



241 FW 10
Diving Safety

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Overview

10.1 What is the purpose of this chapter? This chapter establishes operational policies, procedures, and practices for underwater diving activities to ensure that the Fish and Wildlife Service conducts diving operations in a manner that helps to prevent accidental injury or occupational illness.

10.2 What is the Service's policy on diving activities? Safety of divers is the prime consideration in all diving activities. Supervisors and managers do not promote, nor should divers attempt, difficult or hazardous tasks that compromise diver safety. We conduct diving operations in accordance with the requirements described in [29 CFR 1910, Subpart T](#); [485 DM 27](#); and this chapter (see authorities in section 10.4). Divers must adhere to the diving safety rules in this chapter during all diving operations.

10.3 What is the scope of this chapter? This chapter applies to all Service employees, volunteers, and cooperating personnel who engage in or oversee our diving activities. This chapter does not cover snorkeling. However, employees and volunteers using snorkel equipment should be aware of certain dangers that could affect their safety. We recommend that snorkelers conduct their activities at least in pairs, receive adequate training, familiarize themselves with causes of shallow water blackout, and prepare an appropriate safety plan for the activity.

10.4 What are the authorities for the diving safety program?

- A. Occupational Safety and Health Act, Section 19, Federal Agency Safety Programs and Responsibilities ([Public Law 91-596](#)).
- B. Rehabilitation Act of 1973, as amended ([Public Law 93-112](#)). See also [29 U.S.C. 791\(g\) and 794\(d\)](#) (incorporating standards of the Americans with Disabilities Act into the Rehabilitation Act).
- C. Privacy Act of 1974 ([Public Law 93-579](#)).
- D. [Executive Order 12196](#), Occupational Safety and Health Programs for Federal Employees.
- E. [Executive Order 12564](#), Drug-Free Federal Workplace.
- F. Medical Qualification Determinations ([5 CFR 339](#)).
- G. Rehabilitation Act ([29 CFR 1614.203](#)).
- H. Commercial Diving Operations ([29 CFR 1910, Subpart T](#)), and [Appendix B, Guidelines for Scientific Diving](#).
- I. Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters ([29 CFR 1960](#)).
- J. [370 DM 792](#), Drug Testing Procedures.
- K. [485 DM 27](#), Underwater Diving Safety.
- L. [Department of the Interior Occupational Medicine Program Handbook](#).

10.5 Can diving activities deviate from the requirements of this chapter?

A. The Regional Diving Officer, with the concurrence of the National Diving Control Board, must approve any deviations from operational procedures that this chapter requires. The request for a variance, Regional Diving Officer approval, and National Diving Control Board concurrence must be in writing.

B. Emergency (life or injury-threatening) situations may warrant diving activities contrary to this chapter. The Project Leader must immediately submit a written report of all such actions to the Regional Diving Officer.

10.6 Who is responsible for the diving safety program? Table 10-2 describes responsibilities for diving safety?

Table 10 2: Responsibilities for Diving Safety	
These employees...	Are responsible for...
A. The Director	<p>(1) Ensuring the Service maintains an effective and comprehensive occupational safety and health program, and</p> <p>(2) Approving the policy for our Diving Safety program.</p>
B. The Assistant Director – Business Management and Operations	<p>(1) Providing overall direction for the administration and implementation of an effective diving safety program. and</p> <p>(2) The Washington Office provides sufficient support and resources to implement it.</p>
C. Regional Directors; the Chief, Office of Law Enforcement; and the Director, National Conservation Training Center	<p>Ensuring that:</p> <p>(1) There are sufficient resources and support in place to implement an effective and comprehensive diving safety program within their areas of responsibility, and</p> <p>(2) A Regional Dive Officer is appointed if there are divers within their areas of responsibility.*</p>
D. The Chief, Division of Safety and Health	<p>(1) Revising and updating this chapter,</p> <p>(2) Interpreting the requirements of this chapter, and</p> <p>(3) Working to resolve Servicewide issues and questions about the diving safety program.</p>
E. The National Diving Control Board (NDCB) Also see section 10.9	<p>(1) Develops, maintains, and updates this chapter.</p> <p>(2) Develops and maintains liaisons with other organizations that have diving programs.</p> <p>(3) Adjudicates appeals from divers whose diving authorization has been denied or suspended.</p> <p>(4) Reviews Regional programs and assesses training needs.</p> <p>(5) Recommends new equipment and techniques.</p> <p>(6) Reviews requests for variance from diving safety requirements contained in this chapter, as submitted through the Regional Diving Officer.</p>
F. Regional Safety Managers	<p>(1) Advising managers and Collateral Duty Safety Officers about the diving program in their Regions,</p> <p>(2) Interpreting program requirements and working to resolve Regionwide issues and questions,</p>

