water-resistant so that they can be easily cleaned.
- K. Research Animals: LO/SO and field/program offices shall adopt the following best practices to reduce infection potential and allergic response of workers:
 - (1) Eliminate or minimize exposure to the proteins found in animal urine, saliva, and dander.
 - (2) Limit the chances that workers will inhale or have skin contact with animal proteins by using well-designed air handling and waste management systems.
 - (3) Have workers use appropriate PPE (e.g. gloves, gowns, hair covers, respirators) to further minimize their risk of exposure.
 - (4) For work with animals infected with specific microorganisms, follow the CDC control and work practice guidelines for animal biosafety. There may be additional requirements depending on the microorganism involved and the specific research activities conducted.
- L. A survey of cultures of microorganisms and toxins shall be conducted on an annual basis. Surveys shall include the identification of BSAT and their quantities. Registration of select BSAT with the Federal Select Agent Program (FSAP) may also be required. Specific lists of BSAT and requirements for registration can be found at <http://www.selectagents.gov/>.
- M. Any laboratory utilizing BSAT will follow security requirements for these microorganisms and/or toxins in accordance with 7 CFR Part 331, 9 CFR Part 121, and 42 CFR Part 73.

16.4.3. Physical Hazards.

Physical hazards in the lab need to be controlled. These include ergonomic hazards, ionizing radiation hazards, non-ionizing radiation hazards, and noise hazards. LOs/SOs and field/program offices with laboratory and research facilities shall assess tasks to identify potential worksite hazards and ensure

that workers have the necessary training. At a minimum, laboratories shall assess the following physical hazards:

- A. Autoclaves and sterilizers.
- B. Centrifuges.
- C. Compressed gases.
- D. Cryogenics and dry ice.
- E. Electrical hazards.
- F. Fire hazards.
- G. Lockout/tag out.
- H. Trips, slips, and falls.

16.4.4. Medical Consultation and Examinations.

LOs/SOs and field/program offices shall include in their laboratory standards provisions for a medical consultation by a licensed physician whenever a spill, leak, explosion, or other occurrence results in the likelihood of exposure to a hazardous substance.

SECTION 17. RADIATION SAFETY.

This section prescribes NOAA safety policy and processes for NOAA radiation safety programs and functions. This chapter applies to organizations using sources of radiation, both ionizing and non-ionizing.

17.1. Scope.

This section applies to all NOAA employees, volunteers, student interns, and NOAA affiliates who are involved in work with potential exposure to ionizing and non-ionizing radiation (RF generating devices and Class 3b and Class 4 LASERS) hazards.

17.2. Purpose.

This section defines high-level OSH performance requirements and establishes OSH responsibilities to provide a safe working environment for its workforce and for NOAA affiliates who are exposed to the risks associated with ionizing and non-ionizing radiation sources.

17.3. Roles and Responsibilities.

A. SECO shall:

- (1) Serve as the proponent for the NOAA Radiation Safety Management System.
- (2) Appoint a qualified person to serve as the NOAA Radiation Safety Officer (RSO). An alternate RSO shall also be appointed to be available for urgent communication under circumstances where the RSO is unavailable.
- (3) Identify radiation safety training needs for NOAA RSOs, LO/SO organization RSOs and LSOs.

- (4) Ensure that field/program offices conduct annual audits of facilities/activities utilizing radioactive commodities to ensure compliance with NRC licenses and NOAA, DOC, and other Federal policies and procedures.
 - (5) Provide a common access repository on the NOAA safety portal to manage radioactive inventories.
 - (6) Establish a NOAA Radiation Safety Council.
 - (a) Membership includes the NOAA RSO (serves as the council chair) and an RSO alternate and LO/SO/field office RSOs and LSOs.
 - (b) The Radiation Safety Council should meet at least semi-annually and at the call of the chair.
- B. LOs/SOs and/or field/program offices utilizing radioactive devices, sources, and other radioactive materials, and/or Class 3b and Class 4 LASERs shall:
- (1) Appoint a qualified person to serve as the LO/SO Radiation Safety Officer (RSO). An alternate RSO shall also be appointed to be available for urgent communication under circumstances where the RSO is unavailable.
 - (2) Appoint qualified employees as the RSO and the RSO alternate to serve as the field/program office central point of contact for all radiation issues. Ensure that the training needs of the RSO and the RSO alternate are addressed. Note: Where there is a limited-scope Nuclear Regulatory Commission (NRC) radioactive materials license, both RSOs and Authorized Users are appointed by NRC after a review of training and experience.
 - (3) Appoint a qualified employee as LSO to serve as the field/program office central point of contact where there are Class 3b and Class 4 LASER hazards. Ensure that the training needs of the LSO are addressed. The field/program office RSO may also serve as the organization's LSO. Note: Although an appointed RSO or LSO may hold a position anywhere in his/her organization, the RSO and LSO shall have direct access to the senior manager of the organization for radiation safety purposes.
 - (4) Manage radiation safety and control programs in accordance with federal law and NOAA policies and procedures.
 - (5) Comply with all NRC license requirements and conditions.
 - (6) Notify the NOAA RSO within 24 hours of an NRC, OSHA, or other regulatory inspection pertaining to the use of ionizing radiation. Provide written results of a regulatory inspection to the NOAA RSO within 48 hours. In the event of a Notice of Violation, send a written follow-up giving the details of the violation(s), the corrective actions taken, and the program modifications instituted to prevent a recurrence to the NOAA RSO within 15 days of the violation.
 - (7) Notify the NOAA RSO and respective LO/SO RSO within 24 hours of radiation incidents, including the loss or theft, destruction, or release of radioactive material outside of a restricted area. Send a written follow-up giving the details of the incidents, the corrective actions taken, and the program modifications instituted to prevent a recurrence to the NOAA RSO within 15 days of the incident through the organization's normal organizational leadership chain.
 - (8) Publish and implement written radiation safety plans and forward a copy of their written radiation safety management system to the LO/SO RSO. Note that written radiation safety plans must include a section on incident response: loss or theft of radioactive material or sources, exposures, spills and release of radioactive material outside of restricted areas. Written plans

must include regulatory inspection response consistent with this NOAA Manual. Maintain trained personnel to handle incidents when they occur.

