

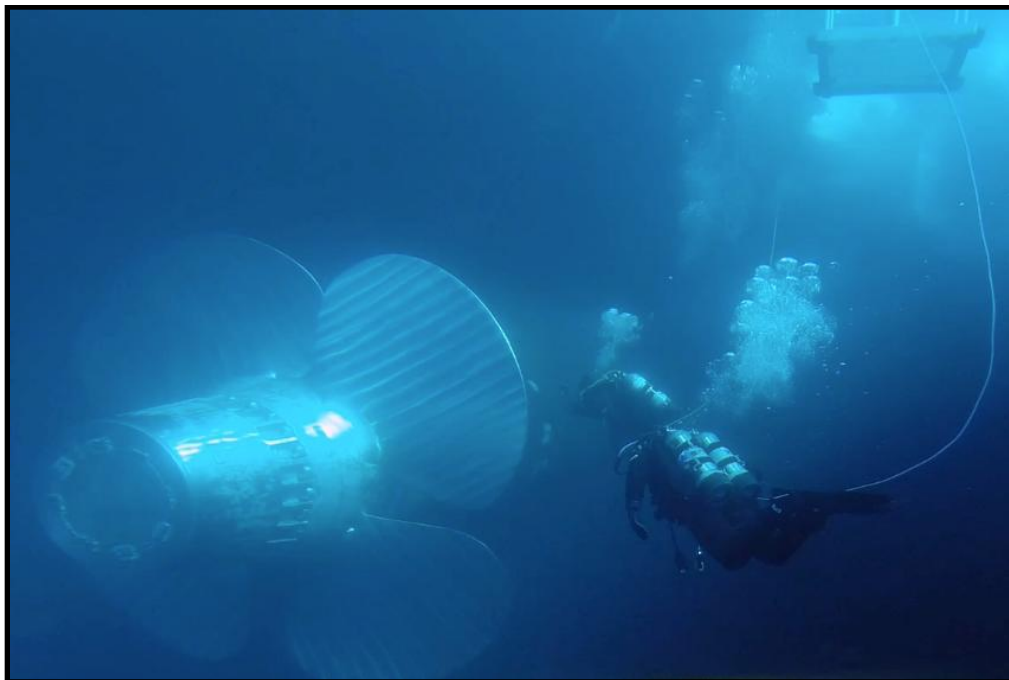
U.S. Department of  
Homeland Security

United States  
Coast Guard



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# Diving Program Manual



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**COMDTINST M3150.1D**  
**December 2018**





Commandant  
United States Coast Guard

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COMDTCHANGENOTE 3150  
27 DEC 2018

COMMANDANT CHANGE NOTICE 3150

Subj: CH-1 TO DIVING PROGRAM MANUAL, COMDTINST M3150.1D

1. PURPOSE. This Commandant Change Notice publishes a change to the Diving Program Manual, COMDTINST M3150.1D.
2. ACTION. All Coast Guard Area and District Commanders, Commanding Officers, Officers-In-Charge, Deputy/Assistant Commandants, and Chiefs of Headquarters staff elements must ensure compliance with the provisions of this Commandant Change Notice. Internet release is authorized.
3. DIRECTIVES AFFECTED. With the addition of this Commandant Change Notice, Diving Program Manual, COMDTINST M3150.1D is updated.
4. DISCLAIMER. This guidance is not a substitute for applicable legal requirements, nor is it itself a rule. It is intended to provide operational guidance for Coast Guard personnel and is not intended to nor does it impose legally binding requirements on any party outside the Coast Guard.
5. MAJOR CHANGES.
  - a. Updated Maritime Safety and Security Team (MSST) San Diego (91109) to Maritime Security Response Team (MSRT) West.
  - b. Additional administrative updates capture organizational functional changes that transferred diver training responsibilities and resources from the Office of Specialized Capabilities Commandant (CG-721) to the Force Readiness Command (FORCECOM). The Coast Guard Liaison Office (CGLO) at the Naval Diving and Salvage Training Center (NDSTC) is now the Diving Branch under the Training Division of the Special Missions Training Center (SMTC).

DISTRIBUTION – SDL No. 169

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NON-STANDARD DISTRIBUTION:

6. ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATIONS.

- a. The development of this Instruction and the general policies contained within it have been thoroughly reviewed by the originating office in conjunction with the Office of Environmental Management, Commandant (CG-47). This Instruction is categorically excluded under current Department of Homeland Security (DHS) categorical exclusion (CATEX) A3 from further environmental analysis in accordance with "Implementation of the National Environmental Policy Act (NEPA)", DHS Instruction Manual 023-01-001-01 (series).
- b. This Instruction will not have any of the following: significant cumulative impacts on the human environment; substantial controversy or substantial change to existing environmental conditions; or inconsistencies with any Federal, State, or local laws or administrative determinations relating to the environment. All future specific actions resulting from the general policy in this Instruction must be individually evaluated for compliance with the National Environmental Policy Act (NEPA), Department of Homeland Security (DHS) and Coast Guard NEPA policy, and compliance with all other applicable environmental mandates.

7. DISTRIBUTION. No paper distribution will be made of this Commandant Change Notice. An electronic version will be located on the following Commandant (CG-612) websites. Internet: <http://www.dcms.uscg.mil/directives/>, and CG Portal: <http://cgportal2.uscg.mil/library/directives/SitePages/Home.aspx>.

8. PROCEDURE. If maintaining a paper library, remove and replace the following pages of the Diving Program Manual, COMDTINST M3150.1D:

| <u>Remove</u> | <u>Replace</u> |
|---------------|----------------|
| 2-1 – 2-4     | 2-1 – 2-4      |
| 3-1 to 3-2    | 3-1 to 3-2     |
| 5-1 to 5-2    | 5-1 to 5-2     |
| 6-1 to 6-2    | 6-1 to 6-2     |
| 7-1 to 7-2    | 7-1 to 7-2     |

9. RECORDS MANAGEMENT CONSIDERATIONS. This Commandant Change Notice has been evaluated for potential records management impacts. The development of this Commandant Change Notice has been thoroughly reviewed during the directives clearance process, and it has been determined there are no further records scheduling requirements, in accordance with Federal Records Act, 44 U.S.C. 3101 et seq., National Archives and Records Administration (NARA) requirements, and the Information and Life Cycle Management Manual, COMDTINST M5212.12 (series). This policy does not have any significant or substantial change to existing records management requirements.

10. FORMS/REPORTS. The CG forms referenced in this Commandant Change Notice are available in USCG Electronic Forms on the Standard Workstation or on the Internet:

<https://www.dcms.uscg.mil/Our-Organization/Assistant-Commandant-for-C4IT-CG-6/The-Office-of-Information-Management-CG-61/Forms-Management/>; CG Portal:  
<http://cgportal2.uscg.mil/library/forms/SitePages/Home.aspx>.

11. **REQUEST FOR CHANGES.** Recommendations for changes or improvements to the Diving Program Manual, COMDTINST M3150.1 (series), are welcome and should be submitted via the chain of command to the Office of Specialized Capabilities, Commandant (CG-721).

MICHAEL P. RYAN /s/  
Rear Admiral, U. S. Coast Guard  
Assistant Commandant for Capability





COMDTINST M3150.1D  
28 JUL 2017

COMMANDANT INSTRUCTION M3150.1D

Subj: DIVING PROGRAM MANUAL

- Ref:
- (a) U.S. Navy Diving Manual, SS521-AG-PRO-010 (series) (NOTAL)
  - (b) Commercial Diving Operations, 29 Code of Federal Regulations (CFR) 1910 Subpart T
  - (c) Commercial Diving Operations, 46 CFR 197 Subpart B
  - (d) Coast Guard Diving Policies and Procedures Manual, Volume 2, COMDTINST M3150.2 (series) (NOTAL)
  - (e) Administration of Diving Unit Inspections and Assessments, COMDTINST 3150.3 (series)
  - (f) Required Operational Capabilities (ROC) and Projected Operational Environmental (POE) for Coast Guard Regional Dive Lockers, COMDTINST 3501.11(series)
  - (g) U.S. Navy-U.S. Coast Guard Addendum to the Inter-service Training Review Organization (ITRO) Memorandum of Agreement of 18 July 2012
  - (h) U.S. Navy Guidance for Diving in Contaminated Water, SS521-AJ-010 (series) (NOTAL)
  - (i) Coast Guard Pay Manual, COMDTINST M7220.29 (series)
  - (j) Enlisted Accessions, Evaluations, and Advancements, COMDTINST M1000.2 (series)
  - (k) Equipment Tag-Out Procedure, COMDTINST 9077.1 (series)

1. PURPOSE. This Manual establishes policy and procedures for the administration, application, training, and the execution of diving operations within the Coast Guard.
2. ACTION. All Coast Guard Area and District Commanders, Commanding Officers, Officers-In-Charge, Deputy/Assistant Commandants, and Chiefs of Headquarters staff elements must ensure compliance with the provisions of this Manual. Internet release is authorized.

