NOAA DIVING PROGRAM



UNIT DIVING SUPERVISOR Operational Guidelines

Revised 15 March 2017

A Message from the NOAA Diving Control and Safety Board

The Unit Diving Supervisor is the most important position in the NOAA Diving Program. You are the final arbiter for all diving related activities at your unit: when dives occur, how the dives are executed, and who goes in the water. You are also the conduit between the NOAA Diving Control and Safety Board and your divers, explaining policies and procedures down the chain and elevating concerns and needs up the chain.

Many things will be required of you as UDS. Some are tangible; others are intangible. The tangible items are listed in the following pages – which reports you need to complete, the forms required for a range of situations, etc. However the intangible requirements are far more important and impossible to define in a manual. These skills are acquired over time, and require diligence, constant attention, and the avoidance of complacency. Your decision making skills define your performance as a UDS. People's lives depend on the decisions you make. The toughest part of the job will be to maintain safety as your highest priority and not let friendships or pressure from project leaders or supervisors exert undue influence. You are not alone in this position, your LODO and the Safety Board will back you up on tough calls. Use these resources often.

The remainder of this manual is devoted to the tangible items you will use to administer the UDS duties. The UDS Manual begins with descriptions of the most common activities you will undertake as a UDS (e.g., how to file a dive plan, how to select Divemasters). Each report, form, or checklist is included in this manual and prefaced with a description of when and how it should be used. These documents were current at the time this manual was written, however please refer to the NDP website for the most recent versions. While there is a lot of information in this manual, it is not meant as a substitute for the standards, policies and procedures in the NOAA Diving Standards and Safety Manual (NDSSM). You should have a copy and be familiar with the NDSSM and refer to it when you are uncertain how to proceed with any particular issue. The NDSSM is revised periodically, so policies that are drafted between revisions are codified through the OMAO 0300 series. These official policies are produced by the NOAA Diving Control and Safety Board (NDCSB) and become effective after the Director, OMAO signs them. The OMAO 0300 policies can be found on the NOAA Diving Program (NDP) website. Another resource you should utilize is your LODO. Remember your LODO works for you; they represent you on the NDCSB. If you have a problem or concern, raise it to your LODO.

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QUICK REFERENCE of DIVE UNIT SCHEDULES

REPORTS

External DUSA – Triennially, conducted by DSO and/or Inspectors from NDC

Annual Report – Due to LODO by 15 November

Internal DUSI – Due to LODO by 15 January

EQUIPMENT

SEP gear service – Annual, arrange timing with SEP Coordinator

SEP inventory check -- Annual

Scuba cylinders visual inspection (VIP) - Annual

Scuba cylinders hydrostatic inspection – Every five (5) years

Oxygen resuscitator kit function test – Monthly and before every diving day

Oxygen regulator pressure test – Every three (3) months

Oxygen regulator service – Biannually

AED inspection – Monthly for batteries, monitor pad expiration dates

First Aid Kit medication replacement -As required

Dive computer service – Annual

Note: If manufacturer of any gear recommends shorter service/inspection intervals, follow them

PERSONNEL

Dive skills checkout dive - Annual

Watermanship test – Annual

Rescue drills - Annual

Topside training – Annual

Verification of Coverage (contractors only) – Annual

Annual medical history report – Due at the end of the month of the anniversary of last dive physical

Dive physical – Every one to five (1-5) years, depending on age

Distinguishing Between OSHA-exempt and OSHA-compliant Dives

One of the most frequent decisions you will make as a UDS is the determination of which standards to apply to a dive – the NOAA standards for scientific dives or the OSHA standards for commercial (working) dives. Scientific dives require several conditions be met in order to be exempt from the OSHA Standards for Commercial Diving. The OSHA standards are found in 29 CFR 1910, subpart T. OSHA offers the following definition of scientific diving: "Scientific diving means 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."

There are seven questions you should ask to help make this determination:

- Can the tasks be accomplished using simple hand tools (e.g., small hammers, pliers, chisels, wrenches, cameras, measuring tapes, nets, collection jars) weighing 25 pounds or less underwater?
- 2. Do the tasks require the expertise of a scientist or scientist-in-training?
- 3. Can the tasks be accomplished with minimal physical exertion?
- 4. Can the tasks be accomplished in short duration (e.g., <1-hour)?
- 5. Are the tasks limited solely to the observation of natural phenomena or responses of natural systems and/or gathering of data for scientific analysis?
- 6. If any object is to be lifted or moved, is its weight underwater <100 pounds?
- 7. Will the tasks result in the advancement of science?

An answer of 'NO' to any of these questions means the OSHA standards for commercial (working) dives should apply. Questions 1, 3, 4, 5, and 6 are fairly straightforward. While the one hour time limit in question 4 is easily defined, it is not a hard limit – the intent is to separate truly large projects from simpler ones. A scallop survey in a seagrass bed under 15 fsw that takes 90 minutes to complete is still a scientific dive. Questions 2 and 7 require your judgement and often can be the source of debate during dive planning. Be realistic in assessing question 2, evaluate the task and think about the skills needed to accomplish it. Does it really require scientific expertise? Let's look at some examples: The task of dive one is to clean marine growth off two pilings so you can attach a tide gauge. Dive two requires the installation of a 'No Fishing Zone" marker buoy anchor in a coral reef with minimal damage to living corals. Dive one is clearly a working dive, there is no scientific expertise needed to scrape barnacles off a piling. Dive two however, would qualify as a scientific dive because scientific expertise is required to determine where the living corals are and the best location for the anchor to be installed without damaging them.

Question 7 also requires a realistic assessment of the task. Avoid over-reaching in an attempt to qualify for the scientific exemption. For example, dive three involves using a water jet to install a piling you will use to tie up your 21 ft research vessel. The boat missions may advance science, but providing a place to tie up the boat does not, this would be a working dive. Another type of dive which falls under question 7 is one involving education and outreach. These dives qualify for the scientific exemption if

they result in the advancement of science by promoting interest in NOAA's scientific mission, increasing public awareness of ocean-related issues, or encouraging students to undertake a scientific career.

If a dive combines scientific and working tasks, the working requirements take precedence and the commercial standards apply. If dive two and dive three above were combined, the tasks were to install a mooring buoy in the reef without damaging corals and then the divers are to swim over to a sandy area and install a piling, the commercial standards would apply.

If you cannot make a determination, you should follow the more conservative approach and apply the commercial standards. The primary differences are the manning levels and the requirement for an alternate breathing gas supply.

The NOAA Diving Standards and Safety Manual explains this subject in greater detail. Additional information can be found in the OSHA standards, which are available at this website: https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10139

Submitting a Dive Plan

Submitting a dive plan is another common task you will perform as a UDS. There is a one-page form which is the administrative component of submitting a dive plan; Dive Operations Plan (NF 57-03-20). Once completed, this form should be submitted to the NDP.Diveplans@noaa.gov email address. The filename for the dive plan should be the UDS' last name and the date, for ships it should be the ship name and the date (e.g., Roberson04July2017 or Pisces05Aug2017). One dive plan can cover several days or even weeks of a continuing project, as long as the operations are the same. It is also acceptable to have multiple tasks on one plan (e.g., dive 1 is to measure coral heads on a reef, dive 2 is an hour later and the goal is to remove line from the rudder on the research vessel). However if the coral dive is today and the ship husbandry dive is next week, submit two separate dive plans. In the case of a working dive and a scientific dive on the same plan, you should check the working dive box as that requires stricter standards (although you could still use the scientific standards for the coral dive). There is no penalty for conducting a scientific dive under the working standards, but you do not want to go the other direction.

While submitting the dive plan is simple, preparing the plan requires your full attention. The first section of the plan provides details of the diving operation, location, date, depth range, number of divers, etc. Occasionally there is confusion about the box for number of consecutive dive days. The first day of diving does not count so begin incrementing the number in this box on the second day. For example, a two-day mission would have one consecutive dive day, a five-day mission would have four consecutive days. There are some checkboxes to indicate if the safe ship checklist or a float plan is required. The most important checkbox is the one describing the standards to be followed, scientific or working. This determination is described in detail in an earlier section of this manual; if the plan will include both working and scientific dives, check the working dive box but indicate which dives will follow the scientific standards in the Purpose of Dives and Tasks to be Performed section.

The Divers section is a simple list of the divers who may be involved with the dive. Include all divers, not only the NOAA divers if there is a mixed team involved. It is helpful to list a little additional information about non-NOAA divers, such as T. Nugent (Univ. Detroit). The first person listed is the Divernaster or Lead Diver for the operation. Match this person with the skills needed for the job. You may have an operation to change zincs on a NOAA research vessel, a Divernaster who has overseen a thousand fish counting dives and a NOAA Corps officer who did two hundred ship husbandry dives at her previous assignment. Choosing the Corps officer to be the Lead Diver for this mission would be a good decision.

The next section has several boxes for narrative descriptions of the dive purpose, diver-worn equipment and breathing gases, tools or special equipment needed, potential hazards and mitigations, and the plans for evacuating injured divers. In the hazards and mitigation box, you do not need to list common hazards which are present on every dive (i.e., drowning, hypothermia, AGE, DCS). You should list hazards that are unique to this particular operation AND what steps you are taking to minimize these risks. For example, the dive is to take place in a channel between a bay and the open ocean which is subjected to strong tidal currents and your mitigation is to dive at slack high or slack low tide.

The final section is the authorization. Two people must sign the plan; one of them MUST be the UDS or their designee. The UDS (or designee) may be the originator of the plan, in which case a second diver may sign as the approving diver. The important thing is to have two different people review and sign the plan and one of them must be the UDS (or designee).

The first time a plan is submitted in any calendar year, a copy of the <u>Diving Emergency Assistance Plan (DEAP) (NF 57-03-21)</u> should also be submitted. Also any time the circumstances of the DEAP change, a new plan should be submitted along with the dive plan. For example, a DEAP would change if the recompression chamber or hospital were different or if the evacuation method were different, say a change from government vehicle to helicopter, or from research vessel to ambulance. If you are planning an operation in a location where another NOAA Dive Unit routinely operates, contact their UDS while preparing your DEAP; they will be able to provide their plan and save you time. They can also provide local knowledge which will make your operation easier and safer.

The <u>Dive Operations Plan (NF 57-03-20)</u> form is for the submission of no-decompression air or nitrox dives using open circuit or closed circuit equipment. These do not require approval by the NDCSB, however NOAA Diving Center (NDC) personnel review the plans to ensure the information on the forms is complete and the unit is properly planning their dives.

There are different forms for decompression dives and mixed gas CCR dives. The <u>Decompression Diving</u> <u>Request (NF 57-03-28)</u> must be submitted to the NDCSB and approved before any dives requiring decompression. The <u>Closed Circuit Rebreather (CCR) Decompression Diving Request (NF 57-03-29)</u> must be submitted to the NDCSB and approved before any CCR dives using mixed gases (any breathing gases composed of more than 1% of an inert gas other than nitrogen) or requiring decompression. The Deco and CCR Deco forms are used infrequently and a detailed description of their use is not included in this Manual. If you need more information on these forms, please contact your LODO.

Creating a new NOAA Diver

There are two avenues to follow for NOAA Diver Training based upon the location of the training. The NOAA Diving Center offers three full-service, modular classes per year, two in Seattle and one in Florida. In addition the NDP allows for local training by approved NOAA Dive Trainers. Many of the requirements for the local and NDC training options are the same, however there are important distinctions in the prerequisites. There are also differences in the pre-approval process for FTEs and contractors. Below is a step by step description of the process.

NOAA Diver Training at the Unit Level with NOAA Dive Trainers – This program is designed to bring divers with prior experience into the NOAA Diving Program. It is primarily a skills assessment and introduction to the NOAA Diving Program policies and standards. Requirements to participate in this program are certifications from a nationally recognized diver training organization (e.g., NAUI, PADI, IANTD, SDI/TDI) in Basic Openwater, Advanced Openwater and Rescue. A <u>list of NOAA Dive Trainers</u> can be found on the NDP website.

NDC Training Module Breakdown – The NDC has adopted a modular approach to its diver training program. There are now five (5) options to complete dive training at the NDC depending on the needs and experience of the diver. Additionally NDC offers NOAA Divemaster (DM), Tethered Communications, and Diving Medical Technician (DMT) courses.

<u>Module 1</u> – Designed for divers with limited or no diving experience and is open to all diving candidates with their UDS's endorsement. Students learn how to scuba dive, receive training in rescue procedures, and learn the NOAA Diving regulations. Graduates are NOAA Divers able to conduct basic underwater tasks.

<u>Module 2</u> – Designed for previously certified recreational divers. Basic certification including 50 dives or an Advanced certification including 25 dives is required along with UDS endorsement. UDS endorsement must include an in-water skills checkout dive by the UDS or designee. Graduates will be NOAA Divers able to conduct basic underwater tasks.

<u>Module 3</u> – Designed for any diver who has completed Module 1 or Module 2 or current NOAA Divers seeking additional skills and experience. Graduates will be able to conduct specialized underwater tasks including Core Skills and Special Task Endorsements (STEs).

<u>Module 1 & 3</u> – This combination is recommended for prospective ship's divers or prospective scientific divers who would like expanded working skills and mission support capabilities.

Module 2 & 3 – This combination is the same as above but for previously certified divers.

<u>Diversor</u> – Designed for current divers who want to supervise diving operations. Prior diving experience is required as is UDS endorsement.

<u>Tethered Communications</u> – This training and the use of this equipment are primarily for the purpose of reducing the number of personnel needed to conduct an OSHA designated working dive. A typical working dive requires five (5) people (in-water Buddy Team, Designated Person in Charge, pair of Standby Divers), whereas Tethered Communications diving reduces that minimum requirement to three (3) people (in-water Diver, Tender, Standby Diver). Tethered Communications is a one (1) week course typically held once a year in Seattle, but can be done remotely or more frequently given a sufficient number of students.

<u>Dive Medical Technician</u> – If you have multiple divers at your unit and are consistently conducting taxing diving operations, this is an excellent program to send some of your divers through. This course produces graduates who are certified DMTs specializing in the recognition and treatment of diving maladies. Completion of this course results in a NOAA DMT certification, however if specifically requested, a certificate from the National Board of Diving and Hyperbaric Medical Technology can be attained. Prerequisite for this course is a national EMT certification.

Training Authorization – The first step is to ensure the diver candidate's supervisor agrees to allow them to participate in the program. This is done by completing a Training Request and Authorization Form (NF 57-03-38). For FTEs, the first line supervisor should sign the form. For contractors, the supervisor from the contracting company should sign as well as the NOAA FTE for whom the contract employee is providing services. Not all contracts or contract positions allow diving. Make sure the Statement of Work (SOW) in the contract and the diver candidate's position description provide for diving. The diver candidate and the UDS also sign the NF 57-03-38 form. NDC Training Courses have fees associated with them. Check with NDC or on their web site for the current fee schedule and include costs and accounting codes on the NF 57-03-38. For local Dive Unit training by a NOAA Dive Trainer, the Course and Payment Information section of NF 57-03-38 is left blank. For individuals who will participate in a NDC Training Course, the completed form is part of the application packet and must be submitted 60 days in advance of the class. For those who will participate in local training at the Dive Unit level, the completed form must be retained in the diver's file.

Dive Physical – There are three forms required to secure medical clearance to dive, the first is a checklist describing the various tests (which are age dependent) and forms needed for a complete dive physical package. The second item is a self-report of medical history and the third is a medical professional's report of a physical examination. These forms are combined in the Report of Physical Examination (NF 57-03-50,51, 52). **Before any physical activities are conducted (i.e., swim test, dive skills evaluation, checkout dives), the NOAA Diving Medical Officer (NDMO) must provide a medical authorization to proceed.** A diver candidate's medical insurance normally covers the cost of the laboratory tests and physical exam, however if it does not, these costs may be covered by the government. The medical history and physical exam forms contain private medical information which the UDS is not entitled to see. However the UDS is very strongly encouraged to go over the checklist to ensure the package is complete before it is submitted to the NDMO. One of the most common delays in the diver certification process is an incomplete dive physical. The diver candidate is responsible for submitting the dive

physical package to the NDMO, this should be done by fax to (206) 529-2759 or encrypted email to DMO@noaa.gov.

Swim Test – Once medically cleared, diver candidates must complete the Initial Swim Test with the results documented on the Swim Test Evaluation (NF 57-03-39). There are three components to this test; an underwater swim of 25 yds (22 m), a surface swim of 550 yds (500 m), and a 30 minute period of treading water. The 550 yd swim must be completed without stopping and must use the front crawl, side stroke, or breast stroke. Goggles or a mask may be used on the swim, but no snorkels or fins. The 550 yd snorkel must also be completed without stopping. The candidate may do the four components in any order, but they should be conducted in one session with reasonable rest periods between each event. The times for the 550 yd swim and snorkel and successful completion of the 25 yd underwater swim and 30 min water tread are noted on the NF 57-03-39 along with a general rating of the diver candidate's swimming ability and signed by the UDS. For individuals who will participate in a NDC Training Course, the completed form is part of the application packet submitted in advance of the class. For those who will participate in local training at the Dive Unit level, the completed form should be retained in the diver's file. Note: Personnel attending NDC Training Courses are required to successfully perform this test again during the first day of pool work.

Safety Certifications – There are several safety training certifications which are prerequisites for any NOAA Dive training; they are Adult CPR, AED, First Aid and Oxygen Administration. These certifications must be issued by a nationally recognized safety training organization (e.g., American Red Cross, American Heart Association, ASHI, DAN) and must be valid at the time training begins and must remain valid throughout the entire training period. Copies must be on file at the training facility (NDC or Unit) prior to the beginning of NOAA Dive Training. Dive Units are authorized to use government funds to pay for this safety training.

Diving Certifications – Pre-existing dive certifications are strongly recommended for NOAA Diver candidates participating in NDC Training Courses and required for NOAA Dive Training conducted at the Dive Unit level. Copies should be submitted to NDC prior to the beginning of the NDC Training Course the diver candidate will participate in. Divers participating in NOAA Dive Training at the Dive Unit level must have certifications from a nationally recognized diver training organization (e.g., NAUI, PADI, IANTD, SDI/TDI, U.S. Military) in Basic Openwater, Advanced Openwater and Rescue. Copies must be on file prior to the beginning of NOAA Dive Training conducted at the Dive Unit level. Dive Units are authorized to use government funds to pay for this training if needed. Note: many diving certification cards contain the diver's date of birth, this is considered personally identifiable information (PII) and should be blacked out before sending through email unless encrypted email is used.

Standardized Equipment Program (SEP) Forms – Divers who will participate in the SEP (required of all FTEs, strongly recommended for contractors) will need to complete two forms before they will be supplied with SEP gear; the <u>Standardized Equipment Program Measurement Form (NF 57-03-65)</u> and the <u>Standardized Equipment Program User Agreement (NF 57-03-67)</u>. Copies must be submitted to the SEP Coordinator at least sixty (60) days prior to the beginning of the NDC Training Course the diver candidate will participate in. A similar amount of lead time is desired for divers participating in NOAA Dive Training

at the Dive Unit level. A UDS may request SEP gear before a diver begins NOAA Dive Training at the Dive Unit level, however the annual SEP fees will be assessed from the date the gear is supplied, not when the diver is given a Letter of Authorization to Dive.

Liability Release – All diver candidates must complete and sign the <u>Liability Release and Assumption of Risk Form (NF 57-03-09)</u> prior to participation in NOAA Diving Program training. Additionally, all contractors must complete and a company representative must sign the <u>Verification of Liability Coverage (NF 57-03-07)</u> prior to participation in NOAA Diving Program training. Copies must be on file at the training facility (NDC or Unit) prior to the beginning of NOAA Dive Training conducted at the Dive Unit level.

Diving Resume – All diver candidates must complete, and the candidate and UDS must sign, the <u>Diving Activity Resume (NF 57-03-41)</u> prior to participation in NOAA Diving Program training. Diver candidates participating in NOAA Dive Training at NDC and starting with Module 2, must complete and submit the Diving Activity Resume to NDC at least sixty (60) days prior to the beginning of the NDC Training Course. Copies must be on file prior to the beginning of NOAA Dive Training conducted at the Dive Unit level. If Divers are starting with Module 2 of the NDC training, the UDS or a qualified designee must conduct an in-water skills assessment to confirm the diver's skills are up to par.

Depth Limitations – All newly certified NOAA Divers are approved to dive to 60 fsw. Depth limits may progress to a maximum of 130 fsw with approval by the UDS. The standard progression is 60 fsw, 100 fsw, 130 fsw. The UDS or designee must accompany a NOAA Diver on dives deeper than the initial or interim maximum depth limit for the purpose of advancing to the next greater depth limit. These dives do not need to be to the exact depth of the next level, for example a 60 fsw diver wishing to progress to the 100 fsw level can make a dive or series of dives to 90-95 fsw.

For Diver Candidates participating in NOAA Dive Training at the Dive Unit level, the following are required:

Classroom Training – There are several diving training modules available on the NDP and CLC websites; all of them should be utilized. These may be reviewed individually by the Diver candidate, or a more formal classroom session may be organized by the UDS. Some modules contain short exams, but all of them contain material which is included in the NOAA Diver Examination.

In-Water Training – The UDS must conduct in-water skills training. NOAA Diver candidates will have completed dive certification prior to applying as a NOAA Diver, therefore you are not teaching them how to dive, you are teaching them the NOAA way to dive. Use the NOAA Diver Skills Checkout Checklist (NF 57-03-36) as a guide for the skills you should cover. The videos available on the NDP website are extremely useful instructional materials. Your goal should be to have the NOAA Diver candidate(s) execute the skills exactly as shown in the videos.

Specialized Training – If the NOAA Diver will participate in dives using the RASS or Line Tending, the relevant classroom and in-water training must be conducted. These modules are also available on the NDP website.

Written Examination – There is a test which must be completed at the end of the classroom instruction. The test contains 125 questions, 100 are multiple choice and cover physics, physiology, rescue, equipment, etc. and 25 are decompression calculation problems. There is no time limit on the test, but use your judgement on how long you should allow (2 hours is a reasonable amount of time). The NOAA Diver candidate must score at least 80% on each section of the Exam. There are two versions of the exam, if a student fails to score 80% on a section, you can let them retest with the other version of the exam.

NOAA Dive Trainer – All of the above training may be conducted by the UDS (or designee), however the Checkout Dive and Student Evaluation must be conducted by a NOAA Dive Trainer. These individuals have undergone specialized instructor training provided by NDC and are the only ones authorized to conduct the skills checkout dives. A list of <u>NOAA Dive Trainers</u> is available on the NDP website.

Checkout Dive Report – At the completion of the classroom component of NOAA Dive Training, the NOAA Dive Trainer will conduct a series of checkout dives with the diver candidate. The results of these dives are recorded on the <u>NOAA Diver Skills Checkout Checklist (NF 57-03-36)</u>. This form must be submitted to the LODO who will forward it to <u>Support.NDC@noaa.gov</u> as part of the package requesting a Letter of Authorization to Dive.

Student Evaluation – At the completion of training, the NOAA Dive Trainer will fill out the <u>NOAA Diver Training Course Student Evaluation (NF 57-03-37)</u>. This form must be submitted to the LODO who will forward it to <u>Support.NDC@noaa.gov</u> as part of the package requesting a Letter of Authorization to Dive.

Diving Experience – The prospective NOAA Diver's <u>Diving Activity Resume (NF 57-03-41)</u> should indicate a minimum of 25 logged dives. This number does not include dives conducted during previous training courses.

Depth Limitations – All newly certified NOAA Divers are approved to dive to 60 fsw. Depth limits may progress to a maximum of 130 fsw with approval by the UDS. The standard progression is 60 fsw, 100 fsw, 130 fsw. The UDS or designee may accompany a NOAA Diver on dives deeper than the initial or interim maximum depth limit for the purpose of advancing to the next greater depth limit. These dives do not need to be to the exact depth of the next level, for example a 60 fsw diver wishing to progress to the 100 fsw level may make a dive or series of dives to 90-95 fsw.

Reciprocity Divers

The use of Reciprocity Divers can significantly improve the effectiveness of NOAA Diving operations. Reciprocity Divers allow for increased staffing on high intensity missions and/or the employment of divers with specialized skills. Reciprocity Agreements signify the Diving Control Boards of the participating organizations find their programs to be equivalent (not identical) with respect to training, equipment, medical standards, and operational procedures. Reciprocity Agreements expire on 31 December of every year. They are normally renewed without review unless significant changes are made in the operations of one of the partners. A <u>list of current Reciprocity Agreements</u> can be found on the NDP website.

Incoming Reciprocity Divers

Letter of Reciprocity (LOR) – All incoming reciprocity divers must present the UDS with a Letter of Reciprocity from their home organization. This LOR should include:

- the diver's name
- certification level
- date of last dive
- number of dives in the previous year
- depth limitations
- expiration dates of safety training (CPR, AED, First Aid, and Oxygen Administration)
- expiration date of dive physical
- date of last gear servicing

Additional information may be included, but varies from organization to organization. After reviewing the visiting diver's LOR and ensuring that all dates are current and will remain current through the end of the planned mission, the UDS should inspect their dive gear to ensure it appears to be in good working condition and is generally configured according to NOAA standards (regulator second stage coming over right shoulder, knife reachable with both hands, gauge console controlled and not dangling, etc.). If a visiting diver is not proficient according to NOAA standards, the UDS may conduct, or designate another NOAA Diver to conduct proficiency dives to bring the visiting diver into compliance. If a visiting diver is not known to the UDS, it is strongly encouraged that a skills checkout dive be conducted to evaluate the visiting diver's competence. If a visiting diver will participate in NOAA dives which require NOAA-specific procedures (i.e., use of the RASS), the UDS or designee must conduct this training prior to any operational dives.

Liability Coverage – The UDS should also ensure the visiting diver and their employer's representative have completed the Verification of Liability Coverage form (NF 57-03-07).

Dive Plans and DEAPs – Reciprocity divers should be included on all <u>Dive Operations Plans (NF 57-03-20)</u> for missions in which they will participate. It is advisable to indicate they are reciprocity divers on the

plan by including a notation after their names (e.g., T. Nugent [recip] or T. Nugent [Univ. Detroit]). Emergency contact information for reciprocity divers should be included with the <u>Diving Emergency</u>

<u>Assistance Plan (NF 57-03-21)</u> for the mission. All reciprocity divers must comply with all requirements contained in the NOAA Diving Standards and Safety Manual when diving with NOAA. They may exceed the NOAA standards, but they must comply with the NOAA standards at a minimum.

Gear Inspection – While the Reciprocity Agreement indicates annual servicing of life-supporting diving equipment, the UDS (or designee) should thoroughly inspect all diving gear to be used by Reciprocity Divers before allowing them to participate in NOAA operations. Many dive accidents can be prevented by a thorough gear inspection before divers enter the water.

Obtaining Reciprocity Agreements with other Diving Organizations – If a UDS wishes to establish a new reciprocity agreement with another diving organization, the Review for Scientific Diver Reciprocity form (NF 57-03-05) should be completed and submitted, along with a copy of the proposed partner's Diving Operations Manual, to the UDS' LODO. The form is a checklist for requirements in the proposed partner's program, including initial dive certification, proficiency requirements, dive equipment maintenance, and required safety equipment. One common obstacle can be the medical standards followed by the proposed partner. In Dec 2011 AAUS relaxed their medical standards to no longer require a chest x-ray and spirometry for initial dive physicals. The NDP strongly believes these tests are essential. Make sure proposed AAUS partners follow the pre-Dec 2011 medical standards, if they do not, consult the NDMO before dive operations with this partner.

Outgoing Reciprocity Divers

LORs – All UDS's are authorized to sign LORs for NOAA Divers in their Diving Unit who plan to participate in operations with reciprocity partner organizations. These LORs should contain contact information on the NOAA Diver, the dates of planned reciprocity diving operations, the certification level of the NOAA Diver (i.e., open circuit, CCR, air, nitrox, trimix, deco, no-deco, 130 fsw), the date of last dive, the service date of dive gear, and the expiration dates of CPR, First Aid and Oxygen Administration training, the dive physical and the annual medical history report. Completed LORs should be provided to the diver or sent directly to the Dive Safety Officer of the reciprocity organization. Copies should also be submitted to NDC via the NDP.LOR@noaa.gov email address. Requests for LORs may also be submitted to NDC using the Letter of Reciprocity Request form (NF 57-03-06). Please submit LOR requests no less than one (1) week prior to the beginning of diving operations. Requests for NDC-produced LORs should be submitted to the Support.NDC@noaa.gov email address. All LORs are valid through 31 December of the year they are issued. If a safety certification or medical requirement expires, or the NOAA Diver's gear passes the service date during the period covered under the LOR, it is the NOAA Diver's responsibility to provide the reciprocity organization with updated certificates or documentation showing they are currently authorized to dive by the NOAA Diving Program. All NOAA Divers must comply with all requirements contained in the NOAA Diving Standards and Safety Manual when diving with reciprocity organizations. They may exceed the NOAA standards, but they must comply with the NOAA standards at a minimum.

Observer Divers

The Observer Diver status is used to allow non-NOAA divers to dive as part of a NOAA Diving operation under limited circumstances. Most often Observer Divers are VIPs who wish to observe a NOAA Diving operation while in the water. As the name implies, Observer Divers may only observe, they may not actively participate in any diving tasks, although limited photography of operations may occur with the UDS' approval. They must be accompanied at all times by a minimum of two (2) NOAA Divers. Observer Divers may participate in no more than six (6) NOAA dives per year. In certain situations, the six (6) dives per year maximum may be waived by the LODO. There are a few requirements which must be completed prior to any dives by an Observer Diver and a few requirements which must be completed afterwards. Observer Divers are authorized by the LODO; the pre-dive information should be forwarded to the LODO to receive this authorization.

Dive Certification – Prospective Observer Divers must show proof of diving certification from a nationally recognized diver certifying organization (e.g., NAUI, PADI, IANTD, SDI/TDI, U.S. Military). They must present evidence of at least ten (10) logged dives including one conducted in the preceding three (3) months.

Diver (NF 57-03-53) before participation in NOAA Diving Program operations. This form is to be completed by the prospective Observer Diver and signed by a medical practitioner (i.e., MD, DO, NP, or PA). This is not a dive physical, but rather a self-reported medical history that is attested to by a medical practitioner familiar with the prospective Observer Diver. The medical consultation must take place no more than a year prior to the NOAA dives the Observer Diver will participate in. The NF 57-03-53 should be sent to the NOAA Diving Medical Officer (NDMO) at least thirty (30) days prior to the NOAA dives. The prospective Observer Diver should submit the form to the NDMO via fax at (206) 529-2759 or via email to DMO@noaa.gov. Any medical records sent via email should use an encrypted process such as secure zip or Accellion. The NDMO will notify the UDS of medical clearance.

Liability Waiver – The prospective Observer Diver must complete and sign the <u>Observer Diver Waiver of Liability form (NF 57-03-08)</u> before any participation in NOAA Diving Program operations. A copy of this form should be retained at the Dive Unit for three (3) months after the completion of all Observer Diver participation in NOAA Diving operations.

Pre- and Post-Dive Reporting – The UDS should use the <u>Observer Diver Report form (NF 57-03-26)</u> to document the prospective Observer Diver meets the requirements for medical reporting, diving certification and proficiency, and understands the NOAA Diving Program standards which will apply during any diving activities. The form also contains an abbreviated dive log which is filled out by the UDS after the conclusion of the NOAA Diving operations. Once the pre- and post-dive sections are completed, the UDS should submit this form to NDC through the <u>Support.NDC@noaa.gov</u> email account.

Dive Gear – The Observer Diver may provide their own gear, however they must provide evidence it has been serviced within the last year and it must be inspected by the UDS prior to use on any NOAA dive.

The LODO may approve the use of NOAA-issued gear. Contact your LODO if you desire to use this option.

Limit on Dives – There is a limit of six (6) dives per year for any Observer Diver. This limit can be waived by the LODO if there is sufficient justification.

Manning Levels – Observer Divers must be accompanied by a minimum of two (2) NOAA Divers whose sole responsibility is to serve as Escorts for the Observer Diver. The minimum number of Escort Divers is two and the minimum ratio of Escort Divers to Observer Divers is 1:1. Additionally there must be standby divers and topside support for all Observer dives (with sufficient justification, these can also be waived by the LODO). All Escort Divers will carry a RASS. An example of the manning levels is as follows:

Observer Divers	Escort Divers	Standby Divers ¹	DPIC
1	2	1 or 2	1
2	2	1 or 2	1
3	3	1 or 2	1
4	4	1 or 2	1

¹ Standby divers consist of a pair of free swimming divers or a single line-tended diver.

Volunteer Divers

Volunteer Divers offer an excellent solution for insufficient manning levels at a NOAA Dive Unit or for needed expertise not available within the Unit. There are two federal laws which allow us bring people on as Volunteer Divers; the Fish and Wildlife Improvement Act of 1978 (16 USC 742f) and the National Marine Sanctuary Act (16 USC 1442). To qualify the Volunteer Diver must not be paid (by anyone) for participating in the NOAA Diving operation. The prohibition on receiving payment for diving **does not include** individuals with scholarships, fellowships, or other academic awards; these divers may dive for NOAA as Volunteer Divers.

Under the Volunteer Diver provisions, the volunteer effectively becomes a NOAA employee for the purposes of coverage for liability claims under the Federal Tort Claims Act (FTCA), 28 USC 2671, and for injury claims under the Federal Employees Compensation Act (FECA) 5 USC 8101. There are administrative requirements which must be met for someone to become a volunteer diver, in addition to the diving requirements outlined below. At the Diving Program level, there is a single administrative form to complete; the NOAA Volunteer Diver Service Agreement (NF 57-03-11). This form should be completed and signed by the prospective Volunteer Diver before it is reviewed and signed by a NOAA representative with hiring authority. Individual Line Offices, Program Offices or facilities may have additional requirements and you should check with your local human resources or administrative officer to ensure all requirements have been met.

The diving requirements for training a Volunteer Diver are essentially the same as outlined in the "Creating a New NOAA Diver" section above for FTEs or NOAA contractors. Volunteer Divers are eligible to attend NOAA Diver Training courses conducted by NDC.

The following describe the diving requirements for Volunteer Divers:

Dive Physical – There are three forms required to secure medical clearance to dive, the Report of Physical Examination (NF 57-03-50, 51, 52). The first document is a checklist describing the various tests (which are age dependent) and forms needed for a complete dive physical package. The second item is a self-report of medical history and the third is a medical professional's report of a physical examination. **Before any physical activities are conducted (i.e., swim test, dive skills evaluation, checkout dives), the NOAA Diving Medical Officer (NDMO) must provide a medical authorization to proceed. A Volunteer Diver candidate's medical insurance normally covers the cost of the laboratory tests and physical exam, however if it does not, these costs may be covered by the government. The medical history and physical exam forms contain private medical information which the UDS is not entitled to see. However the UDS is strongly encouraged to go over the checklist to ensure the package is complete before it is submitted to the NDMO. This is particularly important for Volunteer Divers who may not be as familiar with NDP forms as FTE or NOAA contractors. One of the most common delays in the diver certification process is an incomplete dive physical. The Volunteer Diver candidate is responsible for submitting the dive physical package to the NDMO. This should be done by fax to (206) 529-2759 or encrypted email.**

Swim Test — Once medically cleared, Volunteer Diver candidates should complete the Initial Swim Test with the results documented on the Swim Test Evaluation (NF 57-03-39). There are three components to this test; an underwater swim of 25 yds (22 m), a surface swim of 550 yds (500 m), and a 30 minute period of treading water. The 550 yd swim must be completed without stopping and must use the front crawl, side stroke, or breast stroke. Goggles or a mask may be used, but no snorkels or fins. The 550 yd snorkel must also be completed without stopping and candidates. The candidate may do the four components in any order, but they should be conducted in one session with reasonable rest periods between each event. The times for the 550 yd swim and snorkel and successful completion of the 25 yd underwater swim and 30 min water tread are noted on the NF 57-03-39 along with a general rating of the Volunteer Diver candidate's swimming ability and signed by the UDS. For individuals who will participate in a NDC Training Course, the completed form is part of the application packet submitted in advance of the class. For those who will participate in local training at the Dive Unit level, the completed form should be retained in the Volunteer Diver's file. Note: Personnel attending NDC Training Courses are required to successfully perform this test again during the first day of pool work.

Safety Certifications – There are several safety training certifications which are prerequisites for any NOAA Dive training; Adult CPR, AED, First Aid and Oxygen Administration. These certifications must be issued by a nationally recognized safety training organization (e.g., American Red Cross, American Heart Association, ASHI, DAN) and must valid at the time training begins and must remain valid throughout the entire training period. Copies must be submitted to NDC prior to the beginning of the NDC Training Course the diver candidate will participate in. Copies must be on file prior to the beginning of NOAA Dive Training conducted at the Dive Unit level. Dive Units are authorized to use government funds to pay for this safety training if needed.

Diving Certifications – Pre-existing dive certifications are strongly recommended for NOAA Diver candidates participating in NDC Training Courses and required for NOAA Dive Training conducted at the Dive Unit level. Copies should be submitted to NDC prior to the beginning of the NDC Training Course the diver candidate will participate in. If starting an NDC Training with Module 2, then copies should be submitted to NDC at least sixty (60) days prior to the scheduled start date. Divers participating in NOAA Dive Training at the Dive Unit level must have certifications from a nationally recognized diver training organization (e.g., NAUI, PADI, IANTD, SDI/TDI, U.S. Military) in Basic Openwater, Advanced Openwater and Rescue. Copies must be on file prior to the beginning of NOAA Dive Training conducted at the Dive Unit level. Dive Units are authorized to use government funds to pay for this safety training if needed. Note: many diving certification cards contain the diver's date of birth, this is considered personally identifiable information (PII) and should be blacked out before sending through email unless encrypted email is used.

Standardized Equipment Program (SEP) Forms – Divers who will participate in the SEP (required of all FTEs, strongly recommended for contractors, available to Volunteer Divers) will need to complete two forms before they will be supplied with SEP gear; the <u>Standardized Equipment Program Measurement Form (NF 57-03-65)</u> and the <u>Standardized Equipment Program User Agreement (NF 57-03-67)</u>. Copies should be submitted to the SEP Coordinator at least sixty (60) days prior to the beginning of the NDC

Training Course the diver candidate will participate in. A similar amount of lead time is desired for divers participating in NOAA Dive Training at the Dive Unit level. A UDS may request SEP gear before a diver begins NOAA Dive Training at the Dive Unit level, however the annual SEP fees will be assessed from the date the gear is supplied, not when the diver is given a Letter of Authorization to Dive.

Liability Release – All diver candidates must complete and sign the Liability Release and Assumption of Risk Form (NF 57-03-09) prior to participation in and NOAA Diving Program training. Additionally, all contractors must complete and a company representative must sign the Verification of Liability Coverage (NF 57-03-07) prior to participation in and NOAA Diving Program training. Copies must be submitted to NDC prior to the beginning of the NDC Training Course the diver candidate will participate in. Copies must be on file prior to the beginning of NOAA Dive Training conducted at the Dive Unit level.