Table 10 2: Responsibilities for Diving Safety

These employees...	Are responsible for...
	<p>(3) Providing technical assistance and guidance to diving operations in order to help them comply with this chapter, and</p> <p>(4) Evaluating compliance of a station's diving program with this policy.</p>
<p>G. Regional Dive Officer (RDO)</p>	<p>(1) Review all diving-related activities within their Region to ensure compliance with this chapter and all national and Regional diving program policies, procedures, and standards. Notify the appropriate Project Leader of any deficiencies.</p> <p>(2) Periodically inspect diving equipment storage and any existing dive facilities. A Field Diving Officer also can perform this responsibility.</p> <p>(3) Plan and coordinate diver training programs to meet their Region's diving needs.</p> <p>(4) Maintain files of Regional diving activities, including current diver qualifications.</p> <p>(5) Investigate any significant occurrence of equipment failure or problems, and ensure that their Regional divers and the NDCB are aware of necessary actions.</p> <p>(6) Promote Regional diving operations and assist Project Leaders in ascertaining how the Region diving program can help meet their objectives. The RDO may help Project Leaders assess the need to establish a diving program.</p> <p>(7) Nominate Field Diving Officers to assist administratively and operationally in managing the dive program within their geographic area on an as-needed basis. Line management must approve the nominees.</p> <p>(8) Keep abreast of technological advances and identify issues or incidents with diving equipment and methods, and advise divers within their Region and the NDCB of this information.</p> <p>(9) Coordinate and authorize diving activities and proficiency standards with other cooperating agencies with which we may conduct joint operations.</p> <p>(10) Issue initial diving authorization and annual reauthorization in accordance with requirements of this chapter. The RDO may delegate this task to the Field Diving Officer.</p> <p>(11) Coordinate and/or conduct qualification/training dives with prospective Service divers.</p> <p>(12) Report any dive-related accident that occurs in their geographic area to the Regional Safety Manager and assist with follow-up investigations and reports.</p>

Table 10 2: Responsibilities for Diving Safety	
These employees...	Are responsible for...
	<p>(13) Act as the chair of the NDCB when called upon.</p>
H. Field Dive Officer (duties as assigned by the RDO)	<p>(1) Evaluate field diving operations within an assigned geographic area to determine if they are conducted in a safe and efficient manner and in accordance with this chapter and all national and Regional policies, procedures, and standards. The FDO brings any deficiencies or potential problems to the attention of the RDO and appropriate line management.</p> <p>(2) Conduct, with approval of the RDO, qualification and training dives with prospective divers providing that the FDO has 100 dives and 5 years of diving experience or a recognized dive instructor's certification, such as from the Professional Association of Diving Instructors (PADI), Scuba Schools International (SSI), National Association of Underwater Instructors (NAUI), etc.</p> <p>(3) Ensure that all divers understand procedures for routine and emergency measures prior to any diving activities, as required in section 10.15 of this chapter.</p> <p>(4) Ensure that authorization, training, and proficiency requirements and records for all active divers within their geographic area are maintained, and provide required certification documentation to the RDO.</p> <p>(5) Immediately report (i.e., verbally) any dive-related accident that occurs in their geographic area to the RDO and Regional Safety Manager and assist with follow-up investigations and reports. See section 10.19 for more information.</p> <p>(6) Maintain records of all dive logs for their geographic area.</p>
I. Project Leaders/Supervisors/Facility Managers	<p>(1) Ensure that divers within their jurisdiction conduct operations in accordance with the requirements of this chapter and encourage staff participation commensurate with workload and budgetary constraints.</p> <p>(2) Ensure that the dive team submits a Diving Safety Plan (DSP) (Exhibit 1) to the RDO and FDO, as appropriate.</p> <p>(3) Ensure that only authorized divers participate in diving activities. You must give divers the necessary time, equipment, and training to meet and maintain authorization standards, including up to 3 hours per week for aerobic exercise and strength building.</p> <p>(4) Provide funding for physical examinations, first aid and cardiopulmonary resuscitation (CPR) training, equipment, oxygen administration, and any additional standard diver training we may require for a diver to maintain diving authorization.</p> <p>(5) Respond in a timely fashion to reports or requests from the RDO or FDO.</p>