DISTRIBUTION – SDL No. 168

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NON-STANDARD DISTRIBUTION:

3. DIRECTIVES AFFECTED. Coast Guard Diving Policies and Procedures Manual, Volume I, COMDTINST M3150.1C, is hereby canceled.
4. DISCUSSION.
  - a. This Manual has been completely revised to account for major organizational changes in the Coast Guard, the establishment of the Underwater Modular Egress Trainer at the Aviation Technical Training Center, and the implementation of the enlisted Diver (DV) rating and Diving (DIV) Chief Warrant Officer specialty.
  - b. The provisions of this Manual are intended as a guide for consistent and uniform execution of the Coast Guard Diving Program. Reference (a) is the primary procedural guide for general military diving operations. Where Coast Guard policies differ from Reference (a), discussion and guidance is provided within this Manual.
  - c. The scope of this Manual extends to all diving, diver training, underwater egress training support, and any other subsurface operation conducted by Coast Guard divers, as well as Coast Guard units requiring diving services.
  - d. Commanding Officers retain ultimate responsibility for Coast Guard personnel diving under their command. Commanding Officers of units obtaining non-military diving resources are responsible for ensuring such services are conducted in accordance with References (b) and (c). Further guidance is contained in Chapter 8.
5. DISCLAIMER. This guidance is not a substitute for applicable legal requirements, nor is it itself a rule. It is intended to provide operational guidance for Coast Guard personnel and is not intended to nor does it impose legally binding requirements on any party outside the Coast Guard.
6. MAJOR CHANGES. Major changes to the Manual are summarized below. However, due to the significant revision of this Manual, a careful review is recommended.
  - a. Title. The title of this Manual has been changed from U.S. Coast Guard Diving Policy and Procedures Manual, Volume 1, to Diving Program Manual. This change was made to emphasize that the Manual contains policy only. Diving tactics, techniques, and procedures (TTP) can be found in References (a) and (d). The Aids to Navigation Diving TTP (CGTTP 3-17.6) can be found on the FORCECOM Tactics, Techniques, and Procedures CG Portal page in the TTP Library:  
<http://cgportal2.uscg.mil/units/forcecom/TTP/SitePages/Home.aspx>.
  - b. Diving Resources. Policy on employment of organic and external diving resources has been revised to clarify the Diving Program's role in the Coast Guard's statutory missions.
  - c. Diving Operational Readiness Inspections (DORI) and Diving Safety Assessments (DSA). Policy on DORI and DSA has been established in Reference (e). The DORI/DSA process replaced the Diving Program Safety Survey (DPSS).



- d. DORI/DSA Checklists. DORI/DSA checklists, formerly DPSS checklists, are maintained by the Naval Safety Center and published on the Naval Safety Center website. They have been removed from this Manual.
- e. Emergency Evacuation Hyperbaric Stretcher (EEHS). Policy on the EEHS has been removed from this Manual.
- f. Standard Diving Checklists. Checklists already contained in Reference (a) have been removed, including the Dive Team Diving Safety and Planning Checklist, Emergency Assistance Checklist, Environmental Checklist, Dive Brief, SCUBA Pre-Dive Checklist, and Rough Diving Log.
- g. Diving Equipment Maintenance and the Diving Equipment List (DEL). Policy for diving equipment maintenance and the DEL has been updated.

7. ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATIONS.

- a. The development of this Directive and the general policies contained within it have been thoroughly reviewed by the originating office and are categorically excluded under current USCG categorical exclusion #33 from further environmental analysis, in accordance with Section 2.B.2. and Figure 2-1 of the National Environmental Policy Act Implementing Procedures and Policy for Considering Environmental Impacts, COMDTINST M16475.1 (series).
- b. This Directive will not have any of the following: significant cumulative impacts on the human environment; substantial controversy or substantial change to existing environmental conditions; or inconsistencies with any Federal, State, or local laws, or administrative determinations relating to the environment. All future specific actions resulting from the general policies of this Manual must be individually evaluated for compliance with the National Environmental Policy Act (NEPA), Council on Environmental Policy NEPA regulations at 40 CFR Parts 1500-1508, DHS and Coast Guard NEPA Policy, and compliance with all other environmental mandates.

8. DISTRIBUTION. No paper distribution will be made of this Manual. An electronic version will be located on the following Commandant (CG-612) websites. Internet: <http://www.dcms.uscg.mil/directives/>, and CG Portal: <http://cgportal2.uscg.mil/library/directives/SitePages/Home.aspx>.

9. RECORDS MANAGEMENT CONSIDERATIONS. This Manual has been thoroughly reviewed during the directives clearance process, and it has been determined there are no further records scheduling requirements, in accordance with Federal Records Act, 44 U.S.C. 3101 et seq., NARA requirements, and Information and Life Cycle Management Manual, COMDTINST M5212.12 (series). This policy does not have any significant or substantial change to existing records management requirements.

10. FORMS/REPORTS. The CG forms referenced in this Manual are available in USCG Electronic Forms on the Standard Workstation or on the Internet: <http://www.dcms.uscg.mil/directives/>; CG Portal: <http://cgportal2.uscg.mil/library/forms/SitePages/Home.aspx>.
11. REQUEST FOR CHANGES. Change recommendations to this Manual should be routed via memo through the chain of command to the Office of Specialized Capabilities, Commandant (CG-721).

MICHAEL P. RYAN /s/  
Rear Admiral, U. S. Coast Guard  
Assistant Commandant for Capability





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## CHAPTER 1. OVERVIEW

- A. Scope. The scope of this Manual extends to all operations, training, and administrative functions of the Coast Guard Diving Program. It also provides guidance for units requiring diving services.
- B. Coast Guard Missions. Coast Guard divers provide diving capabilities and other subsurface equipment and technologies to support all subsurface needs of the Service. These capabilities are available to support the 11 statutory Coast Guard missions.

1. Ports, Waterways, and Coastal Security (PWCS). This mission includes, but is not limited to, inspections of piers, bridges, vessels, adjacent shorelines, and any other maritime infrastructure or structure in order to detect, identify, and mark underwater threats including parasitic devices, underwater improvised explosive devices (IEDs), underwater hazardous devices, hazards to navigation, and conditions that may hazard a vessel, facility, or structure.

**NOTE:** Coast Guard divers are not capable of conducting Render Safe Procedures. Only qualified Explosive Ordnance Disposal divers must attempt to render safe underwater ordnance or IEDs.

2. Drug Interdiction (DI). This mission includes, but is not limited to, subsurface searches and inspections of piers, bridges, vessels, adjacent shorelines, and any other maritime infrastructure or structure in order to detect, identify, mark, and recover potential contraband.
3. Defense Readiness (DR). This mission includes operations, exercises, and joint training with other U.S. military services, allied and partner nations. This mission also includes underwater ship husbandry tasks in support of DR for the fleet.
4. Other Law Enforcement (OLE). This mission includes, but is not limited to, search and recovery of weapons, human remains, and other evidence in support of Coast Guard law enforcement or other agencies. Coast Guard divers are also able to provide diving subject matter expertise (SME) support for Coast Guard investigations and case prosecution.
5. Migrant Interdiction (MI). This mission includes assisting in the enforcement of immigration laws at sea to interdict and process illegal and undocumented migrants as far from U.S. shores as possible. Coast Guard divers provide support to this mission set as requested by operational commanders.
6. Marine Safety (MS). This mission includes a variety of underwater tasks that support MS, such as identification and removal of hazards to navigation, channel clearance for reestablishment of the maritime transportation system (MTS) following natural or man-made disasters, and assistance in marine casualty investigations.
7. Aids to Navigation (ATON). This mission includes, but is not limited to, providing subsurface capabilities for ATON units and waterways managers in support of the MTS.

8. Living Marine Resources (LMR). This mission includes, but is not limited to, environmental surveys and search/recovery of derelict fishing nets and other marine debris. This mission also includes oceanographic research and scientific sampling.
9. Marine Environmental Protection (MEP). This mission includes, but is not limited to, oil spill response, hazardous materials (HAZMAT) response, other search and recovery, and investigation of hazards to the marine environment.
10. Ice Operations (IO). This mission includes, but is not limited to, hull maintenance, damage assessments, and repair of U.S. Coast Guard Icebreakers and other cutters operating in the high latitudes, and other mission areas requiring subsurface capabilities in the vicinity of floating ice environments. The U.S. Navy-U.S. Coast Guard Memorandum of Agreement on the Operation of Ice Breakers of 22 June 1965 commits the U.S. Coast Guard to maintaining diving and salvage services in polar latitudes.
11. Search and Rescue (SAR). This mission includes, but is not limited to, underwater search, identification, and potential recovery of persons, vehicles, vessels, and aircraft.