Diving Resume - All diver candidates must complete and the candidate and UDS must sign the <u>Diving Activity Resume (NF 57-03-41)</u> prior to participation in and NOAA Diving Program training. If beginning NDC Training with Module 2, copies must be submitted to NDC at least sixty (60) days prior to the beginning of the NDC Training Course the diver candidate will participate in. Copies must be on file prior to the beginning of NOAA Dive Training conducted at the Dive Unit level.

Depth Limitations – All newly certified NOAA Divers are approved to dive to 60 fsw. Depth limits may progress to a maximum of 130 fsw with approval by the UDS. The standard progression is 60 fsw, 100 fsw, 130 fsw. The UDS or designee must accompany a NOAA Diver on dives deeper than the initial or interim maximum depth limit for the purpose of advancing to the next greater depth limit. These dives do not need to be to the exact depth of the next level, for example a 60 fsw diver wishing to progress to the 100 fsw level can make a dive or series of dives to 90-95 fsw.

For Volunteer Diver candidates participating in NOAA Dive Training at the Dive Unit level, the following are also required:

Classroom Training – There are several diving training modules available on the NDP and CLC websites, all of them should be utilized. These may be reviewed individually by the Volunteer Diver candidate, or a more formal classroom session may be organized by the UDS. Some modules contain short exams, but all of them contain material which is included in the NOAA Diver Examination.

In-Water Training – The UDS should conduct or designate a qualified person to conduct in-water skills training. Volunteer Diver candidates will have completed dive certification prior to applying as a NOAA Volunteer Diver. You are not teaching them how to dive, you are teaching them the NOAA way to dive. Use the <u>NOAA Diver Skills Checkout Checklist (NF 57-03-36)</u> as a guide for the skills you should cover. The <u>videos available on the NDP website</u> are extremely useful instructional materials. Your goal should be to have the Volunteer Diver candidate(s) execute the skills exactly the same way as is shown on the videos.

Specialized Training – If the Volunteer Diver will participate in dives using the RASS or Line Tending, the relevant classroom and in-water training should be conducted. These <u>modules</u> are available on the NDP website.

Written Examination – There is a test which must be completed at the end of the classroom instruction. The test contains 125 questions, 100 are multiple choice and cover physics, physiology, rescue, equipment, etc. and 25 are decompression calculation problems. There is no time limit on the test, but use your judgement on how long you should allow (2 hours is a reasonable amount of time). The Volunteer Diver candidate must score at least 80% on each section of the Exam. There are two versions of the exam, if a student fails to score 80% on a section, you can let them retest with the other version of the exam.

NOAA Dive Trainer – All of the above training may be conducted by the UDS (or designee), however the Checkout Dive and Student Evaluation must be conducted by a NOAA Dive Trainer. These individuals have undergone instructor training at NDC and are the only ones authorized to conduct the skills checkout dives. A <u>list of NOAA Dive Trainers</u> is available on the NDP website.

Checkout Dive Report – At the completion of the classroom component of NOAA Dive Training and clearance from the NDP DMO, the NOAA Dive Trainer will conduct a series of checkout dives with the diver candidate. The results of these dives are recorded on the <u>NOAA Diver Skills Checkout Checklist (NF 57-03-36)</u>. This form must be submitted to the LODO who will forward it to support.ndc@noaa.gov as part of the package requesting a Letter of Authorization to Dive.

Student Evaluation – At the completion of NOAA Dive Training, the NOAA Dive Training will fill out the NOAA Diver Training Course Student Evaluation (NF 57-03-37). This form must be submitted to the LODO who will forward it to Support.NDC@noaa.gov as part of the package requesting a Letter of Authorization to Dive from the NOAA Dive Program Manager (NDPM).

Diving Experience – The prospective Volunteer Diver's Diving Resume should indicate a minimum of 25 logged dives if the diver wishes to only participate in Scientific (OSHA-exempt) Dives and 100 logged dives if the diver wishes to participate in Scientific and Working (OSHA-subject) Dives. These numbers do not include dives conducted during previous training courses.

Depth Limitations – All newly certified NOAA Divers are approved to dive to 60 fsw. Depth limits may progress to a maximum of 130 fsw with approval by the UDS. The standard progression is 60 fsw, 100 fsw, 130 fsw. The UDS or designee must accompany a NOAA Diver on dives deeper than the initial or interim maximum depth limit for the purpose of advancing to the next greater depth limit. These dives do not need to be to the exact depth of the next level, for example a 60 fsw diver wishing to progress to the 100 fsw level can make a dive or series of dives to 90-95 fsw.

Safe Manning Levels

There is no set number of personnel required for safe manning levels, however there are minimum requirements. These vary with the type of dive and the platform. As UDS, it is entirely within your discretion to exceed the minimum requirements if you feel additional personnel are needed. The minimum requirements are outlined below, based upon the type of dive and platform.

Scientific (OSHA-exempt) Dives

<u>From Shore or Platform (Pier, Dock, etc.)</u> – This mode requires the fewest personnel, however the UDS should consider the implications of an emergency in which one diver is incapacitated before waiving the topside support requirement.

Divers	Standby Divers	Topside Support (DPIC)	TOTAL
2	0	0* or 1	2 or 3

^{*}With UDS approval, the topside support may be waived.

<u>From a Vessel</u> – Topside support is required, however the vessel operator may serve in this role as long as they are able to devote their full attention to the diving operation. NOAA Small Boat operators are required to have current CPR/AED/First Aid certifications; in order to provide topside dive support they must also have a current Oxygen Administration certification.

Divers	Standby Divers	Standby Divers Topside Support (DPIC)	
2	0	1	3

Working (OSHA-subject) Dives – Regardless of platform, all Working Dives require at least four personnel, however the use of five is more common.

Divers	Standby Divers	Topside Support (DPIC)	TOTAL	
2	1* or 2	1	4 or 5	

^{*}If using a single standby diver, they must be line-tended from the surface.

Tethered with Communications – This mode requires specialized training. It allows the deployment of a single diver as long as they are tethered to the surface with hard-wired voice communications, have a tender, and there is a standby diver who is also tethered and equipped with hard-wired communication gear. If at any point in the dive, voice communications are lost, the dive must be terminated.

Divers	Standby Divers	Topside Support (DPIC)	TOTAL
1	1	1	3

Technical Dives – There are several options for this diving mode. Standby divers, equipped to reach the maximum depth of the bottom divers, may be used. Alternatively, a single on-bottom safety diver may be employed. The on-bottom safety diver accompanies the bottom divers during the dive, however their only task must be the monitoring of the bottom divers. Support divers are equipped to meet the bottom divers (and on-bottom safety diver, if used) during the decompression phase of the dive. They can carry additional decompression gases to the bottom team and ferry equipment to the surface.

Divers	Safety Divers	Standby Divers	Support Divers	Topside Support*	TOTAL
2	1	0	2	1	6
2	0	2	2	1	7

^{*}Topside support for decompression dives must include a Technical Diving Supervisor

Choosing Divermasters and Lead Divers

The selection of Divemasters and Lead Divers requires careful consideration of the mission at hand and the available personnel. If possible, a Divemaster should be present at all dive sites, if a Divemaster is not available, the UDS should designate a Lead Diver. A detailed description of the duties, requirements, and responsibilities of these positions is provided in the NOAA Diving Standards and Safety Manual and will not be duplicated here.

Match your personnel to your mission. Mixing personnel to manage a dive site is certainly acceptable, the goal is to maximize safety. For example, your unit will conduct a dive using a hydraulic drill to create a mooring attachment in a large boulder at the site of a historical shipwreck. Your team includes a NOAA Corps officer who has attended NOAA Divemaster training, but was assigned to your unit two months ago. You also have a Volunteer Diver with extensive military and commercial diving experience who is skilled with hydraulic tools. The rest of your divers include an archaeologist who is nearing retirement and two survey technicians who are in their 30s but have been with the unit for ten years. How would you assign the roles for this operation? A good solution would be to assign the Corps officer as the Divemaster, since they have the required training and will be able to provide effective pre- and post-dive briefings and conduct good pre-dive gear checks. Since this is a historic site, a reconnaissance dive would be reasonable before anyone touches anything. The best buddy team for this short dive would be the Volunteer Diver, who you have assigned to operate the drill, and the archaeologist, who can point out sensitive spots on the wreck to prevent damage from the tools and hydraulic lines. Once back on the surface, the entire team would discuss the best way to safely and effectively install the anchoring point. The installation dive would be conducted by the Volunteer Diver and one of the survey techs. This would include someone with good local knowledge of subsurface conditions on the buddy team who could also assist with the physical demands of operating the equipment. Since this is a working dive, the archaeologist and second survey tech would serve as Standby Divers. There are obviously many combinations of buddy teams which could be used for this mission, but the take home message is to evaluate the task and your available assets and match the personnel to the tasks. It is always better to match an experienced diver with a new person than to assign two new people to dive together. You may be a very experienced diver in your environment but always seek local knowledge when you travel to a different location. Also remember to brief new people to your area about the local hazards that you might take for granted (e.g. low visibility, high currents, hazardous marine life).

Reporting Dive Incidents

In the event of a diving incident the first priority is rendering first aid and evacuating the victim to the next level of care. Once the medical situation is under control, there are two administrative processes which must be initiated; notification and investigation.

Notification - NDP

Again, dealing with the medical emergency is your first priority, but once that is under control your first call should be to the NOAA Diving Medical Officer (NDMO). The phone number will be on your DEAP. If you do not get an answer and have to leave a voicemail, do not wait more than five (5) minutes before calling the secondary NOAA medical contact. You can also call Divers Alert Network (DAN) for medical advice. The next person to contact is the immediate supervisor of the injured diver. After that, call your LODO and then the NOAA Diving Program Manager. If those calls do not go through, work your way down the list (e.g., branch chief, superintendent, lab director are secondary contacts for the injured diver's immediate supervisor). The Deputy Line Office Diving Officer in your line office or the LODO or DLODO from another line office are secondary contacts for the NDPM and LODO. Keep calling until you speak with a person on both the medical and administrative sides.

Notification - SECO

Once notifications are made to the NDP, NOAA's Safety and Environmental Compliance Office (SECO) must be notified. This is normally done by the injured diver's immediate supervisor, but you can provide helpful information to assist with the process. The SECO notification timeline is based upon the seriousness of the incident and SECO has five levels for this determination.

Accident Classification	SECO Notification Timeline
Class A	Within eight (8) hours
Class B	Within 24 hours
Class C	Within seven (7) days
Class D	Within seven (7) days
Near Miss	Within 14 days

Here are the definitions of the various classes of accidents along with some examples of each.

Class A Accident. An accident with an injury that results in a fatality or permanent total disability or an accident with property damage or environmental clean-up costs are \$1,000,000 or more or a NOAA aircraft or NOAA ship is destroyed, missing, or abandoned.

Class B Accident. An accident with an injury that results in permanent partial disability, an amputation, loss of an eye, or when one (1) or more personnel are hospitalized or an accident in which property damage is between \$200,000 and \$1,000,000. Examples of diving-related Class B injuries include Arterial Gas Embolism (AGE) and near drowning.

Class C Accident. An accident with an injury that results in one or more days away from work beyond the day or shift on which it occurred or a disability at any time that results in lost time from work (and does not meet the definition of Class A or B). An accident in which property damage is between \$20,000 and \$200,000. Examples of diving-related Class C injuries include Type I or Type II Decompression Sickness (DCS) requiring decompression chamber treatment or Pulmonary barotrauma.

Class D Accident. An injury and/or occupational illness that results in restricted work activity, loss of consciousness, medical treatment greater than first aid, occupational hearing loss or a period of medical observation as directed by a physician. An Accident in which the resulting in total cost of property damage is less than \$20,000. Examples of diving-related Class D injuries include envenomation (stingray, lionfish, etc.), sprained ankle after slipping on dive ladder or a fish bite requiring stitches.

Near Miss. Any event which did not result in injury to personnel or property damage but had significant potential for injury or property damage to occur. Malfunction or failure of significant or life supporting diving equipment. Any action that jeopardized a diver's safety or that of a dive buddy. Evidence of poor judgment by a NOAA diver, supervisor or reciprocity diver. Any near miss incident shall be treated and investigated as if it were a serious injury. Examples of diving-related near misses include air sharing or buddy breathing, uncontrolled ascent or lost contact between diver(s) and support vessel.

Securing the Gear

After notifications are complete and assuming the medical situation is still under control, the next steps are securing the relevant gear for completion of the initial reports. Securing the gear is simple, but is also invaluable for an investigation. **Do not disassemble the gear**, but secure the tank valve while carefully noting the number of turns it takes to close. Secure the gear in a location where it will not be damaged or tampered with during the medical evacuation.

Reporting – SECO

There is a SECO report which must be filed by the injured diver's supervisor and, if on a ship, an OMAO form (MOC 137) which will be filed by the command.

Investigation - NDP

Several reports may be required and your involvement will vary with each one. For the NDP, you will use the <u>Diving Incident Report (NF 57-03-01)</u> and its completion will be your responsibility. The NDP form is comprehensive and you will not be able to complete it immediately, but do not wait to get

started. The form has sections on the diver, equipment, dive details, dive profiles (for the entire day, not only the incident dive), emergency procedures used, immediate medical treatment, and follow-up treatment. Do not wait until the medical situation is completely resolved before starting the form; record what you can while the information is fresh in your mind. This form must be completed and submitted to your LODO within ten (10) days of the diving incident. You will also need to provide the LODO with a narrative description of the incident from you and all witnesses. These are typically a page or two in length and are extremely valuable as different people's recollections vary and understanding the incident is easier with a range of perspectives.

It cannot be stressed enough that the first response to a diving incident should be addressing any medical emergencies. After that, there are two similar paths which must be taken, notification and investigation. Notification should be done first. Do not wait for complete details to begin this process. You can always provide updates as more information becomes available.

The following page has a list of contact names and telephone numbers for people in the chain of command above the Diving Unit level. This list was current at the time this manual was prepared, but the UDS should be aware of changes which may occur through time.

Notification Chain Contact Information Above Dive Unit Level

NOTE: If you cannot reach the person you are instructed to contact within a reasonable amount of time, you must inform the next person up the chain. Leaving a voicemail is not a positive notification. **TALK TO A PERSON**

Line Office Diving Officers and Deputies

OMAO

LODO Bill Gordon, (office) 206-526-6450, (cell) 206-890-2568

DLODO LCDR Faith Knighton, (office) 206-526-6460, (cell) 808-373-6392

NOS

LODO Brian Degan, (office) 252-728-8704, (cell) 252-723-1346

DLODO Joe Hoyt, (office) 757-591-7336, (cell) 757-805-3554

NMFS

LODO Andy David, (office) 850-234-6541 x208, (cell) 850-819-4067

DLODO Ray Boland, (office) 808-725-5716, (cell) 808-225-4716

NOAA Diving Program and Center

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DCM Dave Kowalick, (office) 206-526-6476, (cell)

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DSO Roger Mays, (office) 301-525-7380, (cell) 252-723-1612

XO LCDR Faith Knighton, (office) 206-526-6460, (cell) 808-373-6392

NOAA Diving Control and Safety Board

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Director, OMAO and Staff

Dir RADM David Score, (office) 301-713-7600

CoS CDR Nancy Hann, (office) 301-713-7658, (cell) 301-357-0261

Line Office Assistant and Deputy Assistant Administrators and Staff

NOS DAA Nicole LeBoeuf, (office) 301-713-3074, (cell) 240-688-7289
CoS David Holst, (office) 301-713-3074 x148, (cell) 240-429-4106
NMFS DAA Paul Doremus, (office) 301-427-8000, (cell) 202-680-9701

XO CAPT Kurt Zegowitz, (office) 301-427-8060, (cell) 301-233-9660

Annual Report

The <u>NOAA Diving Program Annual Report (NF 57-03-02)</u> is one of only two documents UDSs are required to submit on a fixed time table. This report is submitted to your LODO and is due no later than **15 November** each year. The LODO is required to submit all Annual Reports from their respective Dive Units along with a Line Office Annual Report by 15 December.

This report is your opportunity to showcase your Unit's activities during the preceding year. Information from these reports goes directly into the NDP Annual Report which is disseminated to NOAA leadership in Silver Spring and around the country. We have a good story to tell, when the leadership hears it they are universally supportive. But we cannot put together a good product without good information at the start. Please spend some time on this report, tout your successes, show how your diving projects have influenced your research, local community, the nation and big NOAA, describe how diving helps you meet legislative mandates, point out things that are holding you back and please INCLUDE PHOTOS.

The Annual Report is a two-page form, there are nine sections requesting specific information plus a section for other comments. These sections are:

- 1. Primary Diving Mission of the Unit;
- 2. Specific Projects or Operations Completed During the Year;
- 3. Number of NOAA Divers in the Unit;
- 4. List of Publications;
- 5. Cost Savings;
- 6. Diving Projects or Operations Completed Outside of NOAA;
- 7. Reciprocity Organizations;
- 8. Operations Planned for November and December; and
- 9. Other Remarks or Comments.

Annual Inspections

The <u>Diving Unit Inspection Checklist (NF 57-03-03)</u> is the second of the two reports which have a fixed time table for submission. This report must be submitted to your LODO by **15 January** of every year.

The DUSA is a comprehensive review of five areas in your Unit; administration, training, diving gear, support equipment, and compressors and related equipment. This form is used annually by the UDS and triennially by the DSO or designated DUSA Inspectors from NDC. If you have addressed all the items on the checklist, you will have no surprises during your triennial DUSA inspection.

In addition to the DUSA checklist, there are several items you will need to address annually:

Servicing of Life Supporting Dive Gear – If using SEP gear, all regulator sets and BCD inflators must be returned once per year for maintenance. Drysuit inflation and exhaust valves must be serviced every two years. The timing of these should be arranged with the SEP Coordinator to minimize impact on your Unit's activities. The turnaround is usually 7-10 days. The annual servicing requirements also apply to non-SEP regulator sets and BCD inflators, however the maintenance is performed locally. Make sure the records of this servicing are kept in the Unit files and noted in the Unit Log.

Compressor Servicing – All compressors and related components have annual service requirements. Refer to the manufacturer's Operating Manual for the specific requirements of your equipment. Among the items to make sure you keep within service dates are the final stage compressor relief valve and the critical pressure gauges of the gas charging system. All of the gauges do not need to be in current certification, but at least one does (typically this is the charging gauge used to monitor pressure in SCUBA cylinders as they are filled). The other gauges should be compared to one that is certified.

Air tests – The compressor air tests are included in this section, however they are to be conducted every six (6) months. The NDP has a contract with Texas Research International (TRI) to test the products from NOAA dive compressors. Every six (6) months TRI will ship a test kit to the UDS. Please complete the test quickly (within a few days) and return the kit to TRI. There are a limited number of test kits in use for the NOAA contract and a delay on your end will cause problems for other Dive Units.

VIPs and Hydros – Every scuba cylinder in use in the NDP must be visually inspected annually and hydrostatically tested every five years by a nationally certified inspector. Any cylinders which are out of date should be tagged out and kept in a separate location away from useable cylinders. The <u>Visual Cylinder Inspection Summary (NF 57-03-82)</u> is an easy way to track the certification dates, but an alternate format may be used. Cylinder inspections should be noted in the Unit Log.

Annual Medical History Report – Every NOAA Diver (including Volunteer Divers) is required to submit the <u>Report of Medical History – Annual Update (NF 57-03-54)</u> to the NDMO during the anniversary month of their current dive physical. This is a one page update of any **CHANGES** in medical conditions or

medications from those listed in the current dive physical. The UDS should track the dates of when these reports are due and remind their divers to submit them on time. Divers with out of date Annual Medical History Reports are not authorized to dive.

SEP Gear Inventory – All NOAA Divers participating in the SEP must inventory their gear annually. One way to conduct this inventory is by using the <u>Standardized Equipment Program Transaction Form (NF 57-03-66)</u>. This form should accompany any gear received from or returned to the SEP Coordinator. You are looking for two things during the annual inventory – the serial numbers match between what SEP thinks you have and what you actually have and that all gear is in good operating condition. If gear is lost or missing, use the <u>Standardized Equipment Program Review of Property Form (NF 57-03-72)</u> to report this to the SEP Coordinator. In most cases the gear will be replaced at no charge, but for flagrant or repeated loss of gear due to gross negligence, the Dive Unit may be charged for the replacement. This is also your opportunity to clean out your dive locker. If there is gear that is no longer needed or serviceable, this is the time to contact the SEP Coordinator to see if you should send it back or dispose of it.

Unit or Personally Owned Gear – The use of Dive Unit or personally owned gear is allowed under several conditions. All FTEs are required to participate in the SEP. Contractors and Volunteer Divers may participate if approved by the UDS and the facility. FTEs may use non-SEP gear if a waiver is provided by the LODO. All non-SEP gear requires the same level of annual maintenance as SEP gear, this includes regulator sets (including gauges), BCD inflators, and drysuit inflation and exhaust valves. Service must be performed by a manufacturer's certified technician and records need to be maintained of this service. These records will need to be shown to the DUSA Inspector during the triennial inspection.

Dive Computers – The SEP does not currently issue dive computers, however they are in widespread use throughout the NDP. It is the UDS' responsibility to ensure dive computers are serviced annually. This service must include replacement of the battery, inspection of o-rings (and replacement as needed) and comparison against a master depth gauge. Deviation from the master gauge may be no more than +3.0/-0.0 fsw at a pressure equivalent to 300 fsw.

Monthly Inspections

There are several inspections the UDS should conduct monthly as well as several items which expire at various times during the year and should be monitored monthly to prevent avoidable diver suspensions.

Safety Certifications and Annual Medical Forms – CPR, AED, First Aid, and Oxygen Administration certificates must be current for a NOAA Diver to remain authorized. Additionally the Report of Medical History – Annual Update (NF 57-03-54), must be current. The expiration dates for these items is available on the DMS website. The dates can be found under each NOAA Diver's profile or by running the UDS Report feature.

Oxygen Kits – The emergency oxygen kits should be checked monthly and before every diving operation (if no diving will be conducting during a month, the monthly check may be omitted). The Emergency Oxygen Kit – Order, Issue, and Maintenance Form (NF 57-03-84) provides an excellent way to track the monthly checks and lists all the inspection items the UDS should include. If any items are found to be defective in an NDC provided oxygen kit, this form may also be used to request replacements from the NDC (requests should be sent via the SEP.ndc@noaa.gov email account). Every three months the UDS should test the Elder (demand) valves on oxygen kits. The procedure is outlined in the Emergency Oxygen Kit Demand Valve Test (NF 57-03-85) form. Any NDC provided Elder valves which fail the test should be returned to NDC for replacement (using the NF 57-03-84 described above).

First Aid Kits – All medications and most expendable supplies in First Aid Kits have expiration dates. While it may not be necessary to check these monthly, the UDS should not keep expired items in the kit. Replacement items for first aid kits can be supplied by NDC. The UDS should include a list of required First Aid items with regulator sets and BCD inflators when they are sent to the SEP Coordinator every year for servicing.

AED – The Automated External Defibrillator (AED) has four items which the UDS should monitor; pads, primary battery, secondary battery and accessories. The AED pads and the primary battery have expiration dates. Replacements for NDC-provided AEDs can be ordered from the SEP Coordinator via the SEP.NDC@noaa.gov email address. Make sure to include the make and model when ordering AED pads and batteries. Most AEDs also have a small (usually 9V) battery which powers the voice commands and display lights on the unit. These should be replaced annually or more frequently if needed. The AED unit should be tested monthly to ensure proper function. There should also be a small accessory bag with the AED unit containing a razor, gloves, and a pocket CPR mask or barrier. These should also be checked regularly to ensure they are in good condition.

Divemaster Kits – There are several items which are suggested for a Divemaster Kit used on NOAA operations; o-rings, fin and mask straps, regulator mouth pieces and cable ties, regulator first stage port plugs, scuba tools (allen wrenches, adjustable end wrench, etc.), snorkel keepers, and a HP spool for pressure gauges. The UDS should ensure these items are present and in good working condition. A

monthly check is a good way to ensure everything is present. The above list is the minimum; UDSs are encouraged to augment their kits with items specific to their needs. Additional items to consider include mask anti-fog solution, drysuit wax and talc, dive computer batteries, larger cable ties, silicone grease for o-rings, HP and LP hoses, and dive light batteries and bulbs.

Annual Refreshers and Drills

All NOAA Divers are required to conduct annual topside and in-water training. There are universal requirements, but UDSs are strongly encouraged to conduct training specific to their Dive Unit's needs as well. Additionally when new tasks are to be conducted at depths greater than 60 fsw, there should be training dives conducted in shallow water to allow divers to gain proficiency in the new operations.

The universal requirements for topside training include several online presentations available on the CLC website:

- 1. NDP Standards, Policies and Procedures
- 2. Oxygen Administration
- 3. Recognition and Treatment of Diving Injuries
- 4. Rescue Techniques
- 5. NOAA No Decompression Tables (2008)
- 6. Dive Accident Management (only required for Divernasters and Lead Divers)
- 7. Field Neurological Exam (only required for Diversasters and Lead Divers)

The in-water component includes:

Annual Swim Test – A 550 yd (500 m) swim using one of six (6) options found on the NDP <u>Annual</u> Watermanship Assessment (NF 57-03-40);

Rescue Drills – To include surfacing an unconscious diver, extraction to dive platform, and administration of emergency oxygen; and

Skills Checkout Dive – One or more dives in a pool or confined water during which a series of skills must be demonstrated to the UDS. Procedures for correctly executing the skills must emulate those demonstrated in the training videos found on the NDP website. The Rescue Drills noted above may be conducted as part of the Skills Checkout Dive. The results are reported on the <u>Annual Diver Training</u> Record (NF 57-03-34).

Dive Unit Logbook

Every NOAA Dive Unit must maintain a logbook of ongoing activities. While there is no required format for this logbook, it should contain information on equipment maintenance, training, operational dives and the dates of each activity. During the triennial DUSA Inspection, the inspector will want to review the logbook. The easier it is for them to comprehend, the easier it will be for you. An example of the format and level of detail in an acceptable logbook is below.

DATE	DIVER	ACTIVITY TYPE	ACTIVITY
4/16/2015	Gardner, Moe	Training	Annual refresher training in Decompression Theory & Physiology, Diving Physiology & Maladies, Field Neurological Exam, Rescue, Diving Accident Management & Reporting, and Dive Regulations & Policies
4/29/2015		Equipment	Replaced and leak tested compressor relief valves
4/30/2015	David, Moe	Scientific Dive	Observation of u/w facilities in PC Lab boat basin, 2 dives
5/5/2015		Equipment	Kit #3 O2 cylinders hydro tested (Swanick – NDSTC)
5/12/2015	David, Keesee, Matthews	Working Dive	Film anchor strike and recover Navy items from bottom after trawl testing, 2 dives
5/20/2015		Equipment	Replaced soon-to-expire meds in four First Aid Kits
6/8/2015	Davenport	Medical	Submitted periodic dive physical to NDMO
6/12/2015	Davenport	Medical	Dive physical clearance received from NDMO

The goal is to provide a chronological record of all dive-related activities. You do not need to go into great detail in the descriptions (details can be found in dive plans, DMS divelog entries, gear maintenance records). Using a spreadsheet program allows easy sorting by date, activity type, diver, etc.

Performance Plan Language

NOAA's Chief Administrative Officer has required everyone in a diving leadership role to have one critical element in their performance plan devoted to diving. The NDCSB developed language for Divemasters and UDSs, which were then approved by the CAO. The weight of this critical element may be no less than 5% and no more than 60% of your total performance plan elements.

DIVEMASTER PERFORMANCE PLAN ELEMENT

Major Activities/Results:

- Emergency procedures are disseminated to all appropriate personnel before diving activities occur.
- Divers' ability and fitness to perform dive duties is determined at the time of the scheduled dive based on observation and discussions with divers.
- Diving oversight duties, as delegated by the Unit Diving Supervisors, are completed, including maintenance of diver and equipment records.
- All divers and support personnel are thoroughly briefed on the activities to be conducted
 including the minimum and maximum parameters (e.g., depth, bottom time and surfacing
 cylinder pressure).

Measures/Standards:

- Ensure all divers under area of control are certified, properly trained, and physically fit for diving activities.
- Ensure all diving is conducted in accordance with applicable diving regulations, standards and procedures.
- Ensure all diving-related accidents/incidents are reported immediately, as prescribed in Section 5.02 of NAO 209-123.
- Submit dive and emergency action plans to the UDS for approval prior to each diving operation.
- Complete all pre- and post-dive requirements per NOAA regulations and standards.

UNIT DIVING SUPERVISOR PERFORMANCE PLAN CRITICAL ELEMENT

Major Activities/Results:

- Diving activities are monitored within unit to ensure compliance with all applicable diving regulations, standards and policies and action taken to correct any violations. Files are maintained on each diver in the unit; files should contain, at a minimum, Letters of Certification and training records
- All diving incidents are investigated within unit per Section 5.02 of NAO 209-123.
- Diving oversight duties are completed, including maintenance of diver and equipment records. Diving and accessory equipment is maintained in a safe and fully-functioning condition.
- All divers and support personnel are thoroughly briefed on the activities to be conducted including the minimum and maximum parameters (e.g., depth, bottom time and surfacing

- cylinder pressure). Emergency procedures are disseminated to all appropriate personnel before diving activities occur.
- Divers' ability and fitness to perform dive duties is determined at the time of the scheduled dive based on observation and discussions with divers.

Measures/Standards:

- Submit annual unit diving activity reports to the Line Office Diving Officer/NMAO Fleet Diving Officer by October 15th, annual diver locker inspection reports to the Line Office Diving Officer/NMAO Fleet Diving Officer by January 15th, and compressor air samples to Texas Research Institute within 30-days of receipt of the sample kit.
- All dive and emergency action plans are submitted and/or approved (as appropriate) and forwarded to ndp.diveplans@noaa.gov within 24-hours of approval.
- Ensure all divers under area of control are certified, properly trained, and physically fit for diving
 activities and all diving is conducted in accordance with applicable diving regulations, standards
 and procedures.
- Complete all pre- and post-dive requirements per NOAA regulations and standards.
- Ensure all diving-related accidents/incidents are reported immediately, as prescribed in Section 5.02 of NAO 209-123.

NOAA Diving Program Documentation

NOTE: The forms included in this document were current at the time of publication, however forms are revised periodically and these may not be current at the time you need to use them. Please go to the NDP website to download the most current version of each form you need.

Administration

- <u>Diving Incident Report Form, NF 57-03-01</u>
- Diving Unit Annual Report, NF 57-03-02
- Diving Unit Inspection Checklist, NF 57-03-03
- Diving Unit Change Form, NF 57-03-04
- Review for NOAA Diver Reciprocity, NF 57-03-05
- Letter of Reciprocity Request Form, NF 57-03-06
- Verification of Liability Coverage, NF 57-03-07
- Observer Diver Waiver of Liability, NF 57-03-08
- NDP Liability Release and Assumption of Risk, NF 57-03-09
- Agreement Approving Diving Operations from NOAA Owned or Contracted Vessel, NF 57-03-10
- NOAA Volunteer Diver Service Agreement, NF 57-03-11
- NOAA Corps Officer Diving Authorization Request, NF 56-30

Dive Operations and Logs

- Dive Operations Plan, NF 57-03-20
- Diving Emergency Assistance Plan (DEAP), NF 57-03-21
- Dive Operations Plan Safe Ship, NF 57-03-22
- Pre-Dive and Post-Dive Checklist, NF 57-03-23
- Monthly Dive Log, NF 57-03-24
- Supervisor Dive Log, NF 57-03-25
- Observer Diver Report, NF 57-03-26
- Decompression Diving Request, NF 57-03-28
- Closed Circuit Rebreather (CCR) Decompression Diving Request, NF 57-03-29

Certification and Training

- Annual Diver Training Record, NF 57-03-34
- Report of NOAA Skills Evaluation Checkout Dive, NF 57-03-35
- NOAA Diver Skills Checkout Checklist, NF 57-03-36
- NOAA Diver Training Course, Student Evaluation Record, NF 57-03-37
- Training Request and Authorization Form, NF 57-03-38
- Swim Test Evaluation, NF 57-03-39
- Annual Watermanship Assessment, NF 57-03-40
- Diving Activity Resume, NF 57-03-41

Medical and Diving Physical

- Report of Physical Examination, NF 57-03-50, NF 57-03-51, NF 57-03-52
- Report of Medical History Observer Diver, NF 57-03-53
- Report of Medical History Annual Update, NF 57-03-54

Standardized Equipment

- SEP Measurement Form, NF 57-03-65
- SEP Transaction Form, NF 57-03-66
- SEP User Agreement, NF 57-03-67
- <u>Dive Computer User Agreement, NF 57-03-68</u>
- SEP Off-Duty User Agreement, NF 57-03-69, NF 57-03-70
- SEP Review of Property, NF 57-03-72

Cylinder Inspection, O2 Kit Maintenance

- NOAA Visual Cylinder Inspection Report, NF 57-03-81
- NOAA Visual Cylinder Inspection Summary, NF 57-03-82
- Emergency Oxygen Kit Issue and Maintenance Checklist, NF 57-03-84
- Emergency Oxygen Kit Valve Test, NF 57-03-85

Diving Incident Report Form, NF 57-03-01

What: This form is to be used to report diving injuries to the Diving Program. It is not for non-diving injuries which may happen during a diving operation.

When: The UDS will submit this form to their Line Office Diving Officer (LODO) within ten (10) days of the incident.

Record keeping: A digital or printed copy should be retained in the unit files for three (3) years, however as this form contains medical information, all copies should be secured (e.g., locked filing cabinet, locked desk drawer).

Other considerations: This form is an internal document for the Diving Program detailing the incident dive, other dives on the same day, first aid and other medical treatment. It requires a separate narrative description from all witnesses and copies of any relevant medical records from treatment facilities.

The NDCSB has provided matrices and flowcharts to assist with determining the notification and investigation procedures and timelines for diving incidents. These are provided in the previous section on UDS responsibilities. In the event of an incident involving injuries requiring treatment beyond basic first aid or significant damage to property, the injured employee's supervisor should be notified immediately. They will be required to file a report with NOAA's Safety and Environmental Compliance Office (SECO), with the timetable dependent upon the severity of the injury or property damage. The UDS, Divemaster or Lead Diver should immediately notify their LODO, the NOAA Diving Medical Officer and the NOAA Diving Program Manager in the event of a diving injury requiring treatment beyond basic first aid. Do not end the notification process by leaving a voice mail, continue calling until you reach at least one of these individuals directly.

DIVING INCIDENT REPORT The Unit Diving Supervisor (UDS) shall use this form to report serious diving related injuries, including near-drowning, arterial gas NOTE: embolism (AGE), decompression sickness (DCS), pulmonary barotrauma, or any diving injury that requires hospitalization. An additional narrative and detailed analysis of the incident must be attached. Contact the NOAA Diving Center (NDC) to determine whether an event or minor injury requires an incident report. SECTION I. DIVING ACCIDENT VICTIM GENERAL INFORMATION **DIVER NAME** TIME of INCIDENT DATE of INCIDENT DIVER CERTIFICATION DIVE UNIT LOCATION of INCIDENT DIVER CURRENT MEDICATIONS DIVER CURRENT HEALTH PROBLEMS For NOAA observer divers and non-NOAA divers, complete the remaining blocks in Section I. For NOAA divers, proceed to Section II. HIGHEST DIVE CERTIFICATION LEVEL CERTIFYING DIVING ASSOCIATION AGE SEX (M/F) PREVIOUS DIVE INCIDENTS and DATES TOTAL # of TOTAL# TOTAL # of DIVES in YEARS DIVING of DIVES the PAST 6 MONTHS SECTION II. EQUIPMENT USED BY THE DIVING ACCIDENT VICTIM **BREATHING LOOP DIVER DRESS** DIVE CYLINDER TYPE and SIZE SEP ISSUED EQUIPMENT? CYLINDER PRESSURE IN Open Circuit None / Dive Skin ☐ YES ☐ NO Semi Closed / Wet Suit BREATHING GAS CYLINDER PRESSURE OUT DIVER FAMILIAR WITH EQUIPMENT? **Closed Circuit** Thickness _ Surface Supplied Dry Suit ☐ YES ☐ NO Snorkel SECTION III. DIVE INFORMATION - Incident Dive NAME of ON-SITE DIVING SUPERVISOR / LEAD DIVER AIR TEMP (°F) WATER TEMP (°F) U/W VISIBILITY (FT) CURRENT SPEED (KTS) NAME of DIVE BUDDY DIVE PURPOSE DIVE LOCATION DIVE BUDDY AFFILIATION DIVE PLATFORM SURFACE CONDITIONS DIVES CONDUCTED WITH TYPE of DIVE # of DIVES on # of DIVES on DAY of INCIDENT PREVIOUS DAY ☐ DUTY non-DUTY Dive Tables Dive Computer (Model If NO, explain: Was this dive typical of the diver's normal ☐ YES ☐ NO type of diving? Describe any problems encountered during the incident dive or previous dives: SECTION IV. DIVE PROFILES - Day of Incident (Additional dive profiles for the day of the diving incident can be attached to this form.) Bottom Cold or Incident Max Surface Deco Safety Fast Dive Stop Profile Start Time **End Time** Arduous? Ascent? Depth Time Interval Stop? Stop? Dive? (Depth / Time) (Y/N) (Feet) (Minutes) (HH:MM) (Y/N) (Y/N) (Y/N) (Y/N) 1. 2. 3. 4. 5.

6.