- (9) Provide copies of radioactive material licenses to the NOAA RSO and respective LO/SO RSO as soon as a new amendment or renewal is issued.
- (10) Audit organization facilities/activities on an annual basis to ensure compliance with NRC licenses, NOAA policies, and federal requirements. Provide written results of annual radiation safety and health audits and corrective actions in response to those audits to the respective LO/SO RSO within 15 days of the audit report completion.
- (11) Maintain an inventory of all radioactive materials within the organization and update it semi-annually (or more frequently if required by the NRC license or local procedure). Inventories will be maintained on the NOAA Radiation Safety Portal at <https://share.census.gov/teamsites/CSMIS/NOAA/NOAASafety/NOAASafe/>. RSOs may request access to the portal by contacting the SECO via e-mail at noaa.safety@noaa.gov.
- (12) Appoint a representative from each NOAA organization that has an NRC license to the NOAA Radiation Safety Board.

C. The NOAA Radiation Safety Board shall:

- (1) Act as a resource for questions regarding radioactive materials.
- (2) Provide recommendations to SECO and Line Offices to improve their use of radioactive materials and lasers.
- (3) Keep an inventory of radioactive devices and lasers that belong to NOAA.
- (4) Elevate issues requiring executive-level decisions to the NOAA Executive OSH Council.

17.4. Application.

As a general practice, NOAA organizations shall develop and management quality control processes to identify, mitigate, and control ionizing and non-ionizing radiation hazards associated with NOAA activities and equipment by engineering design, administrative controls, or protective equipment (in that order). Organizations will also ensure that exposure to ionizing radiation is kept as low as reasonably achievable (ALARA). Organizations will adopt no practice and conduct no operation involving the planned exposure of personnel to radiation in excess of the applicable exposure standards.

17.4.1. Ionizing Radiation.

A. Licensing and Control of Ionizing Radiation Sources: Field and program offices shall manage and control licensed materials in accordance with the following guidance:

- (1) Field/program offices where current radioactive materials are maintained shall comply with specific requirements outlined in their NRC license and notification requirements outlined in 10 CFR 20.2202. License holders shall evaluate isotope work in advance which would likely meet or exceed the dose thresholds described in 10 CFR 20.2202. The services of a certified health physicist shall be sought if the expertise to make this evaluation does not exist internally.
- (2) Radioactive material inventories will be maintained on the NOAA Radiation Safety Portal. Change in inventories will be posted to the NOAA Radiation Safety Portal within 30 days of the change.

- (3) No ionizing radiation-producing device, source, solution or other radioactive material may be brought onto a NOAA-leased or owned facility unless it meets one of the following criteria:
 - (a) Is covered by a general license.
 - (b) Is covered by an NRC-issued license specific to an activity on the NOAA-leased or owned facility or covered by a general license.
 - (c) Is authorized by a NOAA authorization for NOAA-owned quantities exempt from NRC license.

B. Wipe and meter contamination surveys:

- (1) Current radioactive material license holders will conduct wipe testing in accordance with their specific license requirements.
- (2) The RSO named on the license will review survey results on at least a monthly basis or more frequently depending on the isotope and activity used. Survey records and any follow-up actions from survey reviews shall be maintained by the RSO on the NOAA Radiation Safety Portal listed in Section 17.3B above. Records shall be made available to the NOAA RSO and respective LO/SO RSO upon request.
- (3) Meter and counters (gamma and liquid scintillation) used to support contamination surveys will be calibrated at least annually, and records of calibration shall be maintained at the site that holds the radioactive material license. Records will be made available to the NOAA RSO and respective LO/SO RSO upon request.

C. Shipping, Receiving and Transportation of radioactive materials, radioactive sources, and instruments containing radioactive material: All shipping, receiving, and transportation of radioactive materials, radioactive sources, and instruments containing radioactive materials shall be done in compliance with applicable regulations and guidelines including but not limited to the U.S. DOT, NRC, student international Air Transport Association, and Environmental Protection Agency regulations. Records of shipments will be maintained by the organization and made available to the NOAA RSO and respective LO/SO RSO upon request.

D. Response to Radiological Spill or Release:

- (1) Spill response procedures for spills or releases of any quantity of radioactive materials must be defined in the license holder's application and radiation safety manual. It must also be part of the required initial and annual training for radioactive material users.
- (2) Incidents that require either immediate or 24-hour notification to NRC must also be reported to SECO within the same timeframe. An incident that meets the reporting requirements on 10 CFR 20.2202 is a Class A incident and is investigated by SECO in accordance with Section 6.2 above.
- (3) Post-spill surveys shall be documented and the results provided to the NOAA RSO and respective LO/SO RSO upon request. Where wipe survey sources are conducted by an outside laboratory, ensure the laboratory follows a rigorous quality assurance program that meets and follows the standards provided under ISO/IEC 17025:2005, ANSI N323A, and appropriate state agency standards.

17.4.2. LASERS.

Operations and use of LASERS in NOAA.

- A. Each field/program office that possesses Class 3b or Class 4 LASERS shall appoint a LSO in writing. The field/program office RSO may also serve as the organization's LSO.
- B. LASER devices shall comply with the provisions of 21 CFR Parts 1040.10 and 1040.11. The design of NOAA LASER safety processes will follow applicable guidelines in ANSI Z136.1, ANSI Z136.3, and ANSI Z136.6.
- C. The field/program office LSO shall maintain an inventory of LASER devices within the organization and update it annually and more frequently if required by local procedure. The LASER device inventory may be maintained on the NOAA Radiation Safety Portal.

17.4.3. Radio Frequency Electromagnetic Radiation.

Operations and use of non-ionizing Radio-Frequency (RF) electromagnetic radiation sources in NOAA.

- A. Each field/program office that possesses RF emitters shall appoint a Radio Frequency Safety Officer (RFSO) in writing. The field/program office RSO may also serve as the RFSO.
 - (1) NOAA will comply with RF radiation safety processes elements outlined in the NOAA Manual. Type-classified RF electromagnetic radiation (EMR) emitting system users will comply with radiation safety requirements in applicable technical publications.
 - (2) Users will adopt no practice and conduct no operation involving the planned exposure of personnel to RF levels in excess of the applicable maximum permissible exposures.
 - (3) Refer to Section 6.2 of this NOAA Manual and the NOAA Handbook 209-40, NOAA Accident Investigation, Reporting, and Recordkeeping for accident/incident reporting requirements.