## CHAPTER 2. ORGANIZATION

- A. Diving Units. For the purposes of this Manual, “diving units” are defined as **Maritime Security Response Team West (MSRT West)**, the Aviation Technical Training Center (ATTC), and the **Special Missions Training Center (SMTC)**.
1. **Maritime Security Response Team West**. Regional Dive Lockers (RDL) function within the Operations Department of **MSRT West**. RDLs operate as prescribed per unit procedures, perform the missions outlined in Chapter 1, and provide the capabilities per Reference (f). Locations of RDLs are:
    - a. Regional Dive Locker East (RDLE), Portsmouth, VA.
    - b. Regional Dive Locker West (RDLW), San Diego, CA.
    - c. Regional Dive Locker Pacific (RDLP), Honolulu, HI.
  2. **Aviation Technical Training Center**. ATTC is located in Elizabeth City, NC. Divers serve as high risk training instructors and safety divers for the Underwater Modular Egress Trainer, and perform other functions as prescribed per unit procedures.
  3. **Special Missions Training Center**. The **SMTC Diving Branch** at the Naval Diving and Salvage Training Center (NDSTC) is comprised of a liaison officer and a team of Coast Guard high risk training instructors. All members perform required duties under the NDSTC command in a joint-service environment. The **SMTC Diving Branch** at NDSTC serves to meet the instructor requirements set forth in Reference (g), convenes and instructs the Cold Water/Ice Diving (CWID) course, facilitates the Diver Candidate Screener, and operates per unit procedures.
- B. Organizational Responsibilities. This Section establishes administrative responsibilities for the Diving Program. Reference (a) provides guidance for diving protocols and the responsibilities of diving personnel during diving operations.
1. **Office of Specialized Capabilities**. Commandant (CG-721) has overall program management authority for subsurface capabilities, including the Coast Guard Diving Program. Specifically, Commandant (CG-721) must accomplish the following:
    - a. Develop and promulgate Coast Guard subsurface capabilities policy.
    - b. Ensure appropriate resourcing for subsurface capabilities management.
    - c. Advise diving units on matters pertaining to diving policy, procedures, and training.
    - d. Serve as waiver authority for all subsurface capabilities policy.

- e. Assist Headquarters offices with the development of all underwater missions, requirements, policies, Tactics, Techniques and Procedures (TTP), capabilities, and guidance for all subsurface operations.
  - f. Maintain liaison with other military, federal, state, and local agencies, partner nations, and civilian groups on matters affecting the Coast Guard subsurface capabilities.
  - g. Monitor emerging technologies related to subsurface capabilities.
  - h. Coordinate the research and acquisition of subsurface systems and equipment.
  - i. Approve Operational Test & Evaluation (OT&E) plans for the development of new or emerging diving equipment and capabilities.
  - j. Serve as technical authority for configuration management of all subsurface equipment.
  - k. Coordinate with Diver Rating Force Master Chief (RFMC) and provide input to Commandant (CG-PSC) to identify diver candidates.
  - l. Review Coast Guard diving mishaps and participate on diving mishap analysis boards.
  - m. Attend industry and joint-service meetings, working groups, conferences, and seminars relating to subsurface capabilities.
  - n. Responsible for the overall administration of Coast Guard diving unit inspections and assessments.
  - o. Coordinate with FORCECOM to maintain and update diver courses and training resources.
2. **Special Missions Training Center**. SMTC is responsible for maintaining and supporting the **SMTC Diving Branch** at NDSTC to provide instruction to diver trainees and administrative support to Coast Guard personnel attending training at NDSTC. Specifically, the **SMTC Diving Branch** must accomplish the following:
- a. Provide administrative support to Coast Guard students enrolled at NDSTC.
  - b. Equip and direct staff to perform instructor duty to administer initial and advanced diver training at NDSTC as set forth in Reference (g).
  - c. Provide recommendations and technical support to Commandant (CG-721) for establishing policies and procedures for the Coast Guard Diving Program.
  - d. Administer the Cold Water Ice Diving (CWID) course.
  - e. Develop Coast Guard-specific diver training curriculum.

- f. Review and process all diver application packages and provide information on qualified candidates to Commandant (CG-PSC) via the DV RFMC.
  - g. Plan, provide high-risk training instructors, and facilitate the Diver Candidate Screener.
  - h. Provide equipment and maintenance support to facilitate all **SMTC Diving Branch** NDSTC functions.
  - i. Request training quotas and conduct and/or request task and training analysis for the determination of training, personnel, and equipment needs.
3. Pacific Area (PACAREA). PACAREA is responsible for coordinating and assigning **MSRT West** dive missions for the Coast Guard. Specifically, PACAREA must accomplish the following:
- a. Ensure **MSRT West** RDLs are equipped, trained, and proficient to meet the standards prescribed in Reference (f).
  - b. Coordinate logistical and operational resources for assigned missions outside the normal scope of **MSRT West** RDL missions.
  - c. Coordinate with Naval Safety Center for scheduling and conducting DORIs at each **MSRT West** RDL.
  - d. Maintain an employment database for missions and work completed by **MSRT West** RDLs.
  - e. Review all Coast Guard diving After Action Reports (AAR) and Deployment Summaries (DEPSUM) for lessons learned and disseminate as necessary.
4. Diving Equipment Section-Light (DESL). The Surface Forces Logistics Center, Long Range Enforcer Product Line, Special Projects Branch maintains the Diving Equipment Section-Light (DESL) to ensure compliance with Coast Guard configuration management policies and provide diving equipment maintenance administration support. Specifically, DESL must accomplish the following:
- a. Prescribe diving unit equipment maintenance procedures, as well as scheduling and tracking methods.
  - b. Conduct oversight of diving unit configuration management and facilitate the configuration change process through Commandant (CG-721).
  - c. Provide a **list** of authorized training courses to align with equipment and maintenance training requirements.

- d. Maintain diving equipment lists.
  - e. Communicate updates to technical manuals, including equipment configuration or design changes.
  - f. Maintain a diving equipment technical library.
  - g. Prescribe and maintain all emergency and operating procedures for applicable diving equipment.**
5. Commanding Officer. Commanding Officers of diving units must accomplish the following:
- a. Maintain ultimate responsibility for the safe conduct of all diving operations.
  - b. Designate Command Diving Officers in writing.
  - c. Promulgate diving standard operating procedures (SOP).
6. Command Diving Officer. A Command Diving Officer must be assigned at each **MSRT West RDL**, **ATTC**, and the **SMTC Diving Branch**. The Command Diving Officer is normally assigned to a CWO (DIV) at each RDL and the **SMTC Diving Branch**, and to a Coast Guard civilian (General Service) employee at ATTC. Diving units may temporarily assign a senior enlisted DV as Command Diving Officer. Specifically, the Command Diving Officer must accomplish the following:
- a. Ensure the safe conduct of all operations and training by providing oversight and ensuring adherence to proper procedures and safety precautions.
  - b. Become thoroughly familiar with all command diving techniques and have a detailed knowledge of all applicable policies.
  - c. Ensure appropriate entries are made in personnel records to document diving qualifications, training, and currency.
  - d. Oversee training and qualification programs.
  - e. Ensure the physical screening test is conducted semi-annually for all divers.
  - f. Oversee the administration of equipment maintenance programs.
  - g. Manage operational schedules and coordinate mission assignments.