NOAA Form 57-03-01 (3-17) Page 2 of 2						U.S. DEPARTMENT OF COMMERC NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATIO			
	DIVING INCIDENT REPORT FORM								
SECTIO	N V. EN	IERGENCY PRO	CEDURES						
YES	NO					YES	NO		
		Was emergency	oxygen available on-site	?				Was there a dive accident management plan in place for dive site?	
		υ,	scenarios discussed wit s, such as low air, out of					Was the dive accident management plan reviewed by all divers and support personnel prior to diving operations?	i
SECTIO	N VI. S	MPTOMS, PRE	-DIVE HEALTH, and O	N-SITE ME	DICAL TREA	ATMENT			
DATE of	SYMPTO	M ONSET	DESCRIPTION of	SYMPTOMS	and LOCATION	ON on BO	DY		
TIME of	SYMPTO	M ONSET							
DESCRIP	TION of	PRE-DIVE HEALTH				DESCRIF	TION o	of PRE-DIVE ALCOHOL CONSUMPTION (previous 24 hours)	
DESCRIP	TION of	PRE-DIVE REST or	FATIGUE LEVELS			DESCRIF	TION o	of STRENUOUS EXERCISE (6 hours prior and 12 hours post-dive)	
SUSPECT AGE DCS	TED INJU	RIES or ILLNESSES	ON-STE OXYGEN Delivery Method		OMINISTRATION ON-SITE FIRST-AID TREATMENT PROVIDED		AID TREATMENT PROVIDED		
— Pulm	onary Ba	irotrauma	Time Started	Time Started		INITIAL EMERGENCY CONTACT (name of person or agency)			_
=	er Barotra								
— □ None	9		Time Stopped	d		TIME of	INITIAL	LEMERGENCY CONTACT TIME TRANSPORTATION STARTED	
□ □ Othe	er								
FIRST-AI	D TREAT	MENT PROVIDED	DURING TRANSPORT			EMERGI	ENCY TF	RANSPORT METHOD(S)	
				1 11 5					
			MATION – Hospital (A	1			perbai	ric Unit, and follow-up medical records.)	
HOSPITA	AL NAME	and ADDRESS		HOSPITAL	TREATMENT DATE of ARRIVAL			DATE of ARRIVAL	
								TIME of ARRIVAL	
HYPERB.	ARIC UNI	T NAME and ADD	RESS	CHAMBER	TYPE		CH	AMBER TREATMENT	
					Monoplace			eatment #1 Time Started Time Stopped	_
					Mulitplace			eatment #2 Time Started Time Stopped eatment #3 Time Started Time Stopped	-
TREATM	IENT TAB	LE / DESCRIPTION		TABLE EXT				TREATMENT TABLE / DESCRIPTION	=
		,						,	
DESCRIBE WHEN RELIEF FROM SYMPTOMS OCCURED DESCRIBE ANY RESIDUAL SYMPTOMS AFTER TREATMENT				DAYS of RESIDUAL SYMPTOMS FINAL DIAGNOSIS DCS I AGE Pulmonary Barotrau DCS II Other		DCS I AGE Pulmonary Barotrauma			
SECTIO	N VIII.	CERTIFICATION							
UDS NA	ME				UDS SIGNA	ATURE		DATE	
NOTE:			rt shall be completed by ne following items:	the UDS and	submitted t	to their Lir	ne Offic	re Diving Officer (LODO) within 10 days of the diving incident.	
	 Diving Incident Report Form (NOAA Form 57-03-01) Cover memorandum providing a narrative of the diving incident, including causal analysis and recommendations for prevention of future injuries. Medical records associated with any medical treatment of injuries resulting from this incident. The LODO shall submit the UDS report, along with their own causal analysis and recommendations for prevention of future injuries to the NOAA								
			er within 30 days of the			, 515 4114 16		endations for prevention of ratare injuries to the North	

Diving Unit Annual Report, NF 57-03-02

What: This form is to be used to report diving activities at each unit on an annual basis. It is one of only two reports which have a set deliverable date each year.

When: The UDS will submit this form to their Line Office Diving Officer (LODO) by 15 November each year.

Record keeping: A digital or printed copy should be retained at the unit for three (3) years.

Other considerations: This report forms the basis on the Line Office Report which becomes a part of the NOAA Diving Program Annual Report. UDSs are strongly urged to include photographs with their Annual Report which illustrate operational or training activities. A key statistic to highlight diving's importance to NOAA's mission is to include citations for any peer-reviewed journal articles, technical memoranda or other scientific publications which were made possible by diving activities. Additionally, we request each UDS indicate the number of dives made at their unit by reciprocity divers.

The NOAA Diving Program Annual Report will only be as good as the material supplied from each Diving Unit, help us showcase the excellent work being done in the field by submitting a detailed and informative Diving Unit Annual Report.

NOAA DIVING PROGRAM ANNUAL REPORT

Instructions:

This report encompasses activities for the CALENDAR YEAR (from Jan 1 to Dec 31 of each year). The Unit Diving Supervisor (UDS) must submit this report to the Line Office Dive Officer (LODO) no later than November 15th. The LODO must submit this report to the NOAA Diving Program no later than December 15th.

UNIT DIVING SUPERVISOR UNIT DIVING SUPERVISOR SIGNATURE DATE LINE OFFICE DIVING OFFICER LINE OFFICE DIVING OFFICER SIGNATURE DATE 1. PRIMARY DIVING MISSION of UNIT (Brief description of one or two sentences) 2. SPECIFIC PROJECTS or OPERATIONS COMPLETED DURING THE YEAR (Please write a short paragraph describing each project a project outcome. Attach original photos of projects if available with photo credit & caption.) A.) Name of Project	UNIT NAME	LINE OFFICE	PERIOD of REPORT	PERIOD of REPORT		
UNIT DIVING SUPERVISOR UNIT DIVING SUPERVISOR SIGNATURE DATE LINE OFFICE DIVING OFFICER LINE OFFICE DIVING OFFICER SIGNATURE DATE 1. PRIMARY DIVING MISSION of UNIT (Brief description of one or two sentences) 2. SPECIFIC PROJECTS or OPERATIONS COMPLETED DURING THE YEAR (Please write a short paragraph describing each project a project outcome. Attach original photos of projects if available with photo credit & caption.) A.) Name of Project			From January 1	l,through D	ecember	31,
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NOAA Form 57-03-02 (3-17) Page 2 of 2			U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION		
	DIVING PRO	GRAM ANNUAL			
UNIT NAME LINE OFFICE PERIOD of REPORT					
		From January 1,	through December 31,		
3. NUMBER of NOAA DIVERS in UNIT:					
a) FTEs b) Volunteers	•	ntractors ner (describe)			
4. LIST of PUBLICATIONS (Peer reviewed pub	<u> </u>		emoranda nuhlished this year usina data		
collected during NOAA diving operations.			emoranda pabilshed this year asing data		
F COST SAVINGS (IM/bat aparations provides	l significant cost so	vinas to the governmen	nt? Places describe and estimate the amount!		
5. COST SAVINGS (what operations provided	significant cost sa	vings to the governmen	nt? Please describe and estimate the amount)		
6. DIVING PROJECTS or OPERATIONS COMPL programs, emergency assistance, coopera			e projects completed in support of community cies or NGOs, public relations, etc.)		
programs, emergency assistance, ecopera		and government agent	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
7. RECIPROCITY ORGANIZATIONS					
Organizations you worked with this year (Inc	clude project name	for each and number o	f reciprocity divers)		
8.OPERATIONS PLANNED for NOVEMBER and	DECEMBER				
9. OTHER REMARKS or COMMENTS					
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Diving Unit Inspection Checklist, NF 57-03-03

What: This form is to be used to report the results of a self-inspection of five areas of the Diving Unit; Administration, Training, Diving Equipment & Storage, Support Equipment, and Breathing Gas Compressors & System Components. It is the second of two reports which have a set deliverable date each year. The last two sections deal with dive briefings and rescue drills and do not need to be completed during the annual self inspection; they are used during the triennial DUSA inspection.

When: The UDS will submit this form to their Line Office Diving Officer (LODO) by 15 January each year.

Record keeping: A digital or printed copy should be retained in the unit files for three (3) years.

Other considerations: This checklist requires 'yes/no' responses to a series of questions. References to the relevant sections in the NOAA Diving Standards and Safety Manual are provided for each question. If any questions require a 'no' answer, a space is provided for explanation. The UDS and LODO will devise and execute a plan to remediate any 'no' answers.

During the triennial on-site DUSA inspection, this Checklist will form the basis of the documentation, equipment and skills demonstrations which will be evaluated by the inspectors.

DIVING UNIT INFORMATION					
DIVING UNIT NAME	LINE or STAFF OFFICE	DATE of LAST INSPECTION	DATE of CL	IRRENT INSPECTION	
DIVING UNIT ADDRESS	CITY		STATE	ZIP CODE	
DUSI DIVING UNIT SELF INSPECTION - Conducted annually by UDS	or designee, not required if DUSA	conducted within previous or follow	ving six (6) m	onths.	
DUSA DIVING UNIT SAFETY ASSESSMENT - Conducted triennially b	by DSO or designee.				
INSPECTOR NAME	INSPECTOR SIGNATURE		DATE of SIG	GNATURE	
UNIT DIVING SUPERVISOR (UDS) NAME	UDS SIGNATURE		DATE of SIG	SNATURE	
LINE or STAFF OFFICE DIVING OFFICER (LODO/SODO) NAME	LODO/SODO SIGNATURE		DATE of SIG	GNATURE	
DIVING SAFETY OFFCIER (DSO) NAME	DSO SIGNATURE		DATE of SIG	SNATURE	
Ships Only					
SHIP DIVING OFFICER NAME SHIP DIVING OFFICER E-MAIL ADDRESS COMMANDING OFFICER NAME					

INSTRUCTIONS

This checklist is used for all NOAA Diving Unit Inspections. The UDS or designee will conduct the annual DUSI (Diving Unit Self Assessment) while the DSO or designee will conduct the triennial DUSA (Diving Unit Safety Assessment). There are five (5) sections of questions on different Diving Unit components and a comment area which must be completed for a DUSI, there are seven (7) sections and a comment area for a DUSA.

Components of Inspection:

- A. Administration
- B. Training
- C. Scuba Equipment and Storage
- D. Support Equipment

- E. Breathing Gas Compressors and System Components
- F. Dive Briefing (DUSA only)
- G. Dive Rescue (DUSA only)
- H. Inspection Comments and Recommendations

After a DUSI has been completed, the UDS must send a signed copy to their LODO/SODO by 15 January. The LODO/SODO will review and sign the checklist and forward a copy to the DSO. The UDS must retain a copy of the most recent DUSI checklist in the Unit files (it is advisable to keep copies of all DUSI checklists, but only the most recent is required).

There is one circumstance in which a Diving Unit is not required to conduct and submit an annual DUSI by the 15 January deadline. If a triennial DUSA inspection has been conducted after 15 July of one year or is scheduled for before 15 July of the following year, a DUSI is not needed during the intervening January. An inspection must occur no more than 18 months after the preceding one, the above dates ensure this schedule is met. Assuming DUSAs are scheduled for the same month every three years, the sequence of inspections would be DUSA - DUSI - DUSI - DUSI - DUSA . . .

The questions below should be answered 'Yes', 'No' or 'n/a' as appropriate. An explanation should be provided for any question which receives a 'No' answer. These explanations should be sufficiently detailed to relate the cause of the 'No' answer. For example, question A7 is, 'Is a Dive Computer User Agreement (NF 57-03-68) on file for each diver that uses a dive computer?', a sufficient explanation for a 'No' answer would be, 'Two divers have recently purchased dive computers and have not signed the forms yet.' The final section of the checklist provides an expanded area to provide comments on the inspection in general or any question(s) specifically. Corrective actions to resolve deficiencies will be determined by the UDS and LODO/SODO. The comment box in Sec H may be used to describe corrective actions proposed in March 2017, Page 44

SECT	TION A: ADMINISTRATION	
A1	Does the Diving Unit have a sufficient number of qualified divers to complete its required operations? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
A2	Does the Diving Unit have a sufficient number of qualified Divemasters and/or Lead Divers? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
А3	Are all Diving Unit divers authorized to dive? This question and all subsequent questions which refer to 'divers' do not pertain to personnel who are medically unauthorized or who are on a TDY assignment which prevents required training, proficiency, etc. Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
A4	Does the Diving Unit maintain a Unit Log which includes operational diving information, training accomplished, drills, equipment service/testing, etc.? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
A5	Has the UDS filed an up-to-date Diving Emergency Assistance Plan (DEAP, NF 57-03-21), with the NDC for the current year? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
A6	Is the latest edition of the NOAA Diving Standards and Safety Manual (NDSSM) at the Diving Unit in electronic or hard copy format? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
А7	Is a Dive Computer User Agreement (NF 57-03-68) on file for each diver who uses a dive computer? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
A8	Does the UDS have off-duty use of SEP gear forms (NF 57-03-69 and NF 57-03-70) filed for each diver who uses SEP gear for off-duty diving? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
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SECT	SECTION A: ADMINISTRATION (continued)				
A9	Have all DUSI or DUSA findings from the previous inspection been corrected or have a corrective action plan (CAP) in progress? Reference: DUSA Standards and Procedures 6.4 Comments:	☐ Yes ☐ No ☐ n/a			
SECT	ION B: TRAINING				
B1	Has each diver completed the annual refresher training provided on the NDC website in the past 12 months and have the completion dates been documented? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a			
B2	Is each diver currently certified in cardio-pulmonary resuscitation (CPR), automated external defibrillator (AED), oxygen administration, and First Aid? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a			
В3	Has each diver completed the annual watermanship swim test with completion time documented? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a			
B4	Has each diver conducted at least one in-water rescue and basic skills checkout dive with a UDS or designee in the past 12 months with results documented on form NF 57-03-35? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a			
B5	Has each diver who may be required to use the Reserve Air Supply System (RASS) been trained in its use? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a			
В6	Has each diver who may be required to use line-tending techniques for stand-by divers been trained in these procedures? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a			
В7	Has each SCUBA cylinder filling station operator been trained for the specific compressor and/or fill stations operating procedures and has the training been documented? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a			
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SECT	FION B: TRAINING (continued)	
B8	Have rebreather divers completed a minimum of one Open Circuit Bail Out from 100 fsw in the last 12 months? The OCBO should include gas switches and simulated decompression stops, if applicable. Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
В9	If decompression, mixed gas or rebreather dives have been conducted in the last 12 months, were the current checklists used? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
SECT	FION C: SCUBA EQUIPMENT and STORAGE	
C1	Is diving equipment stored in a secure, properly ventilated space free of pervasive noxious fumes and/or severely corrosive elements? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
C2	Is space available to allow for proper equipment maintenance and organization of diving equipment? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
C3	Are all divers wearing equipment in accordance with NDP policy, either in the standard configuration or as authorized under a LODO/SODO waiver? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
C4	Has each diver performed an inventory of SEP issued gear within the last 12 months? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
C5	Has each SCUBA cylinder (including RASS cylinders) been visually inspected in the last 12 months and labeled accordingly or tagged out and removed from service? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a

SECT	TION C: SCUBA EQUIPMENT and STORAGE (continued)	
C6	Has each SCUBA cylinder (including RASS cylinders) been hydrostatically tested within the last five (5) years and marked accordingly or tagged out and removed from service? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
C7	Is each SCUBA cylinder used with gas mixtures other than air (e.g., Nitrox) labeled accordingly? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
C8	Is all equipment used with gas mixtures containing oxygen concentrations of 40% or greater cleaned, approved for oxygen service and labeled accordingly? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
C9	Have all non-SEP SCUBA regulators, full face masks, BCD inflators, depth/time gauges and submersible pressure gauges been serviced in the last 12 months and documented? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
C10	Are all dry suits and ancillary equipment (hoods, ankle weights, inflator hoses, boots, etc.) functional or tagged out and removed from service? If equipment is tagged out, please indicate this in the question comment section below. Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
C11	Have all dry suit inflator and dump valves been tested for proper function in the last two (2) years and documented or tagged out and removed from service? If equipment is tagged out, please indicate this in the question comment section below. Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
C12	Has all tethered SCUBA equipment been serviced in the last 12 months and documented or tagged out and removed from service? If equipment is tagged out, please indicate this in the question comment section below. Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
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SECT	SECTION C: SCUBA EQUIPMENT and STORAGE (continued)				
C13	Has decompression, mixed gas, and/or rebreather equipment been serviced according to the manufact recommendations and documented or tagged out and removed from service? If equipment is tagged or please indicate this in the question comment section below. Reference: NDSSM TBD Comments:				
C14	Have DUI weight harness pockets been detached from the harness in the last 12 months? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a			
C15	Is all non-life supporting diving equipment (wetsuits, masks, fins, snorkels, gloves, hoods, knives) function Reference: NDSSM TBD Comments:	onal? Yes No			
SECT	TION D: SUPPORT EQUIPMENT				
D1	Is a Divemaster Kit, with the NDP-required components at a minimum, available at the Diving Unit? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a			
D2	Is a NDP/NDMO-approved First Aid Kit available at the Diving Unit? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a			
D3	Are all medications in the First Aid Kit within listed expiration dates? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a			
D4	Is a portable oxygen kit with a bag-type manual resuscitator, in good working order and capable of ventilating an unconscious patient, available for use at each dive site? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a			
D5	Have all oxygen kit positive pressure demand valves been tested according to the manufacturer's recommendations and documented or tagged out and removed from service? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a			
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SECT	SECTION D: SUPPORT EQUIPMENT (continued)				
D6	Has each oxygen kit cylinders been hydrostatically tested within the last five (5) years and marked accordingly or tagged out and removed from service? (Steel cylinders with a current '*' stamp indicate ten (10) year hydrostatic test requirement). Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a			
D7	Are all oxygen kits stored in a clean, protected, properly labeled and readily available space? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a			
D8	Is a sufficient quantity of oxygen available to provide oxygen to two (2) injured divers during transport from the dive site to the next higher level of care or 12 hours, whichever is less? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a			
D9	Is a backboard in good condition, available for diving emergencies? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a			
D10	Is a system for recalling divers available at each dive site? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a			
D11	Is an International Code of Signals flag 'Alpha' and/or sport diver flag that meets local size requirements available at each dive site? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a			
D12	Does the Diving Unit have a functioning AED readily available and at dive sites when feasible? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a			
D13	If an oxygen analyzer is in use, have the sensors been replaced annually or according to the manufacturer's recommendations and the replacement date documented? Reference: NDSSM TBD Comments:	Yes No			
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SECT	ION E: BREATHING GAS COMPRESSORS and SYSTEM COMPONENTS	
E1	Is a SCUBA cylinder fill system located at the Diving Unit? If 'No', your inspection is complete. Please proceed to Section H and enter any additional comments. Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E2	Are the operating procedures for the compressor and/or fill system(s) posted? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E3	Is the operational and maintenance history of the compressor and breathing gas system documented in a Compressor Logbook? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E4	Is the compressor manufacturer's maintenance and repair manual available for reference and are these guidelines followed at the Diving Unit? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E5	Is the compressor room clean, free of flammable materials and sufficiently ventilated to prevent overheating? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E6	Is hearing protection available to be used by the compressor and filling station operator? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E7	Is each line and valve in the compressor and cylinder filling system labeled or depicted in a system schematic according to its function? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E8	Has a breathing gas sample from the system been analyzed in the past six (6) months with results on file at the Diving Unit? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
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SECT	FION E: BREATHING GAS COMPRESSORS and SYSTEM COMPONENTS (continued)	
E9	Have compressor oil and filter(s) been changed in the last 12 months or in accordance with the manufacturer's specifications, using the manufacturer's recommended oil and filters and documented in the Compressor Logbook? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E10	Are compressor filter canisters inspected for corrosion and pitting before inserting new filter cartridges? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E11	Is the compressor intake clearly labeled and located in an area free of direct contaminants to the air supply? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E12	Has the compressor final stage relief valve been calibrated by a certifying authority within the last three (3) years? Reference: NAVSEA 00C3-PI-005, NAVSEA 00C4-PI-004 Comments:	☐ Yes ☐ No ☐ n/a
E13	Are the compressor cooling fans and belts in good condition? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E14	Are the compressor inter-stage and crankcase cooling fins clean and in good condition? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E15	For RIX Industries compressors only: Are compressor rod end bearings and thrust bearings greased and in good condition? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E16	Is a gauge which can directly measure the compressor discharge, storage bank, and charging whip pressures calibrated by a certifying agency and within the calibration service date? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
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SECT	TION E: BREATHING GAS COMPRESSORS and SYSTEM COMPONENTS (continued)	
E17	Are all valve fittings and gauges rated for the working pressure of the system in which they are installed? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E18	Are all high pressure (HP) and low pressure (LP) gas lines secured with attachment points no more than 36 inches apart? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E19	Has the SCUBA charging whip been visually inspected for damage or deterioration in the last 12 months? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E20	Is the charging whip properly secured to prevent injury to personnel during cylinder filling operations? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E21	Are charging whips, compressor intake hoses, and ports capped when not in use? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E22	Have all HP DOT cylinders assembled in a bank or cascade system been hydrostatically tested within the last five (5) years, including those with a star (*) stamped in the codes? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E23	Are fire hazard and compressed gas warning signs posted in the vicinity of stored oxygen and compressed gases? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a

gas s listed	following section pertains to low pressure (LP) volume tanks (part of a LP breathing gas system) and high pressu storage flasks (part of a HP breathing gas system) other than SCUBA cylinders or standard 'K' cylinders covered i d above. If your system does not contain LP volume tanks or non-standard HP storage flasks, your inspection is eed to Section H and enter any additional comments.	n the requirements
E24	Are LP volume tanks / HP compressed gas storage flasks equipped with an inlet side check valve (exception for shared inlet/outlets)? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E25	Is each LP volume tank / HP compressed gas storage flask equipped with a pressure gauge unless assembled in a bank that requires one pressure gauge on the final flask? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E26	Are all LP volume tanks / HP compressed gas storage flasks equipped with a condensate drain valve located at the lowest point? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E27	Are all LP volume tanks / HP compressed gas storage flasks equipped with slow opening valves when used with design pressures exceeding 500 psi? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E28	Are all LP volume tanks / HP compressed gas storage flasks used in systems containing greater than 40% oxygen cleaned for oxygen service and do they have slow opening valves? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E29	Are all LP volume tanks / HP compressed gas storage flasks labeled appropriately? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E30	Have all LP volume tanks / HP compressed gas storage flasks been either hydrostatically or non-destructively tested within accepted standards, with test date(s) marked on the tanks / flasks and recorded in the maintenance log, or if not, are they tagged out and removed from service? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
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SECT	TION E: BREATHING GAS COMPRESSORS and SYSTEM COMPONENTS (continued)	
E31	Are LP volume tanks / HP compressed gas storage flasks visually examined externally and internally for damage or corrosion annually by a certified inspector? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E32	Do all LP volume tanks / HP compressed gas storage flasks have a serial number or other unique identifier which allows referencing of test results in the maintenance log? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E33	Are all LP volume tanks / HP compressed gas storage flasks equipped with an overpressure relief device and an isolating valve on the pressure side of the relief valve? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E34	If rack mounted into banks of LP volume tanks / HP compressed gas storage flasks, have valves and regulators been protected from damage caused by impact from falling objects? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
E35	Are all LP volume tanks / HP compressed gas storage flasks stored in a well-ventilated area, protected from overheating, and secured from falling? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
	NOAA Diving Program, UDS Manual 15 March 20	017, Page 55

SECT	TION F: DIVE BRIEFING (only used during triennial DUSA)	
F1	Have all appropriate pre-dive forms been completed? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
F2	Have the appropriate water entry/exit methods and locations been discussed and are they adequate? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
F3	Do topside support personnel use a dive log to document (at a minimum) the divers' names, date, time in, time out, pressure in, pressure out, depth and breathing gas? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
F4	Is a set of dive tables, appropriate for the gas mixture being used, at the dive location? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
F5	If divers are required to carry a reserve breathing gas supply, does it have sufficient pressure and volume to reach the surface at a safe ascent rate from the maximum planned depth? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
F6	Has each diver verified they have sufficient gas in their cylinder to complete the assigned task(s) and arrive at the exit point of the dive with at least 500 psi? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
F7	Is appropriate topside support available at the dive location? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
F8	If needed, are standby divers available? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
	NOAA Diving Program. UDS Manual 15 March 20	017. Page 56

SECT	TON F: DIVE BRIEFING (only used during triennial DUSA - continued)	
F9	Do divers understand the situations under which they should terminate their dive (i.e., low cylinder pressure, lost buddy, failure of any life support equipment, conditions become unsafe, use of any alternate air source, other than during a drill)? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
F10	Are pre- and post-dive briefings performed, including assessments of divers' physical condition? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
F11	Did each diver inspect and test their equipment prior to the dive in the presence of their dive buddy or tender? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
F12	Did the Divemaster or Lead Diver conduct a final safety check of each diver's gear before allowing divers into the water? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
SECT	TION G: DIVE RESCUE (only used during triennial DUSA)	
G1	Did the Divemaster or Lead Diver brief divers on the Diving Emergency Action Plan (DEAP) and is the location of the DEAP known to all personnel responsible for the diving and any emergency response? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
G2	Are the first aid kit, oxygen kit, AED, diver recall, and backboard on site and readily accessible? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
G3	Does the diver or rescuer signal for help upon surfacing? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
	NOAA Diving Program, UDS Manual 15 March 20	17, Page 57

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NOAA Diving Program, UDS Manual

SECT	TION G: DIVE RESCUE (only used during triennial DUSA - continued)	
G4	Does the Divemaster or Lead Diver adequately address the problem of an unconscious diver on the bottom? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
G5	If needed, were standby divers launched? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
G6	Was the victim located and brought to the surface in a safe but expeditious manner? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
G7	Once on the surface, did the rescuer report the victim's condition, establish buoyancy, and if needed, provide rescue breaths? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
G8	Was EMS called? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
G9	Was an appropriate extraction performed? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
G10	Once on the platform, was appropriate care given to the victim? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a
G11	Were all divers accounted for before departing the dive site? Reference: NDSSM TBD Comments:	☐ Yes ☐ No ☐ n/a

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Diving Unit Change Form, NF 57-03-04

What: This document is used when a NOAA Diver relocates to a new Diving Unit. It allows the NDC to update its files and ensure the diver appears on the correct roster in the Diver Management System and SEP fees are billed to the appropriate unit.

When: Divers should submit this form to the UDS prior to their departure. The UDS will submit this form to Support.NDC@noaa.gov. When a NOAA Diver from a different unit joins their unit the UDS should verify that this form has been submitted and all information is correct in the DMS.

Record keeping: A digital or printed copy should be retained at the unit until the next billing cycle of SEP fees to document the diver's departure in case of billing errors.

Other considerations: NOAA Corps officers should complete this form as well as the <u>NOAA Corps</u> <u>Officer Diving Authorization Request, NF 56-30</u> when they relocate to a new Diving Unit.

DIVING UNIT CHANGE FORM

DI/	/FR	INFO	RMA	ATION

NAME (Last, First MI)	DATE OF TRANSFER	Check one of the following.		
		NOAA Employee	Contractor	NOAA Corps

PRIOR DIVING UNIT INFORMATION

WORK ADDRESS	CITY	STATE	ZIP
E-MAIL ADDRESS	PHONE NUMBER	FAX NUMBER	
UNIT DIVING SUPERVISOR NAME	DIVING UNIT	LINE or STAFF	OFFICE

NEW DIVING UNIT INFORMATION

WORK ADDRESS	CITY	STATE	ZIP
E-MAIL ADDRESS	PHONE NUMBER	FAX NUMBER	
UNIT DIVING SUPERVISOR NAME	DIVING UNIT	LINE or STAFF	OFFICE

SUBMISSION INSTRUCTIONS

Submit this form to the NOAA Diving Center (NDC) via facsimile or e-mail. The NDC fax number is (206) 526-6506. The NDC support desk e-mail address is Support.NDC@noaa.gov.

NOTES

In addition, NOAA Corps officers must submit a revised NOAA Form 56-30, Officer Diving Authorization Request, upon reporting to a new assignment.

If needed, contact the NO AA Diving Center Executive Officer for help identifying the new Unit Diving Supervisor.

Review for NOAA Diver Reciprocity, NF 57-03-05

What: This document is used to establish reciprocity with another agency. It is a checklist of items NOAA requires for another diving entity to include in their program in order to be considered 'equivalent to NOAA standards'.

When: The UDS will submit this form to the LODO. The LODO will review and forward it to the NDCSB with an endorsement.

Record keeping: A digital or printed copy should be retained at the unit until 31 December of the year in which it was submitted.

Other considerations: The NDCSB may wish to review a copy of the Reciprocity Applicant's Diving Operations Manual. A thorough review takes time, please submit reciprocity requests at least 30 days before any planned dives with the diving partner.

NOAA Form 57-03-05 (8-14)	NATIO	U.S. DEPARTMENT OF NAL OCEANIC AND ATMOSPHERIC ADM	
REV	IEW FOR SCIENTIFIC DIVER RI	ECIPROCITY	
NAME of DIVER	AGENCY	DATE	
NOA	A DIVING PROGRAM REQUIREMENTS	YI	ES NO
DIVING CERTIFICATION: Initia	al		
Certification issued b	y a recognized SCUBA diving associati	on	
Additional certification	on or training is required above entry	level dive certification	
Pass a written exami	nation		
Pass an open-water s	skills check-out dive		
Complete a minimum of at least 25 open-water dives			
Pass initial and regul	arly schedule dive physicals		
DIVING CERTIFICATION: Mair	ntenance		
Complete a minimun	n of at least 12 dives in the past year		
Complete periodic tr	aining in CPR, first-aid, and oxygen ad	ministration	
DIVING EQUIPMENT:			
Regulators tested an	nually		
Depth gauges tested	annually		
Submersible pressure	e gauges tested annually		
SCUBA cylinders visu	ally inspected annually		
Minimum diving equ	ipment includes:		
Primary and	alternate air source		
Flotation dev	vice		
Timing device	e		
Depth gauge			
 Submersible 	pressure gauge		

Air compressors are tested for air quality every six months

Minimum diving support equipment includes:

• First-aid kit

• Oxygen resuscitator

Letter of Reciprocity Request Form, NF 57-03-06

What: This document is submitted to the UDS by a NOAA diver requesting a Letter of Reciprocity (LOR) to dive with an agency with which NOAA has established reciprocity. This form has the reciprocity agency's information, as well as the diver who is requesting the letter.

When: After confirming the diver is currently authorized (proficiency, medical, CPR, AED, First Aid, O₂ Administration and gear serviced within last year), the UDS will fill out the LOR template and submit the LOR to the Diving Safety Officer of the reciprocity agency and cc: NDP.LOR@noaa.gov. Contact XO.NDC@noaa.gov if you need the LOR template.

Record keeping: A digital or printed copy should be retained at the unit until 31 December of the year in which it was submitted.

Other considerations: Agencies and Organizations with whom NOAA has <u>reciprocity</u> with are listed on the NDP website. AAUS members should be confirmed online from the AAUS website.

This LOR is valid through 31 December of the year it is issued, however there is a chance the diver may have a lapse in NOAA authorization before the expiration of the LOR. A common cause would be the expiration of a safety training certification. In this case, it is the diver's responsibility to provide updated certifications to the DSO of the Reciprocity organization. The diver or the reciprocity agency may ask for an updated letter once lapsed certifications are addressed.

LETTER OF RECIPROCITY REQUEST

Requests for a Letter of Reciprocity (LOR) should be submitted to your Unit Diving Supervisor or NDC Support Desk at least a week prior to the start of planned dive operations. Assuming certifications and medical requirements do not expire and the diver's gear does not pass the service date then the diver will be authorized to dive through December 31st of the year the LOR is issued. If a certification or medical requirement expires, or the diver's gear passes the service date during the period of reciprocity, it is the diver's responsibility to provide the reciprocity organization with updated certificates or documentation showing they are authorized to dive under the NOAA Diving Program or request an updated LOR.

RECIPROCITY ORGANIZATION DIVE SAFETY OFFICER (DSO) INF	FORMATION		
NAME (LAST, FIRST, MI)	RECIPROCITY ORGANIZATION		
MAILING ADDRESS	CITY	STATE	ZIP
E-MAIL ADDRESS	PHONE NUMBER		
APPLICANT INFORMATION			
NAME (LAST, FIRST, MI)	Check one of the following. NOAA EMPLOYEE NOAA CORPS CONTRACTOR		
WORK ADDRESS	CITY	STATE	ZIP
E-MAIL ADDRESS	PHONE NUMBER		
UNIT DIVING SUPERVISOR	DIVE OPERATIONS START AND END DATES TO		
CURRENT DIVING AUTHORIZATION			
CERTIFICATION	LAST LOGGED DIVE DATE		
Open Circuit Scuba No-Deco Air			
CPR EXPIRATION DATE	PHYSICAL EXAM EXPIRATION DATE		
FIRST-AID EXPIRATION DATE	ANNUAL MEDICAL HISTORY EXPIRATION DATE		
OXYGEN ADMINISTRATION EXPIRATION DATE	EQUIPMENT SERVICE DUE DATE		
SUBMISSION INSTRUCTIONS			

Submit this form to your Unit Diving Supervisor or NDC Support Desk via E-Mail. NDC Support Desk E-Mail address is Support.NDC@noaa.gov

Verification of Liability Coverage, NF 57-03-07

What: This document is used to confirm coverage for medical care and liability on a Non-NOAA diver who wishes to dive on a NOAA mission. The form should be completed by the visiting diver and must be signed by an authorized representative of the visiting diver's employer.

When: The UDS will ensure this form is completed before allowing a visiting diver to participate on a NOAA dive.

Record keeping: A digital or printed copy should be retained at the unit until the end of the mission the diver is participating on or 31 December of the year it was signed.

Other considerations: This is not a Letter of Reciprocity, this only confirms that a visiting diver is covered for medical and personal liability. An LOR must also be received from the visiting diver's organization before they may participate on a NOAA dive.

VERIFICATION OF LIABILITY COVERAGE

APPLICANT INFORMATION

CONTRACT DIVER NAME (Last, First MI)	NAME of EMPLOYER / CONTRACTOR		
WORK ADDRESS	CITY	STATE	ZIP
E-MAIL ADDRESS	PHONE NUMBER	FAX NUMBER	
NOAA LINE or STAFF OFFICE and UNIT ASSIGNED	DIVE OPERATIONS START DATE	DIVE OPERATI	ONS END DATE

The information below verifies that the above named individual is covered for costs associated with any dive accident or other medical emergency that may occur during the course of his/her work at or with NOAA.

Instructions: Indicate below the type and extent of coverage, including, but not limited to; emergency transportation (e.g. MEDEVAC), hyperbaric treatments, other medical treatments, hospitalization, and compensation for lost wages associated with extended absence due to work-related medical emergencies (e.g. worker's compensation). Attach supporting information and documentation as necessary.

LIABILITY COVERAGE

TYPE and EXTENT of COVERAGE		POLICY START DATE	POLICY END DATE			
INSURANCE COMPANY	PHONE NUMBER	POLICY NUMBER				
TYPE and EXTENT of COVERAGE		POLICY START DATE	POLICY END DATE			
INSURANCE COMPANY	PHONE NUMBER	POLICY NUMBER				
TYPE and EXTENT of COVERAGE		POLICY START DATE	POLICY END DATE			
INSURANCE COMPANY	PHONE NUMBER	POLICY NUMBER				
COMMENTS						

LIABILITY COVERAGE VERIFCATION

NAME and TITLE of COMPANY REPRESENTATIVE

DATE

COMPANY REPRESENTATIVE SIGNATURE

Observer Diver Waiver of Liability, NF 57-03-08

What: This document is used when an Observer Diver is requesting authorization to participate on a NOAA dive. It affirms the Observer Diver is a certified diver, is aware of the dangers associated with diving, and agrees to follow the Standards of the NOAA Diving Program.

When: The UDS will submit this form to NDC through the Support.NDC@noaa.gov email account after receiving medical clearance from the NOAA Diving Medical Officer.

Record keeping: A digital or printed copy should be retained at the unit until three (3) months after the end of the mission the diver is participating on.

Other considerations: This is not the only document required for Observer Divers. The Report of Medical History - Observer Diver (NF 57-03-53) must be completed by the diver and approved by the NOAA Diving Medical Officer before participating in any NOAA dive. Before dives are conducted in the field, the prospective Observer Diver must complete a skills checkout dive with the UDS or designee. Results of this dive are recorded in the Checkout Dive Skills Evaluation form (NF 57-03-35). After diving is concluded, the UDS will complete the Observer Diver Report (NF 57-03-26) and submit it to NDC through the Support.NDC@noaa.gov email account. The Observer Diver Waiver of Liability is good for three (3) months after it is signed.

OBSERVER DIVER WAIVER OF LIABILITY

In consideration of the National Oceanic and Atmospheric Administration (NOAA) per	mitting me to visit
observe and dive as a guest/observer diver, I,, behalf of all my personal representatives, heirs and next of kin do execute and certify	for myself and on the following:
I am a certified diver, trained in safe diving practices, and I am fully informed of, awar	e of, and

thoroughly understand the inherent hazards and risks associated with scuba diving.

I understand that these risks can lead to severe injury and even loss of life, as well as property damage and liability to others. I understand hazards include, but are not limited to, decompression sickness, arterial gas embolism, or other barotrauma injuries which may require treatment in a recompression chamber; drowning, equipment failure, and other perils of the sea.

By signing this Release, I acknowledge that scuba diving is a physically strenuous activity and that I will be exerting myself during this activity. I understand and agree that scuba diving involves certain risks whether engaged in depths above or below the recommended 130 foot limitation for sport/recreational diving activities. I further acknowledge and agree that injuries received may be compounded or increased by negligent rescue operations or procedures.

By signing this release, I certify that I am making full and honest representations of my skills and dive certifications, and that I am fully aware of and expressly assume all risks involved in making the visiting guest/observer dives covered by this waiver.

By signing this release, I acknowledge that past or present medical conditions may disqualify me for scuba diving. I declare that I am in good mental and physical fitness for scuba diving, that I am not and will not be under the influence of alcohol on this visiting dive, that I am not and will not be under the influence of any drugs that are contraindicated for scuba diving. If I am taking medication, I declare that I have seen a physician who has approved me to scuba dive while under the influence of medications or drugs I am taking.

By signing this Release, I agree that if I use my own dive equipment I will not hold NOAA responsible for any failure with respect to my dive equipment, including my failure to inspect my equipment or air supply prior to diving, or for my use of faulty equipment.

By signing this Release, I agree to adhere to NOAA policies and procedures delineated for this visiting dive and all other instructions related to use of NOAA dive equipment and gear and the NOAA dive platform.

By signing this release, I hereby assume full responsibility for any and assume all risk of bodily injury, wrongful death, property loss or damage, and liability to myself or any third party, now and forever, arising out of my diving with NOAA as a guest, whether foreseen or unforeseen, and whether caused by the negligence of myself, third parties, or NOAA.

By signing this Release, I hereby release, waive, discharge and give up any and all claims against NOAA and the U.S. Government, and all its employees, agents and representatives, for any and all liability, claims and demands by me or made by my personal representative, heirs, agents, assigns and next of kin, for any and all loss or damage, and any claim or demands therefore on account of injury, death or loss arising out of or related to my participating as a guest on any NOAA dives conducted during the period this waiver is valid.

OBSERVER DIVER WAIVER OF LIABILITY

By signing this Release, I further agree separately to indemnify, save, and hold harmless NOAA and the U.S. Government from any loss, liability, damage or cost that they may incur, now and forever, arising out of or related to my participation as a guest diver, whether caused by the negligence of NOAA or the U.S. Government, or by me.

By signing this Release, I affirm that I am not relying on any oral or written representation or statements made by NOAA or the U.S. Government, other than what is set forth in this document. I further agree this document shall be interpreted in accordance with the laws of the United States.

By signing this Release, I agree that if any provision of this Release is found to be unenforceable or invalid, that provision shall be severed from this release. The remainder of the Release will then be construed as though the unenforceable provision had never been contained in this release. All other provisions shall survive.