17.4.4. Training Requirements.

RSOs and LSOs shall be trained to a level commensurate with the duties and responsibilities of the radiation program for which they are responsible, and in accordance with applicable NRC regulations, license conditions, ANSI standards, and other program documents. Training shall be resourced by the field/program office utilizing ionizing or nonionizing radiation components. Training records will be maintained in accordance with Section 5.2.1.6 of this NOAA Manual.

- A. Field/program office RSOs and above shall complete an approved 40-hour radiation safety training program. The NOAA RSO shall maintain a list of radiation safety courses that may be used to fulfill this requirement. Retraining should be scheduled every 5 years unless there is a significant operational or regulatory change that requires a shorter interval between training.
- B. All personnel involved in shipping, receiving, and transportation of radioactive materials, radioactive sources, and instruments containing radioactive materials, including personnel preparing low-level radioactive waste for transport, must complete training required by NRC NUREG-1556 Volume 7 and 49 CFR 173. The NOAA RSO shall maintain a list of courses that may be used to fulfill this requirement. Refresher training/retraining should be scheduled every two years to meet both IATA and DOT requirements.
- C. An LSO designated in accordance with this NOAA Manual shall complete a formal course of instruction addressing such topics as LASER fundamentals, terminology, biological effects, hazard

analysis, and protective and control measures. The NOAA RSO shall maintain a list of radiation safety courses that may be used to fulfill this requirement.

- D. All training requirements shall be completed before the RSO/LSO assumes the radiation safety management responsibilities.
- E. For work with ionizing radiation, initial and refresher training must occur for authorized users, radioactive material users, and alternate personnel who are entering radiation restricted areas. Initial training must occur before an employee begins working with radioactive material. Refresher training may occur annually in accordance with NRC regulations and specific license conditions. Retraining, more often than the annual requirement, should occur after a significant operational or regulatory change.
- F. The NOAA RSO will provide guidance on initial and refresher training, including LASERS and RF radiation that meet the requirements in accordance with applicable regulations and this NOAA Manual.

SECTION 18. AMMUNITION, EXPLOSIVES, AND FIREARMS SAFETY.

This section establishes NOAA's Ammunition, Explosives, and Firearms Safety Management Program. It provides the minimum explosives and firearm safety policy for managers with firearm, ammunition, and/or explosives operations to protect personnel, property during research, security, or law enforcement activities. This section will discuss the mandatory procedures for safely handling, storing, and using ammunition, explosives, and firearms.

18.1. Scope.

This Order applies to all NOAA operations that involve the handling, maintenance, and storage of ammunition, explosives, and firearms as part of their operations. The scope includes contractor security, contract law enforcement forces, and other contract activities that are authorized to use firearms, ammunition, and/or explosives.

18.2. Purpose.

The section defines high-level OSH performance requirements and establishes OSH responsibilities to provide a safe working environment for its workforce and for NOAA affiliates who are exposed to the risks associated with the management and use of ammunition, explosives, and firearms. It defines the core requirements for handling, maintenance, and storage activities within NOAA that are designed to reduce the risk of death or injury to NOAA personnel from the use of ammunition, explosives, and firearms.

18.3. Roles and Responsibility.

A. SECO shall:

- (1) Serve as the proponent for the NOAA Ammunition, Explosives, and Firearms Safety Management Program.
- (2) Develop, implement, and disseminate policies, procedures, and training requirements for the safe handling and storage of ammunition, explosives, and firearms throughout NOAA.

- (3) Include within the NECSAS program the audit of the Ammunition, Explosives, and Firearms Safety Management Program and ensure compliance as prescribed in this policy. Compliance shall include storage requirements, procedures for the safe handling of firearms, and the training records of personnel.
 - (4) Provide a common access repository on the NOAA Safe database to catalog ammunition and explosives inventories throughout NOAA.
 - (5) Issue ammunition and explosives storage licenses. Ammunition and explosives storage licenses are issued to facilities which are storing ammunition or explosives and have no expiration date. Licensees shall review their licenses at least annually to validate accuracy.
- B. LO/SO and field/program offices with ammunition or explosives storage shall:
- (1) Develop and implement a site-specific ammunition, explosives, and firearms safety management program that identifies their internal organizational responsibilities and defines ammunition, explosives, and firearm storage safety practices.
 - (2) Appoint an explosives safety officer as the single point of contact for the management of explosives safety and health.
 - (3) Update information on the Ammunition, Explosives, and Firearms Safety Management Portal as required. The Ammunition, Explosives, and Firearms Safety Management Portal provides single-point records management of explosives storage facilities and can be accessed at <https://share.census.gov/teamsites/CSMIS/NOAA/NOAASafety/NOAASafe/>. Safety Managers may request access to the portal by contacting the SECO via e-mail at noaa.safety@noaa.gov.

18.4. Application.

NOAA organizations shall develop management and quality control processes to identify, mitigate, and control ammunition and explosives storage hazards associated with NOAA activities and equipment, detailed in this NOAA Manual, by implementing:

- A. Engineering designs.
- B. Administrative controls.
- C. Personal protective equipment.

Note: Personal protective equipment is the least-preferred method of control. Ammunition and explosives shall be stored in accordance with this NOAA Manual, DAO 209-4, Occupational Safety and Health Program, and ATF P 5400.7.

NOAA organizations shall develop weapon-specific handling procedures and ensure that employees receive proper safety training on the safe handling, storage, and use of all firearms used at their site.

18.4.1. Ammunition and Explosive Safety.

Hazard Analysis and Risk Assessment: All operations involving ammunition/explosives will be assessed to identify and manage the potential risk associated with the operation through the application of the NOAA RM Program.

A. Storage:

- (1) Only facilities with ammunition and explosives storage licenses will be used to store ammunition and explosives on NOAA facilities. Licensing will be requested through the LO/SO to SECO.
- (2) Ammunition and explosive storage facilities that do not meet NOAA ammunition and explosives safety standards will not be licensed.
 - (a) The ammunition and explosive storage license will indicate the maximum Net Explosives Weight (NEW), Net Explosives Quantity (NEQ), and Net Explosives Content (NEC) by Hazard Class and Division (HD) authorized for storage in the facility. The total amount of stored ammunition and explosives will not exceed the limits of the license at any given time.
 - (b) RM will be applied to all operations in and around the storage area of ammunition and explosives. The requesting /program office will prepare a risk assessment in accordance with Section 5.1.1 and Appendix A of this NOAA Manual and coordinate their ammunition and explosives storage license with logistics, security, fire prevention, and ammunition surveillance personnel prior to submission to SECO for licensing.