Table 10 2: Responsibilities for Diving Safety	
These employees...	Are responsible for...
	<p>(6) Rely on the diver’s professional judgment as to whether dive conditions are unsafe or unfavorable and would violate the dictates of his/her training or this chapter (also see section 10.8).</p> <p>(7) Following an accident/incident involving personnel under their responsibility, ensure that a report is completed electronically using the Department of the Interior (Department) Safety Management Information System (SMIS). SMIS is the Department’s internet-based system for reporting accidents and injuries. See sections 10.10 and 10.20 for more information about reporting accidents.</p>
J. Divers*	<p>(1) Have authorization to dive from the RDO.</p> <p>(2) Ensure that diver training certification, medical examination, CPR, first aid, and oxygen administration training requirements are current and that appropriate documentation and training records are on file with the RDO or FDO, as applicable.</p> <p>(3) Maintain a Dive Log (FWS Form 3-2221) and submit it annually to the RDO.</p> <p>(4) Report any dive-related accident or injury immediately to the supervisor, FDO, or RDO.</p> <p>(5) Maintain equipment in accordance with manufactures instructions and maintenance records as required.</p> <p>(6) Determine if they can accomplish a dive within their abilities and in a safe manner (see section 10.8 for more information).</p> <p>(7) Notifying their Project Leaders/supervisors if they are experiencing any adverse health effects; and</p> <p>(8) Participate in the Department’s random drug testing program.</p>

* Office of Law Enforcement divers dive under the Region’s program in which their duty station is located. National Conservation Training Center divers dive under Region 5’s dive program.

10.7 What terms do you need to know to understand this chapter?

A. Accidents are those unplanned or unsought events that result in human injury, illness, or death to the people described in [29 CFR 1904.31](#) or in property damage.

B. Active Diver is someone who “dives” a minimum of 12 times a year with at least 1 dive in the previous 6-month period.

C. Advanced Diving Course is a course nationally recognized diving organizations offer that instructs divers in topics beyond basic certification, such as underwater navigation and over-bottom water diving, boat diving, night diving, dry suit diving, underwater naturalist, altitude diving, search and recovery, etc. (See [section 10.7R](#) for more information on nationally recognized diving organizations.)

D. Authorized Service Diver is a diver who has complied with all Service requirements and has an authorization to dive signed by the appropriate RDO.

E. Buddy System means two or more divers in the water and in contact with each other. The intent of the buddy system is to allow for a diver to respond to an emergency.

F. Buoyancy Compensator (BC) is a safety vest worn by the diver to control buoyancy while diving and to provide positive buoyancy while at the surface. The diver can inflate the BC by a hose connected to the self-contained underwater breathing apparatus (SCUBA) cylinder or orally.

G. Conditional Diver is a diver who has not performed 12 “dives” within the previous 12 months or a diver who has not completed a single dive within the past 6 months.

H. Diving is any activity taking place underwater using SCUBA or surface-supplied gas, including mixed gases, enriched air, or rebreathing apparatus conducted in conditions acceptable to the RDO.

I. Dive Computer is an electronic, submersible, diver-carried meter based on an algorithm or dive table that computes the diver’s decompression status from time-depth inputs.

J. Dive Table is a table that contains a set of depth-time relationships that govern the amount of time a diver should spend at a specified depth, and any necessary safety stops recommended before ascending to the surface.

K. Diving Leadership Course is a course, such as Divemaster, offered by nationally recognized diving organizations, that teaches skills needed for planning and supervising diving operations.

L. Diving Safety Plan (DSP) is a written plan that documents the planning and hazard analysis for a specific type of diving operation (see [Exhibit 1](#)). The dive team conducting the diving operation must complete the plan and the RDO must approve it prior to diving. A DSP is not a substitute for a Field Crew Emergency Plan and Pre-Dive Briefing.

M. Enriched Air Diving is an air supply where the oxygen content exceeds normal atmospheric oxygen content.

N. Field Crew Emergency Plan. A written plan that contains:

- (1) Dive mission.
- (2) Emergency evaluation plan.
- (3) Emergency contact information.
- (4) Safety gear checklist to include communication equipment.
- (5) List of divers (authorized/conditional) participating.

O. Hyperbaric Medicine is the study of the medical aspects of sport, military, and commercial diving; improving the scientific basis of hyperbaric oxygen therapy; and providing sound treatment protocols and standards of practice for diving-related injuries and illnesses.