ACCORDINGLY,	WITH	FULL	UNDERS	TANDII	NG, BEIN	G OF	RIGHT	MIND	AND	DULY	TRAIN	ED, I,
				BY THI	S INSTRU	MENT,	EXEMP	T AND	RELEA	SE NO	AA AN	D THE
U.S. GOVERNM	ENT, ITS	OFFIC	ERS, AGI	ENTS, F	REPRESEN	TATIVES	AND A	SSIGNS	FROM	1 ALL L	ABILIT	Y AND
RESPONSIBILITY	FOR I	PERSO	NAL INJU	JRY, P	ROPERTY	DAMA	GE OR	WRON	IGFUL	DEATH	i, HOV	VEVER
CAUSED, INCLU	DING BU	JT NO	LIMITE	TO E	QUIPMEN	T FAILU	RE AND	NEGLI	GENCE,	, WHET	HER PA	ASSIVE
OR ACTIVE. I A	CKNOW	/LEDGE	THATI	HAVE F	READ AND	FULLY	UNDER	STAND	THE P	OTENTI	AL DAI	NGERS
INCIDENTAL TO	O MY	PARTIC	CIPATION	AS A	A GUEST	DIVER	, AM	FULLY	AWAF	RE OF	THE	LEGAL
CONSEQUENCES	S OF SIG	NING 7	THIS INST	RUMEI	NT, AND I	HEREB\	/ ASSUN	ΛΕ ALL I	RISKS F	OR THI	S DIVE	AS AN
INDIVIDUAL RES	SPONSIB	LE FOR	MY OW	N DIVE	SAFETY.							

I HAVE SIGNED THIS DOCUMENT FREELY AND VOLUNTARILY WITHOUT ANY INDUCEMENT, ASSURANCE OR GUARANTEE BEING MADE TO ME. I INTEND MY SIGNATURE TO BE A COMPLETE AND UNCONDITIONAL RELEASE OF ALL LIABILITY TO THE GREATEST EXTENT ALLOWED BY LAW.

I UNDERSTAND THAT THIS WAIVER SHALL BE VALID FOR THREE (3) MONTHS FROM THE DATE OF MY SIGNATURE.

I HAVE READ THIS DOCUMENT, I UNDERSTAND IT, AND I AGREE TO BE BOUND BY IT.

OBSERVER DIVER NAME (PRINTED)		OBSERVER DIVER SIGNATURE	DATE	
CONTACT PHONE NUMBER	ALTERN	ATE CONTACT PHONE NUMBER	EMERGENCY CON	TACT PHONE NUMBER

NDP Liability Release and Assumption of Risk, NF 57-03-09

What: This document waives any liability claims against NOAA by a person participating in NOAA Dive Training.

When: The UDS will submit this form to NDC through the support.ndc@noaa.gov email account as part of the Diver Training Request package.

Record keeping: A digital or printed copy should be retained at the unit until three (3) months after the completion of training.

LIABILITY RELEASE and ASSUMPTION of RISK

1	, am about to participate	in a training			
	nal Oceanic and Atmospheric Administra				
		tion (NOAA)			
Diving Program described as follo		<i>'</i>			
entirely upon my own initiative, ri	isk, and responsibility.				
	ks and hazards associated with diving, in over-expansion injuries, decompression s	_			
injured as a result of participa	ses my body to increased pressure and t tion in such activities despite following a ablished decompression tables and proce	appropriate			
• I also understand that diving is a physically strenuous activity and that I will be exerting myself during this activity and that if I am injured as a direct or indirect result of exposure to hyperbaric pressures that I assume the risk of said injuries and that I will not hold the released parties responsible for the same.					
under the influence of any dru	ntal and physical condition for diving, ar ugs that are contradictory to diving. If I a ve consulted with a physician and have a uch medication/drugs.	am taking			
assume all risks in connection that may befall me, including a unforeseen. I further save and employees, from any demand	wed to participate in this activity, I hereby with any dive(s) for any harm, injury, dan all risks connected therewith, whether for d hold harmless said activity and NOAA, , claim or lawsuit for personal injury, promily, heirs, executors, representatives, a icipation in this activity.	image or death oreseen or and any of its operty damage, o			
	awful age and legally competent to sign have read this liability release and that				
NEE DIVER NAME (PRINTED)	TRAINEE DIVER SIGNATURE	DATE			
,					

<u>Agreement Approving Diving Operations from NOAA Owned or Contracted</u> Vessel, NF 57-03-10

What: This document is used when a non-NOAA organization wishes to conduct dive operations from a vessel owned or contracted by NOAA. The visiting organization may dive under their standards provided they are comparable to NOAA. The NDCSB will review the dive plan and DEAP for safety and make a recommendation to the NOAA representative approving the agreement. The agreement has checkboxes indicating the applicability of OSHA diving standards, and whether the visiting organization has current reciprocity with the NDP. The vessel captain is also required to review and approve the operation.

When: The UDS will submit this form to the NDCSB through their LODO for approval. Due to the number of people who must review and approve this agreement, please SUBMIT THIS AGREEMENT AT LEAST SIX (6) WEEKS IN ADVANCE OF DIVING OPERATIONS.

Record keeping: A digital or printed copy should be retained at the unit until three (3) months after the completion of mission.

Other considerations: This agreement must also be signed by an authorized representative of the non-NOAA diving organization, this most often is a University DSO or someone in a similar position. While this form specifically references vessels, it may be used to allow use of other NOAA facilities (e.g., pools, docks, boat basins) by non-NOAA organizations. In these cases, the facility director should be substituted for the vessel captain in the approval process.

Agreement Approving Diving Operations From NOAA Owned or Contracted Vessels Under Non-NOAA Diving Standards

This agreement codifies the roles and responsibilities for non-NOAA divers, topside diving support personnel, and NOAA vessel operators involved in a non-NOAA diving operation conducted from a NOAA owned or contracted vessel. The non-NOAA diving party shall hereinafter be referred to as the "diving partner." The diving partner has a diving program with comparable standards to NOAA as described in the NOAA Scientific and Working Diving Standards and Safety Manuals. Diving program comparability is assured by a current reciprocity agreement or a review by the NOAA Diving Control and Safety Board (NDCSB). The NOAA owned or contracted vessel operator will review and approve the components of the operational plan related to vessel manning, provisioning, operations of the vessel and other non-diving activities. The diving partner will be responsible for submitting a Dive Plan and Diving Emergency Assistance Plan (DEAP) to the NDCSB at least six (6) weeks in advance of the diving operation. NOAA agrees to provide the vessel to transport the dive team to the dive location, assess environmental and traffic conditions at the dive location, and provide the partner diving supervisor permission to commence diving operations. The diving partner agrees to provide all divers, topside diving support personnel, diving and emergency equipment and be responsible for all aspects of the diving operation. In the event of a diving incident, the diving partner will be responsible for execution of the DEAP while NOAA will assist to the extent possible. The diving partner shall comply with all applicable laws and regulations governing the dive mission. It is the responsibility of the dive partner to assure the safety of all divers during dive operations. The dive partner shall indemnify, defend and hold harmless the government, its officers, directors, agents, employees and other related parties harmless from and against any and all liabilities, damages, losses, expenses, claims, demands, suits, fines, or judgments including reasonable attorneys' fees, costs and expenses, incidental thereto, which may be suffered by, accrued against or charged to the Government arising out of or relating to any act or error or omission, negligence, or misconduct of the diving partner, its officers, directors, agents, employees or subcontractors. This agreement is intended to cover non-NOAA dives which are under no authority or control of NOAA. These non-NOAA divers are to be conducted consistent with the policies of the non-NOAA divers, and consistent with all applicable laws and regulations. The role of NOAA personnel shall be limited to providing transportation to the non-NOAA divers on NOAA owned vessels.

Diving Partner		
Name of Vessel	Nan	ne of Owner (If contracted vessel)
Operation Dates	Location	of operation
Description of operation		
Applicability of OSHA Commercial Diving Sta	ndards	Reviews by NDCSB / Vessel Operator
This operation is subject to 29 CFR 1910, Subpart T		Dive Plan reviewed (NDCSB) DEAP reviewed (NDCSB)
This operation is exempt from 29 CFR 1910, Subpart If exempt, indicate exemption status	Т	NDCSB Member
Qualifies for Scientific Exemption		Signature
Qualifies for Instructional Exemption		Jignature
Organization not subject to OSHA		Operational Plan reviewed (Vessel Operator)
Reciprocity Status of Diving Partner		Vessel Operator
Current Reciprocity Agreement exists		
Diving partner program reviewed for comparability		Signature
Duly Authorized Representative for NOAA Vessel		
Name Sig	nature —	Date
Duly Authorized Representative for Diving Partner	-	
	ınature	Date
NOAA Diving Program, UDS Manual		15 March 2017, Page 74 Rev 21 Mar 2016

NOAA Volunteer Diver Service Agreement, NF 57-03-11

What: This from is completed by prospective Volunteer Divers to document their status as unpaid federal employees for the purpose of providing Workman's Compensation coverage and to extend liability protection. The UDS should complete the section on 'Description of service to be performed.' This does not need to be extremely specific, it is sufficient to generally describe the diving operations the Volunteer Diver will participate in. For example, 'The Volunteer Diver will participate in NOAA Diving operations at Gray's Reef National Marine Sanctuary to collect scientific data on fishes, invertebrates and habitat.'

When: The UDS will submit this form to the NDPM through the <u>Support.NDC@noaa.gov</u> account as part of the Volunteer Diver request package.

Record keeping: A digital or printed copy should be retained at the unit for the duration of the Volunteer Diver's tenure.

Other considerations: This agreement must be reviewed and signed by a NOAA representative who has hiring authority.

NOAA Form 57-03-11 (08-15) Page 1 of 2					U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMORSPHERIC ADMINISTRATION	
	NOAA VOLUNT	EER DIVER	R SERVIC	E AGREEN	/IENT	
1. NAME OF AGENCY				2. AGREEMEN	IT NUMBER	
3. NAME OF VOLUNTEER (Las	t, First)			4. U.S. CITIZEN Yes No, list vis	o OR PERMANENT RESIDENT	
5. STREET ADDRESS			6. CITY, STA	ATE, ZIP CODE		
7. EMAIL ADDRESS		8. PHONE Home Mobil			9. AGE 18-39 40-49 50-59 60 and Older	
10. ETHNICITY & RACE (Option select two or more races. This inf					ave a disability. Multiracial respondents may in the NOAA Diving Program.	
10a. ETHNICITY Hispanic or Latino	10b. RACE American Indian or		Asian	10c. Are yo	u a Veteran? 🗌 Yes 📗 No	
Not Hispanic or Latino	Hispanic or Latino Black or African American Native Hawaiian or Other Pacific Islander 10d. Do you have a disabili					
EMERGENCY CONTACT INFOR	RMATION			·		
11. NAME (Last, First)			ome obile		13. EMAIL ADDRESS	
14. STREET ADDRESS		15. CITY, STAT	E, ZIP CODE		16. RELATIONSHIP TO VOLUNTEER	
GOVERNMENT OFFICIAL COM	IPLETES THIS SECTION					
17. AGENCY CONTACT NAME	E (Last, First)		ffice Iobile		19. EMAIL ADDRESS	
20. REIMBURSEMENTS APPR	OVED? Yes No	Type and Ra	ite of Reimbu	ırsement:		
	s such as time and schedule	commitment, use o	of government	t vehicle, use of pe	on of the volunteer activity to be performed. ersonal diving equipment and/or vehicle,	
22. Check all that apply: NOAA Diving Program	☐ Additional description	n of service attach			certifications verified erified (if required) Rev 27 Aug 2015	

Act of 1974), which authorizes acceptance of the information requested on this form. The data will be used to maintain official records of volunteers of the USDA and USDI for the purposes of tort claims and injury compensation. Furnishing this data is voluntary, however if this form is incomplete,

NOAA Form 57-03-11

enrollment in the priving frogramot proved

U.S. DEPARTMENT OF COMMERCE NATIONAL

15 March 2017, Page 77

NOAA Corps Officer Diving Authorization Request, NF 56-30

What: This document is used by NOAA Corps officers who wish to remain on or receive initial authorization for diving status. The request requires the officer, the officer's Commanding Officer or immediate supervisor and the Diving Program Manager to complete respective sections. Electronic signatures are acceptable.

When: The officer will initiate completion of this form whenever they report to a new diving unit and at the beginning of every fiscal year (01 October). The form, with sections 1 and 2 completed, should be submitted to NDC via the support.ndc@noaa.gov email account.

Record keeping: A digital or printed copy should be provided to the UDS and retained at the unit until the officer is assigned to a new billet or one (1) year, whichever is less.

OFFICER DIVING AUTHORIZATION REQUEST

Instructions for completing the form

Section 1 shall be completed by the NOAA Corps officer.

Section 2 shall be completed by the NOAA Corps officer's immediate supervisor of Commanding Officer.

Section 3 shall be completed by the NOAA Diving Program (NDP) Manager.

A new diving authorization is required for NOAA Corps officers;

- 1) Upon completion of NOAA Diving Program certification requirements,
- 2) Upon reporting to a new assignment, or
- 3) Upon the beginning of a new fiscal year.

Diving authorizations are valid for a maximum of one fiscal year. Diving authorizations are invalid on the date of detachment or September 30th.

SECTION 1					
LAST NAME	FIRST NAME		MIDDLE NAME		RANK
EMPLOYEE ID NUMBER	LINE or STAFF OFFICE	DIVISIO	N / UNIT / SHIP		
DIVING AUTHORIZATION START DATE		DIVING	AUTHORIZATION ENI	D DATE	
OFFICER SIGNATURE				DATE	
SECTION 2					
I certify the NOAA Corps officer named	above will engage in offic	ial diving duties	in support of NOAA'	s mission during the	indicated period.
NAME of SUPERVISOR		TITLE			
SUPERVISOR SIGNATURE				DATE	
Instructions for submitting the form					
This form must be submitted to NDC ele form must be forwarded to NDC directly Diving Program. Signatures are required	from the e-mail account of	f the officer's im			
E-mail the form to: Support.NDC@noaa.go		ne form to: Diving Center	or	Fax the form to:	

SECTION 3

The NOAA Corps officer named above is hereby authorized to engage in official diving duties involving the breathing of compressed gas in hyperbaric environments in accordance with NAO 209-123 during the indicated period and receive monthly dive pay when dives are reported.

7600 Sand Point Way NE, Bldg 8

Seattle, WA 98115-0070

NAME of NOAA DIVING PROGRAM MANAGER

Subject Line:

Officer Diving Authorization

NOAA DIVING PROGRAM MANAGER SIGNATURE

DATE

(206) 526-6506

NOAA Diving Program, UDS Manual

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Dive Operations Plan, NF 57-03-20

What: This is one of the most frequently used documents in the Diving Program, it is used to describe all the components of a diving operation.

Record keeping: A digital or printed copy should be retained at the unit for 24 hours after completion of the diving operation.

Other considerations: Two signatures are required on this form. While the form describes the first signature as the 'submitting' diver and the other as the 'approving' diver, it is acceptable for a UDS (or designee) to sign in either line and another experienced diver to sign in the other line. The important thing is for two different divers to review and approve the plan. The 'number of consecutive dive days' does not include the first day of diving – if the operation will start and finish on the same day, it should be listed as zero (0) consecutive dive days. If it will take three days in a row to complete the operation, it should be listed as two (2) consecutive dive days. Please include mitigation measures taken to minimize any unique hazards for the planned dive. It is not necessary to include hazards present on every dive such as drowning, DCS, AGE or hypothermia. The filename for the dive plan should be the UDS' last name and the date, for ships it should be the ship name and the date (e.g., Mau15Jan2017 or Shimada12Jun2017).

DATE

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DIVE OPERATIONS PLAN

	/F				

APPROVED BY (UNIT DIVING SUPERVISOR/DESIGNEE)

NOAA Diving Program, UDS Manual

DIVE OF ENATIONS										
DATE(S) of DIVE OPERATIONS					DIVE OPS START TIN	ИE		DIVE OPS STOP TIME		
LOCATION of DIVE OPERATIONS					DISTANCE FROM SHO			EVAC TIME to CHAMBER		
PLATFORM or FACILITY					DEPTH RA	NGE		NUMBER of DIVERS		
PLANNED NUMBER of DIVE EVOLUTIONS PER DAY			MAXIMUM NUME to be LOGGED PER				NUMBER of CON DIVE DAYS	SECUTIVE		
SAFE SHIP CHECKLIST REQUIRED			DIVE MODE	OPEN CIRCU	IT SCUBA REATHER		DIVE PURPOSE		IFIC DIVE	
FLOAT PLAN REQUIRED	_		DECOMPRESSION CALCULATION	DIVE CO	OMPUTER ON TABLES		DIVE DUTY	ON-D OFF-DUTY DIVE w/9	UTY DIVE SEP GEAR	
DIVERS (Attach additional she	ets if more th	nan 1	2 divers participa	ate in the dive)						
DIVEMASTER / LEAD DIVER			DIVER				DIVER			
DIVER			DIVER				DIVER			
DIVER			DIVER				DIVER			
DIVER			DIVER				DIVER			
DESCRIPTION							<u> </u>			
PRINCIPAL DIVER WORN EQUIPMEN	IT and BREATH	IING N	MEDIA							
TOOLS and SPECIALIZED EQUIPMEN	T to be USED						Tet	nered comms dive?	YES □ N	юП
									- <u>-</u>	
POTENTIAL HAZARDS and MITIGATION	ONS (Certain I	hazaro	ds are present on a	all dives (AGE, DCS	, drowning,	etc.). 1	Fhe hazards listed b	elow are unique to	this operat	ion.)
PRIMARY MEANS of EVACUATION fo	or EMERGENCIE	ES								
AUTHORIZATION										
SUBMITTED BY (DIVEMASTER/LEAD	DIVER)			SIGNATURE					DATE	

SIGNATURE

Diving Emergency Assistance Plan (DEAP), NF 57-03-21

What: This document is used to list emergency contacts, hospitals, recompression chambers, and other EMS entities for a specific diving location. It also includes general instructions for treatment of diving casualties.

When: The UDS will ensure a version of this form is completed for every location or activity in which any of the information is different from the version of the DEAP currently on file at NDC. A copy should also be submitted with the first <u>Dive Operations Plan (NF 57-03-20)</u> of each calendar year. Completed DEAPs are submitted to NDC via the <u>NDP.Diveplans@noaa.gov</u> email account. A copy must be present at the dive site during the dive.

Record keeping: During a dive at this location, a printed copy of the DEAP should be at the dive site. A digital or printed copy should be retained at the unit until the form is updated with more current information or 31 December, whichever is less.

Other considerations: It is strongly advised to add unit-specific information to this form. For example, a list of emergency contact information for all divers is important information to have available in the event of an accident. Other information which would be useful includes work, cell and home numbers of the Laboratory Director, Superintendent, Branch/Division/Program Manager. An actual dive accident will be a stressful event, you can avoid leaving out important information by including a prepared script to use when contacting EMS or the Coast Guard. In the event of an accident, make sure you continue calling people on the DEAP until you speak to a person (leaving a voice mail is not sufficient). Do not delay administering first aid in order to notify supervisors, but notification should be made as quickly as possible.

NOAA Form 57-03-21 (01-17) Page 1 of 2

U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

DIVING EMERGENCY ASSISTANCE PLAN

NOAA DIVING UNIT	DIVE LOCATION	CALENDAR YEAR

INSTRUCTIONS:

Complete a Diving Emergency Assistance Plan (DEAP) for each unique diving location and submit the plan to NDP.Diveplans@noaa.gov with the initial dive plan of each calendar year and every time any information on the DEAP changes.

GENERAL PROCEDURES:

- A. Evaluate the victim's <u>Circulation</u>, <u>Airway</u>, and <u>Breathing</u> (CABs). If necessary, begin cardiopulmonary resuscitation (CPR) using a manually triggered ventilator (MTV) or bag-type oxygen resuscitator.
- B. If the victim is breathing, but unconscious, place the victim in the recovery position and administer oxygen using a non-rebreather type mask.
- C. If the victim is awake and alert, place the victim in a position of comfort and administer 100% oxygen using an MTV/demand oxygen resuscitator or non-rebreather type mask. If the victim is not nauseated, give clear non-alcoholic/non-caffeinated fluids to drink.
- D. If the victim's condition is life threatening or urgent, call the local Emergency Medical Services (EMS) or U. S. Coast Guard (USCG) for transport to the nearest medical treatment facility.
- E. If the victim's condition is not urgent, contact the NOAA Dive Medical Officer (DMO) for guidance. If unable to reach the NOAA DMO within 15 minutes, contact the Divers' Alert Network (DAN).
- F. Use the Dive Accident Management Field Reference Guide to document a neurological exam and dive history information.
- G. Gather additional information about the incident and prepare the victim for transport.
- H. Secure the diver's gear for inspection. **DO NOT DISASSEMBLE GEAR OR EXHAUST AIR FROM THE SYSTEM**. Close the cylinder valve ONLY. Count and record number of turns required to secure the valve.
- I. Call and speak to the NOAA DMO, (855) 822-DIVE (3483), to report the incident.
- J. Call the Line Office Diving Officer (LODO) to report incident. If unable to reach the LODO, call the Deputy LODO. Continue calling until <u>positive</u> contact is made. Speak to a person, don't just leave a message.

EMERGENCY TRANSPORTATION CONTACTS:

Primary Shore Based Emergency Transportation							
NAME of TRANSPORTATION PROVIDER							
POINT of CONTACT							
PHONE NUMBER							
At Sea Vessel Emergency Transportation							

At Sea Vessel Emergency Transportation
NAME of TRANSPORTATION PROVIDER
POINT of CONTACT
PHONE NUMBER

Secondary Shore Base	ed Emergency Transportation
NAME of TRANSPORTATION PRO	OVIDER
POINT of CONTACT	
PHONE NUMBER	

At Sea Aviation Emergency Transportation
NAME of TRANSPORTATION PROVIDER
POINT of CONTACT
PHONE NUMBER

NOAA Form 57-03-21 (01-17) Page 2 of 2 U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

DIVING EMERGENCY ASSISTANCE PLAN

NOAA DIVING UNIT DIVE LOCATION CALENDAR YEAR

EMERGENCY CONTACTS:

Primary Operational Hyperbaric Chamber
NAME of FACILITY
ADDRESS of FACILITY
POINT of CONTACT
PHONE NUMBER

Primary Hospital Emergency Room
NAME of FACILITY
ADDRESS of FACILITY
POINT of CONTACT
PHONE NUMBER

USCG, Area Search and Rescue (SAR) Coordinator
NAME of FACILITY
PHONE NUMBER

NOAA DIVING PROGRAM CONTACTS:

	Unit Diving Supervisor
NAME	
EMERGENCY CELL PHONE NUMBER	

	Line Office Diving Officer
NAME	
EMERGENCY CELL PHONE NUMBER	
OFFICE PHONE NUMBER	

NOA	AA Diving Safety Officer
EMERGENCY CELL PHONE NUMBER	301-525-7380
OFFICE PHONE NUMBER	301-525-7380

Secondary Operational Hyperbaric C	hamber
NAME of FACILITY	
ADDRESS of FACILITY	
POINT of CONTACT	
PHONE NUMBER	

Secondary Hospital Emergency Room	
NAME of FACILITY	
ADDRESS of FACILITY	
POINT of CONTACT	
PHONE NUMBER	

USCG, Rescue Coordination Center (RCC)
NAME of FACILITY
PHONE NUMBER

Divers Alert Network (DAN)		
EMERGENCY PHONE NUMBER	(919)	684-9111

Deputy Line Office Diving Officer
NAME
EMERGENCY CELL PHONE NUMBER
OFFICE PHONE NUMBER

NO	AA Diving Medical Officer
EMERGENCY CELL PHONE NUMBER	(855) 822-3483
OFFICE PHONE NUMBER	(206) 526-6474

Dive Operations Plan – Safe Ship, NF 57-03-22

What: This document is used to notify the bridge and department heads of diving operations and to provide an administrative control on activities which may cause a hazard to divers. Signatures of department heads shall only be placed on the document once all required lock-out, tag-out procedures have been completed. The Officer of the Deck is responsible for making the included announcements over the ship's public address system before diving operations begin, every fifteen (15) minutes during the diving operations, and at the conclusion of diving operations.

When: The Ship Diving Officer or Divermaster will ensure this form accurately describes the diving activities to be conducted before submitting it to the OOD for routing and signatures. A copy should be present at the dive site during the dive.

Record keeping: A digital or printed copy should be retained at the unit until 24 hours after completion of the diving operation.

Other considerations: This is not a <u>Dive Operations Plan (NF 57-03-20)</u>, although the Dive Operations Plan does have a checkbox to indicate if the <u>Safe Ship form (NF 57-03-22)</u> is required. This form is only used to coordinate administrative controls on shipboard activities which may imperil divers conducting hull surveys or ship husbandry dives. Each ship may have unique requirements which can be added to this form, these should be noted in the 'Remarks' section.

orm 57-03-22 Page 1 of 2 NATI	U.S. DEPARTMENT OF COMMERI ONAL OCEANIC AND ATMOSPHERIC ADMINISTRATIO
DIVE OPERATIONS PLAN – SA	AFE SHIP
A Ship	DATE of DIVE OPERATIONS
OF THE DECK	COMMENCEMENT TIME
STER / LEAD DIVER	COMPLETION TIME
commencement of dive operations under or alongside the ship and every 15 minuwing announcement shall be made over the ship's public address system:	utes thereafter until completion of dive operations,
ATTENTION ALL HANDS: DIVERS ARE WORKING UNDER OR ALONG	GSIDE THE SHIP AT THIS TIME. DO NOT
PERATE ANY EQUIPMENT OVER THE SIDE, ROTATE SCREWS, CYC	CLE RUDDER, TAKE SUCTION FROM OR
SCHARGE TO SEA, ACTIVATE SONAR OR UNDERWATER ELECTRIC	CAL EQUIPMENT, OR OPEN OR CLOSE
NY VALVES WITHOUT AUTHORIZATION FROM THE DIVEMASTER A	AND THE CHIEF MARINE ENGINEER."
mpletion of dive operations under or alongside the ship, the following announcen	nent shall be made over the ship's public address
DIVE OPERATIONS ARE NOW COMPLETE. NORMAL AND ROUT	TINE WORK MAY BE CARRIED OUT IN
CCORDANCE WITH PREVIOUS INSTRUCTIONS."	
IPTION OF DIVE OPERATIONS PLAN	

DIVE OPERATIONS PLAN – SAFE SHIP

Before dive operations may commence, the persons listed below shall sign in the "Pre Dive" column to indicate they have been notified of dive operations or required pre-dive actions have been completed. This signature indicates that all necessary precautions have been taken to ensure the safety of all divers. After dive operations have been completed, the same persons shall sign in the "Post Dive" column to indicate they have been notified that dive operations are complete and equipment may be reactivated or other scheduled activities may resume.

Dive operations shall not commence until all required signatures are recorded and approved by the Officer of the Deck and the Divemaster.

EQUIPMENT SECU	RED	PRE-DIVE	TIME	POST-DIVE	TIME
RUDDER	CME				
SHAFT(S)	CME				
SEA SUCTIONS	CME				
SEA DISCHARGES	CME				
A-FRAMES / J-FRAMES	СВ				
WINCHES	СВ				
TRANSDUCERS	ET				
SONARS	ET				
SUPPORT EQUIPMENT			<u> </u>		
CODE FLAG "ALPHA" HOIS	STED				
CODE FLAG "ALPHA" LOW	'ERED				
SUPPORT LAUNCH DEPLO	YED				
SUPPORT LAUNCH RECOV	'ERED				
VICINITY VESSELS NOTIFIE	ED				
SHIP #1	OOD				
SHIP #2	OOD				
SHIP #3	OOD				
SHIP REPAIR ACTIVITIES -	- Ship repair	activities will not affe	ct the Dive Operat	tions Plan	
NAME	CME				
NAME	СВ				
NAME	ET				
NAME	ХО				
NAME	СО				
REMARKS			<u> </u>		
OFFICER OF THE DECK SIGNATUR	DE	T,	DIVEMASTER/LEAD DIV	/ED SIGNATURE	
OTTICER OF THE DECK SIGNATUR	NL.	'	DIVEIVIASTER/LEAD DIV	LINGIGIATORE	

SUPERSEDES NOAA Form 64-3 (8-12)

Pre-Dive and Post-Dive Checklist, NF 57-03-23

What: This is a checklist to be used at the dive site before divers enter the water and after they exit. Some items on the checklist should be completed in advance of arriving at the dive site (divers are currently authorized, the <u>Safe Ship form (NF 57-03-22)</u> has been completed – if needed, safety equipment is tested and in good working order, etc.). Other items are completed immediately before divers enter and after they exit the water (indication of entry and exit points, monitoring diver's post-dive physical condition, etc.).

When: The UDS will ensure the assigned Divermaster or Lead Diver completes this form for every diving operation. For repetitive dives, a single copy is sufficient for each day's diving operations, however each repetitive dive should include a briefing on planned depths, times and objectives. A copy should be present at the dive site during the dive.

Record keeping: A digital or printed copy should be retained at the unit until 24 hours after completion of the diving operation.

Other considerations: While all the items on the checklist are important and should be addressed for every dive, do not allow Divernasters and Lead Divers to get tunnel vision and focus on the form while neglecting the divers. Good buddy checks and 'eyeballing' the divers as they prepare to enter the water is very important for detecting and correcting situations which could result in a diving incident.

DIVE OPERATIONS PLAN PRE and POST-DIVE CHECKLIST

DIVE OPER	RATIONS								
DATE		START TIME	END TIN	ME					
LOCATION	LOCATION								
PRE-DIVE	CHECKLIST								
1. MISSIC	ON SAFETY								
Dive obje	ectives and goals are defined, revie	wed, and understood by all the divers and supp	ort perso	onnel.					
☐ The Divir	ng Emergency Assistance Plan (DEA	P) is posted, coordinated, and reviewed (i.e. ch	amber av	ailability, evacuati	on route).				
All perso	nnel have been informed of their a	ssigned diving duties.							
A Pre-Div	ve safety briefing has been conduct	ed.							
2. EVALU	ATE AND PREPARE FOR POT	ENTIAL HAZARDS							
Dive site	entry and exit point(s) have been i	dentified and recognized by all divers and supp	ort persoi	nnel.					
Maximui	m depth and bottom time, and min	imum cylinder ending pressure limits have bee	n defined	for the planned di	ve.				
	currents, dangerous marine life, bo d and discussed.	ttom obstructions, entrapment, entanglement,	and othe	er physical hazards	have been				
☐ Marine t	raffic, gear malfunctions, and othe	mechanical hazards have been evaluated and	discussed	d.					
The Pre-	Dive portion of the Dive Operations	s Plan - Safe Ship (NOAA Form 57-03-22) has be	en compl	eted (if applicable)).				
3. DIVING	G AND SUPPORT PERSONNEL								
11 1	er is authorized to perform assigne ity Diver, or Observer Diver).	d diving duties according to their training and c	ertificatio	on level (e.g. NOAA	Diver,				
	er is qualified to complete their ass								
Support emerger	-	cy recall and diver hand signals, and can offer ir	nmediate	e assistance in case	of an				
A repetit	ive dive designation has been dete	rmined for each diver for any dive made within	the previ	ious 16 hours.					
4. EQUIP	MENT								
All suppo	ort equipment (boats, compressors	tools, etc.) is available and trained personnel a	are design	nated to operate it					
All dive t	echniques to be used are safe, autl	norized, and appropriate for the task.							
All tools	to be used are appropriate for the	task.							
	ete oxygen resuscitator, AED, diving mpression dive tables are on site.	g first-aid kit, backboard, appropriate dive flags,	, and a ha	ardcopy set of appr	opriate				
DIVEMASTE	ERR SIGNATURE	DIVEMASTER SIGNATURE]	DATE	TIME				
POST-DIV	E CHECKLIST		•	'					
Dive tear	m buddies have remained together	and monitored each other's condition for a mi	nimum of	f 30 minutes after	each dive.				
Post dive	e portion of the Dive Operations Pla	ın - Safe Ship (NOAA Form 57-03-22) has been o	completed	d (if applicable).					
All perso	nal dive and support equipment is	thoroughly cleaned and properly stowed.							
A Post-D	ive debriefing and critique of opera	tions has been conducted, including procedure	es for flyin	ng after diving (if a	oplicable).				
DIVEMASTE	ERR SIGNATURE	DIVEMASTER SIGNATURE	[DATE	TIME				
	NOAA Diving Program, UDS Manual			15 March 2017.	Page 89				

Monthly Dive Log, NF 57-03-24

What: The Monthly Dive Log is not a required form, but is useful for individual divers to track their activities while in the field and unable to enter information through the Dive Management System website.

When: As needed.

Record keeping: Not required.

Other considerations: The NDP benefits from having data on all dives conducted in support of the NOAA mission. Use of this form by reciprocity divers allows many dives which otherwise would go unreported to be tracked for statistical purposes.

NOAA (7-12)	A Form 57-10-24)	NATIONA		S. DEPARTMENT ATMOSPHERIC AD		NAME (Last, Fi	rst MI)				CERTIFICATION	N (see note 1)	DATE (mm/yy)
						LINE or STAFF (OFFICE (Check on	e)			UNIT / SUB-UN	NIT	UNIT DIVING SUPERVISOR
		MONTH	LY DIVE	LOG		NMFS	Nos	OAR (Омао (non-NOAA			
1. 2. 3. 4. 5. 6.	RUCTIONS: NOAA Form 57-0 Submit this form Use a separate li Log repetitive div Use the codes in For saturation mi	directly to the NC ne for each dive. res using the date, the NOTES section	DAA Diving Center Print all informat , a decimal point, n below to encode	r, 7600 Sand Point ion legibly. and consecutive e the dive log info	t Way NE, Seattle numbers (i.e. thre rmation.	, WA, 98115 by th	ne 5 th of the mon	th for the precedi	ng month.).	NAC Nor MAC Mid SAC Sou KEY Flor GMC Gult PVC Pue	E LOCATION th Atlantic Coastal -Atlantic Coastal th Atlantic Coastal ida Keys f of Mexico Coasta rto Rico/U.S. Virgi ska Coastal	(Connecticut – Virginia) (North Carolina – SE Florida) I (SW Florida – Texas)
1. 2. 3.	S: CERTIFICATION DIVE TYPE DIVE PURPOSE	1 - Non-Sati		2 - Scientific Diver 2 - Saturation 2 - Collect samples/data 7 - Test/Evaluation 12 - Other (specify)		3 - Install/Construction 4 -		4 - Search/Recovery 5 - Maintenand		5 – Master Diver 5 - Maintenance/Repair 10 - Training/Proficiency		th Pacific Coastal -Pacific Coastal th Pacific Coastal at Lakes Waters er Inland Waters vaii Coastal	(Washington – Oregon) (north and central California) (southern California) (indicate location)
4. 5. 6.	DIVE PLATFORM BREATHING EQU BREATHING GAS	1 - 5 6 - 0 IPMENT 1 - 0	Shore Chamber Open-circuit scub	2 - Small 7 - Pool/1 a 2 - Closed	Boat	3 - Ship 3 - Surface sup 3 - Trimix (indic	plied 4 -	Pier/Dock Snorkel/Skin-divii Heliox (indicate C	-		FCW Fore	ific Territories Trus eign Coastal Water p Ocean Waters er	
DAY	DIVE TYPE	DIVE PURPOSE	DIVE PLATFORM	BREATHING EQUIPMENT	BREATHING GAS	MAXIMUM DEPTH	BOTTOM TIME	DECO TIME	DIVE LOCATION	U/W VISIBILITY	WATER TEMP	CURRENT SPEED	DIVEMASTER / LEAD DIVER
סאו	(Note 2)	(Note 3)	(Note 4)	(Note 5)	(Note 6)	(Feet)	(Minutes)	(Minutes)	(Note 7)	(Feet)	(°F)	(Knots)	DIVE BUDDY
							1						

Supervisor Dive Log, NF 57-03-25

What: The Supervisor's Dive Log is not a required form, but is useful for Divermasters and Lead Divers for tracking diving activities while in the field.

When: Pertinent diving data must be recorded during diving operations, whether this form or an alternate is used is up to the discretion of the diving unit.

Record keeping: Not required.

Other considerations: The NDP benefits from having data on all dives conducted in support of the NOAA mission. Use of this form by reciprocity divers allows many dives which otherwise would go unreported to be tracked for statistical purposes. Additional information not included on this form which may be useful includes the breathing gas, tank number, water temperature, current, and visibility.

(3-17)

SUPERVISOR'S DIVE LOG

DIVEMAS	TER	LOCATION					PLATFORM				DATE			DIVE#
Team		Surface	Repetitive	Planned	Planned	O2 % of	PSI IN	Time	Time	Actual	Actual	PSI OUT	Repetitive	Project/
#	NAME of DIVER	Interval	Group	Depth	Time	breathing	Main	(local)	(local)	Depth	Time	Main	Group	Comments/
		hr:min	IN	(feet)	hr:min	gas	RASS	DOWN	UP	(feet)	hr:min	RASS	OUT	Problems
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Observer Diver Report, NF 57-03-26

What: This is a two part form which the UDS completes before authorization of an Observer Diver and after completion of diving activities by an Observer Diver.

When: Before an Observer Diver may participate on a NOAA dive, the UDS must complete the top half of this form (checklist). After the Observer Diver has completed their diving operations with NOAA, the UDS will complete the lower half of this form (dive log) and submit the entire form to NDC via the Support.NDC@noaa.gov email address.

Record keeping: A digital or printed copy should be retained at the unit until three (3) months after the Observer Diver has completed their diving operations with NOAA. The dives should be recorded in the Unit Log.

Other considerations: There are specific manning requirements for dives in which an Observer Diver participates. A minimum of two NOAA Divers are required to accompany a single Observer Diver or a pair of Observer Divers. Additional Observer Divers require additional NOAA Divers in a one to one (1:1) ratio (one [1] Obs. Diver and two [2] NOAA Divers, two [2] Obs. Divers and two [2] NOAA Divers, three [3] Obs. Divers and three [3] NOAA Divers, four [4] Obs. Divers and four [4] NOAA Divers, etc.). The NOAA Diver escorts must have no tasks during the dive other than to provide buddy support for the Observer Diver(s). The NOAA Diver escorts must include a RASS in their Scuba unit. Observer dives are staffed as OSHA-subject dives, a Designated Person in Charge must be present along with a pair of standby divers or a single line-tended standby diver.

Observer Divers are authorized to complete six (6) per year. In special circumstances, the LODO may authorize an Observer Diver to conduct additional dives within a calendar year.

NOAA Form 57-03-26
(3-17)

U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

OBSERVER DIVER REPORT

NOTE:

The Observer Diver and Unit Diving Supervisor (UDS) shall complete and submit this form to the NOAA Diving Center in order to document Observer Diver activities. This form shall be submitted to the NOAA Diving Center immediately following the diving activities described below.