B. Management of Storage Facilities: Each ammunition and explosives storage facility will be licensed to the field/program office. The field/program office shall be located on the campus/complex where the ammunition and explosives storage facility is located:

- (1) Authorized munitions for storage are limited to typed classified HC/D 1.3, and HC/D 1.4. Ammunition quantities are limited to the minimum amount of ammunition required to support operations (law enforcement, security guards, protection from wildlife, etc.) or to support the immediate training requirements of the field/program office.
- (2) Managers will ensure that physical security requirements are implemented commensurate with ammunition physical security classification.
- (3) The license will specify the location approved for storage, the quantity of ammunition and/or explosive authorized, time restrictions on storage and safety, security, and fire prevention inspection requirements.
- (4) The appropriate fire and/or chemical hazard symbols will be properly posted at each storage location. Each storage location will have a minimum of one serviceable 10 lb. BC fire extinguisher readily available.
- (5) Storage will be consistent with the safety requirements in this NOAA Manual and DOC security requirements. The use of metal storage containers or cabinets is required and ammunition will be stored under the same criteria as it would in an approved ammunition storage facility. Storage rooms without sufficient space for metal storage containers will store ammunition in original sealed outer packs. Considerations in determining the amount of munitions will be based on specific operation requirements, composition of the organization, and adequacy of storage space. Appropriate warning labels shall be used for all storage locations.
- (6) Ammunition will be stored in approved Department of Transportation packaging. Ammunition containers and packaging are considerations in determining a munition's HC/D. Where practical, munitions are to be stored in their original container with original packaging (otherwise, an explosives safety site plan is required).

- (7) No combustibles, solvents, petroleum products, or radioactive materials will be stored in the vicinity of the ammunition. Ammunition will be separated to the greatest extent possible from dissimilar hazardous materials.
 - (8) Net Explosive Weight (NEW) Limitations: The NEW may not exceed 100 pounds NEW for HC/D 1.3 and operationally necessary quantities for HC/D 1.4. Guidance for calculating NEW when HC/Ds are mixed is contained in [DOD Manual 6055.09-M](#).
- C. Transportation of Ammunition: Ammunition and explosives will be transported IAW 49 CFR Part 173.
- D. Ammunition Inventory: Ammunition inventories are required for all ammunition storage facilities. Ammunition inventories are subject to inspection and will be maintained by the field/program office. Ammunition inventories will be made available to LESCOs and SECO upon request.

18.4.2 Firearms Safety.

This section prescribes the requirements for the safe handling of firearms used by personnel in an official capacity as part of their official duties. All affected personnel shall be trained in the use of agency-provided firearms in order to protect themselves and others from harm during the performance of their active duties and within the parameters of a research operation.

- A. NOAA Office of Law Enforcement Officers shall adhere to the requirements of the “Office of Law Enforcement Manual 5.3 Firearms.” This manual provides guidance on the training and carrying requirements for firearms.
- B. General Training requirements: LO/SO shall develop and provide training courses specific to the type/model of firearm(s) used within their organization. All authorized employees required to use a firearm or firearms as part of their duties shall receive this safety training.
- C. General Requirements: Only agency-issued or approved firearms shall be used by authorized personnel in the furtherance of their operation responsibilities while on duty or off duty:
 - (1) As necessary, each supervisor may issue additional written guidelines applicable to the personnel assigned to, or operating within a particular area, so long as such guidelines are not contrary to the purpose or intent of the provisions herein. Copies of such guidelines shall be forwarded to NOAA SECO for approval at least 1 month prior to their proposed effective date.
 - (2) Authorized personnel shall be responsible at all times for the firearm(s) and ammunition in their possession, and will take reasonable precautions against theft or loss of any firearm or loss of ammunition in their possession.
 - (3) Firearms and ammunition shall never be left in the common open area of an automobile or vessel even though the automobile is locked. Under unusual and necessary circumstances, they may be stored for short periods in the locked trunk of an automobile with the automobile doors locked. In the case of vehicles without trunks or when on vessels, the preferred option would be an installed gun safe. If that option is not available and the firearm cannot remain with the authorized employee, it may be stored for a brief period in a locked glove box, locked console, or other locked storage container.

- (4) Each authorized employee will be responsible for keeping their firearm, holsters, magazine(s), holders, and related items clean and in operating condition at all times, in accordance with manufacturer's recommendations. In doing so, authorized employees shall not disassemble agency-owned firearms beyond "field stripping" for routine cleaning (removing slide, barrel and recoil spring) unless they are qualified by the firearm manufacturer. Firearms are to be cleaned after each use.
- (5) Written procedures to minimize lead exposures during firearm cleaning operations shall be developed by each office and posted in the designated firearm cleaning area. Lead testing swabs shall be used on the cleaning surface to ensure cleaning procedures are effective in removing lead material.
- (6) When issuing a firearm, holster, magazine(s), holders, and related items, the issuing authority will ensure that the equipment is inspected and is in proper operating condition. Firearms shall be inspected at the end of each day and after each use.
- (7) If the loss or theft of an agency-owned firearm or ammunition occurs, an immediate verbal report to the direct supervisor is required upon discovery. The report of loss will be forwarded to the Director as expeditiously as possible through the organizational leadership chain. The authorized employee who was issued the firearm that was lost and/or stolen will prepare a written report within 72 hours and submit it to their supervisor.
- (8) Firearms are considered sensitive items and must be entered into the NOAA Sunflower Property Management System.

APPENDICIES

APPENDIX A. Risk Management.

RM involves identifying, assessing, and controlling risks that arise from operational and workplace factors, and making decisions that balance risk with operational benefits. The process of RM analyzes the operation and workplace, focuses on key capabilities, and takes into account the availability and mix of resources. Managing risk can be broken into two general categories: ORM and JHA. ORM focuses on risks associated with dynamic activities where operational variables can significantly affect the associated risk. A JHA is used for detailed analysis of risks associated with NOAA operations. A JHA provides the foundation for which ORM is conducted. The JHA addresses constant risks not impacted by variables such as weather, crew mix, etc. ORM focuses on these variables to address risk under the current operational conditions and environment. Both ORM and JHA require appropriate risk acceptance authorities to execute the operation.