P. Incidents are unplanned events that could have resulted in accidents, but did not. An incident is typically referred to as a “near miss,” and it is critical that we investigate them to determine contributing factors and record them in SMIS. We must also account for them in preventive measures to ensure that an incident doesn’t turn into an accident with more severe consequences.

Q. Mixed Gas Diving is a diving mode in which the diver is supplied with a breathing gas other than air.

R. Nationally/Internationally Recognized Diving Certification Organization are organizations that offer diving certification; e.g., PADI, NAUI, YMCA, and the National Association of Scuba Diving Schools (NASDS). Dive training by a college or university may be an acceptable substitute.

S. Over-Bottom Water Diving is a dive in which it is possible to lose orientation with the bottom or descend below safe levels. This generally occurs in deep water situations where there is no vertical reference.

T. Oxygen Administration Course is a course that teaches how to treat diving-related accident/injuries with oxygen, and the use, care, and maintenance of oxygen administering equipment.

U. Pre-dive Briefing. A briefing to discuss:

(1) The Field Crew Emergency Plan, including the manner in which the dive will be conducted.

(2) Related safety measures.

(3) Necessary contingency plans.

(4) Current diver status for physical fitness.

(5) Pre-dive equipment checklist.

(6) In-water dive considerations for boat operators

V. A Rebreather is a closed or semi-closed circuit SCUBA system. See [section 10.111](#) for the authorization requirements to use this system.

W. A Safety Stop is a planned stop at a specified depth, usually 15 feet for 3 minutes minimum, to help release dissolved nitrogen from tissues and reduce the chances of incurring decompression illness.

X. Shallow Water Blackout is a phenomenon that may occur to breath-holding (skin) divers in shallow water. Skin divers who have hyperventilated excessively before diving below the surface may reduce the level of carbon dioxide in their alveoli and bloodstream so low that their body may deplete oxygen to the point of unconsciousness before the carbon dioxide level in the blood builds up to sufficient levels to stimulate the nervous system to breathe again.

Y. Snorkeling includes the use of mask, fins, and snorkel at the surface or underwater (breath-holding dives).

Z. Surface Supplied Gas Diving is a diving mode in which the diver in the water is supplied with breathing gas via hose to surface cylinders or compressed air intake systems.

10.8 What is the diver's responsibility for ensuring safety? The primary responsibility for diver safety lies with the individual diver. Each diver must exercise the responsibility and privilege to refuse to dive if, in the diver's judgment, conditions are unsafe or unfavorable and would violate the dictates of his/her training or this chapter. A diver must not attempt to dive if he/she is not in the proper mental or physical condition for diving.

Dividing Control Board & RDO/FDO Qualifications

10.9 How is the NDCB organized? The NDCB provides administrative oversight of our diving safety program to ensure compliance with OSHA, Departmental, and Service requirements.

A. The NDCB must have the following members, and the majority must be active divers:

(1) Regional Diving Officers or representatives,

(2) Chief, Division of Safety and Health, or designee (nonvoting), and

(3) Other qualified individuals approved by the NDCB. NDCB members may designate an alternate to act on their behalf.

B. The NDCB consists of a chair, vice chair, and voting and nonvoting members. The NDCB selects the vice chair every 2 years. The vice chair succeeds to the chair position every 2 years.

C. Meetings are held annually or more often when necessary. A quorum consists of three voting NDCB members.

D. The Regions are responsible for funding the activities of their NDCB representatives.

10.10 Do the RDO and FDO have to meet any qualifications?

A. The RDOs must meet the following requirements. If no person currently meets these requirements, the Regional Director may appoint a highly experienced diver who will undergo a training program that the NDCB developed. RDOs must:

(1) Be active, authorized Service divers.

(2) Have logged a minimum of 100 dives.

(3) Have 5 years of diving experience with at least 1 year of experience diving in the conditions found in the geographic area that they represent.

(4) Demonstrate the ability to administer a safe and efficient diving program by documenting dive history, diving safety plans, etc.

(5) Have completed an advanced diving or diving leadership course. As an alternative to the advanced diving or diving leadership course requirement, the candidate can have a diving instructor qualification that a nationally recognized diving organization issued.

B. The FDOs must meet the following requirements. If a fully qualified candidate is not available, the RDO may nominate the best-qualified diver in the geographic area to an "acting" capacity until

a fully qualified candidate is available or until that diver undergoes a training program developed by the NDCB/RDO to upgrade his/her abilities. FDOs must:

- (1) Be active, authorized Service divers.
- (2) Have logged a minimum of 50 dives with at least 1 year of experience diving in the conditions found in the geographic area they represent.
- (3) Have completed an advanced diving or diving leadership course beyond basic diver certification requirements.