I am aware of the inherent risks and hazards associated with diving, and declare that I am in good mental and physical condition for diving. In

]	damage for pers of my pe to abide	or ded onal in articipo by the	of being allowed to participate in this ath unforeseen. I further save and ho jury, property damage or wrongful d ation in this activity. I have read and am while diving as a NOAA Observer I	ld harmless so leath, by me, understand a Diver.	aid activity and my family, heir Il requirements	NOAA s, exec of the	, and any of its employees, fro cutors, representatives, admini · NOAA Diving Safety Rules (NA	m any demand, claim or lawsuit strators and assigns, arising out O 209-123, Exhibit 1) and agree					
			ndicates I have read the above reliab	ility release a		iving S	afety Rules and fully understar						
OBS	ERVER	DIVER	NAME		SIGNATURE			DATE					
			g diving operations, the UDS shall en: it is completed. Reference the NOA										
	_ r	NOAA F	Form 57-03-53, Observer Diver Medic	cal History Re	port, has been	comple	eted, reviewed, and approved	by a licensed Health Care Provider					
	╣,	within the past 12 months of the planned dive(s).											
	\dashv (Observ	er Diver presented evidence of dive e	experience, m	inimum of 10 o	lives, 1	of which was completed with	in the past 3 months.					
	╝,	Observe	er Diver presented evidence of diving	g certification	from a recogni	zed ce	rtifying organization.						
		Observe	er Diver has not completed 6 or more	e dives as a No	OAA Observer I	Diver w	vithin the past 12 months.						
		Observ	er Diver has reviewed and understan	ds the NOAA	Diving Safety a	nd Star	ndards Manual.						
		Observe	er Diver's gear has been inspected by	the UDS for	current mainte	nance	and proper operating conditio	n. (Diver must supply equipment)					
		Observ	er Diver is familiar with the diving eq	uipment to be	e used.								
ĺ	_ [Planned	d dives and dive conditions are within	n the apparen	t abilities and s	kill lev	el of the Observer Diver.						
ĺ	<u> </u>	ost bu	ddy, low air, out of air, and other em	ergency scen	arios have bee	n discu	ssed with the Observer Diver.						
	╣╶	Γhe Div	e Accident Management Plan for the	dive site has	been discusse	d with	the Observer Diver.						
	\dashv (Observe	er Diver will be limited to visual obse	rvations and/	or photograph	y durin	g the dive.						
		Observ	er Diver will be accompanied by a ful	ly certified No	DAA Scientific o	r Worl	king Diver, who will not be per	forming work, but whose sole task					
	IJ i	s to mo	onitor the Observer Diver.										
			ignifies that all of the above items ho g conditions are within the apparent					at the diving activities and					
	SIGNA		g conditions are within the apparent		LINE OFFICE	Obser	UNIT and LOCATION						
					for the Obser	er Div	er below.						
	Da	te	Dive Location	Maximum Depth (ft)	Bottom Time (hr:mm)		NOAA Dive Buddies	Dive Purpose / Remarks					
1.				. , ,									
2.													
3.													
4.													
5.													
6.													

SUPERSEDES NOAA Form 56-62 (7-12)

Decompression Diving Request, NF 57-03-28

What: This document is the principle form used by the NDCSB to review and approve open circuit decompression dives. It is prepared by a UDS (or designee) and submitted to the respective LODO who brings it to the NDCSB. There is a lengthy checklist outlining equipment, training, and operational requirements, a section for describing any negative responses to the checklist items, a section for narrative descriptions of the dive team and planned operations and concludes with a section on emergency procedures.

When: This document should be submitted to the LODO at least one (1) month prior to the beginning of the requested operation. This lead time is required to allow the NDCSB sufficient time to thoroughly review the plan and request clarification of any component which the Board has concerns about.

Record keeping: This document should be retained by the UDS until 24 hours after the completion of the requested dive(s).

Other considerations: This document should be accompanied by a standard <u>NOAA Dive Operations Plan</u> (<u>NF 57-03-20</u>) and a <u>Diving Emergency Assistance Plan (NF 57-03-21).</u>

	Drm 57-03-28 U.S. DEPARTME Page 1 of 10 NATIONAL OCEANIC AND ATMOSPHERIC						
(01 1/)	DECOMPRESSION DIVING REQUEST	c / (5 (1 (1 (1)					
PROJECT	TITLE and DESCRIPTION						
DIVER S	JBMITTING REQUEST DATE						
E-MAIL	ADDRESS PHONE NUMBER						
1.0	QUALIFICATIONS	· ·					
1.1	Certification and Authorization	Yes	No				
A.	Will all divers be trained and certified by an accredited diving association (e.g. TDI, IANTD) recognized by NOAA for the equipment, depth and gas mixtures to be used on this project?						
В.	Will all divers be currently authorized to dive by the NOAA Diving Program (NDP) or another NOAA-approved reciprocity partner?						
C.	Are all training certifications for NOAA divers on file at the NOAA Diving Center (NDC) and are reciprocity partner Letters of Reciprocity (LORs) attached to the dive plan?						
1.2	Proficiency Requirements	Yes	No				
A.	Will all divers have logged a minimum of 12 dives within a six month period prior to the project start date?						
B. Will all divers log a minimum of one (1) dive within the previous 30-day period prior to the project start date in the equipment configuration to be used (e.g. perform work-up dives)?							
2.0	EQUIPMENT						
2.1							
2.1	General	Yes	No				
A.	General Will all valve and regulator systems for primary (bottom) gas supplies be configured in a redundant manner that allows continuous gas delivery in the event of failure of any one component?	Yes	No				
_	Will all valve and regulator systems for primary (bottom) gas supplies be configured in a redundant manner	Yes	No				
Α.	Will all valve and regulator systems for primary (bottom) gas supplies be configured in a redundant manner that allows continuous gas delivery in the event of failure of any one component?		No				
Α.	Will all valve and regulator systems for primary (bottom) gas supplies be configured in a redundant manner that allows continuous gas delivery in the event of failure of any one component? In addition to a mask and fins, will all divers carry or wear the following equipment:		No				
Α.	Will all valve and regulator systems for primary (bottom) gas supplies be configured in a redundant manner that allows continuous gas delivery in the event of failure of any one component? In addition to a mask and fins, will all divers carry or wear the following equipment: 1. Exposure suit?		No				
Α.	Will all valve and regulator systems for primary (bottom) gas supplies be configured in a redundant manner that allows continuous gas delivery in the event of failure of any one component? In addition to a mask and fins, will all divers carry or wear the following equipment: 1. Exposure suit? 2. Buoyancy Compensator Device (BCD) (e.g. dual bladder wings or single bladder and dry suit)?		No				
Α.	Will all valve and regulator systems for primary (bottom) gas supplies be configured in a redundant manner that allows continuous gas delivery in the event of failure of any one component? In addition to a mask and fins, will all divers carry or wear the following equipment: 1. Exposure suit? 2. Buoyancy Compensator Device (BCD) (e.g. dual bladder wings or single bladder and dry suit)? 3. Redundant lift bags and line reels?		No				
Α.	Will all valve and regulator systems for primary (bottom) gas supplies be configured in a redundant manner that allows continuous gas delivery in the event of failure of any one component? In addition to a mask and fins, will all divers carry or wear the following equipment: 1. Exposure suit? 2. Buoyancy Compensator Device (BCD) (e.g. dual bladder wings or single bladder and dry suit)? 3. Redundant lift bags and line reels? 4. Sufficient deco gases to complete decompression?		No				
Α.	Will all valve and regulator systems for primary (bottom) gas supplies be configured in a redundant manner that allows continuous gas delivery in the event of failure of any one component? In addition to a mask and fins, will all divers carry or wear the following equipment: 1. Exposure suit? 2. Buoyancy Compensator Device (BCD) (e.g. dual bladder wings or single bladder and dry suit)? 3. Redundant lift bags and line reels? 4. Sufficient deco gases to complete decompression? 5. Decompression tables specific for the mix being used?						

8. Signaling Devices?

NOAA Diving Program, UDS Manual

2.2	SCUBA Cylinders	Yes	No
A.	Will all scuba cylinders used for dives > 130 feet be outfitted with DIN valves?		
В.	Will single cylinders be used for bottom gas? (If 'Yes', go to 2.2 C; if 'No', go to 2.2 D)		
C.	Will an auxiliary gas supply, with adequate volume to reach the next gas supply, be available?		
D.	Will all dual cylinders be connected by a dual manifold with an adjustable isolation valve on the backpack/harness assembly so divers can reach each cylinder and isolation valve?		
E.	Will all SCUBA cylinders used for decompression be color-coded?		
F.	Will the maximum operating depth (MOD), based on a maximum partial pressure of oxygen (PO_2) of 1.6 ATA of each breathing gas/cylinder (other than air) be displayed on the cylinder with marking tape or lettering facing both inward towards the diver and outwards so other divers can identify the cylinder contents?		
2.3	SCUBA Regulators	Yes	No
A.	Will all dual cylinders be outfitted with redundant scuba regulators?		
В.	Will all regulators used with oxygen supplies be secured in a way (e.g., pouch or bungee) that reduces the possibility of inadvertent use at depths that would result in a hyperoxic exposure?		
C.	Will the primary supply regulator be configured with a hose of adequate length to facilitate effective emergency gas sharing in the anticipated environment?		
2.4	Buoyancy Control	Yes	No
A.	Will all divers have the capability to achieve positive buoyancy at all depths?		
В.	Will all divers use dual-bladder BCDs with separate inflator hoses, or single-bladder BCDs with a variable volume drysuit, each with separate inflator hoses?		
C.	When wearing dual cylinders, will top and bottom dump valves be provided for the primary bladder, with a top dump valve standard for the redundant backup bladder?		
D.	Will each bladder be capable of achieving positive buoyancy at all depths and be outfitted with an over pressurization relief valve?		
2.5	Depth and Cylinder Pressure Gauges	Yes	No
A.	Will each diver have a redundant means of monitoring depth?		
В.	Will at least one (1) of the depth monitoring devices be capable of recording the maximum depth obtained during dives for display once at the surface?		
C.	Will each gas supply have its own dedicated submersible pressure gauge?		
2.6	Dive Timing Devices	Yes	No
A.	Will each diver have a redundant means of tracking dive time? NOAA Diving Program, UDS Manual 15 March 2017, Page 15 March 2017, Page 15 March 2017, Page 15 March 2017, Page 15 March 2017, Page 15 March 2017, Page 15 March 2017, Page 15 March 2017, Page 15 March 2017, Page 15 March 2017, Page 15 March 2017, Page 15 March 2017, Page 16 March 2017, Page 17 March 2017, Page 18 March 2	e 98 er 31 Janu	
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2.7	Signaling Devices	Yes	No
A.	Will each diver carry the following surface signaling devices:		
	1. Surface Marker Buoy (SMB)?		
	2. Signal mirror?		
	3. Whistles or other audible signaling devices?		
В.	Will dives be conducted within two (2) hours of sunset? (If 'Yes', go to 2.7 C; if 'No', go to 2.8)		
C.	Will each diver also carry a flashlight and/or strobe light?		
2.8	Lift Bag and Line Reel	Yes	No
A.	Will each diver carry a lift bag (minimum of 50 pounds buoyancy) and a line reel with line equal to 1.5 times the maximum depth anticipated during a dive?		
В.	Is it understood that redundant lift bags and line reels may be required at the discretion of the on-site Diving Supervisor?		
2.9	Support Boats	Yes	No
A.	Will there be a means of extracting an unconscious victim from the water in a timely manner at all times during decompression diving operations?		
В.	In addition to any NOAA small boat requirements, will each boat carry an oxygen resuscitator capable of ventilating an unconscious victim and a minimum of one (1) SCUBA cylinder of each type of decompression gas used on the dive?		
2.10	Hyperbaric Chamber	Yes	No
A.	Will a hyperbaric chamber be accessible within two (2) hours of the dive site?		
В.	Will a plan be prepared and verified to transport an injured diver to a hyperbaric chamber within the required time frame?		
C.	Does the hyperbaric chamber meet American Society of Mechanical Engineers (ASME), American Bureau of Shipping (ABS), or equivalent standards??		
D.	If a portable hyperbaric stretcher will be used, will evacuation scenarios be demonstrated/practiced with a local Emergency Medical System (EMS)?		
3.0	EQUIPMENT		
3.1	General	Yes	No
A.	Will all gases used for diving be of breathing quality?		
В.	Will all breathing mixtures to be used for diving be analyzed for oxygen content using an oxygen analyzer?		
C.	Is it understood that all breathing gases must test within acceptable parameters as specified in the dive tables or computers used?		
D.	Will each diver confirm the following information prior to commencing diving:		
	NOAA Diving Program, UDS Manual 15 March 2017, Pa	ge 99 er 31 Janı	uary 2017

3.1	General (continued)	Yes	No
	1. Fraction of oxygen (FO ₂) of his/her scuba cylinder(s)?		
	2. PO ₂ cut off depth (MOD) and appropriate gas mixture(s) to be used for each phase of the dive?		
	3. Planned maximum depth and bottom time for the dive?		
	4. Availability of adequate volumes of gas as determined by review of cylinder pressures?		
E.	Will nitrox and/or 100% oxygen be used during ascent and/or decompression stops?		
F.	Will all divers calculate and carrying the required volume of breathing gases needed for each phase of the dive, plus reserves?		
G.	Will the "rule-of-thirds" (one third to get to the dive site, one-third to reach the first decompression stop, and one-third reserve) be followed on all decompression dives?		
Н.	Will all divers carry sufficient gas to complete all phases of the dive including descent, on-the-bottom, ascent, and decompression independent of surface support?		
I.	Will all divers carry sufficient gas to complete in-water decompression for the next deeper depth and bottom time planned?		
3.2	Oxygen	Yes	No
A.	Will there be a means of extracting an unconscious victim from the water in a timely manner at all times during decompression diving operations?		
В.	Will all breathing gases used while performing in-water decompression contain the same or greater oxygen content as that used during the bottom phase of the dive?		
C.	Will all gas systems, components, and storage containers used with oxygen mixtures above 40% by volume, be formally cleaned in accordance with the NOAA Diving Manual (current edition)?		
3.3	Air	Yes	No
A.	Will compressed air used with oxygen concentrations greater than 40% or when used in the preparation of nitrox breathing mixtures with greater than 40% oxygen as the enriching agent, meet or exceed CGA Grade E standards?		
4.0	MANNING REQUIREMENTS		
4.1	Minimum Personnel and Capabilities	Yes	No
A.	Bottom Divers		
	1. Will there be a minimum of two (2) divers functioning as a buddy team?		
	Will divers remain in such proximity to each other to render immediate assistance if necessary at all times during the dive; and if separated, initiate the standard separated buddy procedure?		
В.	Support Divers		
	1. Will there be two (2) standby divers, each of which is capable of reaching the bottom or one (1) dedicated safety diver with the bottom team?		
	Will all divers required to dive to the bottom be appropriately trained, experienced, and outfitted to perform such dives? NOAA Diving Program, UDS Manual 15 March 2017, Pag		
	15 Walter 2017, Tag	(100 Per 31 Janu	uary 2017

4.2	Minimum Topside Personnel	Yes	No
A.	Diving Supervisor		
	1. Will the on-site Diving Supervisor remain at the surface at all times during diving operations?		
	2. Has the on-site Diving Supervisor been approved by the NDCSB?		
В.	Vessel Captain		
	1. Will the vessel captain remain on the vessel at all times during diving operations?		
	Is it understood that the vessel captainWill all divers calculate and carrying the required volume of breathing gases needed for each phase of the dive, plus reserves?		
5.0	MINIMUM OPERATIONAL REQUIREMENTS		
5.1	Dive Planning	Yes	No
Α.	Dive condition limits: Is it understood that the on-site Diving Supervisor and the vessel captain shall assess current and predicted weather conditions, sea state, and current speed and direction, then decide whether or not diving can be safely initiated?		
B.	Diver Communications		
	1. Will all bottom divers be able to signal topside personnel at all times during the dive?		
	2. Will there be a signaling protocol established that allows the differentiation between routine and emergency situations?		
5.2	Decompression Calculation	Yes	No
A.	Are the decompression tables to be used on the dives approved by the NDCSB?		
В.	Is it understood that the use of dive computers and/or computer based decompression generating software programs must be approved by the NDCSB?		
C.	Will each diver carry a set of decompression dive tables, including one (1) over and one (1) under contingency time schedules?		
5.3	Maximum Depth and Bottom Time	Yes	No
A.	Is it understood that the maximum depth for decompression diving using open-circuit SCUBA equipment and breathing air is 170 feet?		
В.	Will the maximum oxygen partial pressure of all decompression gases be 1.6 ATA or less and bottom mixes be 1.4 ATA of less?		
C.	Will all bottom times be within the maximum allowable exposure time for a given partial pressure of oxygen as listed in Table 15.2, Appendix D NOAA Diving Manual (4th Edition)?		
D.	Is it understood that all repetitive dives must be approved by the on-site Diving Supervisor?		
5.4	Diving Procedures	Yes	No
A.	Descent		
	1. Is it understood that the on-site Diving Supervisor will determine the procedure for descending to the bottom (i.e., use of down-line versus 'free dropping')?		
	Is it understood that should any member of the bottom team get separated during descent and cannot locate another diver within five (5) minutes of reaching the bottom, he/she shall terminate the dive and begin ascent/decompression? NOAA Diving Program, UDS Manual 15 March 2017, Pag	101.	

5.4	Diving Procedures (continued)	Yes	No
В.	On-bottom: Is it understood that the on-site Diving Supervisor must approve any decision to remove and stage decompression cylinders once on the bottom?		
C.	Ascent: Is it understood that the on-site Diving Supervisor must approve the procedure for ascending to the surface (i.e., use of ascent-line versus 'drift decompression')?		
D.	Surface Interval: Is it understood that no additional dives will be made until all members of the dive team have completed their in-water decompression and have been on the surface for a minimum of 30 minutes?		
5.5	Contingency Protocols	Yes	No
A.	Will all the dive team members know and follow the technical diver contingency protocols outlined in Section 9.0 of this document?		
В.	Is it understood that following the occurrence of any contingency scenarios, a post-dive 'stand down' will be initiated to thoroughly review the incident and establish corrective actions?		
C.	Is it understood that if the contingency scenario is deemed a "near-miss", a Diving Incident Report, NOAA Form 57-03-01, must be completed and submitted in accordance with NAO 209-123, Section 5.02b.1 (b)?		
6.0	DIVE PLAN		
6.1	Submission and Review Requirements	Yes	No
A.	Is it understood that in accordance with NOAA Scientific Diver Standards and Safety Manual (NSDSSM), diving projects involving non-standard open circuit scuba diving equipment and techniques must be approved by the NOAA Diving Control and Safety Board (NDCSB) before diving activities begin?		
В.	Is it understood that in order to evaluate the proposed diving activities, this dive plan must be submitted to the NDCSB through the Line Office Diving Officer indicated in Section 8.0 for review a minimum of 45 days prior to the commencement of diving operations?		
C.	Will all decompression diving activities conducted in association with this plan meet the criteria specified in the NSDSSM to qualify for the scientific exemption?		
7.0	EXPLANATIONS		
7.1	Explain all 'No' responses indicated above on this request. NOAA Diving Program, UDS Manual 15 March 2017, Pag.	e <u>102</u> er 31 Janu	

	DECOMPRESSION DIVING REQUEST		
7.2	Provide a brief overview of the diving activities to be conducted.		
7.3	What are the goals, objectives, and tasks to be completed?		
7.4	Provide the location and a description of where the dives will be conducted.		
7.5	Provide names, affiliations, roles/responsibilities, and qualifications of participants.		
7.6	What are the scheduled dates for the operation?		
7.7	Provide the name and contact information for the primary and secondary hyperbaric chambers to be indicated on the DEAP.		

DECOMPRESSION DIVING REQUEST

8.0 APPROVALS and ENDORSEMENTS		
UNIT DIVING SUPERVISOR NAME	UNIT DIVING SUPERVISOR SIGNATURE	DATE
LINE/STAFF OFFICE DIVING OFFICER NAME	LINE/STAFF OFFICE DIVING OFFICER SIGNATURE	DATE

9.0 TECHNICAL DIVER CONTINENCY PROTOCOLS

In order to increase safety during decompression dives, the following protocols have been developed as the primary responses to the identified emergencies.

9.1 Out of gas - Bottom mix

Begin gas sharing with dive buddy and abort the dive, observing decompression schedule during ascent.

9.2 Out of gas - Decompression nitrox/trimix cylinder

At the beginning of decompression, the support divers shall bring one spare staging mix cylinder for each group of bottom divers, in accordance with normal operational protocols. Any further stage gas failure will warrant gas sharing of stage mix. Divers shall communicate any problem to the in-water support diver who shall retrieve and deliver additional spare stage mix cylinder(s) to divers as needed.

9.3 Out of gas - Decompression oxygen cylinder

The support divers will carry extra deco gas and will be with bottom divers during the first gas switch during decompression. Any deco oxygen failure from bottom diver's supply will require a support diver to transport a deco oxygen cylinder for attachment to the bottoms diver's harness for use as the gas source during the completion of decompression. Any further stage gas failure would warrant gas sharing of stage mix if necessary. Bottom divers shall communicate the problem to in-water support divers whom shall then retrieve and deliver spare stage mix cylinder to the bottom divers.

9.4 Gas failure - Source of problem unknown

Bottom divers with an unknown gas failure shall reach back and close the isolation valve then determine the cause of failure. The diver shall notify their dive buddy of the problem, abort the dive and follow decompression schedule during ascent.

9.5 Aborted dive procedures

The bottom divers may abort any planned decompression dive and return directly to the surface if a depth of 150 FSW and an elapsed time of five (5) minutes has not been exceeded (U.S. Navy Standard Air Compression Tables - current edition). If a depth of 150 FSW or an elapsed time of five (5) minutes has been exceeded during a planned decompression dive, bottom time divers must complete all decompression stops as scheduled. Bottom divers may elect to deploy a lift bag to signal to the surface support team and dive vessels. At such time the bottom divers shall be recovered by the primary support vessel. Upon review of the bottom divers dive profile, the dive team may elect to make a second drop. On a repetitive dive, the abort procedure will require an additional in-water decompression stop and the bottom divers must follow the dive computer or contingency table.

9.6 Omitted decompression

If a bottom diver is asymptomatic, the diver must repeat all stops deeper than and including the 40 FSW stop. The diver shall multiply the 30 FSW, 20 FSW, and 10 FSW stop times by 1.5. The bottom diver shall maximize PO_2 by using the most hyperoxic gas appropriate for the depth without exceeding a PO_2 of 1.6 ATA. If a bottom diver is symptomatic, the diver must be placed on oxygen, hydrated, and evacuated to the nearest recompression facility.

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DECOMPRESSION DIVING REQUEST

9.7 Oxygen toxicity hit

Hyperoxia can occur at a PO₂ of > 1.4 ATA. Hyperoxic oxygen convulsions will present themselves in two (2) phases. Phase 1 will place the diver in a state of convulsions, with no respiration, and the diver is likely to clinch their teeth which may serve to keep the regulator mouthpiece in the diver's mouth. In Phase 2 the diver will be relaxed and will start to hyperventilate (breathe fast). The second phase poses a significant risk of drowning if the regulator mouthpiece is allowed to fall out of their mouth. Dive planning should ensure PO₂ during all phases of the dive, except decompression, remains significantly below 1.6 ATA. In the unlikely event of any Con-VENTID symptoms, an asymptomatic diver shall immediately gain control of the symptomatic diver and begin ascent.

9.8 Dive team unable to reach down-line

If a dive team is unable to reach the down-line during deployment, the divers shall abort the dive and return to the surface. The divers shall then be recovered to the primary support vessel and may elect to make a second drop.

9.9 Dive team separated during deployment

If a dive team finds themselves separated from their buddy(ies) during deployment, the divers should abort the dive after searching for team members for five (5) minutes and return to the surface. Divers will deploy a lift bag to signal to the surface support team and dive vessel(s). The divers shall be recovered to the primary support vessel and may elect to make a second drop.

9.10 Dive team separated on dive site

The Research (bottom) Divers will remain in constant contact (visual range and close enough to render immediate assistance) at all times during the dive. At no time during the dive (regardless of visibility), will the Bottom Divers be separated by more than fifteen (15) feet. Separated divers will perform a visual search for each other for one minute before returning to the base of the down-line. Once at the down-line separated divers will allow no more than four minutes to reunite. If the divers have not found one another within five (5) minutes they will abort the dive and head to the surface using appropriate ascent techniques and decompression procedures.

9.11 Dive team separated, swept off dive site

Upon separation of buddy pair, unable to locate each other, the divers should independently shoot a bag to the surface and commence their own decompression. Divers shall exercise normal decompression procedures, and expect to see Support Diver in the water above them.

9.12 Dive team swept off dive site

Divers stay together; attempt to regain position on dive site and abort if necessary. If unable to return to the dive site, abort the dive and commence ascent under an inflated lift bag. Exercise appropriate decompression procedures.

9.13 Diver entanglement on bottom

Divers shall carry at least two knives and an additional cutting tool, either EMT scissors or a seatbelt cutter. If entangled, notify other diver(s) of problem. Evaluate the nature of entanglement and attempt to free self or signal buddy for assistance. If using the standby diver mode, separated from buddy and entangled without remedy, inflate bag to surface with penciled distress message on slate attached by snap hook to the bag. The standby diver from primary support vessel shall then enter the water and search for the entangled diver. The other diver, if separated and successfully decompressing on a lift bag, shall be accompanied by the Small Boat. Both vessels will maintain radio contact with each other, but the primary support vessel will remain with the entangled diver and the designated Diving Supervisor will monitor the situation topside. If using the on-bottom safety diver mode, given this contingency or similar difficulties in which a pair of divers will need to assist the expedition team at the bottom, the second dive team of the day (if available) will deploy to assist the entangled diver.

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9.14 Dive team unable to locate ascent-line

Remain mindful of bottom time (BT). Divers can either shoot a lift bag on a reel to the surface and begin decompression ascent on the bag line, or, if adequate gas supply is available, take an additional five (5) minutes to search and extend to the next bottom time group. Divers must be on a line beginning ascent by five (5) minutes past original plan. Divers shall carry hard copies of planned decompression schedules and contingencies. Decompress according to the appropriate schedule or according to the dive computer. If divers come up on the bag line, surface support will shift to the divers' location, be they drifting or stationary. In the event of loss of ascent line, divers will shoot a lift bag and commence a drifting ascent under the bag.

9.15 Buoy or down-line breakaway

Divers shall shoot a bag to the surface on a line reel then decompress on the line in the same manner as if unable to locate the down-line.

9.16 Dive team reaches surface, but dive support vessel is gone

Research (bottom) divers stay together upon reaching surface. Use appropriate signaling device to signal surface craft.

9.17 Change of environmental conditions during dive

In the time interval between the beginning of a dive and the completion of decompression, it is possible for environmental conditions to change sufficiently to require adjustment to the dive plan.

- A. Current Strength A significant increase in current strength during a dive will make it more difficult for the divers to decompress if they are using a fixed down-line, subjecting the decompressing divers to the full strength of the current. Divers should consider "drift decompression" to be the preferred method in strong currents.
- B. Surface Waves or Swell Height A significant deterioration of sea conditions will make it more difficult for the divers to decompress because the ascent line (either a hard line anchored to the bottom or a drifting line suspended from a buoy) will rise and fall, sometimes violently, as the dive vessel strains on the line, if at anchor. Therefore, decompressing divers must take care not to hold to the ascent line too tightly, especially on the shallower stops where the effect is most pronounced. In instances where there is significant movement of the ascent line, divers should employ one or more lengths of "Jon line" to dampen the motion. One end of the Jon line is looped around the down-line and the other is clipped to the diver's "scooter ring." Otherwise the dive team should choose to use drift decompression.
- C. Visibility A significant decrease in visibility on the bottom will make it more difficult for the divers to work, but also might decrease the safety of the divers. Therefore, if the visibility decreases to less than ten (10) feet, the divers should consider terminating the dive.
- D. Water Temperature A decrease in water temperature, due to a deep-layer thermocline or to an alteration of current patterns, will affect diver comfort and, if significant, could affect safety. Divers should wear adequate thermal protection-a well-fitting wet suit and hood, or a dry suit. If water temperature decreases significantly, the dive should be terminated.

9.18 Initiation of subsequent dives

If any emergency arises while one team is in the water, a second team will not commence operations until the problem has been resolved and it has been deemed appropriate to make the second dive.

Closed Circuit Rebreather (CCR) Decompression Diving Request, NF 57-03-29

What: This document is the principle form used by the NDCSB to review and approve closed circuit rebreather (CCR) decompression dives. It is prepared by a UDS (or designee) and submitted to the respective LODO who brings it to the NDCSB. There is a lengthy checklist outlining equipment, training, and operational requirements, a section for describing any negative responses to the checklist items, a section for narrative descriptions of the dive team and planned operations and concludes with a section on emergency procedures.

When: This document should be submitted to the LODO at least one (1) month prior to the beginning of the requested operation. This lead time is required to allow the NDCSB sufficient time to thoroughly review the plan and request clarification of any component which the Board has concerns about.

Record keeping: This document should be retained by the UDS until 24 hours after the completion of the requested dive(s).

Other considerations: This document should be accompanied by a standard <u>NOAA Dive Operations Plan</u> (NF 57-03-20) and a <u>Diving Emergency Assistance Plan (NF 57-03-21).</u>

	NOAA Form 57-03-29 U.S. DEPARTMENT OF COMMERC (01-17) Page 1 of 12 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION					
(01-17)	CLOSED CIRCUIT REBREATHER (CCR) DECOMPRESSION DIVING REQUEST					
PROJECT :	· · ·	331014 DIVING REQUEST				
DIVER SU	BMITTING REQUEST	DATE				
E-MAIL AI	DDRESS	PHONE NUMBER				
	For Decompression or Mixed Gas dives complete entire form and subr	mit to NDCSB through LODO/SODO				
Air Dilue	nt, No Decompression CCR Dives should use the standard dive plan (NOAA Form	n 57-03-20) and submit to ndp.diver	olans@no	oaa.gov.		
1.0	QUALIFICATIONS					
1.1	Certification and Authorization		Yes	No		
A.	Will all divers be trained and certified by an accredited diving association (e.g. TDI, IANTD) recognized by NOAA for the equipment, depth and gas mixtures to be used on this project?					
	——————————————————————————————————————					
B.	B. Will all divers be currently authorized to dive by the NOAA Diving Program (NDP) or another NOAA-approved reciprocity partner?					
C. Are all training certifications for NOAA divers on file at the NOAA Diving Center (NDC) and have reciprocity partner Letters of Reciprocity (LORs) been reviewed and approved by the UDS?						
1.2	Proficiency Requirements		Yes	No		
Α.	Will all divers have logged a minimum of 12 dives within a six month period pr	rior to the project start date?				
В.	B. Will all divers log a minimum of one (1) dive within the previous 30-day period prior to the project start date in the equipment configuration to be used (e.g. perform work-up dives)?					
2.0	EQUIPMENT					
2.1	General		Yes	No		
A.	In addition to a mask and fins, will all divers carry or wear the following equip	oment:				
1. Exposure suit?						
2. Buoyancy Compensator Device (BCD) (e.g. dual bladder wings or single bladder and dry suit)?						

3. Redundant lift bags and line reels? 4. Sufficient bailout gases to complete decompression? 5. Redundant NOAA-approved decompression computers using the Buhlmann 16 or the ZHL-16 GF algorithm? 6. Cutting Devices? 7. Signaling Devices? 15 March 2017, Page 108 Ver 31 January 2017

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3.0	BREATHING GASES and GAS MANAGEMENT		
3.1	Breathing Gases and Gas Management	Yes	No
A.	Will all breathing gases used be medical (USP) or aviator's grade?		
В.	Will all breathing mixtures to be used for diving be analyzed for oxygen and helium content using a mixed gas analyzer?		
C.	Is it understood that all breathing gases must test within acceptable parameters as specified in the dive tables or computers used?		
D.	Will all divers confirm the following information prior to commencing dive operations?		
	1. FO ₂ of his/her SCUBA cylinder(s).		
	2. PO ₂ cut off depth (MOD) and appropriate gas mixture(s) to be used for each phase of the dive.		
	3. Planned maximum depth and bottom time for the dive.		
	Availability of adequate volumes of bailout gas as calculated by using the diver's independent Respiratory Minute Volume (RMV) rate and by review of cylinder pressures.		
E.	Will the diver's primary bailout cylinder contain a gas that can be breathed at any depth for the planned dive?		
F.	Will all divers calculate and carry the required volume of breathing gases needed for each phase of the dive, plus reserves?		
G.	Will all gas systems, components, and storage containers used with oxygen mixtures above 40% by volume, be formally cleaned in accordance with the NOAA Diving Manual (most current Edition)?		
Н.	Will compressed air used with oxygen concentrations greater than 40% or when used in the preparation of nitrox breathing mixtures with greater than 40% oxygen as the enriching agent, meet or exceed CGA Grade E standards?		
4.0	MANNING REQUIREMENTS		
4.1	Bottom Divers	Yes	No
A.	Will there be a minimum of two (2) divers functioning as a buddy team?		
В.	If any members of the dive buddy team are open circuit divers, will they be trained how to respond to emergency procedures which include at a minimum how to read the CCR diver's PO2 (handsets and HUD), location and operation of O2 and diluent tank valves, location of pressure gauges, locations and operation of isolator valves, how to perform an open loop diluent flush, how to open/close the DSV, how to open the ORV and how to recover an unconscious CCR diver?		
C.	Will divers remain in such proximity to each other to render immediate assistance if necessary at all times during the dive - and if separated, initiate the standard separated buddy procedure?		
D.	Is it understood that the best practice is for two CCR divers to be paired together whenever possible and that if a CCR diver pairs with an open-circuit diver, the OC diver will at a minimum know how to read the CCR divers PO2 (on handsets and HUD), know how to perform an Open Loop Diluent Flush, how to recover an unconscious CCR diver and how to pipe in offboard gases?		
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5.0	CCR SPECIFIC CONSIDERATIONS		
5.1	CCR Specific Considerations	Yes	No
A.	Will all divers complete a new pre-dive checklist with two signatures in the following situations?		
	1. Prior to diving after any time that the unit has been disassembled.		
	2. Prior to diving any time after the sorbent, batteries or O2 cells have been changed.		
	3. Prior to all mixed gas or decompression dives		
	4. Any time it is suspected that the system integrity of the unit has been compromised.		
В.	Is it understood that a post-dive checklist will be completed in the following situations?		
	1. Any time the unit is to be disassembled.		
	2. When the sorbent is expired and needs to be changed.		
	3. After all mixed gas or decompression dives.		
C.	Is it understood that if a pre-dive checklist was not completed (in the case of multiple no-decompression dives on the same day) prior to diving the diver will at a minimum conduct a positive/negative pressure test of the loop and a positive pressure check of the BCD?		
D.	Is it understood that the diver will turn the gases on before they put the unit on and that they will turn the gases off prior to taking it off?		
E.	Is it understood that the diver will pre-breathe the unit for at least five minutes on the surface with their mask on/nose plugged prior to entering the water?		
F.	Is it understood that the diver will complete a "deck check" checklist prior to entering the water if a Diving Supervisor is not present to conduct final checks?		
6.0	DECOMPRESSION or MIXED GAS DIVING		
6.1	Science Support Divers	Yes	No
A.	Will Science Support divers be on site to support operations?		
В.	Will all Science Support divers be trained on how to respond to a CCR diver in an emergency and how to pipe gases into the CCR diver's rig?		
C.	Will the Science Support buddy team carry at least one cylinder of all bail out bottles being carried by the CCR divers?		
6.2	Bailout Cylinders	Yes	No
A.	Will all bailout bottles carried by the Science Support divers be configured with an open circuit regulator which has an isolation valve on the LP hose next to the second stage and which has a LP ORV on the first stage?		
В.	Will all first stages be configured with an LP inflator hose which can be attached to either the mixed gas bypass valve or the O2 manual addition valve?		

6.3	Operational Considerations	Yes	No
A.	Will there be a chase boat with a qualified coxswain onboard who is current in CPR, First Aid, Oxygen Administration and AED (when applicable)?		
В.	Will all operations be conducted within two hours of a chamber if there is not a chamber or Hyperlite on site?		
C.	Does the hyperbaric chamber meet American Society of Mechanical Engineers (ASME), American Bureau of Shipping (ABS), or equivalent standards?		
D.	If a portable hyperbaric stretcher will be used, will evacuation scenarios be demonstrated/practiced with a local Emergency Medical System (EMS)?		
E.	Will there be two standby divers, each of which is capable of reaching the bottom or one dedicated safety diver in the water?		
F.	Will all divers required to dive to the bottom for decompression dives be appropriately trained, experienced and outfitted to perform such dives?		
G.	Is it understood that the maximum depth for decompression using AIR diluent is 150 fsw?		
н.	Is it understood that the use of dive computers and/or computer-based decompression generating software program must be approved by the NDP?		
I.	Will all bailout gases used while performing in-water decompression contain the same or greater oxygen content than the bottom bailout mix?		
J.	Is it understood that at no time will the diver "stage" or otherwise remove their bailout bottles from their harness during a dive except in an emergency?		
6.4	Topside Considerations	Yes	No
A.	Is it understood that the on-site Diving Supervisor will determine the procedure for descending to the bottom (i.e., use of down-line versus 'free dropping')?		
В.	Will the Diving Supervisor remain at the surface at all times during diving operations?		
C.	Will the vessel/boat captain remain on the vessel/boat at all times during decompression operations?		
D.	Is it understood that the vessel/boat captain must concur with the Diving Supervisor on the commencement of diving operations and can terminate diving due to weather, vessel-related operational problems, or any other factors that may affect safety?		
E.	Is it understood that the Diving Supervisor and the Vessel Captain shall assess current and predicted weather conditions, sea state and current speed and direction and decide whether or not diving can be safely initiated?		
F.	Is it understood that the Diving Supervisor must approve any repetitive dives?		
G.	Is it understood that the procedures involved with ascending to the surface, i.e., use of ascent-line versus "drift decompression," must be approved by the Diving Supervisor?		
6.5	Diver Considerations	Yes	No
Α.	Is it understood that should any member of the bottom team get separated during descent and cannot locate each other within five (5) minutes of reaching the bottom, he/she will terminate the dive and begin ascent/decompression?		
В.	Will all bottom divers be able to signal topside personnel at all times during the dive?		

	CLOSED CIRCUIT REBREATHER (CCR) DECOMPRESSION DIVING REQUEST					
6.5	Diver Considerations (continued)	Yes	No			
C.	Will there be a signaling protocol established that allows the differentiation between routine and emergency situations?					
D.	Is it understood that no additional dives will be made until all members of the dive team have completed their in-water decompression and have been on the surface for a minimum of 30-minutes?					
7.0	EXPLANATIONS					
7.1	Explain all 'No' responses indicated above on this request.					
7.2	Provide a brief overview of the diving activities to be conducted.					