This guide describes NOAA's primary decision-making process for identifying hazards and controlling risk across the full spectrum of NOAA operations and activities. A detailed understanding of this process will assist leaders in the mitigation of unnecessary accidents and injuries.

Purpose of Risk Management.

To manage risk in all tasks, leaders at all levels must ensure that the proper procedures are in place and that appropriate resources are available for the NOAA workforce to perform assigned tasks.

Goal of Risk Management.

To develop an environment in which all NOAA personnel and civilians are trained and motivated to personally manage risk in everything they do.

Principles of Risk Management.

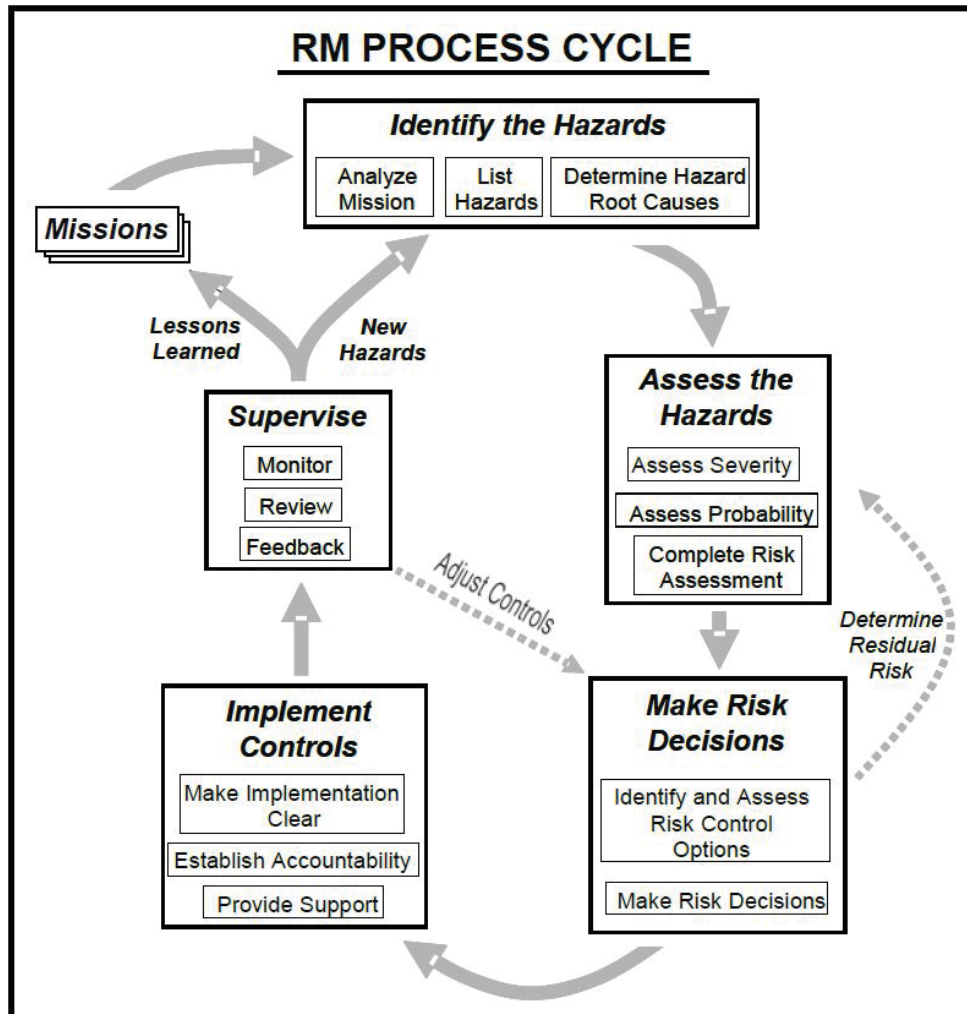
Four principles govern all actions associated with RM. These continuously employed principles are applicable before, during, and after all tasks and operations.

- A. **Accept No Unnecessary Risk.** Unnecessary risk comes without a commensurate return in terms of real benefits or available opportunities. Many operations and daily routines involve risk. The most logical choices for accomplishing an operation are those that meet all operation requirements with the minimum acceptable risk. The corollary to this axiom is “accept risk only when necessary” and when required to successfully complete the operation or task.
- B. **Make Risk Decisions at the Appropriate Level.** Making risk decisions at the appropriate level establishes clear accountability. Those accountable for the success or failure of the operation must be included in the risk decision process. The appropriate level for risk decisions is the one that can allocate the resources to reduce the risk or eliminate the hazard and implement controls. Typically, the leader or individual responsible for executing the operation or task is:
 - (1) Authorized to accept levels of risk typical of the planned operation (e.g. loss of operation effectiveness, normal wear and tear on materiel).
 - (2) Required to elevate decisions to the next level in the leadership chain after it is determined that controls available to him/her will not reduce residual risk to an acceptable level.
- C. **Accept Risk Only When Benefits Outweigh the Costs.** All identified benefits should be compared to all identified costs. The process of weighing risks against opportunities and benefits helps to maximize capability. Even high-risk endeavors may be undertaken when there is clear

knowledge that the sum of the benefits exceeds the sum of the costs. Balancing costs and benefits may be a subjective process and open to interpretation. Ultimately, the balance may have to be determined by the appropriate decision authority.

- D. **Integrate RM into Operational Doctrine and Planning at all Levels.** Risks are more easily assessed and managed in the planning stages of an operation. Integrating RM into planning as early as possible provides the decision maker the greatest opportunity to apply ORM principles. Additionally, feedback following an operation must be provided to benefit future operations and activities.

Five Step Risk Management Process



Step 1. Identify The Hazards.

The purpose of Step 1 is to identify as many hazards as possible. A hazard can be defined as any real or potential condition that can cause operational degradation, injury, illness, or death to personnel, or damage or loss of equipment or property. The following is used to help identify real or potential hazards.

- A. List the major steps of the operation.
- B. Conduct a preliminary hazard analysis:

- (1) List the hazards associated with each step.
- (2) List the possible causes of the hazards.

Step 2. Assess the Risks.

Determine the degree of risk for each hazard in terms of their likelihood and consequences.

- A. A matrix provides a consistent framework for the assessment, shows the relative risk, and identifies which hazards to control first.
- B. The use of a matrix is recommended, but not required.