Diving Safety Rules

10.11 What are the Service's diving safety rules?

A. No diver may dive unattended. Use of the buddy system is a standard operating procedure for all diving activities. An authorized Service diver must accompany a conditional diver during all Service diving activities in which conditional divers participate.

B. No dive may exceed 60 feet unless the diver has:

- (1) An advanced dive certification beyond the open-water level, and
- (2) Had specific deep diving instruction from a nationally recognized dive agency, or documentation of deep dive experience that the RDO reviewed and approved.

C. The RDO must approve in writing all dives in excess of 100 feet. A diver should plan no dive to exceed 130 feet.

D. During dives beyond easy swimming distance from shore or in areas of strong currents, a surface support vessel with boat operator must attend the divers. Person in charge of a dive, must brief boat operators on in-water dive considerations.

E. All divers must be fully aware of standard diver hand signals. Divers must review these signals prior to the dive, especially when diving with an unfamiliar buddy.

F. No over-bottom dives may be made unless the diver maintains direct contact with the surface, such as with a line suspended from a float.

G. Divers undertaking single dives within the no-decompression limits must plan their activities to include a minimum surface interval of 12 hours before ascent to an altitude equivalent to that flown by commercial airlines (i.e., 8,000 feet). Divers who make multiple dives for several days or repetitive same-day dives must take special precautions and provide for a minimum surface wait of 18 hours.

H. Immediately prior to a dive, participants should conduct a pre-dive briefing to discuss:

- (1) The manner in which the dive will be conducted,
- (2) Related safety measures,
- (3) Necessary contingency plans,

(4) Current diver status for physical fitness,

(5) Pre-dive equipment checklist, and

(6) In-water dive considerations for boat operators.

I. Divers may use closed and semi-closed circuit SCUBA (re-breathers) if approved by the RDO and with concurrence of the NDCB.

J. Divers are not allowed to use gas mixes other than of oxygen/nitrogen. The use of enriched air (Nitrox) requires specialized training.

K. Divers must follow the procedures established by the manufacturer of the tables or dive computer they are using. When using computers, both buddy divers are equipped with their own individual computers. Use the more conservative of the two computers to determine time, depth, and ascent rates. Divers must not exceed no-decompression dive limits for the dive table or dive computer they use for the dive.

L. All dives must use a safety stop at approximately 15 feet for a minimum of 3 minutes where dive profiles allow. Where applicable, a longer stay at 15 feet may be required per the dive tables being used.

M. When diving, display dive flags that best fit current dive conditions; e.g., international alpha, sport diver's/diver-down.

N. An oxygen administration kit and first aid kit must be available at the dive site during all diving operations. All divers must be trained in their use.

O. Two-way communication (telephone or radio) adequate to summon emergency assistance must be available at the dive site.

P. When there is a significant entanglement hazard there must be an additional diver at the port of entry of an enclosed or physically confining space.

10.12 How does a diver get authorization to dive?

A. The need for the applicant's diving skills is a line management decision. Applicants must submit a request for diver authorization through their Project Leader to the RDO. [FWS Form 3-2223](#) is a checklist of requirements for the initial authorization. Applicants must:

(1) Take and pass a drug test administered in accordance with [370 DM 792](#). Once authorized, divers are subject to the Department's random drug testing program.

(2) Provide evidence of having successfully completed an open water diving certification program conducted by a national or international certifying agency (i.e., YMCA, NAUI, PADI, etc.).

(3) Provide copies of diving logs ([FWS Form 3-2221](#)) or other materials that indicate their diving experience. If at initial authorization, the diver has not performed 12 dives within the previous 12 months with at least 1 dive within the previous 6-month period, we consider the applicant a conditional diver.

(4) Successfully complete a diving skills and physical fitness evaluation ([Exhibit 2](#)).

(5) Undergo an initial diving medical examination upon entry into the program and every 5 years for divers up to age 40, every 3 years for divers over the age of 40 and up to age 60, and every 2 years for divers older than 60. Divers must use and provide [FWS Form 3-2224](#) (Scuba Diving Medical Examination Form) and [FWS Form 3-2224-A](#) (Physician's Qualification Statement) to the examining physician.

(a) Once examination is complete, the examining physician returns both forms to the employee who gives the forms to the RDO. The RDO gives both forms to the reviewing physician.

(b) The reviewing physician must be either board certified in occupational medicine or limited to practice in occupational medicine and be trained in hyperbaric medicine or undersea medicine. The reviewing physician reviews baseline and periodic physicals. The reviewing physician must complete both forms and return them to the RDO as part of the authorization package.