7.3	What are the goals, objectives, and tasks to be completed?
7.4	Provide the location and a description of where the dives will be conducted.
	· ·
7.5	Provide names, affiliations, roles/responsibilities, and qualifications of participants.
7.6	What are the scheduled dates for the operation?
7.7	Provide the name and contact information for the primary and secondary hyperbaric chambers to be indicated on the DEAP.
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CLOSED CIRCUIT REBREATHER (CCR) DECOMPRESSION DIVING REQUEST

8.0 APPROVALS and ENDORSEMENTS		
UNIT DIVING SUPERVISOR NAME	UNIT DIVING SUPERVISOR SIGNATURE	DATE
LINE/STAFF OFFICE DIVING OFFICER NAME	LINE/STAFF OFFICE DIVING OFFICER SIGNATURE	DATE

9.0 **CLOSED CIRCUIT REBREATHER / TECHNICAL DIVER CONTINGENCY PROTOCOLS**

9.1 Out of Gas, Onboard diluent cylinder

Bail out to depth-appropriate off-board gas or pipe in off-board gas from the depth-appropriate bailout cylinder. Notify the buddy, abort the dive and begin ascent conducting all decompression stops (if a decompression obligation has been incurred) while monitoring the gas supply of the bailout.

9.2 Out of Gas, Onboard oxygen cylinder

If conducting no-decompression dives and the onboard supply of oxygen is lost, bail out to off-board gas. If conducting decompression operations, pipe in the off-board oxygen bailout, manually add O₂ and monitor the PO₂. Notify the buddy, abort the dive and begin the ascent conducting all necessary decompression stops while monitoring the gas supply of the bailout.

9.3 Out of Gas, Lost bailout

The CCR diver should go to an on-bottom safety diver (for decompression operations) or a buddy with bailout gas properly configured for CCR response. Any failure from a diver's onboard oxygen supply would require a safety diver or properly configured CCR diver (decompression operations) to transfer an oxygen cylinder for attachment on the diver's harness and remain as a gas source during completion of decompression or until such time as additional bailout can be delivered. Any further bailout gas failure would warrant gas sharing of bailout mix through the offboard connector of a CCR buddy's bailout. If below the depth where support divers are present, an emergency lift bag or surface marker buoy should be launched with a message describing the problem so a support diver can descend with additional cylinders. If during the phase of the dive where support divers are present, divers shall communicate problem to an in-water support diver who shall acquire and deliver spare bailout to diver.

9.4 Gas Failure, Source of problem obvious (BOOM scenario - diluent oxygen)

If the diver can see where the leak is occurring, secure the flow of the affected gas supply by either isolating the ADV, or disconnecting the hose to the manual addition valve or the BC inflator. If the problem is not resolved, the diver will close the valve on the affected side. Either bail out or pipe in appropriate off-board gas (unless the problem is that valve). Immediately perform an open loop diluent flush if the PO₂ spikes. Notify buddy of problem and abort the dive.

9.5 Gas Failure, Source of problem not obvious (BOOM scenario - diluent oxygen)

If the diver cannot see where the leak is occurring, turn off both the diluent and oxygen valves. Immediately look at both pressure gauges and note on which gauge the pressure is falling. Leave the affected side closed and open the unaffected side, and check the handset for the PO2. If the gas loss occurred on the diluent side, pipe in off-board gas or bail out. If the gas loss occurred on the oxygen side, bail out immediately as hypoxia will ensue. In either case, notify buddy of problem and abort the dive. If there is concern over the amount of bailout gas available to reach the surface including decompression, pipe in oxygen from the diver's or the CCR buddy's oxygen bottle to the offboard connector or the oxygen manual addition valve.

NOAA Diving Program, UDS Manual

9.0 CLOSED CIRCUIT REBREATHER / TECHNICAL DIVER CONTINGENCY PROTOCOLS (continued)

9.6 Oxygen solenoid stuck open

If the oxygen solenoid is stuck open, as evidenced by the sound of oxygen being continuously injected into the head, immediately close the oxygen valve, and follow with an open loop diluent flush to bring down the PO₂ then check the handset for the PO₂ level. Feather (slowly open and close just enough to add oxygen to the breathing loop) the oxygen valve to maintain an appropriate PO₂. If an offboard cylinder of oxygen is available, it can be piped in via the offboard connector to the offboard valve, or the oxygen manual addition valve and oxygen can be manually added to the loop. If an appropriate PO₂ cannot be maintained, bail out to an appropriate offboard gas. In either case, notify the buddy of the problem and abort the dive. A slow oxygen leak past the solenoid may not be heard, instead, the leak may show up as increased buoyancy and slow PO₂ increase.

9.7 Oxygen solenoid stuck closed

If the oxygen solenoid is stuck closed, as evidenced by no sound of oxygen being injected into the head, first ensure that the oxygen valve on the tank is indeed open. If it is, leave the oxygen valve open and manually add oxygen to maintain an appropriate PO₂. If the oxygen valve is not open, turn it at least one (1) full turn and check to see if the solenoid is properly injecting oxygen. If an offboard cylinder of oxygen is available, it can be piped in via the oxygen manual addition valve or the offboard connector to the off-board valve and oxygen can be manually added to the loop. If an appropriate PO₂ cannot be maintained, bail out to an appropriate offboard gas. In either case, notify the buddy of the problem and abort the dive. In cold water, the solenoid may not be heard at all due to a thick hood and/or ambient noise. A solenoid stuck in the closed position may show up as a slow decrease in buoyancy and a falling PO₂ reading.

9.8 Partially flooded loop

If the Dive Surface Valve (DSV) is removed from the mouth while in the open position, the loop may partially flood. If this happens, either grab the loop overhead with a hand or use both hands to find the loop from the "T" pieces. Once located, put the DSV in the mouth and conduct a loop recovery maneuver. Open the Over-Pressurization Relief Valve (ORV) on the exhalation counterlung, blow into the DSV and simultaneously perform a diluent flush but do not breathe out through the nose. If this does not resolve the problem, bail out to an appropriate offboard gas, notify the buddy and abort the dive.

9.9 Totally flooded loop

A totally flooded loop is non-recoverable and if the diver continues to attempt to breathe off the loop they risk a "caustic cocktail." Anytime a gurgling sound is heard coming from the inhalation side of the loop, the diver tastes or smells carbon dioxide absorbent, experiences sudden increased breathing resistance, or experiences a sudden loss of buoyancy, suspect a flooded scrubber canister. If any of these scenarios occurs, immediately bail out to an appropriate offboard gas, notify the buddy and abort the dive.

9.10 Total electronics failure

While a total failure of electronics is possible it is not very likely. In the event that a diver experiences total electronics failure of a CCR, immediately bail out, switch the dive computer to open circuit, notify buddy, abort the dive and ascend following the appropriate decompression schedule.

9.0 CLOSED CIRCUIT REBREATHER / TECHNICAL DIVER CONTINGENCY PROTOCOLS (continued)

9.11 Hypoxia

Hypoxia can occur at a PO_2 of < 0.21 ATA. If the diver notices the PO_2 is low, DO NOT ASCEND until the situation has been corrected or unconsciousness can occur. Immediately perform a Diluent Flush maneuver. Check the handsets and the oxygen cylinder pressure and ensure that the oxygen valve is open. Consider the possibility that the solenoid may be stuck in the closed position and attempt to add oxygen manually. Consider also that the wrong gas may be in the oxygen cylinder, or that the cylinders are mounted reversed. If the problem is correctable continue in CCR mode, otherwise bail out, notify the buddy and abort the dive.

9.12 Hyperoxia

Hyperoxia can occur at a PO₂ of > 1.4 ATA. If the diver notices the PO₂ is too high, do not descend any further until the situation is corrected or unconsciousness can occur. Immediately perform a Diluent Flush to reduce the PO₂. Check the handsets and if the PO₂ continues to climb, consider that the solenoid may be stuck in the open position, the oxygen manual addition valve may be stuck or the internal fittings may be loose and bleeding into the rebreather head; if the oxygen manual addition valve is stuck, remove the low pressure hose from the valve. If the source of increased oxygen is a stuck solenoid or internal fitting leak, close the oxygen valve and turn it on and off (feathering) to maintain a PO₂ of 1.3. If a constant PO₂ cannot be maintained, bail out to the appropriate gas, notify the buddy and abort the dive. Hyperoxic oxygen convulsions will present themselves in two (2) phases. Phase 1 will place the diver in a state of convulsions, with no respiration, and the diver is likely to clinch their teeth which may serve to keep the DSV in the diver's mouth. In Phase 2 the diver will be relaxed and will start to hyperventilate (breathe fast). The second phase poses a significant risk of drowning if the DSV is allowed to fall out of their mouth.

9.13 Hypercapnia

Hypercapnia can occur if the carbon dioxide is not being properly scrubbed (breakthrough or pushing sorbent past its capacity to remove carbon dioxide), or if there is no scrubber canister in the rebreather. If the diver notices that they "do not feel right," carbon dioxide may be too high and, if the situation is not corrected, unconsciousness will occur. Immediately bail out to an appropriate gas and do not go back on the loop. Notify the buddy and abort the dive.

9.14 Unconscious CCR diver

A CCR diver should constantly be moving; if not, it could be an indication they are unconscious and may have succumbed to hypercapnia, hyperoxia or hypoxia. If you suspect the diver is unconscious, shake the diver to check. If no response is seen, approach the diver from the back, reach around with the right hand and keep the DSV in the mouth. Check the PO₂ to see what partial pressure is currently being displayed. If possible, perform a vigorous Diluent Flush. Get the diver to the surface as soon as safely possible. Once on the surface, close the DSV or the diver will immediately lose buoyancy if water enters the loop. If the diver regains consciousness, and a decompression obligation exists, consider lowering the setpoint and extending decompression time. If the DSV is not in the diver's mouth, close the DSV and get the diver to the surface as fast as is safely possible. If the diver is unconscious, and a decompression obligation exists, get the diver to the surface and return to the last missed stop and continue decompression with a buddy. Follow omitted decompression procedures by extending all stops shallower than 30 fsw by 1.5 times the originally scheduled time.

CLOSED CIRCUIT REBREATHER / TECHNICAL DIVER CONTINGENCY PROTOCOLS (continued) 9.0

9.15 "Caustic cocktail"

While some CCRs can tolerate a small amount of water in the system, depending on the location of the leak, the water-trapping capacity of the system may become overwhelmed. Signs of a flood include: gurgling in the inhalation hose, carbon dioxide absorbent smell or taste, increased breathing resistance, drop in temperature of inhaled gas, and loss of buoyancy. If any of these signs are present, immediately bail out to an appropriate gas, notify buddy and abort the dive. If the caustic cocktail entered mouth, rinse the mouth with surrounding water immediately. If the caustic cocktail was swallowed, drink fresh water, DO NOT attempt to neutralize with vinegar or other acids. If a caustic cocktail has been inhaled and/or burns are present, consider supplemental oxygen, and seek immediate medical treatment. If a caustic cocktail is not present, but the diver suspects some water has entered the loop (gurgling on exhalation) the diver can follow the procedures for a partially flooded loop.

9.16 Over-pressurization Relief Valve failure (OPRV)

If the ORV fails and will not vent gas from the counterlungs on ascent, vent excess gas through the mouth around the mouthpiece or through the nose.

9.17 **Omitted decompression**

If a bottom diver is asymptomatic, the diver must repeat all stops deeper than and including the 40 FSW stop. The diver shall multiply the 30 FSW, 20 FSW, and 10 FSW stop times by 1.5. The bottom diver shall maximize PO₂ by using the most hyperoxic gas appropriate for the depth without exceeding a PO₂ of 1.6 ATA. If a bottom diver is symptomatic, the diver must be placed on oxygen, hydrated, and evacuated to the nearest recompression facility.

9.18 Dive team unable to reach down-line

If a dive team is unable to reach the down-line during deployment, the divers shall abort the dive and return to the surface. The divers shall then be recovered to the primary support vessel and may elect to make a second drop.

9.19 Dive team separated during deployment

If a dive team finds themselves separated from their buddy(ies) during deployment, the divers should abort the dive after searching for team members for five (5) minutes and return to the surface. Divers will deploy a lift bag to signal to the surface support team and dive vessel(s). The divers shall be recovered to the primary support vessel and may elect to make a second drop.

9.20 Dive team separated on dive site

The Research (bottom) Divers will remain in constant contact (visual range and close enough to render immediate assistance) at all times during the dive. At no time during the dive (regardless of visibility), will the Bottom Divers be separated by more than fifteen (15) feet. Separated divers will perform a visual search for each other for one minute before returning to the base of the down-line. Once at the down-line separated divers will allow no more than four minutes to reunite. If the divers have not found one another within five (5) minutes they will abort the dive and head to the surface using appropriate ascent techniques and decompression procedures.

9.21 Dive team separated, swept off dive site

Upon separation of buddy pair, unable to locate each other, the divers should independently shoot a bag to the surface and commence their own decompression. Divers shall exercise normal decompression procedures, and expect to see Support Diver in the water above the manual

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9.0 CLOSED CIRCUIT REBREATHER / TECHNICAL DIVER CONTINGENCY PROTOCOLS (continued)

9.22 Dive team swept off dive site

Divers stay together; attempt to regain position on dive site and abort if necessary. If unable to return to the dive site, abort the dive and commence ascent under an inflated lift bag. Exercise appropriate decompression procedures.

9.23 Diver entanglement on bottom

Divers shall carry at least two knives and an additional cutting tool, either EMT scissors or a seatbelt cutter. If entangled, notify other diver(s) of problem. Evaluate the nature of entanglement and attempt to free self or signal buddy for assistance. If using the standby diver mode, separated from buddy and entangled without remedy, inflate bag to surface with penciled distress message on slate attached by snap hook to the bag. The standby diver from primary support vessel shall then enter the water and search for the entangled diver. The other diver, if separated and successfully decompressing on a lift bag, shall be accompanied by the Small Boat. Both vessels will maintain radio contact with each other, but the primary support vessel will remain with the entangled diver and the designated Diving Supervisor will monitor the situation topside. If using the on-bottom safety diver mode, given this contingency or similar difficulties in which a pair of divers will need to assist the expedition team at the bottom, the second dive team of the day (if available) will deploy to assist the entangled diver.

9.24 Dive team unable to locate ascent-line

Remain mindful of bottom time (BT). Divers can either shoot a lift bag on a reel to the surface and begin decompression ascent on the bag line, or, if adequate gas supply is available, take an additional five (5) minutes to search and extend to the next bottom time group. Divers must be on a line beginning ascent by five (5) minutes past original plan. Divers shall carry hard copies of planned decompression schedules and contingencies. Decompress according to the appropriate schedule or according to the diver computer. If divers come up on the bag line, surface support will shift to the divers' location, be they drifting or stationary. In the event of loss of ascent-line, divers will shoot a lift bag and commence a drifting ascent under the bag.

9.25 Buoy or down-line breakaway

Divers shall shoot a bag to the surface on a line reel then decompress on the line in the same manner as if unable to locate the down-line.

9.26 Dive team reaches surface, but dive support vessel is gone

Research (bottom) divers stay together upon reaching surface. Use appropriate signaling device to signal surface craft.

9.27 Change of environmental conditions during dive

In the time interval between the beginning of a dive and the completion of decompression, it is possible for environmental conditions to change sufficiently to require adjustment to the dive plan.

- A. Current Strength A significant increase in current strength during a dive will make it more difficult for the divers to decompress if they are using a fixed down-line, subjecting the decompressing divers to the full strength of the current. Divers should consider "drift decompression" to be the preferred method in strong currents.
- B. Surface Waves or Swell Height A significant deterioration of sea conditions will make it more difficult for the divers to decompress because the ascent-line (either a hard line anchored to the bottom or a drifting line suspended from a buoy) will rise and fall, sometimes violently, as the dive vessel strains on the line, if at anchor. Therefore, decompressing divers must take care not to hold to the ascent-line too tightly, especially on the shallower stops where the effect is most pronounced. In instances where there is significant movement of the ascent-line, divers should employ one or more lengths of "Jon line" to dampen the motion. One end of the Jon line is looped around the ascent-line and the other is clipped to the diver's "scooter ring." Otherwise the dive team should choose to use drift decompression.
- C. Visibility A significant decrease in visibility on the bottom will make it more difficult for the divers to work, but also might decrease the safety of the divers. Therefore, if the visibility decreases to less than ten (10) feet, the divers should consider terminating the dive.
- D. Water Temperature A decrease in water temperature, due to a deep-layer thermocline or to an alteration of current patterns, will affect diver comfort and, if significant, could affect safety. Divers should wear adequate thermal protection-a well-fitting wet suit and hood, or a dry suit. If water temperature decreases significantly, the dive should be terminated.

9.28 Initiation of subsequent dives

If any emergency arises while one team is in the water, a second team will not commence operations until the problem has been resolved and it has been deemed appropriate to make the second dive.

Annual Diver Training Record, NF 57-03-34

What: This form is used to record the completion of the annual training required for every NOAA Diver. The activities do not need to occur on the same day, but they must be completed once every twelve (12) months. When all activities are completed the form should be signed by the diver and the UDS.

When: This form is used to record training and other annual requirements for NOAA Divers at the unit. Items should be entered as they occur. This will avoid confusion from trying to remember the dates of activities weeks or perhaps months after the fact when the form is finalized and signed each year.

Record keeping: A digital or printed copy should be retained in the Unit files until the following year's training record replaces it.

Other considerations: This form is designed to allow the UDS to more easily track each unit diver's progress towards completion of the annual training requirements. There is no requirement to transmit this form to NDC, but it is very useful during triennial DUSA inspections to document that all training has occurred and the dates of completion.

NOAA Form 57-03-34 08-16)		_	_	COMMERCE ND ATMOSPHERIC ADMINISTRATION
•	DIVER TRAINI			
This form is used to record the completion of the an				
same day, but they must be completed once every to	velve (12) months. When all a	ctivities are	completed	d the form should be signed by the
diver and the UDS. A digital or printed copy should be DIVER LAST NAME	pe retained in the Unit files unti	l the follow	ving year's MI	training record replaces it. FINAL COMPLETION DATE
DIVER LAST IVAIVIE	DIVER FIRST IVAIVIE		IVII	FINAL COMPLETION DATE
DIVING UNIT NAME / LOCATION	UNIT DIVING SUPERVISOR	UNIT DIVING SUPERVISOR NAME		 VING SUPERVISOR SIGNATURE
TOPSIDE TRAINING		AN	│ INUAL R	EQUIREMENTS
(COMPLETE APPLICABLE ITEMS)	COMPLETION DATES			PLICABLE ITEMS)
NDP Standards, Policies & Procedures				COMPLETION DATES
Oxygen Administration		Ann	ual Medica	
Recognition & Treatment of Diving Injuries			Gear Inven	·
Rescue Techniques			ulator & BC	·
NOAA No-Decompression Tables		☐ Veri	ification of	Liability
Dive Accident Management (DM/LD only)		Cov	erage (con	tractors only)
Field Neurological Exam (DM/LD only)				
WATERMANSHIP ASSESSMENT (G	COMPLETE ONE, ALL ARE 500 m	n / 550 yd T	IMED SWIN	MS)
Bathing suit with mask/goggles, any stroke	(except backstroke) in 15 min.	D	rysuit with	mask, snorkel & fins in 15 min.
Bathing suit or wetsuit with mask, snorkel 8	fins in 12 min.	□ U	nderwater	in scuba gear and drysuit in 22 min.
Underwater in scuba gear and wetsuit in 16	min.			
TIME TAKEN TO	COMPLETE SWIM	COMPLE	TION DATE	
DIVE SKILLS CHECKOLLE (COMPLETE	All Notes and discontinuous for the second	. N. NI-		Control Control Control
DIVE SKILLS CHECKOUT (COMPLETE				
Pre-dive buddy check				rs (BCD & Drysuit)
Properly weighted			-	ace & bottom)
Buoyancy control		Buddy breathing to surface (as donor & recipient)		
Controlled descent / ascent rate		Air sharing to surface (as donor & recipient)		
U/W navigation and orientation		Weight belt remove / replace (surface & bottom) Drysuit roll outs & venting (if drysuit certified)		(surface & bottom)
U/W communication (hand signals)				
Mask removal, replace and clear Regulator recovery (3 methods)		nd use RAS		during dive
-		ontact and		
DIVER OBSERVING IN-WATER SKILLS			COMP	LETION DATE OF IN-WATER SKILLS

Assist panicked diver (surface & bottom) Emergency Oxygen & AED administration Assist unconscious diver (surface & bottom) In-water rescue breathing on unconscious diver Tow diver to exit point (3 methods) Extricate unconscious diver from water **DIVER OBSERVING RESCUE DRILLS**

NOAA Diving Program, UDS Manual

COMPLETION DATE OF RESCUE DRILLS

15 March 2017, Page 121

Report of NOAA Skills Evaluation Checkout Dive, NF 57-03-35

What: This form is used to record the results of checkout dives for new NOAA Divers and existing NOAA Divers whose proficiency has lapsed by more than six (6) months. There are sections describing the participants in the dive, location, conditions, equipment, pre-dive, skills demonstrated during the dive, post-dive, and a subjective assessment of the diver being evaluated. The UDS recommends recertification level (including an option for no certification), any restrictions and/or training requirements needed.

When: This form is used to record the activities of any checkout dive conducted at the unit for new NOAA Divers and existing NOAA divers whose proficiency has lapsed by more than six (6) months.

Record keeping: A copy is submitted to NDC via the Support.NDC@noaa.gov email address and a digital or printed copy should be retained at the unit for one (1) year. For current divers, it should be recorded in the Unit Log.

Other considerations: Certain skills may not be required, depending on the level of training of the diver being evaluated. For example, a diver in a tropical location who has never received dry suit training is not required to demonstrate dry suit skills. The alternate air source to the surface skill should be completed with an alternate second stage regulator and repeated with the RASS, if the diver has received RASS training.

NOAA Form 57-03-35 (08-16) Page 1 of 2			N/	ATIONAL OCE	ANIC AN	U.S. DEPARTMEN D ATMOSPHERIC A	
CHECKOUT DIVE SKILLS EVALUATION							
DIVER LAST NAME		DIVER FIRST NAME		M		DATE	
DIVING UNIT NAME		DIVING UNIT LOCATION	I	UN	NIT DIVIN	IG SUPERVISOR	
DIVE PLAN				l			
DIVE LOCATION			DIVE PLATFO	RM			
WATER TEMPERATURE (°F)	SURFACE (CONDITIONS					
DOTTOM DEDTILIET	POTTOMA	FINAS (NAINUITES)	VICIDILITY /FT	-1		CURRENT (VALOT	201
BOTTOM DEPTH (FT)	BOLLOW	FIME (MINUTES)	VISIBILITY (FT)		CURRENT (KNOT	5)
PRELIMINARY OBSERVA	TIONS						
Prior to commencing the checkout dive, the equipment used by the individual shall be inspected to ensure that it is in a safe/ operable condition. The individual should be diving with equipment that will be used during the project or operation. The dive plan and dive emergency assistance plan shall be reviewed with diver prior to dive. Diving Equipment Condition: Check that all diving equipment has been properly maintained. Verify gear chosen is adequate and diver is trained and authorized for use. (i.e. A diver must have attended an approved training course in the use of dry suits in order to use a dry suit on a checkout dive.) (Note Condition as either; P = Poor, S = Satisfactory, or E = Excellent)							
EQUIPMENT ITEM	MANUFAC	TURER / MODEL	CONI	DITION	LA	AST SERVICE	NOAA (N) or PERSONAL (P)
Regulator							
Alternate Air Source							
Pressure gauge							
Depth gauge							
Bottom timer							
Cylinder							
Buoyancy Compensator							
Wet suit / Dry suit							
Knife							
Fins							
Mask / Snorkel							
Pre-Dive Assessment Diving physical completed, reviewed and approved by NDC Observe set-up of equipment, note any fumbling or improper set-up Evaluate knowledge of equipment operation Is the individual physically fit and able to carry own equipment topside? Anxiety level (observe for unusual or questionable behavior) Determine if any deficiencies exist prior to commencing dive Evaluate judgment, motivation, and professional attitude Review safety protocols with diver (in water and topside) Select and discuss the characteristics of appropriate dive sites Review evaluation skills on surface prior to dive Verify that diving gear chosen and diving technique are adequate and authorized for use							

CHECKOUT DIVE SKILLS EVALUATION

DIVER SKILL EVALUATION								
Assess diver ability on execution of skills relative to performance of tasks required for project/diving operations. Make objective observations. (Note Skill as either; U = Unsatisfactory, N = Needs Improvement, S = Satisfactory, or E = Excellent)								
Physical condition		Surface kick (flutter	· / scissors)					
Swimming ability		Snorkeling skills (clearing at surface)						
Equipment knowledge / set-up			vancy compensator (surface & bottom)					
Water entry		Regulator recovery						
Weighted properly		Clearing flooded mask						
Free dive with mask and snorkel		Mask removal, replacement, and clearing						
Buoyancy control at surface		Buddy breathing to the surface						
Buoyancy control at mid-water o	lepth	Alternate air source						
Buoyancy control at bottom dep			al / replacement (surface & bottom)					
Controlled ascent / descent rate		Dry suit roll out and	_					
Underwater communication (ha			nect inflators (BC / Dry suit)					
Underwater navigation / orienta Buddy check	tion		ms gas mixtures used during the dive awareness during the dive					
Buddy Clieck			ipment and site clean-up					
POST DIVE ASSESSMENT Critique judgment, motivation, professional Indicate deficiency areas: RECOMMENDATIONS		of diving tables.						
Should the diver be recertified?	☐ YES (at same level)	YES (at lower level)	NO (requires refresher training)					
Certification level of:	☐ TRAINEE	□ OBSERVER	□ NOAA DIVER					
	☐ DIVEMASTER							
Certification Restrictions:								
Training requirements:								
EVALUATED BY		TITLE						
SIGNATURE			DATE					
Submit this form and the last six Monthly Div Diving Center for diver recertification.	e Logs (NOAA Form 57-03-	24) or a Diving Activity Resume (N	OAA Form 57-03-41) to the NOAA					

NOAA Diver Skills Checkout Checklist, NF 57-03-36

What: This form is used by a UDS or other NOAA Diver who has received NOAA Dive Trainer training and is authorized to conduct initial training for a certified diver entering the NOAA Diving Program. This initial skills checklist should be completed over four separate sessions in a pool or confined water area. It includes the initial swim test, a series of individual and buddy skills, and dive rescues.

When: A copy is submitted to NDC via the Support.NDC@noaa.gov email address along with supporting documents when a prospective NOAA Diver has completed all required training and a request for a Letter of Authorization to Dive is submitted to the Diving Program Manager.

Record keeping: A digital or printed copy should be retained at the unit in the diver's file until they leave the Diving Unit.

Other considerations: There are many ways to perform several of these skills, however UDSs must ensure prospective divers perform these skills in accordance with the preferred NOAA method as demonstrated in the training videos provided to all UDSs and NOAA Dive Trainer.

There are several other documents which must be included with requests for a Letter of Authorization to Dive. These include: a letter from the NDMO affirming fitness to dive; copies of recreational, military or educational diving certifications; copies of current CPR, First Aid, AED and Oxygen Administration certificates; NDP Liability Release and Assumption of Risk (NF 57-03-09); the NOAA Diver Training Course Student Evaluation Record (NF 57-03-37); the Swim Test Evaluation (NF 57-03-39); the Diving Activity Resume (NF 57-03-41); and the SEP Measurement Form (NF 57-03-65).

NOAA DIVER SKILLS CHECKOUT CHECKLIST

STUDENT NAME	LINE OFFICE	UNIT				
NOAA DIVER TRAINER NAME	LINE OFFICE	UNIT				
TRAINING SESSION - 1 (Demonstrate skills in pool of	PASS	DATE				
1. Swim 550 yards (500 meters) ¹						
2. Swim 25 yards underwater ²						
3. Tread water for 30 minutes on surface ³						
TRAINING SESSION - 2 (Demonstrate skills on pool	deck or in pool)	PASS	DATE			
1. Equipment setup and donning with buddy ⁴						
2. Pre-dive safety check ⁴						
3. Giant stride entry ³						
4. Forward roll entry ³						
5. Backward roll entry ³						
6. Controlled seated entry ¹						
7. Buoyancy check and weight adjustment⁵						
8. Regulator - snorkel exchange while swimming ¹						
9. Descent ⁶						
10. Maintain neutral buoyancy at depth ⁶						
11. Ascent ⁶						
12. Remove, replace and clear mask ⁶						
13. Remove, recover and replace regulator using swee						
14. Remove, recover and replace regulator using tank						
15. Remove and replace weight belt at surface ¹						
16. Remove and replace scuba unit at surface ³						
17. Remove and replace weight belt underwater ⁶						
18. Remove and replace scuba unit underwater ⁶						
19. Share air with alternate air source inflator as dono	r ⁶					
20. Share air with alternate air source inflator as receive	ver ⁶					
21. Buddy breathe as donor ⁶						
22. Buddy breathe as receiver ⁶						
23. Controlled emergency swimming ascent (diagonal)	6					
24. Controlled emergency swimming ascent (vertical) ⁶						
25. Buoyant emergency swimming ascent simulation (vertical) ⁶					
26. Self rescue using Reserve Air Supply System (RASS)	6					
27. Runaway buoyancy compensator device/drysuit in	flator response ⁵					
28. No mask drills ²						
29. Breathing from freeflowing regulator⁵						
30. Air turned off drill ⁵	30. Air turned off drill ⁵					
31. Water exit ¹						
32. Equipment shutdown, disassembly and maintenan	ce ¹	15 March 2017, Pa	age 126			

KEY

¹Skill performed at the surface

⁴Skill performed out of water (e.g., pool deck, pier or vessel)

²Skill performed underwater at any depth

⁵Skill performed in water depth shallow enough to stand in

³Skill performed at surface in water depth too deep to stand in

10. Extricate an unconscious diver from the water³

9. Tow and perform in-water rescue breathing for an unconscious diver³

⁶Skill performed underwater in depth too deep to stand in

AUTHORIZATION

The student named above has satisfactorily demonstrated all the skills listed per criteria outlined in the NOAA Trainer Guide.

NOAA DIVER TRAINER NAME	NOAA DIVER TRAINER SIGNATURE	DATE
NOAA Diving Program, UDS Manual	15 March 2017, Pa	ge 127

NOAA Diver Training Course, Student Evaluation Record, NF 57-03-37

What: This is a checklist for all of the requirements needed for a diver to become a NOAA Diver. It covers the prerequisites, the exam scores, and the in-water skills.

When: This document is submitted to the Dive Program Manager, along with supporting documentation, when all requirements have been met. It should be submitted via the support.ndc@noaa.gov email address.

Record keeping: A digital or printed copy should be retained at the unit in the diver's file until they leave the Diving Unit.

Other considerations: The other documents which must be included with requests for a Letter of Authorization to Dive. These include: a letter from the NDMO affirming fitness to dive; copies of recreational, military or educational diving certifications; copies of current CPR, First Aid, AED and Oxygen Administration certificates; the NDP Liability Release and Assumption of Risk (NF 57-03-09); the NOAA Diver Skills Checkout Checklist (NF 57-03-36); the Swim Test Evaluation (NF 57-03-39); the Diving Activity Resume (NF 57-03-41); and the SEP Measurement Form (NF 57-03-65). The SEP Measurement Form (NF 57-03-65) is not needed if the diver candidate is a contractor and does not wish to participate in the Standardized Equipment Program. If Divers will be participating in the SEP program indicate in the Comments section the type of exposure suit they will need; 3mm, 5mm, or 7mm full wetsuit, and/or drysuit.

NOAA Form	57-03-37
(12-14)	

U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NOAA DIVER TRAINING COURSE STUDENT EVALUATION RECORD

STUDENT NAME	LINE OFFICE	UNIT
NOAA TRAINER NAME	LINE OFFICE	UNIT

PREREQUISITES

Req	uirements	✓
1.	Training request approved by supervisor	
2.	Diving physical approved by NOAA Diving Medical Officer	
3.	Copies of scuba certification	
4.	Copies of current CPR, First-Aid, AED and oxygen delivery training	
5.	Copy of diver resume verifying minimum logged dives	

FINAL WRITTEN EXAMINATIONS (Minimum passing score is 80%)

Sub	ject	Exam A / B	Score	Date
1.	Physics		%	
2.	Physiology		%	
3.	Hazardous Aquatic Life		%	
4.	Equipment		%	
5.	Standards and Regulations		%	
6.	Diving Skills and Techniques		%	
7.	Dive Planning and U.S. Navy Dive Tables		%	

WATER SKILLS

Skil			Pass	Date
1.	Swim Eval			
2.	Basic SCUBA Skills	(Pool)		
3.	Basic SCUBA Skills	(Open Water)		
4.	Rescue Skills	(Pool)		
5.	Rescue Skills	(Open Water)		

AUTHORIZATION

The student named above has satisfactorily demonstrated all the skills and knowledge required by						
the NOAA Diving Program for certification as a NOAA Diver.						
NOAA TRAINER NAME	A TRAINER NAME NOAA TRAINER SIGNATURE DATE					

Training Request and Authorization Form, NF 57-03-38

What: This form is the initial request for a prospective diver to attend a NDC training class. It includes applicant information, course selection, and approvals from the applicant's direct supervisor and UDS. The accounting codes used to charge the unit for the training are also required.

When: This form should be submitted via the <u>Support.NDC@noaa.gov</u> email address no less than sixty (60) days prior to the beginning of the Module 1 training class.

Record keeping: A digital or printed copy should be retained at the unit in the diver's file until they leave the Diving Unit.

Other considerations: The costs of the various classes occasionally fluctuate, therefore the form does not list costs. Current costs may be obtained from NDC via the Support.NDC@noaa.gov email address.

This form requires the applicant to include copies of certifications for CPR, AED, and First Aid. These must be current through the end of the training class(es).

There are other documents which must be submitted before a prospective diver will be admitted to training classes. These include: a letter from the NDMO affirming fitness to dive; copies of recreational, military or educational diving certifications (not a prerequisite, but include if applicant has prior dive training); copies of current safety training certifications (CPR, AED, First Aid and Oxygen Administration); NDP Liability Release and Assumption of Risk (NF 57-03-09); the Swim Test Evaluation (NF 57-03-39); the Diving Activity Resume (NF 57-03-41) if beginning class with Module 2 or 3; and the SEP Measurement Form (NF 57-03-65). If Divers will be participating in the SEP program indicate in the Comments section the type of exposure suit they will need; 3mm, 5mm, or 7mm full wetsuit, and/or drysuit. Note: many diving certification cards contain the diver's date of birth, this is considered personally identifiable information (PII) and should be blacked out before sending through email unless encrypted email is used.

NOAA DIVING PROGRAM TRAINING REQUEST AND AUTHORIZATION							
This form will be used to identify prospective students for NOAA Diving Program classes. Submission of this form does not guarantee acceptance into a particular course. Incomplete forms may be returned to the applicant.							
APPLICANT INFORMATIO		ioc into a partio	war course. Weemprete to the			·	
NAME (Last, First MI)						UDENT TYPE Check one)	
NAME of AGENCY / EMPLOYER					○ NOA	A EMPLOYEE	
WORK ADDRESS					○ NOA	A CONTRACTOR	
PHONE NUMBER	FAX NUMBER		E-MAIL ADDRESS		Non	-NOAA EMPLOYEE	
TRAINING JUSTIFICATION	I I (Non-NOA	A personnel c	nnly)				
		-					
COURSE and PAYMENT IN	NFORMATIO	N					
COURSE NAME		COURSE ST	TART DATE	COURSE EN	D DATE	COURSE FEE	
NOAA Diver (Select	Module)					\$	
O Mod	dule 1	Module 2 (○ Module 3 ○ Modu	ule 1 & 3 🔘) Module 2 & 3		
Oivemaster						\$	
O Dive Medical Techn	ician					\$	
NOAA Diver Refresh	ner (Module 2)					\$	
Tethered Communi	cations					\$	
0						\$	
NOAA ORGANIZATION ACCOUN	ITING CODE	NOA	A PROJECT-TASK CODES		TOTAL COST >>>	\$0	
NOTES: Travel costs are the resp start date. Payments for Non-No If attending Module 3 please	OAA students r	nay be made by	check made out to NOAA Divi	ing Center. NO	AA students will be		
If participating in SEP will you be taking a drysuit with you? What type of drysuit do you require? Will you be taking the two piece 7mm suit used during training with you back to your unit. YES NO One piece wetsuit options in place of 7mm two piece: 3mm 5mm 7mm CPR, AED and FIRST-AID Certification - Include a copy of your certification cards with this form. Certifications must be valid							
though Course End Date.							
AUTHORIZATION			ADDUGANT GLOVATURE			DATE	
APPLICANT NAME			APPLICANT SIGNATURE			DATE	
SUPERVISOR NAME		SUPERVISOR SIGNATURE			DATE		
UNIT DIVING SUPERVISOR NAME			UNIT DIVING SUPERVISOR SIGNATURE			DATE	
SUBMISSION INSTRUCTIONS							
Submit this form to NDC electro forwarded to NDC directly from Signatures are required if the fo	the e-mail acco	ount of the emp					

E-mail the form to:

Support.NDC@noaa.gov Subject line: Training Request

Swim Test Evaluation, NF 57-03-39

What: This form documents one of the prerequisites for participating in any NOAA dive training, the initial swim test. It is required whether the applicant is enrolling in NDC Dive Training classes or training is being conducted locally by a UDS who has completed the NOAA Dive Trainer program.

When: If enrolling in a NDC Dive Training class, the form is submitted as part of the application. If participating in local training, the form is submitted as part of request for a Letter of Authorization to Dive after the completion of training. In both cases the form is submitted to NDC via the Support.NDC@noaa.gov email address.

Record keeping: A digital or printed copy should be retained at the unit in the diver's file until they leave the Diving Unit.

Other considerations: The prospective diver <u>must</u> complete the diving physical or receive clearance from a physician before attempting the swim test. When administering this swim test an AED, O2 kit and First Aid kit must be on site or available at the testing location.

There are other documents which must be submitted before a prospective diver will be admitted to NDC Dive Training classes. These include: a letter from the NDMO affirming fitness to dive; copies of recreational, military or educational diving certifications (not a prerequisite, but include if applicant has prior dive training); copies of current safety training certifications (CPR, AED, First Aid and Oxygen Administration); NDP Liability Release and Assumption of Risk (NF 57-03-09); the Training Request and Authorization Form (NF 57-03-38); the Diving Activity Resume (NF 57-03-41); and the SEP Measurement Form (NF 57-03-65).