How to Assess Risk.

A. **Likelihood:** First, estimate the likelihood of the hazard. Likelihood tells you how often the hazard will affect some activity within the operation. This is the estimate, which is given based on known information and experience. If reliable data is available, you can also express likelihood as a number, in terms of a ratio or as a percentage. Express the level of likelihood by using the following ranking levels:

Frequent	Occurs very often: known to happen regularly. <ul style="list-style-type: none"> ◆ Individual Item – Occurs often in the life of the system ◆ Fleet or Inventory – Continuously experienced ◆ Individual – Occurs often in career ◆ All Personnel – Continuously experienced (e.g. Multiple members of the workforce encounters the hazard at any point during daily operations across the organization)
Probable	Occurs several times: a common occurrence. <ul style="list-style-type: none"> ◆ Individual Item – Occurs several times in the life of the system ◆ Fleet or Inventory – Occurs regularly ◆ Individual – Occurs several times in a career ◆ All Personnel – Occurs regularly (e.g. At least one member of the workforce encounters the hazard at any point during daily operations across the organization)
Occasional	Occurs sporadically, but is not uncommon. <ul style="list-style-type: none"> ◆ Individual Item – Will occur in the life of the system ◆ Fleet or Inventory – Occurs several times in the life of the system ◆ Individual – Will occur in a career ◆ All Personnel – Occurs sporadically (e.g. At least one member of the workforce encounters the hazard at some point during the year across the organization)
Remote	Remotely possible: could occur at some time. <ul style="list-style-type: none"> ◆ Individual Item – May occur in the life of the system ◆ Fleet or Inventory – Can be expected to occur in the life of the system ◆ Individual – May occur in a career ◆ All Personnel – Occurs seldom (e.g. At least one member of the workforce encounters the hazard at some point during their tenure across the organization)

Improbable	<p>Can assume it will not occur, but not impossible.</p> <ul style="list-style-type: none"> ◆ Individual Item – So unlikely you can assume it will not occur in the life of the system ◆ Fleet or Inventory – Unlikely but could occur in the life of the system ◆ Individual – So unlikely you can assume it will not occur in a career ◆ All Personnel – Occurs very rarely (e.g. Although unlikely, one member of the workforce may encounter the hazard at some point during their tenure across the organization)
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B. Consequences: Next, determine the consequence once the likelihood has been determined. Consequence is expressed in categories reflecting the degree to which an incident will impact the operation’s capability or effectiveness. The degree of consequence estimated for each hazard is based on the results of similar past events. The consequence assessment should be based on the worst possible outcome that can be expected. It is expressed in terms of the impact on the operation, people, material, facilities, and environment. There are four categories of consequence:

Category I: Catastrophic	<p>The hazard may cause death, loss of facility or asset, or grave damage to national interests.</p> <ul style="list-style-type: none"> ◆ Personnel – Death or permanent total disability ◆ Real property or Equipment – System loss, major property damage
Category II: Critical	<p>The hazard may cause severe injury, illness, property damage, damage to national or service interests, or degradation in the efficient use of assets.</p> <ul style="list-style-type: none"> ◆ Personnel – Permanent partial disability, temporary total disability in excess of 3 months ◆ Real property or Equipment – Major system damage, significant property damage
Category III: Marginal	<p>The hazard may cause minor injury, illness, property damage, damage to national service or command interests, or degradation in the efficient use of assets.</p> <ul style="list-style-type: none"> ◆ Personnel – Minor injury, lost workday accident, compensable injury or illness ◆ Real property or Equipment – Minor system damage, minor property damage
Category IV: Negligible	<p>The hazard presents a minimal threat to personnel safety or health, property, national, service or command interests, or efficient use of assets.</p> <ul style="list-style-type: none"> ◆ Personnel – First aid, minor medical treatment ◆ Real property or Equipment – minor system impairment

C. Exposure: Finally, consider exposure. Exposure is the extent to which an organization and/or stakeholder is subject to an event. It is the number of resources (personnel or equipment) affected by a given event or by repeated events over time. Although exposure is a component of risk, it is not used directly in assigning a level of risk. However, you should consider the exposure potential when assigning levels of likelihood and consequences. Exposure can be expressed in the following terms:

- ◆ **Time:** how long resources are exposed to the hazard?
- ◆ **Proximity:** how close to resources would the hazard occur?
- ◆ **Volume:** what is the number of resources affected by the hazard?
- ◆ **Repetition:** what is the frequency with which the hazard would recur?

Levels of Risk.

NOAA created a Risk Assessment Matrix that leaders use to assign a standardized risk level based on likelihood and consequence. Leaders use these standard risk levels to express their risk decisions. Senior leaders establish policies to determine who is authorized to approve operations at each level of risk and to ensure that every subordinate leader understands this requirement. The NOAA workforce must also understand it.

Once you have determined likelihood and consequence, locate the point of intersection on the Risk Assessment Matrix to determine the level of risk for a particular hazard. For example, if a hazard is estimated to have a probable likelihood and a Category II consequence, the level of risk would be a Serious Risk. Risk levels are defined as:

- A. **High Risk:** Loss of ability to accomplish the operation or the operation produces extremely severe outcomes. This implies that the risk associated with this operation, activity, or event may have severe consequences beyond those associated with the specific operation or event. The decision to continue must be weighed carefully against the potential gain to be achieved by continuing this course of action. High-risk operations must be approved at an appropriate level of leadership.
- B. **Serious Risk:** Significant degradation of operational capabilities in terms of the required operation standard, inability to accomplish all parts of the operation, high potential for serious injury to personnel, or inability to complete the operation to standard if hazards occur during the operation. This implies that if a hazardous event occurs, serious consequences will occur. The decision to continue must be weighed carefully against the potential gain to be achieved by continuing this course of action. Serious-risk operations must be approved at an appropriate level of leadership.
- C. **Medium Risk:** The ability to complete the operation will be slightly degraded in the event this hazard occurs. If a hazardous event occurs it will only slightly impact on the operation, resulting in only minor injury or loss, and will not affect overall capability.
- D. **Low Risk:** Expected losses have little or no impact on accomplishing the operation. Injury, damage, or illness will be minor and have no long-term impact or effect.