(c) The RDO places a copy of [FWS Form 3-2224-A](#) in the diver's individual file and gives a copy to the diver. The RDO sends the entire package to the servicing Human Resources office for filing in the employee's medical folder (SF-66D).

(6) Provide current evidence of having completed a CPR course comparable to American Red Cross or American Heart Association Adult CPR. All applicants and authorized divers must provide current evidence of having completed a basic first aid course comparable to American Red Cross Multi-Media. We highly recommend advanced first aid training. All authorized divers complete an oxygen administration course comparable to the course developed by the Divers Alert Network.

B. Following receipt of all required application materials and successful completion of a diving skills evaluation, the RDO may issue the diving authorization ([FWS Form 3-2225](#)). The authorization must include any conditions or special authorizations for the diver.

C. If the RDO denies authorization, applicants may appeal the denial to the NDCB. Refusal to authorize a diver must be in writing with an explanation of the reasoning leading to the refusal.

D. The RDO must annually review each diver's authorization status and issue annual reauthorization. Diving reauthorization is contingent on the RDO receiving the following evidence:

(1) Current medical examination form.

(2) Current CPR certification.

(3) Current first aid certification.

(4) Current oxygen administration certification.

(5) Diving log for the past year.

(6) Evidence of required supplemental training (see [section 10.13A](#)).

(7) Successful completion of an annual diving skills and physical fitness evaluation ([Exhibit 2](#)).

E. Project Leaders or the RDOs may suspend a diver's authorization for cause. Violation of any requirement in this chapter or exercising poor judgment may be sufficient cause for suspension. The Project Leader or RDO must inform the diver in writing of the reason for the suspension. The diver may appeal the suspension to the NDCB through his/her line management.

10.13 What are the training requirements for divers?

A. Project Leaders develop a continuing education plan for each diver. Service divers must complete a minimum of 40 hours of diving-related training every 3 years. Experienced divers may substitute instructing for the 40-hour training requirement. This training is in addition to the first aid, CPR, and oxygen administration training requirements described in [section 10.12A](#) and may be completed through in-Service, interagency, or open market training opportunities. Divers must provide evidence of training to the RDO and FDO.

B. Active Service divers must make a minimum of 12 logged dives in a 12-month period with at least 1 dive in the 6-month period prior to reauthorization. The minimum requirements for a dive are use of an underwater breathing system by the diver and at least a 10-minute surface interval since the previous dive. We consider consecutive no-decompression dives with less than a 10-minute surface interval as single dives. Failure to comply with this requirement causes the diver to revert to conditional status.

C. Line management supervisors are responsible for authorizing the time, resources, and hazard duty payment necessary for divers to meet minimum proficiency standards. Service-owned diving equipment may be made available during non-duty hours for the purpose of maintaining diver proficiency. Non-authorized divers may not use Service-owned equipment.

D. Since diving is a physically demanding activity, all divers must maintain an appropriate level of physical conditioning. We encourage divers to participate in strength building and aerobic conditioning (see [section 10.6G](#)).

10.14 Are divers eligible for hazardous duty or environmental differential pay? Divers working underwater may be eligible for hazard duty pay differential (see [5 U.S.C. 5545\(d\)](#), [5548\(b\)](#); [5 CFR 550.901-906](#); and [225 FW 2](#)).

A. General Schedule (GS) Employees.

(1) Divers in the GS series receive hazard pay when diving under the following conditions while in pay status for that day, unless we took the diving work into account when we classified the employee's position, i.e., professional diver. Hazard pay is not discretionary, and we must pay it to qualifying divers. Dives subject to hazard pay includes those involving:

- (a) Depths of 6 meters (20 feet) or more below the surface.
- (b) Restricted visibility.
- (c) Rapidly flowing or cold water.
- (d) Restriction of vertical access to the surface due to overhead structure.
- (e) Testing or working with hardware that presents special hazards.

(2) The hazard pay differential is 25 percent of the basic hourly rate, which we apply to all hours in a pay status for the day in which the diving is performed. Document and compute hazard pay on [FWS Form 3-212](#) (Hazardous Duty/Environment Claim).

B. Wage Grade (WG) Employees.

(1) Divers in the WG series receive environmental differential pay, but the differential is not the same as for GS employees. WG employees who perform diving duties are paid 175 percent of the locality WG-10, step 2, rate for all payable hours of the shift. Use [FWS Form 3-212](#) to claim hazard pay differential for WG divers.