OAA Form 57-03-39 U.S. DEPARTMENT OF NATIONAL OCEANIC AND ATMOSPHERIC ADM						
SWIM TEST EVALUATION						
		EVALU				
VING CANDIDATE LAST NAME	FIRST NAME		MIDDLE II	NITIIAL	DATE OF TEST	
INSTRUCTIONS: Rate the diving candid and Safety Manual. Watermanship of to must be verified prior to arrival at the for certification requirements. Person during the first day of pool work.	the diving cand NOAA Diving C	idate, which enter (NDC)	shows a noticeable for upcoming training	degree of ng or as pa	confidence, rt of review	
Watermanship Criteria						
1. UNINTERRUPTED SURFACE SWIM without stopping, using the front craw					(500 meters)	
Time (mm:s	ss) required t	o complete	the 550 yard sw	vim:		
2. UNDERWATER SWIM - The diving of surfacing and without the use of fins.					ithout	
25 yard	d underwate	r swim com	pleted successfu	ılly:		
3. THIRTY (30) MINUTE FLOAT - The of flotation aids.	diving candidate	e must tread	water for 30 minut	es without	the use of any	
	30 minut	e float con	npleted successfu	ılly:		
All skills must be successfully demons swim be completed first, followed by minute rest period is recommended b	the uninterrupt	ed surface s				
The diving candidate's swimming abili	ity is:	Poor	○ Satisfacto	ry O	Excellent	
UNIT DIVING SUPERVISOR / DIVEMASTER NAME	-	ORGANIZAT	TION / DIVE UNIT	•		
UNIT DIVING SUPERVISOR / DIVEMASTER SIGNATI	URE	TELEPHONE	NUMBER	DATE		

Return the evaluation to NDC upon completion of the test or include this form with certification packet. Submit forms via Email to Support.NDC@noaa.gov

NOAA Diving Center, 7600 Sand Point Way N.E., Seattle, WA, 98115

FAX: (206) 526-6506 Phone: (206) 526-6196

Reset Form

Annual Watermanship Assessment, NF 57-03-40

What: This form should be completed annually for all divers in the Diving Unit. It documents the annual watermanship test, which consists of a timed swim. There are six options for the swim, they are all 500 m (550 yds), but the equipment worn and the allowed times vary.

When: This form should be completed at the completion of the timed swim.

Record keeping: A digital or printed copy should be retained at the unit for one (1) year and recorded in the Unit Log.

Other considerations: When administering the assessment an AED, O2 kit and First Aid kit must be on site or at the testing location.

NOAA Diving Program Annual Watermanship Assessment

Name of Diver	Date of Test
NOAA Scientific and Working Diving Star	tion of the NOAA Diving Program Annual Watermanship Assessment. As described in the ndards and Safety Manuals, all NOAA divers must pass this assessment on an annual basis in shall be completed, signed and filed on site at the diver's unit.
Please indicate which swim test option v	was completed:
500 m in bathing suit and	mask/goggles using any stroke (except backstroke) in 15 minutes.
500 m in bathing suit with	h mask, snorkel & fins in 12 minutes.
500 m in wetsuit with ma	ask, snorkel & fins in 12 minutes.
500 m in drysuit with mas	sk, snorkel & fins in 15 minutes.
500 m underwater in scul	ba gear and wetsuit in 16 minutes.
500 m underwater in scul	ba gear and drysuit in 22 minutes.
Time Allowed to Complete Swim	Time Taken to Complete Swim
Signature of Diver	
Name of Witness (UDS or Designee)	
Signature of Witness (UDS or Designee)	
Organization / Diving Unit	
NOAA Diving Program, UDS Manual	15 March 2017, Page 135

Diving Activity Resume, NF 57-03-41

What: This form documents previous diving activity by a diver wishing to join the NOAA Diving Program. It may also be used to summarize NOAA dives for reciprocity purposes or requesting Advanced NOAA Diver or Master Diver designations. It contains information on the diver, diving certifications, safety certifications, breakdowns of dives by year, depth, and conditions, questions about diving incidents, references, and areas for comments.

When: If enrolling in NDC Dive Training Module 2 or 3, the form is submitted as part of the application. If participating in local training, the form is submitted as part of request for a Letter of Authorization to Dive after the completion of training. In both cases the form is submitted to NDC via the Support.NDC@noaa.gov email address.

Record keeping: A digital or printed copy should be retained at the unit in the diver's file until they leave the Diving Unit.

Other considerations: There are other documents which must be submitted before a prospective diver will be admitted to NDC Dive Training or local Dive Unit classes. These include: a letter from the NDMO affirming fitness to dive; copies of recreational, military or educational diving certifications (not a prerequisite for NDC Dive Training, but include if applicant has prior dive training); copies of current safety training certifications (CPR, AED, First Aid and Oxygen Administration); NDP Liability Release and Assumption of Risk (NF 57-03-09); the Training Request and Authorization Form (NF 57-03-38); the Swim Test Evaluation (NF 57-03-39); and the SEP Measurement Form (NF 57-03-65). Note: many diving certification cards contain the diver's date of birth, this is considered personally identifiable information (PII) and should be blacked out before sending through email unless encrypted email is used.

NOAA Form 57-03-41 U.S.DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (08-13) Page 1 of 2 **DIVING ACTIVITY RESUME DIVER INFORMATION** APPLICANT NAME (Last, First MI) DATE POSITION HELD ORGANIZATION MAILING ADDRESS CITY STATE ZIP E-MAIL ADDRESS WORK PHONE WORK FAX NAME of SUPERVISOR / CONTACT PHONE DIVING CERTIFICATIONS – Attach copies of all certifications listed below. Certification Level / Depth Organization Date Location **Diving Instructor** MEDICAL CERTIFICATIONS – Attach copies of all certifications listed below. Agency Level Date (initial) Date (current) CPR First-Aid O₂ Admin **EMT DMT** Other **DIVING ACTIVITY** Number of years diving Date of last dive Total number of dives Total hours under water Greatest depth of any dive Greatest depth in the past 12 months Number of dives in the past 6 months Number of dives in the past 12 months

61 - 100' fsw

DIVING DEPTHS – Indicate cumulative number of dives by depth, by year. Indicate most recent year first.

31 - 60' fsw

Date of last Nitrox / Trimix dive

101 - 130' fsw

0 - 30' fsw

Date of last Dry-Suit dive

YEAR

Deeper than 130' fsw

DIVING ACTIVITY RESUME

EXPERIENCE – Indicate the number of dives for each type of diving experience listed below. If zero, leave blank.								
	Fresh Water	Visibility >	20'	Dec	compression		Search	& Recovery
	Salt Water	Visibility =	5 – 20 '	Sat	uration		Photog	raphy / Video
	Blue Water	Visibility =	1-5'	Clo	sed Circuit		Naviga	tion
	Rivers	Visibility <	1'	Sur	face Supplied		Salvage	e / Lift Bag
	Dive Chamber	Visibility =	0	Dry	Suit		Ship Hu	ısbandry
	Dive Habitat	Water Ten	np < 50°	Nit	rox		From S	mall Boat
	Lockout	Water Ten	np = 51 - 70°	Hel	iox		Shore /	Beach Entry
	Night Diving	Water Ten	np > 71°	Trir	nix		Heavy S	Surf Entry
	Coral Reef	Current <	1 knot	Div	e Computer		Pier / D	ock Entry
	Kelp	Current =	1 – 3 knots	Alti	tude (> 1000')		Underv	vater Assembly
	Ice Diving / Polar	Current >	3 knots	Res	search / Survey		Recrea	tional Sport
	Under Ice	Depths > 1	.30'	Cor	ing / Collecting		Instruc	tional
	Wreck Penetration	Drift Divin	g	Cor	mmercial Diving		Observ	ational
	Cave Penetration	Skin / Free	Diving	Mil	itary Diving		Life Sav	ving
	aphical locations of diving exp							
SELF ASSESSMENT – State objectives and intent for NOAA Diving Program certification.								
	ou ever run out of air during						YES	O NO
	ou ever been treated in a hyp						YES	O NO
	ou ever experienced symptor						YES	O NO
	ou ever experienced a pulmo						YES	O NO
	able incident or accident repo						YES	O NO
	REFERENCES – Provide at leas			with your o		nd abil		
NAME		ORGANIZATION L		LOCATION	PHONE			
NAME		ORGANIZATION	N		LOCATION	PHONE		
NAME		ORGANIZATION LOC		LOCATION		PHONE		
VERIFI	CATION – I have reviewed and	d found this	resume to be	a thorough	and honest repres	entatio	on of my	diving history.
APPLICAN			APPLICANT SIGN				DATE	•
UNIT DIVING SUPERVISOR NAME UNIT DIVING SUPERVISOR SIGNATURE					DATE			

Report of Physical Examination, NF 57-03-50, NF 57-03-51, NF 57-03-52

What: These three forms are used to report a diver's health status to the NDMO. One form (NF 57-03-50) is a checklist to ensure all the required tests have been conducted and the reports included in the submission packet. The second form (NF 57-03-51) is a self-reported medical history consisting of a series of yes/no responses concerning numerous medical conditions (explanations required for affirmative responses). The third form (NF 57-03-52) is to be completed by the medical professional conducting the physical examination. It consists of basic vital signs, a general clinical exam, a neurological exam, laboratory exams and explanations of any abnormalities.

When: These forms are submitted to the NDMO by diver candidates before participating in any NOAA Diving Program training and by current NOAA Divers on a periodic basis based upon age (every five [5] years for divers under forty [40], every two [2] years beginning at age fifty [50] and annually after reaching age sixty [60]). These forms contain Personally Identifiable Information (PII) and are covered under the Health Insurance Portability and Accountability Act (HIPAA), transmittal to the NDMO should be done using a secure file transfer via the DMO@noaa.gov email address or through the NDMO fax line, (206) 529-2759.

Record keeping: None at the Dive Unit level.

Other considerations: These forms contain medical information protected under HIPAA and as such are confidential. The UDS is encouraged to consult with diver candidates and divers to ensure the forms are filled out correctly and all required supplemental information is included before they submit the forms to the NDMO. The checklist (NF 57-03-50) is particularly helpful in ensuring completeness. The transmission of HIPPA covered information should be done via encrypted file transfer protocol or by fax.

NO/ (03-	AA Form 57-03-50			NATIONAL OCI		EPARTMENT OF COMMERCE OSPHERIC ADMINISTRATION
(03	13)					OSITIENIC ADMINISTRATION
				ATION CHECKLIS	-	
		AND AL	JTHORIZ	ATION TO DIVE		
LAS	T NAME	FIRST NAME		MIDDLE NAME	DATE	of BIRTH
UNI	T DIVE SUPERVISOR NAME			UNIT DIVE SUPERVISOR E-	-MAIL ADDRESS	
DIV	T LINUT			DUTY STATION LOCATION		
DIVI	<u>E UNIT</u>			DUTY STATION LOCATION	<u>.</u>	
TYP	E of EXAMINATION – Cross out	non-applicable section	ıs			
	INITIAL (39 and younger)	☐ INITIAL (40 and	older)	PERIODIC (39 and yo	unger)	PERIODIC (40 and older)
	mplete Sections 1 and 2	Complete Sections		Complete Sections 1 and	_	plete Sections 1, 3 and 4
Di	iver shall fill in all information a	bove and complete all	fields on Form	57-03-52 Report of Medica	l History - Diver ((attached). Print all
	orms and take to the examination yield the common contract of the contract of					, .
μı	iysical examination and div	mig certification. Subm	iit packet via si	ecure file transfer to Divio	Pridad.gov di FAA	X. 200-329-2739.
Sec	tion 1. All INITIAL and Pl	ERIODIC EXAMINA	TIONS must	include the following	reports and t	est results
	NOAA Form 57-03-51	Report of Physical	Examinatio	n – Diver		
	NOAA Form 57-03-52	Report of Medical	History – D	ver		
	Complete Blood Count	(CBC)				
	Complete urinalysis					
	Near and distant visior	n tests – results				
Soc	tion 2. All INITIAL EXAM	INATIONS must in	cludo thoso	additional tost results		
360	Spirometry test – resul			additional test results		
	Audiogram – results ar					
	Chest X-ray interpretat	· · · · · · · · · · · · · · · · · · ·	st 24 months	(no films)		
	11			(110 111110)		
Sec	tion 3. All 40 and OLDER	EXAMINATIONS r	nust include	these additional test	results	
	12-Lead resting EKG –	results and interpr	etation			
	Lipid screening – total	cholesterol, HDL, I	LDL, and trig	lycerides		
	Hemoglobin (HgA1c) o	r fasting glucose s	creening			
	4 411 25212212574			1 1111 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
Se	ction 4. All PERIODIC EXA			•	KERS ONLY)	
	Spirometry test – resul	its and interpretat	ion (SIVIORE	RS UNLY)		
API	PLICANT CERTIFICATION:	:				
I ha	ave reviewed the attache	d medical informa	tion and co	nsider the application	package to be	e complete.
APP	LICANT NAME		APPLICANT S	GNATURE		DATE
			•			•
_	AA DIVING MEDICAL OF ave reviewed the attache		tion and hav	ve found the applicant	named abov	e to he
	Medically cleared					NOAA diving duty
		TOT NOAA GIVING C			y cicuieu ioi	
DIVI	ING MEDICAL OFFICER NAME		DIVING MED	CAL OFFICER SIGNATURE		DATE

REPORT OF MEDICAL HISTORY – DIVER

Instructions to the Applicant:

The purpose of completing NOAA Form 57-03-52, Report of Medical History – Diver, is to obtain medical data for determination of medical fitness for diving with the NOAA Diving Program (NDP). Disclosure of any and all information is purely voluntary; however, failure to provide the requested information will result in a delay or possible rejection of your application to dive or continuation to dive with the NDP.

Provide all information requested in blocks 1-9. If you do not have a middle name, leave block 1c blank. Please provide all phone numbers and e-mail addresses requested in block 5. At least one phone number must be provided. Provide complete and detailed information in blocks 10 and 11. If you do not take any medications or you do not have any allergies, indicate "None" in the appropriate block. Check either "Yes" or "No" for blocks 12 through 81 and 83, except men shall leave block 81 unchecked. Provide complete and detailed information in blocks 82a through 82c and blocks 84 through 86 as indicated.

Certify your responses as true and complete in block 87 then provide the form to the medical provider or examiner. The examiner must complete blocks 88 through 89 as part of the Physical Examination.

The examiner that provides the physical examination must be a Medical Doctor (MD), a Doctor of Osteopathy (DO), a Nurse Practitioner (NP), or a Physician's Assistant (PA). In addition to the Report of Medical History – Diver, provide the examiner a NOAA Form 57-03-51, Report of Physical Examination – Diver.

Use NOAA Form 57-03-50, Medical Evaluation Checklist, to ensure all required laboratory tests, diagnostic studies, and required documentation are completed. It is the applicant's responsibility to make sure that the examiner provides all of the required tests and records the results as indicated on each of the forms listed above. All above laboratory tests and diagnostic studies as well as the medical history and physical examination must be performed within the previous 12 months with the exception of the chest x-ray which must be performed within the previous 24 months.

Upon compilation of all required documentation, submit the original results and forms with original signatures to the NOAA Diving Medical Officer (DMO) at the NOAA Diving Center. Final determination for fitness for diving will be made by the NOAA Diving Program.

For questions, contact the NOAA Diving Medical Officer at (206) 526-6474.

Submission of medical qualification documentation must made by one of the following methods;

Preferred method: E-mailed to: DMO@NOAA.GOV

Subject: Report of Physical Examination – Diver (Last name of diver)

Please use secure file transfer such as Secure Zip or Accellion File Transfer

Or

Second preference: Fax to: 206-529-2759

Attn: NOAA Diving Medical Officer

Or

Third preference: Mailed to: NOAA Diving Medical Officer (DMO)

NOAA Diving Program 7600 Sand Point Way NE Seattle, WA 98115

NOAA Form 57-0				N		J.S. DEPARTMENT OF		
(03-15) Page 2					IATIONAL OCEANIC AND	ATMOSPHERIC ADM	INISTRA	ATION
	REPORT O	F ME	DICA	AL HISTO	RY - DIVER			
1a. LAST NAME	1b. FIRST NAME	1c. MI	DDLE N	AME	2. DATE of BIRTH	3. DATE		
4a. WORK ADDR	ESS				4b. BEST CONTACT PH	IONE NUMBER		
					4c. WORK E-MAIL ADD	DRESS		
5. STATEMENT O	F PRESENT HEALTH				6. AGE	7. GENDER		
					8. HEIGHT	9. WEIGHT		
					(inches)	(pounds)		
10. CURRENT PR	ESCRIPTION and NON-PRESCRIPTION M	EDICATIO	NS		11. ALLERGIES (List all	insect bites / stings,	oods a	nd
(Indicate dos	age, frequency and condition being trea	ated)			medicines) Do you car	ry an Epi-Pen?	es 🔃	No
PAST MEDICAL H	HISTORY: Have you ever had the follow	ing? Che	ck each	item.	l			
		YES	NO				YES	NO
12. Adverse rea	action to medication			24. Pain or	pressure in the chest			
13. Tuberculos	is or positive TB test				ion, pounding heart or a	abnormal heartbeat	Ħ	Ħ
	someone who had tuberculosis			 	urmur or other disorder			
	any breathing difficulty			27. Heart o	r blood vessel surgery			
16. Used or ha	ve been prescribed an inhaler			 	nal heart anatomy or pat	tent foramen ovale		
17. Plates, scre	ews, rods or pins in any bone			29. Diabete	es			
18. High or low	blood sugar			30. High ch	olesterol			
19. Sugar, albu	min or blood in the urine			31. Stroke				
20. Tumor, gro	wth, cyst or cancer			32. Heart d	isease			
21. Aneurysm,	frequent or severe headaches			33. Parent	or sibling with condition	indicated in 29-32		
22. Seizures, co	onvulsions, epilepsy or fits			34. Treated	l in a decompression cha	amber		
23. Other neur	ologic disorder or injury			35. Medica	l disqualification for divi	ng duty		
PAST MEDICAL F	IISTORY: Have you had the following in	n the <u>last</u>	ten yea	ars? Check each	h item.			
		YES	NO				YES	NO
36. Thyroid tro	uble or goiter			+	lisease, hemorrhoids, bl			
37. Eye disorde	r or trouble	$ \!$ $\!$ $\!$ $\!$ $\!$	Щ	1	ess of breath or wheezing			
	correct vision (i.e. RK, PRK, LASIK)	$ \parallel$ \parallel	Щ	†	s, bronchitis or frequent			
	back pain or any back problem		Н		bladder or urination pro			Н
	ry, numbness, tingling or sensitive areas	\dashv	Н	†	jury, memory loss or am			\blacksquare
41. Loss of fing		-		†	sion or period of uncons	ciousness	\blacksquare	
	le (locking, giving out, pain, injury)	-	Н	+	ss or fainting spells	or ombolism	H	\vdash
43. Leg cramps	swollen joints	\vdash		+	ged bleeding, blood clot	or embolism	H	
					low blood pressure sion, anxiety or claustrop	ahohia		
	neumatism, tendonitis or bursitis int or other deformity			· · ·	d counseling of any type			
	ure or deformity				valuated or treated for a			H
	r intestinal trouble			d .	ted or planned suicide	mentar condition	H	H
	epatitis or liver disease	╫		·	to focus or pay attention	n .	H	H
50. Hernia or r	•			65. Ear infe		511		\vdash
30. Herriid or i	aptare			03. Edi iiile	.ccion			_
CURRENT MEDIC	CAL HISTORY: Do you currently have an	ny of the f	ollowir	ng? Check each	ı item.			
	, 	YES	NO				YES	NO
66. Severe too	th or gum trouble			74. Use of p	prosthetic / corrective de	evices or braces		
	es or contact lenses			†	nt indigestion or heartbu			
	on in either eye			· ·	ease (i.e. acne, eczema,			
	or allergic rhinitis			†	unexplained weight loss			
	r throat trouble			 	sickness (kinetosis)			
71. Hearing los	s or wear a hearing aid			79. Difficulty distinguishing colors or seeing at night				
72. Impaired u	se of arms, hand, legs or feet			80. Difficulty performing moderate to heavy exercise				
73. Foot proble	ems		81. Currently pregnant/may be pregnant (women only)					
				•	SUPERSE	DES NOAA Form 57-0	3-52 (8	3-14)

NOAA Form 57-03-52 (03-15) Page 3 of 3			NATIONAL		EPARTMENT OF COMMERCE OSPHERIC ADMINISTRATION
(US-13) Fage 3 UI 3	REPORT O	F MEDICA	L HISTORY - I		OSFILING ADMINISTRATION
1a. LAST NAME	b. FIRST NAME		c. MIDDLE NAME		3. DATE
82. Indicate the type and frequenc	ry of use for the followi	ng.			
a. Alcohol	b. Toba	CCO		c. Recreational dr	ugs
PAST DIVE MEDICAL HISTORY: Hav	ve you ever had the fol	lowing as a result	of diving? Check each) item	
TAST DIVE WEDICAL HISTORY. Ha	ve you ever had the for	YES NO	or diving: Check each	riceiii.	YES NO
83a. Ear or sinus squeeze			g. Near drowning		
b. Inability to equalize middle e	ar pressure		h. Arterial gas embo		
c. Ruptured ear drum			i. Oxygen (O ₂) toxic	-	
d. Vertigo (dizziness) e. Loss of consciousness or aspl	nvxia		j. Carbon dioxide (C		welling)
f. Lung squeeze or collapsed lu			I. Type II DCS	5111y, 1cc1111g, 1cc111, 5	
84. Indicate any other medical con		e.			
85. Indicate date, location and rea any declined surgery.	son for each hospitaliza	ation and surgery	, had or advised to hav	re within the last ter	n years. Indicate reasons for
86. Provide a detailed explanation	for each item checked	"YES" in either N	ledical History section.	Add additional pag	ges if necessary.
APPLICANT CERTIFICATION:					
87. I certify that I have reviewed the that falsification of information on	a Government form is		·	·	_
or prevent my qualification for div	e duty.	L ADDUCANT	CONTRIBE		- DATE
a. APPLICANT NAME		b. APPLICANT S	SIGNATURE		c. DATE
88. EXAMINER SUMMARY of DEFE	CTS				
89a. EXAMINER NAME and TITLE		b. EXAMINER S	IGNATURE		c. DATE
NOAA Diving Program, UDS Manua	al				15 March 2017, Page 143

REPORT OF PHYSICAL EXAMINATION – DIVER

Instructions to the Examiner: (The Examiner must be a Medical Doctor (MD), Doctor of Osteopaty (DO), Nurse Practioner (NP), or Physician's Assistant (PA))

The person requesting this physical examination is an applicant for training or currently participates in diving activities with self-contained underwater breathing apparatus (SCUBA) or other similar equipment. Your opinion of the applicant's medical fitness for diving is requested. The Medical History and Physical Examination forms focus on conditions that may put a diver at increased risk for injuries or other conditions that could lead to decompression sickness or drowning. The diver must be able to withstand some degree of cold stress, pressures of up to six (6) atmospheres, the physiologic effects of immersion, the optical effects of water, and have sufficient physical and mental reserves to deal with underwater emergencies.

Please review the applicant's responses to all items in blocks 5 through 86 on the NOAA Form 57-03-52, Report of Medical History – Diver. All Items must be completed, except men shall leave block 81 unchecked.

Please provide a comprehensive physical examination and complete blocks 5 through 49 on pages 2 through 4 of this form. Summarize any abnormal findings and pertinent data in block 46, provide a recommendation in block 47, and include your name, title, signature, and date in blocks 49a through 49e. Some items include specific directions. Any item not completed will result in the form being returned to you for completion. This will result in a delay in the processing of a dive application or renewal of a diving certification.

The applicant will also provide to you a NOAA Form 57-03-50, Medical Evaluation Checklist. Use this form to determine which laboratory tests and diagnostic studies are required based on the applicant's age and examination type. All above laboratory tests and diagnostic studies as well as the medical history and physical examination must be performed within the previous 12 months with the exception of the chest x-ray, which must be performed within the previous 24 months. If you conduct other laboratory tests or diagnostic studies as part of this physical examination, include copies of these results with the submission of the other required documentation.

Final determination for fitness for diving will be made by the NOAA Diving Program. For questions, contact the NOAA Diving Medical Officer at (206) 526-6474.

Submission of medical qualification documentation must be made by one of the following methods;

Preferred method: E-mailed to: DMO@NOAA.GOV

Subject: Report of Physical Examination – Diver (Last name of diver)

Please use secure file transfer such as Secure Zip or Accellion File Transfer

Or

Second preference: Fax to: 206-529-2759

Attn: NOAA Diving Medical Officer

Or

Third preference: Mailed to: NOAA Diving Medical Officer (DMO)

NOAA Diving Program 7600 Sand Point Way NE Seattle, WA 98115

NOAA Form 57-03-51						EPARTMENT OF	
(03-15) Page 2 of 4				IATIONAL OCEAN		OSPHERIC ADMI	INISTRATION
	REPORT OF PH	HYSICAL	EXAMIN	ATION - D	IVER		
APPLICANT INFORMATION:	This section must be comple	ted by the dive	applicant.				
1a. LAST NAME	1b. FIRST NAME	1c. MIDDLE N	NAME	2. DATE of BIR	TH	3. DATE of EX	AM
4a. WORK ADDRESS				4b. BEST CONT	ACT PHONE	NUMBER	
				4- MODK F M	All ADDRESS		
				4c. WORK E-M	AIL ADDRESS		
				4d. ALETERNA	TE PHONE NU	JMBER	
PHYSICAL EXAMINATION: T	his section must be fully com	pleted by the e	xamining medi	ical provided (MD	D/DO/NP/PA	only).	
5. EXAM TYPE	6. AGE	7. GENDER		8. HEIGHT (inches)		9. WEIGHT (pounds)	
Initial Periodic 10. TEMP.	11. PULSE	12. BLOOD	,	2 nd BP		3 rd BP	
(°F)		PRESSURE	/	(if needed)	/	(if needed)	/
13. VISION CORRECTABLE TO	O 20/20?		CT LENS USE	15. NEAR VISIO	N		
Right eye Distant(Y/	'N) Near(Y/N)		ION MASK?	Right eye 20 /	/	Corrected to	20 /
Left eye Distant(Y/	'N) Near(Y/N)		YES	Left eye 20 /	/	Corrected to	20 /
Left eye Distant(1)	(1/10)		NO	Left eye 207	·	corrected to	207
GENERAL CLINICAL EVALUA	TION: Check each item.	Normal	Abnormal	Description of	abnormality		
16. Head, face and scalp							
17. Neck							
18. Eyes							
19. Fundus							
20. Ears (internal / external	canals)						
21. Eustachian tube function	n, can perform Val Salva						
22. Tympanic membranes							
23. Nose (septal alignment)							
24. Sinuses							
25. Mouth and throat							
26. Dental (loose or decayed	d teeth)						
27. Lungs and chest (includi	ng breasts)						
28. Heart (thrust, size, rhyth	nm, sounds)						
29. Pulses (equality, etc.)							
30. Vascular system (varicos	sities, etc.)						
31. Abdomen and viscera							

SUPERSEDES NOAA Form 57-03-51 (10-14)

32. Hernia (all types)

35. Skin, lymphatics

34. Spine

33. Feet (arch, pes cavus / planus)

NOAA Diving Program, UDS Manual

(03-15) Page 3 01 4	REI	PORT	OF PHYSICAL E	XAMI			JSPHERIC ADIVINISTRATION
1a. LAST NAME		1b. FIRS	T NAME	1c. N	MIDDLE NAM	E	3. DATE of EXAM
NEUROLOGIC EXAMIN	ATION: Check	each item					
36. Sensorium (Consci	ousness, intelle	ctual, cog	nitive function) Normal _	At	normal		
37. Cranial Nerves: (ne							
I. Olfactory II. Optic III. Oculomotor IV. Trochlear			V. Trigeminal VI. Abducent VII. Facial VIII. Auditory			IX. Glossopharyng X. Vagus XI. Spinal Accessor XII. Hypoglossal	
38. Reflexes:	Deep Tend	on (grade (0 – 3+, 2+ = normal)			Pathological	(+/- = presence/absence)
Brachioradialis Biceps	Left	Right	Patella Achilles	Left	Right	Hoffman Ankle clonus	Left Right
39. Cerebellar Function Gait Tremor (intention)	•	normal	Vibratory sensations _	= presence/ Left	Right	End point (physiol	- = presence/absence) ogic)
Finger to nose Heel to shin slide Romberg sign			Stereognosis (ability to recognize objects by touch)			Pathological	
42. Muscle Strength (g Deltoids Latissimus Triceps Biceps Forearms Hands Fingers		rmal) Right	Hips: Flexion Extension Abduction Adduction	Left	Right	Knees: Flexion Extension Ankles: Dorsiflexion Plantarflexion Inversion Eversion	
43. Range of Motion (4 Shoulders Elbows	Left	Right	Hips Wrist	Left	Right	Knees Ankles	Left Right
44. Sensation (sharp du	Crail 3 CP C3 C4 Supraciar T3 T10 T10 L1 S6 L8 Supraciar T3 Supraciar T4 Supraciar T5 Supraciar	Post, Ax Post, Ax Post, Ax Minutes and Ax Minutes a	ed, Cutan secuto, Cutan, Median	f altered s	Radial Do-Do-Muscuta. Curla Med. Cut	Supraclav tarcostals Post. tarcostals Post. Citania Median Post. Cutan Gran-Saphenous Fronzal-Saphenous	C2 C3 C4 C5 T2 T1 C5 T1 C7 T1 C7 T1 C7 T1 C7 T1 C7 T1 C7 T1 C7 T1 C7 T1 C7 C7 T1 C

NOAA 5 57.02.54						C DEDARTA	AENIT OF CO	NA AN AFROS
NOAA Form 57-03-51 (03-15) Page 4 of 4			NΔ	TIONAL OCE		S. DEPARTN		
(03 13) Tuge Tol 1	REPORT OF PH	HYSICAL EXA						3110111011
1a. LAST NAME	1b. FIRST NAME		1c. MIDDL	E NAME		3. DA	TE of EXAM	1
	ry/ancillary data. Transcribe res may not list every test. Submit a			oratory repo	ort. Tests be	elow are rep	presentative	e of
COMPLETE URINALYSIS	METABOLIC DATA	ALIDIOMI	TDV (Only	for initial ph	veical)			
Spec. Gravity	Glucose	HZ	500	1000	2000	3000	4000	6000
Ph Ph	BUN	Left	300	1000	2000	3000	1000	0000
Color	Creantine	Right						
Clarity	eGFR		•	•				•
Leuk Esterase	BUN/Cr	CBC DATA	4		LIPII	O PROFILE		
Protein	Sodium	WBC			Tota			
Glucose	Potassium	RBC				lycerides		
Ketones	Chloride	Hg			HDL			
Occult Blood	CO ₂	Hct			LDL			
Bilirubin	Calcium	MCV			VLD			
Urobilirubin Nitrite	HgA1C	MCHC MCHC			LDL	/HDL Ratio		
Nitrite	_	RDW						
		Platelets						
				1				
47. Although the NOAA D concerns to this applicant	iving Medical Officer will make t 's fitness for diving?	the final determinati	on regardin	g fitness for	duty as a d	iver, are the	ere any furt	her
48. EXAMINATION LOCAT	TION NAME and ADDRESS	49a. EXAMINER NA	AME			49b. I	PHONE NUI	MBER
		49c. EXAMINER TIT	TLE			•		
		49d. EXAMINER SIG	GNATURE			49e. [DATE	

SUPERSEDES NOAA Form 57-03-51 (10-14)

Report of Medical History – Observer Diver, NF 57-03-53

What: This form is used to report an Observer Diver candidate's health status to the NDMO. The form is to be completed by the Observer Diver candidate and signed by the medical professional conducting the medical review. It consists of contact information for the diver, medications, allergies, and a short medical history (yes/no list of medical conditions). There is a section for the explanation of affirmative answers in the history section.

When: This form is submitted to the NDMO by Observer Diver candidates before participating in any NOAA Diving Program operations. This form contains Personally Identifiable Information (PII) and is covered under the Health Insurance Portability and Accountability Act (HIPAA), transmittal to the NDMO should be done using a secure file transfer via the DMO@noaa.gov email address or through the DNMO fax line, (206) 529-2759.

Record keeping: None at the Dive Unit level.

Other considerations: This form contains medical information protected under HIPAA and as such is confidential. The UDS is encouraged to consult with the Observer Diver candidates to ensure the form is filled out correctly and all required supplemental information is included before they submit the forms to the NDMO. The transmission of HIPPA covered information should be done via encrypted file transfer protocol or by fax.

REPORT OF MEDICAL HISTORY — OBSERVER DIVER WORK ADDRESS WORK ADDRESS WORK ADDRESS CELL PHONE NUMBER WORK - MAIL ADDRESS CELL PHONE NUMBER AGE GENDER STATEMENT OF PRESENT HEALTH AGE GENDER AGE GENDER HIGHER GENDER AGE GENDE	NOAA Form 57-03-53								= . =		DEPARTMENT OF		
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SUPERSEDES NOAA Form 56-76 (2-09)	NOAA Diving Program,	UDS Manual											

Report of Medical History – Annual Update, NF 57-03-54

What: This form is used to report **CHANGES** in the medical history of all NOAA Divers on an annual basis. The form is to be completed and signed by the NOAA Diver. It consists of contact information for the diver, medications, allergies, and a short medical history (yes/no list of medical conditions). There is a section for the explanation of affirmative answers in the history section. It is important to note that this form is for reporting CHANGES in medical status, not listing ongoing or past conditions. For example if the diver had an ear infection three years ago which required medical treatment and was reported to the NDMO at the time, it should not be included on the current year's form.

When: This form is submitted to the NDMO by NOAA Divers each year in the same month as their current Report of Physical Examination (NF 57-03-50, NF 57-03-51, NF 57-03-52) was submitted. This form contains Personally Identifiable Information (PII) and is covered under the Health Insurance Portability and Accountability Act (HIPAA), transmittal to the NDMO should be done using a secure file transfer via the DMO@noaa.gov email address or through the DNMO fax line, (206) 529-2759.

Record keeping: None at the Dive Unit level.

Other considerations: This form contains medical information protected under HIPAA and as such is confidential. The UDS is encouraged to consult with the Diver to ensure the form is filled out correctly and all required supplemental information is included before they submit the forms to the NDMO. The transmission of HIPPA covered information should be done via encrypted file transfer protocol or by fax.

NOAA Form 57-03-54	4									DEPARTMENT O		
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Inability to equalize r			╁┝	╣	┢	╣			claustrophobia	illeli Ovale	╁╞┽	╁┝
Bone, joint or other	·		┢	┪	┢	Ħ		· ·	ated for a mental o	condition	╁╞┽	╁┝
High or low blood su	•		⇈	1	┢	1			noderate to heavy		╁╞╅	╁┝╴
Unexplained weight									erol, stroke or hea			
Head injury, memory	loss or amnesia						Parent or sib	ling with	diabetes, stroke or	r heart disease		
Concussion or period	d of unconsciousness						Treated in a	decompre	ession chamber			
Seizures, convulsions	s, epilepsy or fits			Ц		Ц	-		(symptoms of bot		┵	
Dizziness or fainting	•	following					Currently pre	egnant/ m	nay be pregnant (w	vomen only)	Щ	
Alcohol	d frequency of use for the	Tobacco							Recreational dru	uge		
Alcohol		Tobacco							Necreational dis	ugs		
Indicate date, location	on and reason for each ho	l ospitalization	and	sur	ger	ry, ł	nad or advised	to have.	I Indicate the reaso	ns for any declin	ed surge	ery.
Provide a detailed ex	xplanation for each item	checked "YES	S" in	eith	er	Me	dical History s	ection. A	dd additional page	es if necessary.		
APPLICANT CERTIFIC	CATION:											
	eviewed the medical info nation on a Government tion for dive duty.											
APPLICANT NAME	<u>.</u>		API	PLIC	AN	T SI	GNATURE			DATE		
I certify that I have re	RAM REVIEWER CERTIFI eviewed the medical info t found any medical cond und medical conditions w	rmation provitions which	pred	lud	e tł	ne a	pplicant from	diving cer	tification.	f defects listed be	low.	
DIVING MEDICAL OF	FICER NAME		DIV	/INC	M	EDI	CAL OFFICER S	SIGNATUR	E	DATE		
NOAA Diving Program	m. UDS Manual									15 March 20)17. Pac	e 15

SEP Measurement Form, NF 57-03-65

What: This form is used by NOAA Diver candidates to ensure they receive the proper size gear during NOAA Diver Training classes. It is also used by locally trained NOAA Divers who wish to join the Standardized Equipment Program (SEP). It consists of contact information for the diver or diver candidate, a series of body measurements, and a comment section where specific preferences can be listed (e.g., 3 mm one-piece wetsuit, 7 mm two piece wetsuit). It is signed by the diver or diver candidate and the UDS.

When: The form should be submitted to the SEP Coordinator via the SEP.ndc@noaa.gov email address or sent via fax to (205) 529-2757 at least thirty (30) days prior to the NOAA Diver Training class.

Record keeping: Not required, but it is suggested to keep a copy until the diver or diver candidate receives their SEP gear.

Other considerations: If requesting an exposure suit the diver or diver candidate should indicate in the Comments section the type of exposure suit they will need; 3mm, 5mm, or 7mm full wetsuit, and/or drysuit.

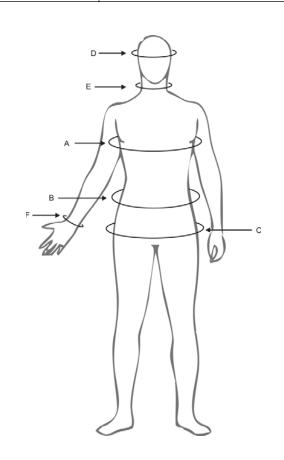
STANDARDIZED EQUIPMENT PROGRAM MEASUREMENT FORM

APPLICANT INFORMATION

NAME (Last, First, MI)	NAME of AGENCY / UNIT	DATE	
WORK ADDRESS	CITY	STATE	ZIP CODE
E-MAIL ADDRESS	TELEPHONE NUMBER	EXTENSION	

MEASUREMENTS (use soft measuring tape, pull tape snugly)

GENDER		C	FEMALE	\bigcirc N	MALE
GLOVE SIZE	OS	ОМ	\bigcirc L	○XL	○XXL
HEIGHT				ft.	in.
WEIGHT					lbs.
CHEST / BUST	(A)				in.
WAIST (B)					in.
HIPS (C)					in.
HEAD CIRCUM	1FERENCE	(D)			in.
NECK CIRCUM	IFERENCE	(E)			in.
WRIST CIRCUI	MFERENCI	E (F)			in.
SHOE SIZE					



COMMENTS

AUTHORIZATION

DIVER NAME	DIVER SIGNATURE	DATE
UNIT DIVING SUPERVISOR NAME	UNIT DIVING SUPERVISOR SIGNATURE	DATE

SUBMISSION INSTRUCTIONS

Submit this form to the Standardized Equipment Program via SEP.NDC@noaa.gov or FAX: (206) 529-2757

SEP Transaction Form, NF 57-03-66

What: This form is used by NOAA Divers and the SEP Coordinator whenever diving gear is issued, requested or returned. It consists of contact information for the diver and UDS, and a series of gear descriptions with notations for serial numbers and/or sizes. It is signed by the diver and the UDS.