			LIKELIHOOD				
			Frequent	Probable	Occasional	Remote	Improbable
			A	B	C	D	E
CONSEQUENCE	Catastrophic	I	High		Serious		Medium
	Critical	II	Serious		Medium	Low	High
	Marginal	III	Medium		Low		High
	Negligible	IV	Low		High		Medium

Step 3. Analyze Risk Control Measures and Make Risk Decisions.

Develop Controls.

- A. Develop Controls for each hazard to eliminate or reduce the risk until the benefit is greater than the risk. Use NOAA's Hierarchy of Controls (in order of precedence) to control risks.
- (1) Elimination of hazard.
 - (2) Substitution of less hazardous materials, processes, operations, or equipment.
 - (3) Engineering controls.
 - (4) Warnings.
 - (5) Administrative controls.
 - (6) Personal protective equipment.
- B. Develop controls for the most serious hazards first. You may not have time to control every hazard, so control the worst hazards first.

Determine Residual Risk.

After controls have been selected to eliminate hazards or reduce their risk, determine the level of residual risk for the selected task or operation and/or course of action. Once residual risk is determined, decide on one of the following courses of action:

- A. **Accept the plan as is:** Benefits outweigh risks (costs), and total risk is low enough to justify the proposed action if something goes wrong. The decision maker must allocate resources to control risk. Available resources are time, money, personnel, and/or equipment.
- B. **Reject the plan out-of-hand:** Risk is too high to justify the operation in any form. The plan was probably faulty in some manner, or the objective was not that important.
- C. **Modify the plan to develop measures to control risk:** The plan is valid, but the current concept does not adequately minimize the risk involved. Further work to control the risk is necessary before proceeding.
- D. **Elevate the decision to higher authority:** The risk is too great for the decision maker to accept, but all measures of controlling risk have been considered. If the operation is to continue, a higher authority must decide if the operation is worth it, and accept the risk.

Make a Risk Decision at the Appropriate Level.

Factors below form the basis for a decision-making system to guide leaders:

- ◆ Who will answer in the event of a mishap?
- ◆ Who is the senior person at the scene?
- ◆ Who possesses the best insight into the full benefits and costs of a risk?
- ◆ Who has the resources to mitigate the risk?
- ◆ What level makes the most operational sense?
- ◆ What level makes these types of decisions in other activities?

Step 4. Implement Risk Controls.

- A. Incorporate selected controls into standard operating procedures, policies, guidance documents, and training.

- B. Communicate controls to the lowest level (e.g. Who will do what by when?).
- C. Implementation can go wrong for the following reasons:
 - (1) The wrong control was used for the problem.
 - (2) Operators dislike it.
 - (3) Leaders dislike it.
 - (4) It's too costly.
 - (5) Other priorities overmatch it.
 - (6) It's misunderstood.
 - (7) Nobody measures it until it's too late.

Step 5. Supervise and Review.

RM is a process that continues throughout the life cycle of the system, operation, or activity. Leaders at every level must fulfill their respective roles in assuring that controls are sustained over time. Once controls are in place, the process must be periodically reevaluated to ensure effectiveness.

Supervise.

Monitor the operation to ensure that:

- A. Controls are effective and remain in place.
- B. Changes which require further RM are identified.
- C. Action is taken when necessary to correct ineffective risk controls and reinitiate the RM steps in response to new hazards.
- D. Anytime the personnel, equipment, or operation tasks change or new operations are anticipated in an environment not covered in the initial risk management analysis, the risks and control measures should be reevaluated.
- E. Successful operation performance is achieved by shifting the cost-benefit balance in favor of benefit through controlling risks.

Review.

After assets are expended to control risks, then a cost-benefit review must be accomplished to see if risk and cost are in balance.

- A. Is the actual cost in line with expectations?
- B. What effect did control measures have on performance?
- C. Was an operation feedback system established to ensure that the corrective or preventative action taken was effective?
- D. Was documentation available to allow a review of the risk decision process?
- E. What measurements were in place to ensure accurate evaluations were taken regarding how effectively controls were able to eliminate hazards or reduce risks?

Feedback.

Feedback informs all involved as to how the implementation process is working and whether or not the controls were effective. Feedback can be in the form of briefings, lessons learned, cross-tell reports, benchmarking, database reports, etc.

Three Levels of Risk Management.

RM is a continuous process that is integral to every operating level from strategic planning to tactical execution. It is a tool designed to improve operation readiness and operation accomplishment. The following defines the three general levels of RM.

Detailed Risk Management – Job Hazard Analysis.

A JHA/JSA is a RM technique used to identify and control workplace hazards with the overall aim of preventing personal injury or damage to government or private property. In a JHA, each basic step of a job is analyzed to identify potential hazards and to recommend controls that reduce the risk associated with identified hazards to acceptable levels. Some of the tools used to identify and assess hazards may include research of available engineering and safety data, use of diagram and analysis tools, trends, formal testing, or long-term tracking of the hazards associated with the operation or activity. The following outlines the fundamental steps in the JHA process and specific requirements for NOAA leaders, employees, volunteers, student interns, and NOAA affiliates:

- A. ORM is required in conjunction with a JHA when the operation includes variables that can affect the level of risk associated with the operation (e.g. weather, lighting, sea state, etc.).
- B. A JHA is closely tied to procedures and controls outlined in the organization's SOP for the operations. LO/SO and field/program offices shall review and update JHAs at least every two years as part of SOP review or when one of the following occurs (whichever comes first):
 - (1) Equipment used in the job or operations is modified or replaced.
 - (2) Procedures for conducting the job or operation changes.
 - (3) Accident trends indicate a need for modifications to controls or the inclusion of additional controls.
 - (4) Regulatory change requires alterations to operational practices.
 - (5) As part of the management of change process as outlined in Section 5.1.3 below.

Deliberate Risk Management – ORM.