(2) WG divers who are performing the duties of a diver tender are entitled to hazard pay, which is 100 percent of the locality WG-10, step 2 rate. A diver tender is a trained diver (Service authorized) whose surface responsibilities are essential to the dive, such as operating surface supply air systems, maintaining diver retrieval lines, or maintaining direct communications with submerged divers. We also consider a diver who is fully suited and prepared to immediately enter the water in case of emergency (i.e., standby diver) to be a diver tender. We only require standby divers on dives when the project Diving Safety Plan (DSP) or commercial diving regulations ([29 CFR 1910](#)) require it.

10.15 Do diving activities require written plans?

A. Each diving activity must have a written DSP ([Exhibit 1](#)) that addresses safety, logistics, and special equipment. Prior to engaging in each new diving procedure or when using a new type of equipment for which a DSP does not exist, the dive team prepares the DSP and submits it to the RDO for review. In situations requiring a quick approval, the dive team may function on a verbal approval, followed by a written approval. The DSP must contain a hazard analysis relevant to the type of diving being performed (e.g., transect surveys, suction dredging, ice diving, etc.), and the surface support vessel. The FDO and Project Leader must ensure preparation of the DSP. The RDO retains approved DSPs. Routine dive activities can be covered by one plan and updated annually. A DSP is not a substitute for a Field Crew Emergency Plan and Pre-Dive Briefing.

B. Each dive requires a Field Crew Emergency Plan and Pre-Dive Briefing ([FWS Form 3-2222](#)) that addresses safety aspects of the dive. The dive team prepares FWS Form 3-2222 and the FDO reviews it prior to approval by the Project Leader. The plan must contain a list of contacts, evacuation procedures, and locations of professional emergency assistance and decompression chamber.

C. Both plans must be readily available at the dive site and field station.

10.16 Are there any equipment requirements?

A. You must maintain all underwater diving gear and accessory equipment in a good and safe operating condition. At a minimum, we provide each diver with the following:

(1) Regulator equipped with submersible pressure gauge and alternate second stage. A qualified specialist must check, service, and document all diving regulators at least annually.

(2) Buoyancy compensator with a minimum amount of 20 pounds of buoyancy. The diver must inspect the power inflator annually.

(3) Quick release weight system. We do not authorize tied on or otherwise anchored systems.

(4) Exposure/environmental suit that provides adequate thermal and abrasion protection.

(5) Depth gauge or dive computer.

(6) Dive timing device or dive computer.

(7) Mask with corrective lenses, if required.

(8) Snorkel.

(9) Fins.

(10) Dive knife with a sharp edge, a serrated edge, and a line cutter.

(11) Compass.

(12) Dive gear transportation case/bag.

(13) SCUBA cylinders. A qualified specialist must perform an annual internal visual inspection of all air cylinders. The diver must also conduct external inspections to identify exterior damage/wear before each use. Hydrostatically test air cylinders every 5 years. Do not fill cylinders beyond their rated pressures.

(14) Signaling device, such as a whistle, air horn, smoke flare, etc.

(15) Oxygen administration and first aid kit. Maintain the oxygen administration kit in a good, functional condition in accordance with the manufacturer's recommendations. Ensure that both kits are available at the dive site.

B. A diver may use non-Service-owned dive equipment that meets the following parameters. The Service is not financially liable for personal equipment that is lost or damaged when it does not meet equipment requirements in this policy.

(1) Equipment must meet policy standards and be maintained in accordance with this policy.

(2) The diver may only use the equipment with the written permission of the supervisor or Project Leader.

C. If a dive unit uses a Service-provided air compressor, they must ensure the following:

(1) All air compressor operators must be thoroughly trained and familiar with operation of the compressor.

(2) The output of air compressor systems used or air bottles provided for use must meet Grade E air quality parameters set forth in Compressed Gas Association (CGA) G-7.1. You can test air compressors by taking samples at the connection to the distribution system. Check with air bottle providers to ensure that air meets the Grade E parameters.

(3) Change filters and lubricants in accordance with the manufacturer's recommendations.

(4) Operators must keep a log of compressor operation and repairs.

(5) Each dive unit that operates a compressor must appoint an individual within the unit to be responsible for maintenance and operation of the compressor.

Diving With Other Agencies and in Other Regions

10.17 Can divers participate in dives if they are from another Region or are from outside the Service?

A. Divers from all Regions and other Departmental bureaus are eligible to participate in mutual dive activities if the following takes place:

(1) The diver from the visiting Region or bureau must show the RDO/FDO that their home program permits them to dive and verify that they have approval for the Service activity from their line management.