When: The form should be submitted to the SEP Coordinator via the <u>SEP.ndc@noaa.gov</u> email address or sent via fax to (205) 529-2757 whenever gear is requested or returned.

Record keeping: A digital or printed copy should be retained at the unit for one (1) year.

Other considerations: This form is useful when conducting the annual inventory of SEP gear which is a required item on the annual <u>Diving Unit Inspection Checklist (NF 57-03-03</u>. If any discrepancies are noted in serial numbers of equipment, please inform the SEP Coordinator of the correct serial numbers.

NOAA For (02-15)	m 57-03-66							1	NATIONAL (TMENT OF COMMERCE HERIC ADMINISTRATION	
		STANE	DARDIZED EQU	IPMENT	PROGR	AM TRA	NSA	CTION F	ORM			
DIVER NAI	ME		UNIT NAME					UNIT PHONE	NUMBER	DATE		
SHIPPING	ADDRESS		UNIT DIVING SUPERVISOR NAME					UNIT DIVING	SUPERVISO	R SIGNATURE		
DIRECT	IONS: Use the check box to indic	ate the typ	e of action perform	ed and the	item(s) b	eing reque	ested, i	ssued, ret	urned, o	or inventoried.		
CHECK	ITEM DESCRIPTION	SER	IAL NUMBER	ITEM DESCRIPTION			ON	CHECK	ITEM DE	SCRIPTION		
	Regulator – 1 st stage				Ankle V	Veights				Gear Bag		
	Regulator – 2 nd stage			Boots Size:					Knife			
	Alternate air source			Compass				Weight belt				
	Pressure gauge						Dive Alert			Weight harness Os OM OL		
	Depth Gauge/Bottom timer			Fins OM OL)r ();	XL OT		Other:		
	RASS 1 st stage regulator				Gloves	Owet (Dry	Size:		3mm 5mm	Oother	
	RASS 2 nd stage regulator				Hood	Owet C	Dry	Size:		3mm 5mm	Oother	
	RASS pressure gauge				Wetsui	t O Full (2-piece	e Size:		3mm 5mm)7mm Oother	
	BCD			Comme	ents:							
	Full Face Mask											
	Dry Suit											
DIVER SIG	NATURE		DATE								ude completed form , Seattle, WA 98115	

NOAA Diving Program, UDS Manual 15 March 2017, Page 155

SEP User Agreement, NF 57-03-67

What: This form documents that a NOAA Diver who has been issued Standardized Equipment Program (SEP) gear agrees to follow the relevant standards, policies and procedures of the NOAA Diving Program while using the SEP gear. The diver also agrees to properly maintain the gear and return it to the SEP Coordinator if the diver leaves the NOAA Diving Program.

When: This form should be submitted to the SEP Coordinator via the <u>SEP.ndc@noaa.gov</u> email address or sent via fax to (205) 529-2757 when a diver desires to join the SEP.

Record keeping: A digital or printed copy should be retained at the unit in the diver's file until they leave the Diving Unit.

Other considerations: None.

NOAA Form 57-03-67	U.S.DEPARTMI	ENT OF COMMERCE
(02-15)	NATIONAL OCEANIC AND ATMOSPHERI	C ADMINISTRATION
STANDARDIZED EQUIP	MENT PROGRAM USER AGREEMENT	
I,, hereby re	quest the issuance of diving equipment fro	om the
NOAA Diving Center (NDC) diving gear fo NOAA employee or contractor.	r official use pursuant to my position as a o	current
· · ·	future equipment sent to me, is the prope NDC, and that said equipment shall remain may possession.	•
·	mply with all applicable governmental regu 910, Subpart T and NAO 209-123, while usi	
1	nese regulations or fail to keep my diving co be asked to surrender any or all of the dive	
I further understand that I am <u>solely</u> resp	oonsible for the care of this equipment.	
1	end my contract, or be taken off dive order of immediately to the NDC or I will be held	
NAME of DIVE EQUIPMENT RECIPIENT	SIGNATURE of DIVE EQUIPMENT RECIPIENT	DATE

Submit to SEP.NDC@noaa.gov

UNIT DIVE SUPERVISOR SIGNATURE

UNIT DIVE SUPERVISOR NAME

DATE

Dive Computer User Agreement, NF 57-03-68

What: This form documents a NOAA Diver's agreement to a series of conditions when using a dive computer for on-duty NOAA dives. Each condition includes a blank space at the margin for the diver to signify their agreement by initialing the document. The document is signed by the NOAA Diver.

When: This form should be submitted to the NDC via the support.ndc@noaa.gov email address prior to the use of a dive computer on any on-duty NOAA dives.

Record keeping: A digital or printed copy should be retained at the unit in the diver's file until they leave the Diving Unit or discontinue the use of a dive computer.

Other considerations: Any dive computer commercially sold in the United States is authorized for use on no-decompression, air or nitrox dives as long as they use the Buhlmann 16 algorithm. Computers for decompression or dives with breathing gases consisting of more than nitrogen and oxygen (i.e., trimix), require approval of the NDCSB. Currently authorized decompression and/or mixed gas dive computers include the Shearwater Predator, Shearwater Petrel, VR Technologies VRX, and the Liquivision X1.

DIVER NAME

DATE

DIVE COMPUTER USER AGREEMENT

Read each statement in the Agreement below and initial on each line at the end of the sentence, which indicates: 1) Your understanding of the statement, and 2) Your agreement to adhere to the terms or conditions of the Agreement while using a dive computer. Sign and date the Agreement then return it to the NOAA Diving Center (NDC). The NDC will notify you when you are cleared to begin using a dive computer for official-duty dives.

JNIT	DIVING SUPERVISOR NAME	DIVE UNIT					
AG	GREEMENT		INITIALS				
1.	I agree to limit my dive profiles to those depth-time combinations that DO NOT result mandatory decompression stops whenever using a dive computer.	in"ceilings" or	INITIALS				
2.	I agree to terminate the dive and begin ascent whenever the first dive computer in the no-decompression time limit. I understand that it is strongly recommended to ter when the first dive computer in the group indicates that the diver has five (5) minutes decompression time remaining.	minate the dive					
3.	I agree to refrain from diving for 24 hours before activating and using a dive compute	r.					
4.	I agree to refrain from using another diver's dive computer until the computer indicat desaturation in all tissues.	es total					
5.	I agree to make a safety stop between 15-20 feet for 3-5 minutes for repetitive dives than 60 feet in depth, unless doing so jeopardizes my safety or that of my dive buddy	•					
6.	I agree to limit reverse profile dives (e.g., shallowest dive first) to those dives where t differential between the two dives is 40 feet or less.	he depth					
7.	I agree to refrain from flying following dives conducted with dive computers until my indicates that it is safe to do so. I also agree that if my dive computer fails for any reas (e.g.,malfunctions, shut-down, etc.) prior to indicating clearance to fly, that I will wait hours after surfacing from my last dives before flying.	son					
8.	3. I agree to terminate a dive and immediately begin appropriate surfacing procedures if my dive computer fails at any time during a dive. After surfacing, I agree to wait a minimum of 24 hours before diving with either decompression tables or a "clean," (e.g. totally desaturated) dive computer.						
9.	I agree that if I accidentally exceed the no-decompression limits, as indicated on my d that I will terminate the dive and immediately begin ascent to the surface following su instructions (e.g., decompression requirements) displayed on my dive computer. Once I agree to report the incident to the Divemaster, or other person-in-charge, which shall procedural violation. I understand that should I repeatedly exceed the no-decompress may be restricted from further diving.	urfacing e on the surface, Il note the					

DIVE COMPUTER USER AGREEMENT

		INITIALS
10. I agree that if I accidentally exceed the no-decompression limits and during decompression computer fails prior to reaching the surface, that I will ascend to between 10-15 feet for 15 minutes or until reaching 300 psi in my scuba cylinder, whichever comes first. surface, I agree to breathe 100% oxygen, via tight fitting mask for 30 minutes. If I am following breathing oxygen for 30 minutes, I understand that I will be closely monito minimum of 12 hours for signs or symptoms of decompression sickness and restricted diving during this observational period. If signs or symptoms of DCS occur during or a breathing, I understand that I will be transported (on oxygen) to the nearest medical treatment.	and decompress Once on the asymptomatic red for a ed from further after oxygen	
11. I agree that if I accidentally exceed the no-decompression limit and surface without prescribed decompression indicated on my dive computer, and I am asymptomatic at the water within five (5) minutes, that I may be asked to dive to the depth of the "ceethere for the amount of time indicated on my dive computer. If I cannot be returned any reason within five (5) minutes, I agree to breathe 100% oxygen, via tight-fitting minutes. If asymptomatic after breathing oxygen, I understand that I will be closely of minimum of 24 hours for signs or symptoms of decompression sickness and restricted diving during this observational period. If signs or symptoms develop during or after I understand that I will be transported (on oxygen) to the nearest medical facility for	and can return to diling" and remain I to the water for mask for 60 observed for a ed from further breathing oxygen,	
12. I agree to maintain the dive computer in accordance with the manufacturer's guidely yearly inspection by an authorized dealer.	ines including	
13. I understand that prior to diving, all divers in the buddy team must decide if the diversion conducted using dive computers or decompression tables - and that if dive computer all divers must have and use their own dive computers.		
14. I understand that a backup bottom timer and depth gauge are strongly recommend computer fails.	ed in case a dive	
15. I have read and am thoroughly familiar with the operations manual(s) for the dive contend to use, and agree to conduct dives in accordance with the manufacturer's guit the operations manual(s).		
DIVER SIGNATURE	DATE	

NOAA-Owned Diving Equipment Off-Duty User Agreement, NF 57-03-69, NF 57-03-70

What: This form has two parts. The first part confirms that the NOAA Diver agrees to follow NOAA Diving Program standards, polices, and procedures when using NOAA-owned gear during off-duty dives. This includes gear owned by individual Diving Units and that issued by the Standardized Equipment Program (SEP). The second part is a liability waiver which the NOAA Diver initials and signs agreeing to hold harmless NOAA and the United States government for any injuries or damages which may occur when NOAA-owned gear is used during an off-duty dive.

When: This form should be initialed and signed by the NOAA Diver and signed by the UDS before the diver uses any NOAA issued gear for off-duty dives.

Record keeping: A digital or printed copy should be retained at the Diving Unit as long as the diver wishes to use NOAA-owned gear for off-duty dives.

Other considerations: This form addresses activities and equipment under the authority of the NOAA Diving Program, including diving operations and SEP gear. It does not include local approval to use NOAA-owned, but non-SEP, equipment. The UDS is strongly encouraged to obtain approval from a relevant local supervisor (e.g., Laboratory Director, Superintendent, Property Manager) before authorizing NOAA-owned, non-SEP diving equipment for off-duty dives.

NOAA-OWNED DIVING EQUIPMENT OFF-DUTY USER AGREEMENT

The NOAA Diving Control and Safety Board (NDCSB) recognizes the safety benefits of NOAA divers maintaining a high level of proficiency by diving as often as possible. Using NOAA-owned gear (SEP or unit-owned) during dives, either on-duty or off-duty, further increases the safety margin by increasing familiarity with the gear and insuring the use of high-quality, well-maintained gear. Therefore, the use of NOAA-owned gear for off-duty dives is permitted provided the users agree to abide by the following stipulations:

AGREEMENT

- 1. I agree to limit my maximum dive depth to 130 feet.
- 2. I agree to use the NOAA Reserve Air Supply System (RASS), as a minimum, on dives >100 Feet Salt Water (FSW), in overhead environments, or if visibility precludes easy reading of the pressure gauge.
- 3. I agree to keep my bottom times within the NOAA no-decompression limits.
- 4. I agree to always dive with a buddy (i.e., no solo diving) that is certified by a nationally recognized training agency and outfitted with a secondary air delivery system (e.g., octopus regulator).
- 5. I agree to always surface with at least 500 psi in my scuba cylinder.
- 6. I agree to always have access to an emergency oxygen kit within 30 minutes of the dive site.
- 7. I agree to submit an electronic dive plan to ndp.diveplans@noaa.gov (if possible). This dive plan does not require UDS approval.
- 8. I agree to use my NOAA-owned gear for non-commercial purposes only.
- 9. I understand that my use of NOAA-owned gear during off-duty hours may be revoked for violation of any of the above requirements.
- 10. I agree to submit a Decompression Diving Request (NF 57-03-28) or Closed Circuit Rebreather (CCR) Diving Request (NF 57-03-29) to the NDCSB for any off-duty dives using NOAA-owned gear which will exceed 130 FSW, incur a decompression obligation, or use breathing gases other than air or nitrox. I also agree to follow all standards for these diving modes as apply to on-duty dives, follow all special instructions from the NDCSB and not conduct these dives until written approval has been provided by the NDCSB.

Note: The NOAA Diving Program has the authority to approve diving activities and to allow the use of SEP gear. The use of other NOAA-owned gear (non-SEP) should be approved by local supervisors.

DIVER NAME	DIVER SIGNATURE	DATE
UNIT DIVING SUPERVISOR NAME	UNIT DIVING SUPERVISOR SIGNATURE	DATE

This form shall be retained at the Diving Unit while the Diver is issued SEP or other NOAA-owned equipment.

NOAA-OWNED DIVING EQUIPMENT OFF-DUTY USER AGREEMENT

Assumption of risk and release of liability for NOAA employees to use NOAA dive gear for personal or recreational use during off-duty diving; hereinafter "Release".

In consideration of NOAA permitting my use of NOAA owned and maintained dive equipment for non-work related dive activities (e.g., personal, recreational, proficiency, educational, weekend, or vacation use), I, for myself and on behalf of all my personal representatives, heirs, and next of kin do execute and certify the following:

I, hereby declare that I am a NOAA employee, that I am a certified NOAA diver trained in safe diving practices, and that I am fully informed of, aware of, and thoroughly understand the inherent hazards and risks associated with snorkeling, skin diving, scuba diving, compressed air diving, nitrox diving, trimix diving, decompression diving, open circuit diving, and rebreather diving (hereinafter collectively referred to as diving). I understand these risks can lead to severe injury, loss of life, or property damage and liability to others. I understand hazards include, but are not limited to, decompression sickness, embolism, barotraumas or other hyperbaric/air expansion injury that may require treatment in a recompression chamber, drowning, equipment failure, and other perils of the sea. I understand and agree that diving is dangerous whether engaged in depths above or below the recommended 130 foot limitation for sport/recreational diving activities. I further acknowledge and agree that injuries received may be compounded or increased by negligent rescue operations or procedures.	Initials
By signing this Release, I certify that I am making full and honest representations of my dive skills and certifications, and I am fully aware of and expressly assume all risks involved in making dives, whether conducted recreationally, for proficiency, or as part of any organized dive endeavor (class, excursion, or trip)	
By signing this Release, I further certify that I am responsible for my own actions and use of dive gear, including gear owned and maintained by NOAA, and being used by me while off-duty, and I am financially responsible for expenses, including medical expenses, arising from my off-duty use of NOAA dive gear.	
By signing this Release, I acknowledge that past or present medical conditions may disqualify me for diving. Ideclare that I am in good mental and physical fitness for diving, and that I am not nor will I be under the influence alcohol or any drugs contraindicated for diving. If I am taking medication, I declare that I have seen a physician and have approval to dive while under the influence of medications or drugs I am taking.	
By signing this Release, I acknowledge diving is a physically strenuous activity and that I will be exerting myself during this activity. I further acknowledge that if I die or am injured as a result of heart attack, panic attack, hyperventilation, drowning, or any other cause, I expressly assume the risk of said injuries or death, and neither myself, nor my representatives, heirs, agents, or assigns will hold NOAA or the U. S. Government responsible for the same.	 t
By signing this Release, I agree that I will inspect the air supply and all equipment prior to use, and will notify NOAA if any equipment is not working properly or if I have any problems with the air supply or the equipment. I will not hold NOAA responsible for my failure to inspect the air supply or the equipment prior to diving, or for my use of such faulty equipment regardless of any inspection. NOAA Diving Program, UDS Manual 15 March 2017, Page 163	<i>'</i>

NOAA-OWNED DIVING EQUIPMENT OFF-DUTY USER AGREEMENT

By signing this Release, I agree to adhere to NOAA policies and procedures regarding proper use, storage, cleaning, maintenance, operation, configuration, and all other instruction related to use of NOAA dive equipment and gear, consistent with the written instructions NOAA has provided, and which is incorporated by reference herein.	Initials
By signing this Release, I agree to replace, repair, or otherwise compensate NOAA for any loss, damage, or destruction of any NOAA dive gear in my possession and use under this Release.	
By signing this Release, I hereby assume full responsibility for any and all risk of bodily injury, wrongful death, property loss or damage, and liability to myself or any third party, now and forever, arising out of my use of any NOAA dive gear or during diving related activities using NOAA dive gear, whether foreseen or unforeseen, and whether caused by the negligence of myself, third parties, or NOAA.	
By signing this Release, I hereby release, waive, discharge, and give up any and all claims against NOAA, the U. S. Government, and all its employees, agents and representatives for any and all liability, claims, and demands by me or made by my personal representative, heirs, agents, assigns, and next of kin for any and all loss or damage, and any claim or demands therefore on account of injury, death, or loss arising out of or related to my use of NOAA dive equipment during off-duty hours.	
By signing this Release, I understand and agree that this Release means that if I am injured or die in a diving related incident, I am giving up my rights and the rights of my heirs, representatives, executors, or successors to sue NOAA or the U. S. Government, or any of its representatives, employees, or agents for any damages or for any form of compensation.	
By signing this Release, I further agree separately to indemnify, save, and hold harmless NOAA and the U. S. Government from any loss, liability, damage, or cost that they may incur, now and forever, arising out of or related to my use of NOAA dive gear off-duty, whether caused by the negligence of NOAA, the U. S. Government, or me.	
By signing this Release, I certify that I am trained in diving and safe dive practices by NOAA, and my certification and qualifications are up to date.	
By signing this Release I also represent that I have authority to do so and my heirs, assigns, representatives, or beneficiaries will be stopped from claiming otherwise.	
By signing this Release, I affirm that I am not relying on any oral or written representation or statements made by NOAA or the U. S. Government, other than what is set forth in this document. I further agree this document shall be interpreted in accordance with the laws of the United States.	
By signing this Release, I agree that if any provision of this Release is found to be unenforceable or invalid, that provision shall be severed from this release. The remainder of the Release will then be construed as though the unenforceable provision had never been contained in this release. All other provisions shall survive. NOAA Diving Program, UDS Manual	

NOAA-OWNED DIVING EQUIPMENT OFF-DUTY USER AGREEMENT

ACCORDINGLY, WITH FULL UNDERSTANDING, BEING OF RIGHT MIND AND DULY TRAINED, I,
, BY THIS INSTRUMENT, EXEMPT AND RELEASE NOAA AND THE U.S.
GOVERNMENT, ITS OFFICERS, AGENTS, REPRESENTATIVES, AND ASSIGNS FROM ALL LIABILITY AND
RESPONSIBILITY FOR PERSONAL INJURY, PROPERTY DAMAGE, OR WRONGFUL DEATH, HOWEVER CAUSED,
INCLUDING BUT NOT LIMITED TO EQUIPMENT FAILURE AND NEGLIGENCE, WHETHER PASSIVE OR ACTIVE. I
ACKNOWLEDGE THAT I HAVE READ AND INITIALED THE FOREGOING PARAGRAPHS, FULLY UNDERSTAND THE
POTENTIAL DANGERS INCIDENTAL TO MY USE OF NOAA DIVE EQUIPMENT, AM FULLY AWARE OF THE LEGAL
CONSEQUENCES OF SIGNING THIS INSTRUMENT, AM AN EMPLOYEE OF NOAA, AND I AM OLDER THAN 18 YEARS
OF AGE.

I UNDERSTAND AND AGREE THAT THIS DOCUMENT IS LEGALLY BINDING AND WILL PRECLUDE ME FROM RECOVERING MONETARY DAMAGES FROM NOAA OR THE U. S. GOVERNMENT FOR PERSONAL INJURY, PROPERTY DAMAGE, OR WRONGFUL DEATH CAUSED BY MY USE OF NOAA GEAR AND EQUIPMENT DURING OFF-DUTY HOURS, WHETHER PASSIVE OR ACTIVE. I UNDERSTAND THAT BY SIGNING IT I AM GIVING UP SUBSTANTIAL RIGHTS.

I HAVE FULLY INFORMED MYSELF OF THE CONTENTS OF THIS RELEASE BY READING IT AND INITIALIZING IT. I ALSO UNDERSTAND I SIGN IT ON BEHALF OF MYSELF, MY HEIRS, MY REPRESENTATIVES, NEXT OF KIN, AND ASSIGNS. ACCORDINGLY, I AM BOUND BY THIS RELEASE AND ANYONE WHO SUCCEEDS TO MY RIGHTS AND RESPONSIBILITIES SUCH AS MY HEIRS OR THE EXECUTOR OF MY ESTATE IS ALSO BOUND.

I HAVE SIGNED THIS DOCUMENT FREELY AND VOLUNTARILY WITHOUT ANY INDUCEMENT, ASSURANCE, OR GUARANTEE BEING MADE TO ME. I INTEND MY SIGNATURE TO BE A COMPLETE AND UNCONDITIONAL RELEASE OF ALL LIABILITY TO THE GREATEST EXTENT ALLOWED BY LAW.

NOAA PERSONNEL USING THE EQUIPMENT:

I HAVE READ THIS DOCUMENT, I UNDERSTAND IT, AND I AGREE TO BE BOUND BY IT.

THAVE KEAD THIS DOCUMENT, TOK	DENSIAND II, AND I AGNEE TO DE DOC	JIND D1 111.				
DIVER NAME						
		,				
DIVER SIGNATURE		DATE				
LINE or STAFF OFFICE	WORK PHONE NUMBER	EMERGENCY CON	TACT PHONE NUMBER			
NOAA PERSONNEL RELEASING THE	EQUIPMENT:					
I HAVE REVIEWED THIS DOCUMENT	AND CONFIRM IT HAS BEEN PROPERLY	COMPLETED.				
UNIT DIVING SUPERVISOR NAME						
UNIT DIVING SUPERVISOR SIGNATURE			DATE			
DIVING UNIT NAME		WORK BUONE AUG				
DIVING UNIT NAME	WORK PHONE NUMBER					

NOAA Diving Program, UDS Manual

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SEP Review of Property, NF 57-03-72

What: This form is used to report to the Standardized Equipment Program (SEP) Coordinator the loss of or damage to any SEP gear. There are sections to document the serial number(s) of the lost or damaged gear and to provide a narrative description of the circumstances which led to the loss or damage. There are also sections for the UDS and NDC Property Review Board to document findings or recommendations. The form is signed by the NOAA Diver, UDS and SEP Coordinator.

When: This form should be submitted to the SEP Coordinator via the SEP.ndc@noaa.gov email address.

Record keeping: A digital or printed copy should be retained at the Diving Unit until the end of the fiscal year in which any charges for lost or damaged SEP gear are applied.

Other considerations: None.

NOAA F (6-13)	orm 57-03-72	ROGRAM REVIEW OF PROPE	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION							
	STANDARDIZED	EQUIPIVIENT PR	ROGRAM REVIEW OF PROPE	KII						
NAME C	F DIVER			DATE OF RE	VIEW					
UNIT NA	ME		UNIT DIVE SUPERVISOR NAME							
QTY EACH	ITEMS REPORTED : LOST DAMAGED STOLEN DESTROYE	DATE OF LOSS		ACQUISITION COST	REPLACEMENT COST					
	Item Description	Serial# (if ap	plicable)		\$	\$				
	Item Description	Serial# (if ap	plicable)		\$	\$				
	Item Description	Serial# (if ap	plicable)		\$	\$				
	Item Description	Serial# (if ap	plicable)		\$	\$				
	Item Description	Serial# (if ap	plicable)		\$	\$				
- U:	e a separate sheet of paper if reporting additional items	<u> </u>			I	1				
EXPLAI	N THE CIRCUMSTANCES CAUSING REPORTED LOSS OF PROPERTY									
	CERTIFY THAT THE INFORMATION GIVEN ABOVE IS TRUE TO THE BEST OF MY KNOW	LEDGE AND BELIEF.	DATE							
DIVER	IIGNATURE:									
UNIT D	IVING SUPERVISOR FINDING									
TIDE CI	SNATURE		Tours							
003 310	INATORE	DATE								
NDC PF	OPERTY REVIEW BOARD RECOMMENDATION		-							
SEP COC	RDINATOR SIGNATURE	NDPM SIGNATURE		D	ATE					

NOAA DIVING FTOGRAM, ODS IVIAN

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NOAA Visual Cylinder Inspection Report, NF 57-03-81

What: This form documents the visual inspection of a single scuba cylinder. It contains detailed information from all phases of a visual inspection (e.g., cylinder specifications, external condition, internal condition, and valve type and threading). It also notes whether the cylinder passed or failed the inspection.

When: This form should be used every time a scuba cylinder is inspected for use in the NOAA Diving Program.

Record keeping: A digital or printed copy should be retained at the Diving Unit until the cylinder is reinspected.

Other considerations: While there is no requirement to keep this document beyond the next inspection of the cylinder it applies to, it is good practice to keep these for the life of the cylinder to allow tracking of its condition over time.

NOAA Form 57-03-81 (11-12) U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION											
	VISUA	AL CYLINDER	INSPECTIO	N RE	PORT						
DIVING UNIT NAME			DIVING UNIT LOCATION								
CYLINDER SPECIFICA	TIONS		l								
Serial Number		Initial Hydro Da	te		Current Hydro Date						
Cylinder Volume	Ft ³	Cylinder Color			Cylinder Material						
Working Pressure	PSI	Valve Type			Valve Cap	Yes No					
Cylinder Type:	SCUBA	SCBA	Other								
EXTERNAL CONDITION	ON										
Evidence of fire or heat damage?	Yes No	Evidence of repainting?	Yes	No	Evidence of bulges?	Yes No					
Internal odor?	Yes No	Odor description	n:								
Corrosion line around boot?	Yes No	Tone test: (stee	l cylinders only)								
Description of exteri	or surface										
Location and depth of gouges, dings or pits											
Comparison to stand	lards:		cceptable		Unacc	eptable					
INTERNAL CONDITIO	ON										
Amount and makeup	o of contents										
Description of intern	al surface										
Location and depth of	of any pitting										
Comparison to stand	lards:		cceptable	Unacceptable							
THREADING / VALVE											
Description of thread	ds:		Number of a	good t	hreads (counting from	top down)					
O-Ring surface:			Other service	es nee	eded:						
Burst disc replaced?		Yes No	Date valve r	ebuilt:	:						
Comparison to stand	lards:		cceptable		Unacc	eptable					
CYLINDER CERTIFICA	TION					T					
Cylinder PASSE	NOAA Visual Cy Inspection Stick			nth and Year cated on sticker	MM YY						
Cylinder FAILE) Actio	on Taken:	Tumbled		Hydro-ed	Discarded					
RECOMMENDATIONS											
INSPECTOR'S NAME		INSPECT	OR'S SIGNATURE	DA	DATE						
NOAA Diving Program, UE	OS Manual			15 (15 March 2017, Page 169						

NOAA Visual Cylinder Inspection Summary, NF 57-03-82

What: This form summarizes the inspection status of a group of scuba cylinders. It contains fields for several cylinder specifications (i.e., cylinder serial number, type, size, valve type, color, dates of last VIP, first and last hydrostatic tests, any other noteworthy observations, and the name of the inspector). This form is not a record of any individual inspection.

When: This form should be used every time scuba cylinders are inspected for use in the NOAA Diving Program.

Record keeping: A digital or printed copy should be retained at the Diving Unit until the cylinders are re-inspected.

Other considerations: While there is no requirement to keep this document beyond the next inspection of the cylinders it applies to, it is good practice to keep these for the life of the cylinders to allow tracking of their condition over time.

NOAA Fo (11-12)	orm 57-03-82			VIS	UAL CYLI	NDER	INSPE	CTION	SUMMARY	NATIONAL OCE	U.S. DEPART EANIC AND ATMOSPHE	MENT OF COMMERCE RIC ADMINISTRATION
FACILITY	/ / LOCATION				UNIT DIVING	SUPERVI	SOR NAM	Page	of			
	Date of Inspection	Cylinder Serial #	Date Last Inspected	Date First HYDRO (MM/YR)	Date Last HYDRO (MM/YR)	CYL Type	CYL Size	Valve Type	Cylinder Color a	and Remarks	Inspector's Name	
1.												
2.												
3.												
4.												
5.												
6.												
7.												
8.												
9.												
10.												
Sticker	rs Issued NOAA Diving Pr	Stickers Us	= sed	Stickers On	Hand	INSPEC	CTOR'S NA	AME		INSPECTOR'S SIGNATU	IRE 15 March 20	DATE 17, Page 171

Emergency Oxygen Kit Inventory, Maintenance and Order Form, NF 57-03-84

What: This form is an annual record of oxygen kit maintenance and it is used to order additional kits and parts from the Standardized Equipment Program. There are several rows consisting of specific items to inspect on the oxygen kit and columns for every month of the year. There are also blanks to note the date of demand valve tests.

When: Information must be added to this form every month during which diving operations are conducted. However, regular monthly inspection is recommended. This form is also submitted to the SEP Coordinator via the SEP.ndc@noaa.gov email address when new oxygen kits or parts are ordered. When kits or parts are shipped by SEP, a copy of this form should be included in the shipment.

Record keeping: A digital or printed copy should be retained at the Diving Unit for one (1) year after the checklist has been completed.

Other considerations: While this form contains boxes for monthly checks, these are not required if diving operations are not being actively conducted. You should go through your oxygen kit prior to every dive operation. However, it would demonstrate poor leadership if a dive operation had to be cancelled at the last minute because a fault was found with an oxygen kit. A much better practice is to check the kit a week before a planned dive, while there is time to repair a fault, and then confirm cylinder pressures and regulator function immediately before commencing the dive operation. The alternative use for this form is to order additional or replacement oxygen kits and parts.

NOAA Form 57-03-84 (03-17) U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

			EME	RGEN	CY OXYG	EN KIT	Γ - I r	NVEN.	TORY AND) MA	INT	NAN	ICE F	ORI	VI						
O2 KI	T # (ex: NDC 1 of 2)	DIVING	UNIT NAME			D	DIVING UNIT LOCATION							UNIT DIVING SUPERVISOR NAME							
ITE	EMSISSUED						ITEMSISSUED						0	TY	ITEMS ISSUED Q				QTY		
FIRS	T STAGE REGULAT	OR	SERIAL NUMBER				REUSABLE O2 MASK						_	-REBR le use)	EATHE)	RMAS	K				
	OND STAGE DEMA VE REG with LP HC		SERIAL NUMBER / M.	ANUFACTU	JRER				BVM RESUSCI	TATOF	BAG				SPARE WASHER						
	GEN CYLINDER #1		SIZE	Steel	Alum	HYDROS	TATIC	TEST DATI	E			SERIA	AL NUM	BER						1	
OXY	GEN CYLINDER #2	**	SIZE	Steel	Alum	HYDROS	TATIC	TEST DATI	E			SERIA	AL NUM	BER	JER						
**Cyl	inders must meet hydr	ostatic te	sting requirements																		
INSPECTION / MAINTENANCE						YEAR		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC		
1.	Check condition of	f reusable	e O2 mask and the B	VM resus	citatior bag a	nd mask. (Clean	or replac	ce if necessary.												
2.	Check condition of	f single u	se non-rebreather n	nask. Rep	lace if necess	ary.															
3.	Verify washer is se	ated pro	perly. Tighten as ne	eded.																	
4.	Check cylinder cor	ndition. V	alve should be clear	n and dry	(NO OIL)																
5.	Verify cylinder wre	ench is at	tached to yoke and	accessible	e to both cylir	nders (wh	en ap	plicable).													
6.	Open cylinder valv	e. Check	pressure gauge. Ve	rify cylind	der is full (201	.5 psi +/- 1	10%).														
7.	Briefly push butto	n on dem	nand valve. Valve sh	ould have	e high flow, n	o whistle,	, and f	ully stop	when released												
8.	Close cylinder valv	e. Check	for leaks. Pressure	gauge ne	edle should n	ot move.															
9.	Push button on de	mand va	lve to bleed off cont	ents.																	
10.	Check for corrosio	n. Rinse	and clean as needed	l.																	
11.	Check general con	dition of	watertight storage	case.																	
								INSPECT	TOR'S INITIALS:												
DF	MAND VALVE TESTS		OUS 2 YEAR SERVICE DAT	DATE	JAN/FEB/M	IAR		DATE	APR/MAY/JUN		DA	TF	JUL/A	JG/SEPT		Г	DATE	ОСТ	/NOV/DI	EC	
	NG PRESSURE = 32-48 mn			5,112		ı	mmHg			m	ımHg					mmHg					mmHg

NOTES:

- Emergency oxygen kits shall be inspected before diving operations and monthly inspections are recommended.
- Follow the manufactures recommendations for the demand valve resuscitator or it shall be tested every three (3) months and serviced by an authorized service center every two (2) years.

For questions or service needs for this kit, e-mail	NAME of INSPECTOR	SIGNATURE of INSPECTOR	DATE
support.ndഎറ്റുള്ള Program, UDS Manual			15 March 2017, Page 173

Emergency Oxygen Kit Valve Test Instructions, NF 57-03-85

What: This form provides instructions for testing the positive pressure demand regulator (Elder valve) in SEP provided emergency oxygen kits.

When: This form is for reference when conducting quarterly checks on the positive pressure demand regulator in the emergency oxygen kits.

Record keeping: Retention of this form is not required. Results should be recorded on the <u>Emergency</u> Oxygen Kit – Inventory, Maintenance, and Order Form NF 57-03-84.

Other considerations: While this form provides instructions for conducting the quarterly test of the proper functionality of oxygen regulators and valves, operational tests should be done more frequently than this. Oxygen kits should be checked monthly and before every diving operation.

NOAAFORM 57-03-85 (03-17) Page 1 of 3 U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

EMERGENCY OXYGEN KIT DEMAND VALVE TEST RESULTS

Perform a pressure test on each emergency oxygen kit demand valve every three (3) months. Record results below.

Retain test results at the diving unit for three (3) years. Send regulator and demand valve in for service every two (2) years

Retain test results a	it the diving unit for three (3) years. Ser	id regulator and demand valve in for ser	vice every two (2) years.
PRESSURE VALVE T	FST #1		
OXYGEN KIT #	DIVING UNIT NAME		TEST DATE
DEMAND VALVE MAN	UFACTURER	DEMAND VALVE SERIAL NU	JMBER
PERSON PERFORMING PRESSURE TEST UNIT DIVING SUPERVISOR		TEST GAUGE READING	☐ PASSED
		mmHg	☐ FAILED
PRESSURE VALVE T	EST #2	•	
OXYGEN KIT #	DIVING UNIT NAME		TEST DATE
DEMAND VALVE MANUFACTURER DEMAND VALVE SERIAL		JMBER	
PERSON PERFORMING PRESSURE TEST		TEST GAUGE READING	☐ PASSED
UNIT DIVING SUPERVISOR		mmHg	☐ FAILED
PRESSURE VALVE T	EST #3		
OXYGEN KIT #	DIVING UNIT NAME		TEST DATE
DEMAND VALVE MANUFACTURER		DEMAND VALVE SERIAL NUMBER	
PERSON PERFORMING PRESSURE TEST		TEST GAUGE READING	☐ PASSED
UNIT DIVING SUPERVISOR		mmHg	☐ FAILED
PRESSURE VALVE T	EST #4		
OXYGEN KIT #	DIVING UNIT NAME		TEST DATE
DEMAND VALVE MANUFACTURER DEMAND VALVE SERIAL		J JMBER	
PERSON PERFORMING PRESSURE TEST		TEST GAUGE READING	☐ PASSED
UNIT DIVING SUPERVISOR		mmHg	☐ FAILED

(03-17) Page 2 of 3

EMERGENCY OXYGEN KIT DEMAND VALVE TEST INSTRUCTIONS

FRAGILE: Please be careful when handling this test kit. Dropping or hitting the pressure gauge will alter the calibration.

Included: One Sphygomanometer pressure gauge

PVC 'Tee' w/ attached balloon

The Elder Valve test kit comes fully assembled and ready to use. Please do not disassemble or replace/exchange parts without contacting NDC.

The purpose of this test is to verify the proper operation of your positive pressure Elder valve in the NOAA issued diver emergency oxygen kit. Please perform this pressure test on an annual basis.

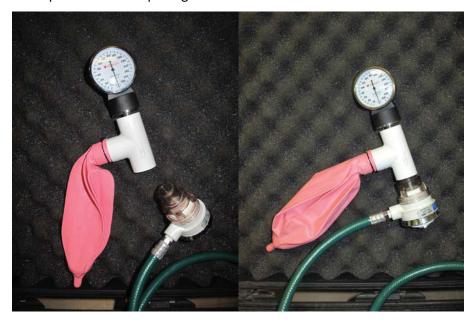
A) Preparation:

- 1. Attach your oxygen 1st stage regulator onto a full or partially full oxygen cylinder.
- 2. Slowly open the oxygen supply all the way then back 1/4 turn. The system should pressurize and have no audible leaks. Remove the face mask from the Elder valve, if attached.
- 3. Depress the positive pressure button on the Elder valve. A flow of oxygen should be apparent from the valve and there should be no whistle sound from either the 1st stage regulator or Elder valve. Oxygen flow should cease immediately when the button is released.



B) Test:

1. Place the Elder valve fitting into/onto the open end of the 'Tee'. If it does not fit, hold the valve as flush as possible to the opening.



EMERGENCY OXYGEN KIT DEMAND VALVE TEST INSTRUCTIONS

- 2. Depress the positive pressure button fully and hold down. The balloon will inflate and the pressure gauge needle will rise. Continue to hold down the pressure button while taking note of the pressure on the gauge: it should read between 32-48 mm Hg.
- 3. If the needle bounces while depressing the positive pressure button, release the button and try again. Depress the button slower while keeping the balloon from swinging as it inflates. Attempt to find a flow rate of oxygen where the needle may settle enough to obtain a pressure reading.
- 4. Release the positive pressure button. The balloon should deflate immediately; if it does not, check the Elder valve exhalation port for improper alignment or blockage.



C) Post-test:

1. Annualy: E-mail, mail, or fax the test results to:

Nick.Jeremiah@noaa.gov

NOAA Diving Center Nick Jeremiah 7600 Sand Point Way NE, Bldg 8 Seattle, Wa. 98115

206-526-6934 206-529-2757 (fax)

- 2. If your Elder valve fails the test by registering a pressure below or above 32-48 mm Hg, contact NDC for repair information.
- 3. Please do not disassemble or replace parts on the Elder Valve test kit. If you need to replace anything for any reason, please contact NDC to make sure repairs are done correctly. Using different parts other than those originally on the kit will contribute to inaccurate pressure readings.