### CHAPTER 3. DIVING OPERATIONS

- A. Introduction. This Chapter provides policy for Coast Guard divers conducting diving operations. Enlisted rated Divers (DV) and Chief Warrant Officers of the Diving (DIV) specialty are the only Coast Guard personnel authorized to conduct diving operations. Diving protocols and procedures are provided in References (a) and (d).
- B. Operational Risk Management (ORM). All Coast Guard divers must follow **Risk Management (RM), COMDTINST 3500.3 (series) for RM** requirements. **RM** must be conducted during all phases of diving operations and training. Anticipated risks and mitigation strategies unique to the diving operation must be documented in dive plans. **RM** assessments and final results must be retained for 60 days following the mission/evolution. **RM** considerations specific to diving are provided in Reference (a).
- C. Diving Checklists. Checklists must be used by mission planners and Diving Supervisors for diving operations. Reference (a) provides diving checklists and guidance for their use.
- D. Personnel Requirements. Manning levels are dictated by operation complexity, **RM**, and equipment selection. In general, dive teams are comprised of a Diving Supervisor, divers, diver tenders, and other support personnel as required. Minimum personnel requirements for diving operations are contained in Reference (a).
- E. Inter-Service Operations. All U.S. military divers receive the same baseline training and strictly follow the diving protocols set forth in Reference (a). Coast Guard divers are authorized to operate with other U.S. military diving units to the extent that qualifications allow.
1. Coast Guard divers are authorized to integrate only with other U.S. military divers. Coast Guard divers must not serve as the Diving Supervisor or designated person in charge of non-U.S. military divers. Coast Guard divers may operate in the vicinity of and in coordination with non-U.S. military dive teams. Performing any diving, supervising, or other diving related roles with non-U.S. military divers is prohibited.
  2. When conducting inter-service diving operations, the unit leading the mission is responsible for verifying the qualifications of all divers.
- F. Water Quality. Divers and diving commands should be familiar with Reference (h) for a general understanding of contaminated water diving guidance.
- NOTE:** Coast Guard divers are not authorized to dive in Category 1 contaminated water environments as defined in Reference (h).
- G. Diving Casualties. Injuries to divers, whether trauma (mechanical) or hyperbaric (diving) related, must be anticipated during the planning stage. The Diving Supervisor must establish an emergency response and evacuation plan and ensure all dive team members and potential responders are briefed prior to commencing operations. The plan must include the designated medical/critical care facility and hyperbaric treatment facility that will be used if casualties occur.

1. Emergency Equipment. Divers must be trained and equipped to render proper and immediate care as prescribed in Reference (a). Reference (a) provides a complete list of required emergency care equipment. At a minimum, the following emergency care equipment must be located at or in proximity of the dive side to support diving operations.
  - a. Communications equipment capable of reaching help in the event of an emergency.
  - b. A first-aid kit, to include trauma response, airway management, diagnostic tools, and other equipment as dictated by ORM for the mission.
  - c. Automatic External Defibrillator (AED).
  - d. Portable oxygen kit with sufficient capacity to reach either the hyperbaric chamber or the planned evacuation location listed in the emergency response and evacuation plan.
  - e. Bag-valve mask with a means to connect to 100% oxygen.
  - f. Means of immobilizing an injured diver.
  - g. Means of extracting a stricken/unconscious diver from the water.
2. Hyperbaric Recompression Chambers. The Diving Supervisor must confirm availability and readiness of the recompression chamber planned for emergency support of diving casualties prior to commencing diving operations each day. Recompression chamber requirements are prescribed in Reference (a). In accordance with Reference (a), the use of a U.S. Navy certified recompression chamber should be planned whenever possible for treatment of injured divers. Use of other recompression chambers may be planned contingent upon meeting the requirements of Reference (a). Non-U.S. Navy certified recompression chambers must be inspected prior to operations and approved in writing by the diving unit Commanding Officer. Non-Navy chamber inspection criteria and checklists are available from Commandant (CG-721) on CG Portal at the following link:  
<https://cg.portal.uscg.mil/units/cg721/CG-7212/Shared Documents/Policy/USCG Diving Policies/>

H. Diving Platforms. Platform selection is important to ensure safe and efficient operations. Considerations for determining diving platform selection during operational planning include:

1. Type of operation.
2. Gear needed.
3. Diving environment.
4. Stability.
5. Ample deck space/storage.

6. Logistical support (e.g. berthing, rescue equipment, medical, hotel services).
  7. Lift capability.
  8. Towing capacity.
  9. Emergency response/evacuation.
  10. Adequate shelter and working area for all personnel and equipment.
- I. Dive Side Apparel. Appropriate clothing must be worn for the safe and practical conduct of diving operations and to provide visual indicators necessary for diver identification. Dive side apparel is authorized for wear by Coast Guard divers while en route to, engaged in, or returning from, supporting, or overseeing diving operations/diving training.
1. Diving Apparel. This is the clothing authorized for wear by Coast Guard divers while diving or serving as stand by diver. This apparel may be worn under wetsuits or other diving personal protective equipment.
    - a. Male - Underwater Demolition Team (UDT) shorts.
    - b. Female - One-piece bathing suit (dark blue or black in color) with UDT shorts.
    - c. Dive “booties” or wet footwear.
    - d. Optional - U.S. Coast Guard Diver t-shirt (long or short sleeve).
  2. Other Dive Side Apparel. This is the clothing authorized for wear by Coast Guard divers while performing other functions supporting the diving operations (e.g. diver tender, diving supervisor, etc).
    - a. U.S. Coast Guard ball cap or boonie hat.
    - b. U.S. Coast Guard Diver t-shirt (long or short sleeve).
    - c. UDT shorts.
    - d. Olive-drab diving shorts or pants.
    - e. U.S. Coast Guard Diver sweatshirt.
    - f. Black work boots with black socks.





## CHAPTER 4. DIVER TRAINING AND QUALIFICATION

- A. Overview. The quality and consistency of initial, advanced, and recurring training is critical to maintaining proficiency and is a key component of safe diving operations. Qualifications are based upon watchstations at diving units.
- B. Resident Training. Military diver training is conducted at NDSTC in Panama City, Florida.
1. DV "A" School. The Coast Guard Second Class Diver course is the DV "A" school.
  2. First Class Diver. The First Class Diver course is provided to DV1s (E-6) who have completed the Cold Water/Ice Diving (CWID) course and are currently qualified as SCUBA Diving Supervisors.
  3. Cold Water Ice Diving (CWID). The CWID course provides DVs with the training necessary to perform operations in a harsh and extreme cold weather environment.
- C. Unit Training. Diving units must conduct recurring training on diving and other topics applicable to current missions and capabilities. At a minimum, diving units must conduct the following training:

| Topic                                       | Periodicity   |
|---|---------------|
| Diving Casualty Drill                       | Semi-annually |
| Diver Extraction Drill                      | Semi-annually |
| Differential Diagnosis of Diving Casualties | Semi-annually |
| Neurological Exam                           | Semi-annually |
| CPR with Oxygen and AED                     | Annually      |

Table 4-1

**Note:** Diving units using AEDs must coordinate with either their cognizant Coast Guard clinic or with the Health, Safety and Work-Life Service Center to obtain appropriate required medical oversight for their AED programs.

- D. Physical Training. The Command Diving Officer is responsible for ensuring all divers maintain an appropriate level of fitness and are physically qualified to perform the duties of the DV rate. The Physical Screening Test (PST) in Appendix D contains the minimum fitness standards for divers. All divers must pass the PST semi-annually. Due to operational demands, CDOs can provide divers up to 30 days grace period upon returning from deployments to complete the test. If a diver fails the PST, the following action must be taken:
1. The diver must be placed into a non-diving status.
  2. The diver has up to two weeks to retake and pass the PST. If the diver passes the PST by the end of the second week, he/she will be returned to diving status and no further action is required. If the diver is unable to pass the PST by the end of the second week, the member's dive pay must be stopped.

3. Reference (j) provides further guidance for divers not qualified to perform the duties of the DV rate.
- E. Qualification of Divers. Personnel Qualification Standards and qualifications in diving watchstations are prescribed by Commandant (CG-721) in the U.S. Coast Guard Military Diver Personnel Qualification Standard Application Guide. This document is available on CG Portal at the following link: <https://cg.portal.uscg.mil/units/cg721/CG-7212/DV Documents/Policy/USCG Diving Policies>.
- F. Diving Competencies. Members acquire Second Class Diver (OPSDB) and First Class Diver (OPSDC) competencies by completing the qualification requirements in Paragraph 4.E. The Diving Officer competency (OPSDF) is acquired by enlisted DVs achieving a Chief Warrant Officer (DIV) appointment. Commands must document competencies via memorandum for entry into Direct Access by the servicing personnel office (SPO). Once acquired, competencies remain with the member regardless of currency.
- G. Diver Insignia. Diver insignia is authorized for wear based on the diver's competency. All diver insignia must be worn in accordance with Uniform Regulations, COMDTINST M1020.6 (series).

