

NURC/UNCW DIVING SAFETY RULES

1. Certification

No individual will be allowed to participate in NURC/UNCW diving operations unless he/she holds a valid UNCW Scientific Diver Certification, NURC/UNCW Diver -in-Training permit, Temporary Diver Authorization, AAUS Scientific Diver Certification, VIP diver authorization, or a NOAA Diving Program Certification. The individual may be required to participate in scheduled training and certification activities prior to beginning the diving research mission.

2. Divers Responsibility

Ultimate responsibility for safety rests with the individual diver. Therefore, it is the diver's responsibility and duty to refuse to dive if the diver feels uncomfortable with the tasks or dive plan, or if conditions are judged to be unsafe or unfavorable, or he/she would be violating the conditions of his/her training or NURC/UNCW diving regulations. A diver should also withdraw from diving if he/she does not feel well enough to safely complete the dive.

3. Supervision

A NURC/UNCW certified Divemaster will be provided for all diving operations. The Divemaster shall have complete operational authority and full responsibility for all diving activities. This shall include, but is not limited to, any decisions regarding operational diving procedures, proper equipment, individual diver fitness, ship or vessel operations as they affect diving and operational weather-ocean related judgments. The Divemaster has the authority to terminate any diving operation he/she feels is unsafe or unwise. The Divemaster may be responsible for only six in-water divers at anyone time during normal working dives. If live boating, then no more than five in water divers are allowed at anyone time.

4. Dive Planning

A dive plan will be formulated prior to engaging in diving activities. This will be reviewed and discussed by all diving participants. This plan should include the proposed site, proposed tasks, bottom time and depth anticipated, a review of surface conditions and underwater conditions and any hazards anticipated. A pre-dive briefing or safety briefing will be conducted by the onsite Divemaster.

5. Dive Procedures

a. Depth Limits

Maximum depth for air or enriched air nitrox will be 132 FSW (113 FSW for 36% EANx). No-stop dives will be in accordance with the US Navy Standard Air Decompression Tables. Provisional dives beyond 132 FSW can be granted, but require additional training and operational procedures, since these dive profiles are likely to incur decompression obligations. Maximum depth for extended range and technical diving is 250 FSW. Special permission must be obtained from the NURC/UNCW Diving Control Board prior to conducting extended range and technical diving.

b. Sea States

Acceptable sea conditions for safe scuba diving depend on a number of conditions including mode of operation, task to be performed, equipment to be used and personnel qualifications. Therefore, the following standards are considered general guidelines to assist the Divemaster in determining safe and normal operating conditions.

- Maximum Sea State: Three to Five foot (3'- 51 seas.
- Maximum Current: One (1) knot.

c. Dive Tables

No-decompression and decompression diving will be in accordance with the U.S. Navy Standard Air Decompression Table, No-Decompression Limits and Repetitive Group Designation Table, and Residual Nitrogen Timetable. Enriched Air Nitrox diving will be conducted in accordance with NOAA NNI Table, NOAA NNII Table, or the equivalent air depth (EAD) concept based on the U.S. Navy Standard Air Decompression Tables.

d. The Dive Team

No diver shall dive unattended. The dive team shall consist of at least two divers, unless the diver is tended from the surface or using surface supplied diving equipment. The divers are required to maintain buddy contact throughout the dive. The guidelines for effective buddy contact include staying in visual contact, maintaining effective communication and being in a position to render assistance if necessary. In situations of limited or low visibility, when visual contact may be difficult or impossible, then the dive team is required to maintain physical contact or use a buddy line.

e. Boat diving/Live boating

A competent boat operator who can operate the vessel, navigate, and return to the dock will remain on board the vessel at all times during normal diving operations. When necessary, live boating procedures may be followed for diving operations and a thorough procedural briefing will be conducted for all concerned personnel.

f. Hours of operation

Normal work hours for personnel engaged in diving activities should not exceed twelve (12) hours during any twenty-four hour period. A minimum rest period of eight (8) continuous hours is required during each twenty-four period for all diving personnel.

g. Specialty Training

Whenever additional specialty training is required, it will consist of, but not be limited to; enriched air nitrox diving techniques, drysuit diving, full face mask scuba, aquanaut/saturation diving, surface supplied and habitat supplied, umbilical dive training and dive computers.

h. Enriched Air Diving

All divers using enriched air nitrox diving techniques will be required to obtain approved EANx training and certification from NURC/UNCW or equivalent instructional agency (IANffi, ANDI, TDI, PADI, NAUI) prior to conducting EANx Scuba or EANx surface supplied dives. It is the responsibility of each diver to confirm the oxygen content of his/her scuba cylinder and verify in writing:

- the PP~ cut-off depth, and appropriate enriched air mixture to be used on the dive,
- the planned maximum depth and allowable bottom time permitted for the mixture contained in his/her scuba cylinder.

i. Safety Stops

An in-water safety stop is recommended for all dives to fifty(50) feet and beyond or approach within ten (10) minutes of the no-decompression time limit. This safety stop should be conducted for at least 3-5 minutes at a depth of 15-20 feet. All divers conducting safety stops must use an ascent line or anchor line for a visual reference or physical aid and the diver is to remain at rest. If the sea states are marginal and exceed three (3) feet or a strong current exists, then safety stops should not be performed. This safety stop is considered a delay in ascent and the time spent will not be counted against bottom time. Divers should reach the surface with no less than 500 psi remaining in their Scuba cylinders.

j. Cold and Arduous Diving Rule

If the dive is extremely cold and/or the underwater tasks are strenuous, then the Divemaster may elect for divers to follow a cold and arduous diving rule. This rule will consist of a repetitive group letter adjustment which will limit no-decompression limits and reduce them by one letter group for single dives and repetitive dives.

k. Flying after Diving

A minimum surface interval of 12 hours is required before ascent to altitude up to 8,000 feet in a commercial jet airliner. Divers who make multiple dives per day or over many days, or dives that require obligated decompression stops should take special precautions and wait for an extended surface interval beyond 12 hours before ascending to altitude (Divers Alert Network, June 1994).

A minimum surface interval of 48 hours is required for saturation divers who have undergone normal saturation decompression procedures.

6. Dive Equipment

An individual diver may chose to use his/her personal diving equipment for operational diving as long as it meets equipment guidelines set forth by NURC/UNCW. Personal diving equipment must be serviced annually, be in good working condition and will be inspected by the Divemaster prior to use. Diving equipment using compressed gas with an oxygen content of 40% or greater, must be cleaned for oxygen service standards.

a. Diving Regulator

All divers will be required to dive with a submersible pressure gauge and an alternate air source (alternate air source can consist of either an octopus regulator, Scubapro Air II, Sherwood Shadow, Spare air or pony bottle with regulator).

b. Buoyancy Compensator

A buoyancy compensator will be worn by each diver. The buoyancy compensator shall have two means of inflation, both oral and mechanical.

c. Diving Harness and Weight Belt

Weight belts and diving harnesses will have a one hand quick release capability and be of a length suitable for the individual. Weight belts used in conjunction with saturation diving will have two quick release buckles for added security.

d. Compass

The use of an underwater compass is recommended for all divers for general navigation and orientation during the dive.

e. Depth Gauge

All divers shall wear a depth gauge or dive computer to record depth profiles.

f. Dive Timer

All divers shall wear a dive watch, dive computer or pressure activated stopwatch to record bottom time.

g. Variable Volume Drysuit

The use of variable volume drysuits are allowed if the participants have proper training and receive dry suit certification.

h. Dive Flag

A Code Alpha and Sport diving flag shall be flown at the dive site so that it can be seen from 360 degrees to indicate underwater diving operations.

i. Dive Computers

Dive Computers are permitted for use and can be used to control the dive profile. Divers must follow the Guidelines for use of Dive Computers, from the AAUS Dive Computer Workshop.

7. Emergency Procedures

a. Emergency Assistance Plan

Diving personnel will review diving accident management prior to engaging in operational diving activities. A copy of an Emergency Assistance Plan will be carried on-board by the Divemaster which outlines the nearest medical facility and recompression facility appropriate for the diving location.

b. Emergency Equipment

The following first aid equipment will be present and available on-site for all diving related activities; divers first aid kit, and oxygen demand valve resuscitator unit.

c. Violations

Violations of the NURC/UNCW Diving Safety Rules will involve a review by the Center Diving Safety Officer and Center Diving Control Board and could result in revocation or suspension of NURC/UNCW approved diving certification.

8. Record Keeping

Permanent records will be kept for each diver trained and certified for diving with NURC/UNCW. These files will include medical examination(s), diver certifications, training and qualification records and dive logs for a period of 5 years. The "inactive diver" files are maintained on those individuals whose certification has lapsed, but plan to apply for recertification. All dives or hyperbaric chamber exposures performed under the auspices of NURC/UNCW will be logged and filed in the mission report folder.

9. Reporting of Injuries

Report any and/or all diving related injuries immediately to the on-site Divemaster or a regular NURC/UNCW staff member. Notification will ensure prompt action and immediate treatment to minimize or resolve any medical complications. NURC/UNCW Divemaster will prepare a Diving Incident Report to document the nature of the injury and action taken.