ORM is an operational-focused decision-making process to systematically evaluate possible courses of action, identify risks and benefits, and determine the best course of action for any given situation. ORM enables executives, functional managers, supervisors, and individuals to maximize operational capabilities while limiting all dimensions of risk by applying a simple, systematic process appropriate for all personnel and functions. Appropriate use of ORM increases both an organization's and individual's ability to accomplish their operation. Whether the dynamic operation is flying an aircraft, driving to a sensor site, conducting research at sea, or conducting a scientific dive, application of the ORM process ensures more consistent results. ORM techniques and tools add rigor to the traditional approach to accomplishing operations, thereby directly strengthening NOAA's ability to conduct its operations. ORM extends the functionality of a JHA by providing for variability associated with an operation. The following outlines NOAA's fundamental goals in implementing an ORM program, principles of ORM, and specific requirements for NOAA leaders, employees, volunteers, student interns, and NOAA affiliates:

- A. Application of ORM principles should be consistent with NOAA’s Hierarchy of Controls. An elevated risk should only be accepted when the implementation of controls based on this hierarchy cannot reduce risk to an acceptable low-risk situation and the benefit of execution outweighs the potential cost of the risk.
- B. NOAA shall integrate ORM principles, techniques, and tools into doctrine, policy, planning, education, and training to induce application by personnel at all levels and in all functional areas.
- C. Leaders at all levels will:
 - (1) Tailor ORM application and techniques to accommodate the unique operation needs of their organization.
 - (2) Develop and maintain ORM implementation and sustainment plans for their organization that direct the integration of ORM into all operational decision-making processes.
- D. All NOAA personnel will apply ORM principles, concepts, and techniques to assess the risks associated with their daily operation and duty-related activities.
- E. Further guidance and detailed procedures for performing ORM are found in NOAA Handbook 209-30, RM.

Hasty Risk Management.

Hasty RM occurs during the execution of an operation or task when resources are very limited and there is not enough time to work through a risk assessment matrix or to calculate residual risk. Hasty RM allows for adaptations in response to unplanned or unforeseen issues or operational need. The steps of hasty RM are the same as those in ORM. However, the steps are done mentally and on the fly as the operation is executed and as variables come into play. The following represents key elements to keep in mind when utilizing hasty RM:

- A. Prior to executing an operation, note the overall risk associated with the tasks at hand. As risks are assessed, be cognizant of variability in the operation that could increase risk. If risk increases, contact the risk acceptance authority for the new level of risk and get verbal approval before proceeding.
- B. Look for ways to reduce risk as the operation is executed. Just because the operation was given moderate or high-risk approval does not mean that efforts should not be made to reduce risk when opportunities present themselves.
- C. Be sure to debrief an operation when variables affected the associated risk. Debriefing helps to ensure that new operational variables are included and assessed in similar operations going forward.

Controlling Risk.

Five types of controls can be used to control risk. In order of most effective to least effective, they are: elimination, substitution, engineering controls, administrative controls, and Personal Protective Equipment (PPE).

Elimination: Controls that completely eliminate or avoid the hazard responsible for increased risk.

Substitution: Controls that replace or substitute the element responsible for the increased risk with less hazardous materials, processes, operations, or equipment.

Engineering Controls: Controls that use engineering methods to reduce risk by design, material selection, and construction.

Administrative Controls:

- A. Controls that reduce risk through specific safe practices, such as warnings, markings, placards, signs, and notices, written policies, programs, instructions, and standard operating procedures (SOPs), that train NOAA personnel to recognize hazards and take proper action, such as limiting the number of personnel/equipment or the time exposed to a hazard.
- B. Administrative controls are effective in reducing risks when used properly.

PPE:

- A. Controls that serve as a barrier between a person and a hazard.
- B. PPE is the least effective type of control because it does not reduce the likelihood of a mishap occurring. It only reduces the consequence when a mishap does occur.
- C. Use PPE when other controls do not reduce the risk to an acceptable level.

APPENDIX B. Occupational Safety and Health Forms.

- A. CD-351, Report of Possible Safety/Health Hazard
- B. NOAA Form 64-70, Energized Electrical Work Permit
- C. NOAA Form 64-90, Survey of Helicopter Landing Area
- D. NOAA Form 64-137, Initial Incident Report
- E. NOAA Form 64-937, Confined Space Entry Permit
- F. NOAA Form 64-2977, Risk Management Worksheet
- G. NOAA Form 64-5382, Hazard/Deficiency Tracking Log
- H. NOAA Form 64-5383, Hot Work Permit

APPENDIX C. References.

Executive Orders.

[Executive Order 12196, Occupational Safety and Health Programs for Federal Employees](#)

United States Code.

[5 U.S.C 7902, Safety Programs](#)

[Occupational Safety and Health Act of 1970, Sections 19 and 24, as amended \(29 U.S.C. 668 and 673\)](#)

Code of Federal Regulations.

[29 CFR 1904, Recording and Reporting Occupational Injuries and Illness](#)

[29 CFR Part 1910, Occupational Safety and Health Standards](#)

[29 CFR Part 1915, Occupational Safety and Health Standards for Shipyard Employment](#)

[29 CFR Part 1917, Marine Terminals](#)

[29 CFR Part 1918, Safety and Health Regulations for Longshoring](#)

[29 CFR Part 1926, Safety and Health Regulations for Construction](#)

[29 CFR Part 1960, Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters](#)

[46 CFR Chapter I, Subchapter U - Oceanographic Research Vessels](#)

[49 CFR 571.500, Low-Speed Vehicles](#)

Department of Commerce Publications.

[DAO 202-411 Supervisory and Management Development](#)

[DAO 209-3, Injury, Illness, Accident, and Fatality Investigation and Reporting](#)

[DAO 209-4, Occupational Safety and Health Program](#)

[DAO 209-5, Safety Award Program](#)

NOAA NAOs.

[NAO 205-1, NOAA Records Management Program](#)

[NAO 209-1A, NOAA Occupational Safety and Health](#)

[NAO-209-123, NOAA Diving Program](#)

[NAO-209-124, NOAA Aviation Safety Policy](#)

[NAO 209-125, NOAA Small Boat Safety Program](#)

[NAO 210-100: All Hazards Incident Management](#)

[NAO 212-14, NOAA Information Technology Security Policy](#)

[NAO 216-104-A, Management and Utilization of Aircraft](#)

[NAO 209-115 NOAA employees aboard non-NOAA vessels](#)

Other NOAA Publications.

[NOAA Handbook 209-40, NOAA Incident Reporting and Recordkeeping Manual](#)

[NOAA Small Boat Standards and Procedures Manual](#)

[NAO 210-100 Handbook](#)

[Supplemental Small Boat Policy](#)

[NOAA Aviation Safety Policy Handbook](#)

[NOAA Working Diving Standards and Safety Manual](#)
[NOAA Scientific Diving Standards and Safety Manual](#)
[OMAO Policy 0350, Diving Unit Safety Assessment Program](#)