## CHAPTER 5. ADMINISTRATION

- A. Diving Duty Pay. For the purposes of Reference (i), orders to any DV or CWO (DIV) billet constitutes orders to duty involving diving. Reference (i) prescribes diving duty pay rates for the following classifications.
1. Diving Under Instruction (DUI). Students enrolled in DV “A” school are qualified for dive pay at the DUI rate upon successful completion of the pool phase of SCUBA training. Divers continue receiving dive pay at the DUI rate until achieving the Second Class Diver competency.
  2. Second Class Diver. Divers with the OPSDB competency code are qualified for dive pay at the Diver Second Class rate.
  3. First Class Diver. Divers with the OPSDC competency code are qualified for dive pay at the Diver First Class Rate.
  4. Diving Officer. Divers with the OPSDF competency code are qualified for dive pay at the Basic Diving Officer rate.
- B. Currency. Divers must complete four dives per six-month period. Currency periods extend from 1 January to 30 June and from 1 July to 31 December.
- C. Currency Lapse. The requirements necessary to renew currency after a diver’s currency has lapsed are in Table 5-1.

| Length of Qualification Lapse   | Requalification Requirements  |
|---|---|
| Less than 12 months.  | Perform four (4) requalification dives (a, b).  |
| Greater than 12 months, but less than three (3) years.  | Complete physical screening test (a).<br>Perform four (4) requalification dives (b).  |
| Greater than three (3) years.   | Complete physical screening test (a).<br>Return to NDSTC for refresher training. The amount and type of refresher training will depend on dive school graduation date and last diver qualification date. Training will be coordinated by <b>SMTC Diving Branch</b> at NDSTC with Commandant (CG-721) approval.<br>Perform four (4) requalification dives (b). |
| <b>NOTES:</b>   |   |
| (a) A current diving medical examination must be on file prior to conducting dives or physical screening tests.   |   |
| (b) All training and working dives regardless of max depth or bottom time are authorized and must be performed with a qualified buddy diver and U.S. military diving team. Recreational and recompression chamber dives do not qualify. |   |

Table 5-1

D. Dive Logs. The Dive Jump Reporting System (DJRS) is a web-based dive log maintained by the Naval Safety Center (NSC). DJRS accounts are set up at NDSTC through the Web-Enabled Safety System during initial diver training. Divers have a DJRS identifier that stays with them for the duration of their career.

1. All military dives must be documented via a dive log entry in DJRS.
2. DJRS serves as the Command Smooth Log as referred to in Reference (a). This log contains a record of dives for personnel attached to a diving command and dives by personnel on temporary duty.
3. DJRS also serves as a personal dive log for each diver.

E. Diving Mishaps.

1. Mishap Reporting. Mishaps must be reported in accordance with the Safety and Environmental Health Manual, COMDTINST M5100.47 (series). The mishap report must reference the DJRS dive log number of the dive in which the mishap occurred, if applicable. Contact Commandant (CG-113) for questions regarding diving mishap reporting.

2. Additional Reportable Incidents. The following incidents must also be reported:

- a. Hyperbaric injuries requiring recompression therapy.
- b. Hyperbaric injuries requiring no recompression therapy but render the member not physically qualified to dive.
- c. Mechanical or other injuries requiring medical treatment that render the member not fit for diving duty.
- d. Illness caused by pollutants in the water.

3. Equipment Considerations. For all Class A and B mishaps, or when diving equipment may have been a causative or contributing factor, follow the equipment handling procedures in Reference (a). Contact Commandant (CG-721) in lieu of NAVSEA.

F. Diving Operational Readiness Inspection (DORI) and Diving Safety Assessment (DSA). The purpose of DORI/DSA is to enhance the safety and effectiveness of diving operations at Coast Guard diving units. Reference (e) explains the DORI/DSA process in detail.

G. Command Diving Officer Relief. The relief of the Command Diving Officer must be documented via memorandum to the Commanding Officer. The Command Diving Officer Relief Check Sheet provided in Appendix C must be completed and included as an enclosure to the memorandum.

## CHAPTER 6. DIVER ACCESSIONS

- A. Overview. DVs are sourced from other Coast Guard ratings. Commandant (CG-PSC) solicits applicants and provides guidance for those entering the DV rating. Eligible applicants attend the Diver Candidate Screener. Best qualified applicants selected at the screener are provided with orders to a **MSRT West** RDL contingent upon graduation of DV “A” school. The diver accession process involves the following:
1. Eligibility Criteria. Commanding Officers are responsible for ensuring that prospective divers meet the following eligibility criteria prior to endorsing members for a change in rate to Diver:
    - a. Applicants must be rank E-5, or E-4 with E-5 Enlisted Personnel Qualifications completed.
    - b. Applicants must meet all eligibility criteria for reenlistment per Reference (j).
    - c. The maximum age for attending DV “A” school is 35 years.
    - d. Combined Armed Services Vocational Aptitude Battery (ASVAB) scores are AR+WK=104 and MC=50.
    - e. Applicants must be eligible for a Secret clearance.
    - f. Applicants must be eligible for an Overseas Screening Endorsement per Military Assignments and Authorized Absences, COMDTINST M1000.8 (series).
    - g. The maximum Time in Service for applicants is 10 years upon graduating DV “A” school.
  2. Physical Screening Test. All DVs must meet the minimum fitness requirements measured by the Physical Screening Test. The fitness standards are the same for all members regardless of age or gender and are the minimum entry level requirements. The physical screening test is provided in Appendix D and consists of:
    - a. 500 yard swim in breaststroke or sidestroke within 14 minutes.
    - b. 42 pushups within 2 minutes.
    - c. 50 sit-ups within 2 minutes.
    - d. 6 dead-hang pull-ups, no time limit.
    - e. 1.5 mile run within 12:45 minutes.

3. Change in Rate (CIR) Request. Applicants must request a Change in Rate to DV in accordance with Reference (j).
4. Diver Candidate Screener (DCS). Due to the physically and mentally challenging nature of diving operations, the screening requirements for diver candidates are extremely strict. The purpose of the DCS is to provide Commandant (CG-PSC) with a list of the best qualified members who possess the traits necessary to pass DV "A" school. The DCS is five (5) days in duration and consists of the Diver Physical Screening Test, overall fitness assessment, academics, and aquatic adaptability assessment.
5. Diving Medical Examination. All applicants must undergo a Diving Medical Examination in accordance with the Coast Guard Medical Manual, COMDTINST M6000.1 (series).

## CHAPTER 7. EQUIPMENT AND MAINTENANCE

- A. Configuration Management. Diving and diving support equipment, as well as other diving unit operational equipment, must be standardized to maximize familiarity, safety, and proficiency. DESL is the single touch point for configuration management of diving systems and equipment. Diving units experiencing equipment malfunctions or having concerns about diving equipment must contact DESL. Commandant (CG-721) is the technical authority.

**NOTE:** Coast Guard diving equipment is for official use only and must not be used for recreational diving activities.

1. Diving Equipment List (DEL). The DEL prescribes approved equipment to support operations and training **for all diving units**. For any item on the DEL, subcomponents, parts, consumables, and tools required for maintenance and repair, although not individually listed, are also considered approved for use. This does not include different accessory parts and modifications to approved configurations.
  2. Equipment Configuration Change Procedures. Commandant (CG-721) is responsible for approving changes to the DEL. DESL facilitates the configuration change process.
    - a. Diving units desiring to make additions, deletions, or other changes to the DEL must use the SFLC Feedback Process as outlined in the Joint Surface Engineering Change Process Guide, CGTO PG-85-00-900-G. This guide can be found at the SFLC Directives Library on CG Portal: <https://cg.portal.uscg.mil/units/sflc/SFLCDirectivesLibrary/Forms/ProcessGuides.aspx>
    - b. The CG-22 Maintenance/Publication Feedback form is used to recommend changes to the DEL, maintenance procedures, equipment configurations, and other equipment concerns. This form can be found at the SFLC Central site: <https://sflccentral.uscg.mil>.
- B. Equipment Maintenance. To standardize the qualification of personnel required to perform equipment maintenance, maintenance procedures, and documentation of maintenance actions, diving units must follow the Diving Equipment Maintenance Guide promulgated by Commandant (CG-721) available on CG Portal: <https://cg.portal.uscg.mil/units/cg721/CG-7212/DV Documents/Policy/USCG Diving Policies>.
1. Qualification. Qualification of personnel performing diving equipment maintenance must be in accordance with the Job Qualification Requirements contained within the Diving Equipment Maintenance Guide.
  2. Maintenance Procedures. All diving unit operational equipment must be maintained as prescribed by DESL.
  3. Documentation. Diving units must utilize eLog for scheduling and recording maintenance actions.