(2) The RDO, FDO, or diver in charge of the dive operation gives the visiting diver a pre-dive briefing. The briefing may include orientation dives to the area where activity will take place.

B. Divers from other Federal, State, and local government agencies, and academia are eligible to participate in Service dive activities if the following takes place:

(1) The visiting diver gives documentation to the RDO/FDO showing that their dive program meets the minimum requirements of this chapter, such as those described in [section 10.12D](#).

(2) The visiting diver provides evidence that their home program permits them to dive and verifies that they have approval for the Service activity from their sponsoring organization.

(3) The RDO, FDO, or diver in charge of the dive operation gives the visiting diver a pre-dive briefing. The briefing may include orientation dives to the area where activity will take place.

C. The RDO must approve contractor participation as members of a Service dive team. Contractors will comply with all Federal, State, and local regulations.

D. Volunteers covered by a current volunteer agreement may participate in diving activities provided they meet all requirements of a Service diver. Volunteers authorized under another Departmental diving program may participate in Service diving activities with approval of their sponsoring bureau and the Service RDO.

10.18 Can Service divers participate in non-Service dives? Service divers may participate in non-Service dive activities on work time in the following circumstances:

A. The RDO has reviewed the non-Service diving program for compliance with this chapter, such as the requirements described in [section 10.12D](#).

B. The diver has permission from line management to participate.

C. The diver acts within the authority of this chapter and the sponsor agency/organization requirements for the diving activity.

Diving Accidents & Incidents

10.19 What does a diver or a dive team member do in case of an accident?

A. Divers must immediately report to their supervisor/Project Leader, FDO, and RDO, all diving-related injuries, accidents, incidents, and equipment failures.

B. If three or more people are hospitalized because of an accident, or it involves a fatality, divers must notify the Regional Safety Manager immediately (see [240 FW 7](#)).

C. The employee's supervisor is responsible for completing an accident report using the SMIS. The report must describe the nature of operations, existing conditions, personnel involved, type of equipment used, nature of the injury or equipment failure, and recommendations for prevention of similar accidents in the future. The Regional Safety Manager will provide the RDO a copy of the SMIS report. The RDO will confer with the NDCB as needed.

D. To facilitate accident investigations, the diver in charge of a dive operation must secure the accident site to the extent practicable and leave all equipment in the same configuration as at the time of the accident until receiving further guidance from the RDO.

E. If a diver is involved in a diving accident or incident, he/she may be subject to a drug test.

10.20 How does the Service report accidents? Upon notification of a diving related accident or incident, the diver's supervisor/Project Leader must consult with the FDO or RDO, or both to determine the need and scope of an investigation. If the accident/incident meets the definition of a serious accident as described in [485 DM 7](#), and [240 FW 7](#)

, the Assistant Director - Business Management and Operations, in consultation with the Chief, Division of Safety and Health, appoints a serious accident investigation team. For all other accidents/incidents, the Regional Safety Manager must provide guidance and support to the supervisor/Project Leader, FDO, and RDO in the conduct of an adequately scaled investigation.

10.21 For diving activities, what record are required and how does the Service maintain them? The collection and maintenance of records containing personal information (i.e., medical exam form, drug testing results, etc.) must be consistent with the provisions of 5 U.S.C. 552a (the Privacy Act of 1974). This information is sensitive and protected by the Privacy Act. It is only available to staff on a need-to-know basis. Personal information in electronic form must be protected using a password and only used in accordance with routine uses identified in "OPM/GOVT-10, Employee Medical File System Records." Use paper records similarly and protect them in a locked file and locked room that is available only to staff who have a need to know this information in accordance with OPM/GOVT-10. Those employees who store and maintain such records must read and be familiar with OPM/GOVT-10.

A. In accordance with 29 CFR 1910.440, the RDO maintains a file of all authorization information for all active divers within his/her geographic area. We keep these records for a minimum of 5 years after the diver stops diving for the Service.

B. The FDO (in the absence of an FDO, the RDO) maintains:

(1) Records of all dive logs conducted in their area of responsibility.

(2) A log of all equipment inspection records for regulators, tanks, and other equipment as required.

(3) All dive-related training records (CPR, first aid, oxygen administration, etc).

C. Divers maintain:

- (1)** Dive logs for all their Service dives.
- (2)** Equipment maintenance records required by this chapter.
- (3)** A file of his/her dive authorization records.