- C. Diver's Gas Purity Standards and Sampling Program. All diving units must comply with the Diver's Gas Purity Standards and Diver's Air Sampling Program as prescribed in Reference (a).
- D. Lock-out/Tag-out Procedures for Diving Equipment and Operations. Equipment, machinery, and systems may need to be secured and identified in such a manner as to prevent their unintended use or operation. Unit diving equipment that is in need of repair or service must be identified as being out of commission to prevent accidental use. Machinery and systems on vessels and facilities that may pose a danger to divers in the vicinity must be secured and identified as being inoperable during diving operations. Tag-out procedures are different for cutters and shore facilities.
1. Equipment Tag-Out Procedures. There are three general categories of equipment tag-out procedures:
    - a. Tagging-out unit diving equipment to prevent use.
    - b. Tagging-out Coast Guard vessels prior to diving operations.
    - c. Securing machinery and systems on other vessels and facilities prior to diving operations.
  2. Shipboard Tag-out Procedures. Coast Guard cutters refer to Reference (k) to tag-out machinery and systems for diving operations.
  3. Diving Units. Coast Guard diving units are all shore-based and must follow OSHA requirements for Lock-out/Tag-out to secure unit equipment that poses a physical risk to personnel due to a potential release of energy (i.e. compressed gas, spring-loaded mechanisms, etc). All diving units must maintain a Lock-out/Tag-out program. This program should be a combination of OSHA Lock-out/Tag-out procedures and Reference (k).
  4. Diving Unit Lock-out/Tag-out Program. The Diving Unit Lock-out/Tag-out program is a combination of OSHA regulations and Reference (k). Command Diving Officers must require and oversee bi-weekly audits of the Lock-out/Tag-out Program. All tags and labels described in Reference (k) can be used to identify equipment or system control mechanisms that are secured to prevent use. If the equipment or system has the potential to release stored energy and cause harm (e.g. electronically driven systems, spring-loaded mechanisms, etc), the equipment or system control mechanism must also be physically locked-out in accordance with OSHA regulations. The following examples highlight the differences between Lock-out/Tag-out and just Tag-out:
    - a. The drive belt needs to be replaced on an electronically driven installed compressor. Prior to commencing repairs, the compressor must be tagged-out with a Danger Tag on the switch and the breaker. The breaker should also be physically locked to prevent actuation. If the breaker cannot be locked, the fuses should be removed in the circuit to prevent energizing if the breaker is inadvertently turned on. This procedure satisfies OSHA regulations.



- b. SCUBA cylinders have exceeded the periodicity for visual internal inspection. The cylinders should have Danger Tags affixed. Physical lock-out is not required because the compressed air must be drained as part of the inspection procedures. This example is also appropriate for a SCUBA (or other) gauge that is out of calibration.
  - c. A MK-20 Full Face Mask malfunctioned during pre-dive checks or during a dive and must be set aside for inspection/repairs. A Danger Tag should be affixed to the item indicating it cannot be used.
5. Diving on Coast Guard Vessels. Diving operations conducted on Coast Guard vessels require certain systems and machinery to be tagged-out and secured. Tag-outs are conducted by the ship's force or unit personnel using their Tag-out program. Most vessels have a Diving Bill that specifies equipment and systems to be tagged-out for divers. However, Reference (a) also provides a general list of systems and machinery that should be tagged-out for diving operations. The Diving Supervisor (or designated representative) must discuss required tag-outs with the vessel's Engineer Officer (or designated representative) during the planning phase of the mission. Prior to commencing diving operations, the Diving Supervisor or designated representative must verify the appropriate placement of all diving tags and must sign in the Authorized Repair Activity block on the Danger Tags and in the unit's Tag-Out Log. Following diving operations, the Diving Supervisor must notify the unit that operations are complete and all dive tags can be removed.
6. Diving on Other Vessels or Facilities. Diving on other vessels or on shore facilities requires the identification of potential hazards to divers. Diving Supervisors must ensure all hazards are considered during the planning phase and appropriate mitigation measures are put into place.



## CHAPTER 8. INFORMATION FOR NON-DIVING UNITS

- A. Diving Bill for Non-Diving Units. Afloat units must maintain a diving bill as part of their instructions. Commands should consider the guidance in Appendix A when creating the diving bill to ensure compliance with the commercial diving regulations required by References (b) and (c). Coast Guard and other military dive teams follow military diving procedures in Reference (a). An example of a diving bill is provided in Appendix B. The diving bill must detail:
1. Personnel roles and responsibilities.
  2. Safety procedures.
  3. Equipment to be tagged out prior to commencing diving operations.
  4. Required notifications.
  5. Pre/post-dive checklists.
- B. Diving Resources. The purpose of this Section is to discuss general policy for the employment of Coast Guard and external diving resources.
1. Coast Guard Resources. Coast Guard divers support the subsurface needs of the Service and should be a first priority resource. PACAREA provides operational diving force apportionment. Units and support managers requiring subsurface capabilities should contact the PACAREA Dive Force Manager for Coast Guard resources.
  2. Non-Coast Guard Resources. The following diving resources may be used in the event that Coast Guard divers are unavailable or unable to meet mission requirements. Divers for these different groups must be trained, certified, and utilized in accordance with their employer or parent organization and applicable federal regulations. Nothing in this Manual will establish a requirement for non-military diving units to operate in accordance with internal Coast Guard or U.S. military regulations or procedures.
    - a. Other U.S. Military Diving Units. Other military dive teams may be available as an additional resource. All U.S. military dive teams operate in accordance with Reference (a).
    - b. Commercial Diving Services. Commercial diving services can be contracted to perform underwater work for Coast Guard units. Commercial divers must follow all applicable federal and local regulations. Appendix A provides guidance to assist in verifying compliance with commercial diving regulations.
    - c. Public Safety Divers. Many federal, state, and local law enforcement agencies, fire departments, and other public safety agencies maintain diving capabilities for public safety purposes. Public safety diving is defined as diving performed solely for search,

rescue, or related public safety purposes by or under the control of a government agency. Coast Guard units must not utilize public safety dive teams to perform commercial diving functions unless they are in compliance with 29 CFR 1010, Subpart T and 46 CFR 197, Subpart B. See Appendix A for information on these regulations.

- d. Scientific Divers. Scientific diving is defined as diving performed solely as a necessary part of a scientific, research, or educational activity by employees whose sole purpose for diving is to perform scientific research tasks. Coast Guard units must not utilize scientific dive teams to perform commercial diving functions unless trained and certified as commercial divers in accordance with an operating under 29 CFR 1910, Subpart T and 46 CFR 197, Subpart B. See Appendix A for information on these regulations.

**APPENDIX A. COMMERCIAL DIVING REGULATORY REQUIREMENTS**

The member charged with oversight to diving operations should review the following requirements with the diving supervisor or designated person-in-charge before commencing diving operations. This table is not a comprehensive regulatory inspection document. It is intended to provide an indicator of substantial compliance with the mandatory health and safety requirements for commercial divers.

| <b>COMMERCIAL DIVING PERSONNEL</b>   |  |  |   |
|--|--|--|---|
| <b>Requirement</b>   | <b>OSHA Regulation</b>   | <b>USCG Regulation</b>   | <b>Comments</b>   |
| Dive team members must be qualified to conduct assigned tasks.   | 29 CFR 1910.410 (a)<br>29 CFR 1910.120                                       | 46 CFR 197.404<br>46 CFR 197.410                                     | There is not a “commercial diver certification card,” similar to those required by the recreational diving community. The Association of Diving Contractors International offers a certification card or the company can provide proof of experience. Divers should provide proof of hazardous waste operations and emergency response (HAZWOPER) training before commencing diving operations in contaminated water.   |
| All dive team members must have current cardiopulmonary resuscitation (CPR) and first-aid certifications.  | 29 CFR 1910.410  |  |   |
| For SCUBA diving operations, a minimum of three personnel are required: the person-in-charge, a standby diver, and the diver. For Surface Supplied Diving operations, a minimum of 4 personnel are required: the person-in-charge, a standby diver, the diver, and a diver-tender. | 29 CFR 1910.410 (b)<br>29 CFR 1910.424<br>29 CFR 1910.425<br>29 CFR 1910.426 | 46 CFR 197.430<br>46 CFR 197.432<br>46 CFR 197.434                   | A minimum of three personnel for SCUBA and four personnel for Surface Supplied Diving is required by OSHA regulations and is an accepted industry practice by the Association of Diving Contractors International. The Coast Guard requires a minimum three-member dive team for Coast Guard contracts (ALDIST 228, 1999). The diving supervisor must not serve in a dual role as both supervisor and diver. The standby diver must be dressed out and ready to dive. |
| An experienced, designated person-in-charge is on-scene and supervising the operation.   | 29 CFR 1910.410 (c)  | 46 CFR 197.208<br>46 CFR 197.210<br>46 CFR 197.402<br>46 CFR 197.404 | Under the OSHA regulations, the person-in-charge is the qualified diving supervisor. When diving operations occur on an inspected vessel, under USCG regulations, the person-in-charge (the owner, agent, or master of the vessel) and the diving supervisor are separate individuals, and both must be designated in writing.  |

| <b>COMMERCIAL DIVING OPERATIONS</b>   |  |                        |   |
|---|--|------------------------|---|
| <b>Requirement</b>  | <b>OSHA Regulation</b>   | <b>USCG Regulation</b> | <b>Comments</b>   |
| A Safe Practices Manual or Operations Manual must be available on-site.<br><br>Prior to welding or burning on closed compartments, structures or pipes, which contain a flammable vapor or in which a flammable vapor may be generated by the work, they shall be vented, flooded, or purged with a mixture of gases which will not support combustion. | 29 CFR 1910.420<br>29 CFR 1910.421(b)<br>29 CFR 1910.422<br>(g)(5) | 46 CFR 197.420         | OSHA regulations require a Safe Practices Manual that describes the diving activities, while USCG regulations require an Operations Manual that meets the requirements of the Safe Practices Manual. This is the site-safety plan. In particular, personnel should review emergency procedures, emergency phone numbers, and the directions to the nearest decompression chamber and hospital. For contaminated water diving, a more specific safety plan that addresses the specific contaminant and protective equipment should be available. |

Appendix A to COMDTINST M3150.1D

| <b>COMMERCIAL DIVING OPERATIONS</b>  |                                       |                                      |   |
|--|---------------------------------------|--------------------------------------|---|
| <b>Requirement</b>   | <b>OSHA Regulation</b>                | <b>USCG Regulation</b>               | <b>Comments</b>   |
| The divers must have a plan to obtain emergency assistance, specifically, a two-way communications system. | 29 CFR 1910.421(b)                    | 46 CFR 197.420<br>46 CFR 197.314 (b) | If a decompression chamber is not required on site, ensure that the divers know the location and contact numbers of the nearest facility and hospital. Most importantly, the divers must have the capability to reach emergency services.   |
| First-aid equipment, including a hand-held resuscitator, must be located on site.                          | 29 CFR 1910.421(c)<br>29 CFR 1910.423 | 46 CFR 197.314<br>46 CFR 197.432     | For dives deeper than 100-fsw (feet sea water) or dives outside the no-decompression limits, an operating decompression chamber and supply of breathing gas sufficient to treat for decompression sickness must be located on-site. The chamber must be within five (5) minutes of the dive station. The more conservative OSHA limitation of 100-ft depth should be applied. |
| The Diving Supervisor must conduct a pre-dive safety briefing and inspect equipment.                       | 29 CFR 1910.421(f) & (g)              | 46 CFR 197.410                       | All members of the dive team must attend. Key personnel of the ship or facility should also attend.   |
| A warning signal (dive flag) must be displayed.  | 29 CFR 1910.421(h)                    | COLREGS, Rule 27                     | The warning signal must be a rigid replica of the international code "A" flag at least one (1) meter in height.   |
| The person-in-charge and the diving supervisor must maintain a dive log.                                   | 29 CFR 1910.440                       | 46 CFR 197.480                       | The log should contain the date, time, and location of the start and completion of dive operations; underwater and surface conditions; name of diving supervisor; and general nature of the work performed.   |

| <b>SCUBA DIVING OPERATIONS</b>   |                        |                        |   |
|--|------------------------|------------------------|---|
| <b>Requirement</b>   | <b>OSHA Regulation</b> | <b>USCG Regulation</b> | <b>Comments</b>   |
| Scuba diving must be conducted in depths less than 130 fsw, within the no-decompression limits, and in currents less than one (1) knot.  | 29 CFR 1910.424 (b)    | 46 CFR 197.430 (a)     | OSHA regulations require an operating decompression chamber on-site when diving greater than 100 fsw or outside the no-decompression limits.<br><br>Scuba diving is not appropriate where there is a risk of oil or toxic chemical ingestion. The NOAA Diving Manual states "Standard scuba gear offers inadequate protection to divers operating in contaminated water environments" (NOAA, 1991). |
| A standby diver is available while the scuba diver is in the water.  | 29 CFR 1910.424 (c)    | 46 CFR 197.430 (c)     |   |
| The scuba diver must be either line-tended or accompanied by another diver with continuous visual contact.                               | 29 CFR 1910.424 (c)    | 46 CFR 197.430 (d)     |   |
| If the scuba diver must work in a physically confining space, another diver must line-tend the diver from the underwater point of entry. | 29 CFR 1910.424 (c)    | 46 CFR 197.430 (e)     | During salvage operations and underwater oil recovery operations, divers must often penetrate the hull to conduct damage assessments, connect equipment, and recover floating oil.  |
| Scuba divers must carry a reserve breathing gas supply.  | 29 CFR 1910.424 (c)    |                        |   |

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| <b>SURFACE-SUPPLIED DIVING</b>  |  |                        |  |
|---|--|------------------------|--|
| <b>Requirement</b>  | <b>OSHA Regulation</b>                 | <b>USCG Regulation</b> | <b>Comments</b>  |
| Surface-supplied air diving must be conducted at a depth of 190 fsw or less.  | 29 CFR 1910.425 (b)                    | 46 CFR 197.432         | Dives of 30 minutes or less may be conducted to depths of 220 fsw.   |
| Mixed-gas must be used as a breathing mixture for dives deeper than 220 fsw.  | 29 CFR 1910.426                        | 46 CFR 197.434         | A separate dive team member must tend each diver in the water.   |
| An open bell is required for dives deeper than 220 fsw or when the dive involves in-water decompression times greater than 120 minutes.   | 29 CFR 1910.426 (b)                    | 46 CFE 197.434 (c)     |  |
| A closed bell is required for dives greater than 300 fsw.   | 29 CFR 1910.426 (b)                    | 46 CFR 197.434 (d)     | The regulations permit an exception to this rule when diving is conducted in a physically confining space.<br><br>When closed bell operations are conducted, a diver must be available in the closed bell to assist the diver in the water.  |
| Each diver must be continuously tended.   | 29 CFR 1910.425 (c)                    | 46 CFR 197.432 (c)     |  |
| Divers must carry a reserve breathing gas supply at depths greater than 100 fsw or outside the no-decompression limits.   | 29 CFR 1910.425 (c) (4) (iii)          | 46 CFR 197.432 (e)     | Note: Coast Guard regulations require a secondary (reserve) breathing gas supply at depths greater than 130 fsw or outside the no-decompression limits. However, the Coast Guard (decision March 5, 2001) and the ADCI recommend that bailout bottles be used for all commercial diving operations, regardless of depth. |
| An operating decompression chamber must be on-site for any dive outside the no-decompression limits, mixed-gas diving, or for dives deeper than 100 fsw.  | 29 CFR 1910.425 (b)<br>29 CFR 1910.426 | 46 CFR 197.432 (e) (2) | Note: Coast Guard regulations require a decompression chamber on-site for dive operations greater than 130 fsw or outside the no-decompression limits. The more conservative OSHA limitation of 100 fsw should be applied.   |
| When saturation diving is conducted (1) a standby diver must be available when the closed bell leaves the dive location until the divers are in saturation, and (2) a member of the dive team must be able to assist in the recovery of the closed bell or its occupants. | 20 CFR 1910.426                        | 46 CFR 197.434 (g)     |  |

| <b>COMMERCIAL DIVING EQUIPMENT</b>   |                        |                        |                 |
|--|------------------------|------------------------|-----------------|
| <b>Requirement</b>   | <b>OSHA Regulation</b> | <b>USCG Regulation</b> | <b>Comments</b> |
| Air compressors used to supply air to the diver must be equipped with a volume tank with a check valve on the inlet side, a pressure gauge, a relief valve, and a drain valve. | 29 CFR 1910.430 (b)    | 46 CFR 197.310         |                 |
| Air intakes for air compressors must be located away from areas containing exhaust fumes or other hazardous materials.   | 29 CFR 1910.430 (b)(2) | 46 CFR 197.310 (b)     |                 |

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| <b>COMMERCIAL DIVING EQUIPMENT</b>  |                        |                                  |   |
|---|------------------------|----------------------------------|---|
| <b>Requirement</b>  | <b>OSHA Regulation</b> | <b>USCG Regulation</b>           | <b>Comments</b>   |
| The output of the air compressor systems must be tested for air purity every six (6) months and after every repair or modification.   | 29 CFR 1910.430 (b)(4) | 46 CFR 197.450<br>46 CFR 197.340 | The diving supervisor must provide laboratory results or maintenance records for air quality. Compare the compressor identification number with that noted on the laboratory results or maintenance records. Compressed air used for breathing mixtures must be 20 to 22 percent oxygen by volume, have no objectionable odor, and have no more than 1000 ppm (particles per million) carbon dioxide, 20 ppm carbon monoxide, 5 mg/cubic meter of solid and liquid particulates including oil, and 25 ppm hydrocarbons. |
| Surface-supplied helmets and masks must have a non-return valve, an exhaust valve, and a two-way voice communications system.   | 29 CFR 1910.430 (h)    | 46 CFR 197.322 (a)               |   |
| Breathing gas supply hoses must have a working pressure at least equal to the working pressure of the total breathing system, have a bursting pressure at least equal to four times the working pressure, and be tested at least annually to one and one-half (1.5) times their working pressure.   | 29 CFR 1910.430 (c)    | 46 CFR 197.312                   | Ensure the breathing supply line has been pressure tested to one and one-half (1.5) times the Maximum Allowable Working Pressure within the past year. Additionally, ensure all connectors are made of corrosion-resistant material and the umbilical is marked in 10-foot increments from the diver to 100 fsw and is constructed of kink-resistant material.  |
| A depth gauge is required for every diver.  | 29 CFR 1910.430 (g)    | 46 CFR 197.318                   | OSHA and USCG regulations require a depth gauge that can be read on the surface for surface-supplied divers. Additionally, OSHA requires a depth gauge that can be read by the SCUBA diver.   |
| A diving ladder or stage must be provided to assist entry and exit.   | 29 CFR 1910.425        | 46 CFR 197.320<br>46 CFR 197.432 | When using heavy gear in depths greater than 100 fsw, an in-water stage must be provided.   |
| A diver's safety harness, with a positive buckling device capable of distributing the pulling force of the umbilical, is required for surface-supplied divers.  | 29 CFR 1910.420 (j)    | 46 CFR 197.324                   |   |
| When weights are worn, the belt or assembly should be equipped with a quick release.  | 29 CFR 1910.430 (j)    |                                  |   |
| Decompression chambers, or "pressure vessels for human occupancy (PVHO)," must be properly equipped and maintained.<br><br>1. PVHO must be stamped ASME PVHO-1 or have documentation of CG approval.<br>2. PVHO piping must have a shut-off valve within 1-foot of every pressure boundary penetration.<br>3. The PVHO must have (a) a pressure relief device, (b) two-way communications between compartments and to the outside, (c) a pressure gauge in each compartment, (d) view ports, (e) enough illumination to allow occupants to read gauges, (f) a means of extinguishing an interior fire, and (g) a means of overriding interior breathing and pressure-supply controls. | 29 CFR 1910.430 (f)    | 46 CFR 197.328<br>46 CFR 197.462 | Records must show that the chamber has been examined for mechanical damage or deterioration on an annual basis. Additionally, the pressure vessel and associated piping must be pressure tested every three (3) years.  |



## APPENDIX B. SAMPLE DIVE BILL FOR NON-DIVING UNITS

### References:

- (a) U.S. Navy Diving Manual, NAVSEA SS521-AG-PRO-010
- (b) U.S. Coast Guard Diving Program Manual, COMDTINST M3150.1 (series)
- (c) Commercial Diving Operations, 29 CFR 1910 Subpart T
- (d) Commercial Diving Operations, 46 CFR 197 Subpart B

1. Purpose. To establish policy and procedures for oversight of diving operations. This bill supplements but in no case is intended to supersede or contradict guidance found in References (a) through (d).
2. Responsibilities. Personnel designated as the Unit Diving Liaison must be familiar with the contents of References (a) through (d) and the requirements of this Instruction.
  - A. Commanding Officer/OIC:
    - (1) Responsible for the safe oversight of all diving operations.
  - B. Unit Diving Liaison:
    - (1) Be assigned prior to diving operations.
    - (2) Directly responsible to the Commanding Officer for the safe oversight of diving operations.
    - (3) Ensure that Commercial, Public Safety, and Scientific Diving Operations conducted in coordination with, or at the request of, this unit adhere to the provisions of References (c) and (d).
    - (4) Ensure public safety and scientific dive teams do not operate outside the scope of CFR exemptions promulgated in References (c) and (d).
    - (5) Ensure coordination of necessary equipment tag-outs with the Engineering Officer, Engineering Petty Officer, or designated representatives.
    - (6) Ensure coordination of routine pipes/notifications of ongoing diving operations.
    - (7) Ensure notification of diving operations to adjacent afloat and ashore units and port operations.
    - (8) Ensure physical presence in the vicinity of diving operations.
    - (9) Ensure diving company/unit has an emergency evacuation plan that has been briefed to all hands involved in the dive operation.
  - C. Command Duty Officer / Officer of the Day:
    - (1) Ensure termination of diving operations, in concert with the diving supervisor or person-in-charge, upon discovery of significant safety hazards until such hazards are mitigated.
    - (2) Ensure routine visual oversight and engagement with the diving team.



**APPENDIX C. COMMAND DIVING OFFICER RELIEF CHECK SHEET****Command Diving Officer Relief Check Sheet**

|  | SAT/UNSAT | INITIALS |
|--|-----------|----------|
| 1. Review Unit Readiness Status                                      |           |          |
| a. Personnel Qualifications  | _____     | _____    |
| b. TMT   | _____     | _____    |
| c. Currency  | _____     | _____    |
| d. Medical Fitness   | _____     | _____    |
| e. Physical Fitness  | _____     | _____    |
| 2. Review materiel condition of all DLSS and equipment               |           |          |
| a. Operational Status  | _____     | _____    |
| b. Maintenance Schedules   | _____     | _____    |
| c. Property Inventory  | _____     | _____    |
| 3. Review Pending reports  |           |          |
| a. DJRS entries  | _____     | _____    |
| b. AAR/DEPSUMs   | _____     | _____    |
| c. MISHAPS   | _____     | _____    |
| 4. Review the unit training plan                                     | _____     | _____    |
| 5. Administrative Review   |           |          |
| a. Budget  | _____     | _____    |
| b. Facility Status   | _____     | _____    |
| c. Commanding Officer's Standing Orders/Unit Instructions            | _____     | _____    |
| 6. Observe command diving operations and processes                   | _____     | _____    |
| 7. Review last DORI/DSA report & response                            | _____     | _____    |
| 8. Complete the Navy Safety Center 'Diving Administration' Checklist | _____     | _____    |



**APPENDIX D. PHYSICAL SCREENING TEST**

|   |                                |      |  |
|---|--------------------------------|------|--|
| U.S. DEPARTMENT OF<br>HOMELAND SECURITY<br>U.S. COAST GUARD<br>CG-3150B (1-08)  | <b>PHYSICAL SCREENING TEST</b> |      |  |
| Applicant's Name  | Rank/Rate                      | Date |  |
| Administrator's Name  | Rank/Rate                      |      |  |
| <p>1. <u>500 yard SWIM</u>: In swimming attire, swim nonstop 500 yards utilizing the side or breast stroke. Applicant may push off pool sides during turns.</p> <p>Maximum Time Limit: 14min <span style="float: right;">Time: _____</span></p> <p>Ten-minute rest period.</p> <p>2. <u>PUSH-UPS</u>: The exercise will be performed with the back straight, head up, and knees together. Begin by bending the elbow and lowering entire body until the top of the arms, shoulder and lower back are aligned and parallel to the deck. They may stop and rest in the up position. They will then push their body up, keeping their back straight, and locking their elbows. They will count each repetition aloud as they complete a push-up.</p> <p>Minimum Number: 42 <span style="margin-left: 100px;">Maximum Time Limit: 2min</span> <span style="float: right;">Number: _____</span></p> <p>Two-minute rest period.</p> <p>3. <u>SIT-UPS</u>: Lie flat on back with knees bent, heels close to buttocks (approximately 10 inches) with arms folded across the chest and feet held to the floor by partner. Sit up touching elbow to thighs. Each time you touch your thighs will count as one sit-up. Lie back touching shoulder blades to deck. Repeat as many times as required in the allotted time frame. You may stop and rest in the up or down position, however, if you lower your legs, fail to keep your feet to the ground, or fail to keep your arms folded across your chest, the test is ended.</p> <p>Minimum Number: 50 <span style="margin-left: 100px;">Maximum Time Limit: 2min</span> <span style="float: right;">Number: _____</span></p> <p>Two-minute rest period.</p> <p>4. <u>PULL-UPS</u>: The exercise will be performed by grasping the pull-up bar and hanging straight down. Hands should be placed on the bar with palms away, at shoulder width. Repetitions will be counted aloud by applicants each time they pull their chins over the bar. Applicants shall not swing or bicycle their feet as they pull their chin over the bar, and they must maintain a vertical position during the exercise.</p> <p>Minimum: 6 <span style="float: right;">Number: _____</span></p> <p>Ten-minute rest period.</p> <p>5. <u>1.5 mile RUN</u>: Applicants may wear sneakers and standard PT gear.</p> <p>Maximum Time Limit: 12min 45sec <span style="float: right;">Time: _____</span></p> |                                |      |  |

