

**CFB KINGSTON**  
**DOLPHIN SCUBA CLUB**  
**DIVE SAFETY ORDERS**

Reference:

A. Interim Canadian Forces (CF) Recreation SCUBA Club Policy (CFAO 50-10, Nov 04)

**INTRODUCTION**

1. Purpose. These Dive Safety Orders provide members of CFB Kingston's Dolphin Scuba Club (DSC) with the information they require to undertake recreational diving safely within the Club environment. They complement the regulations laid down in Reference A and satisfy particular obligations mandated by that Reference.
2. Scope. The Safety Orders apply to all diving activity organized by the DSC. They do not apply to activities undertaken by Club members privately. Members are nevertheless encouraged to observe the safe diving practices outlined in these Orders when they participate in recreational Scuba diving outside the Club environment. All members are required to read these Orders on joining the Club and annually when they renew their membership.
3. Limitation. The Club will make every effort to ensure the safety of members engaged in recreational Scuba diving through enforcement of these Orders. However, members must accept that they bear a personal responsibility for their own safety while diving recreationally. This responsibility involves, but may not be restricted to:
  - a. Observation of all applicable regulations and instructions set out in Reference A, these Orders and other documents issued from time to time by CF or the Committee of the DSC. A copy of Reference A is available online at [www.dolphinclub.com](http://www.dolphinclub.com) and in the Club premises.
  - b. Paying close attention to instruction and advice offered by instructors when training is conducted and observance of the conditions stipulated during any course of instruction.
  - c. Maintenance of dive skills and practices taught by the recognized dive training agencies<sup>1</sup> that apply to their particular level of certification and training.
  - d. Avoidance of any dive situation where their current level of training and experience is likely to be exceeded.
  - e. Maintenance of personal levels of fitness that equip them to deal with the physical challenges that might reasonably be anticipated during recreational diving.

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<sup>1</sup> Canadian Forces specifically recognize ACUC, NAUI and PADI. Other Agencies accredited by the Recreational Scuba Training Council may also be acceptable.

- f. Refraining from diving when any medical condition identified by the Recreational Scuba Training Council as potentially increasing the risk to safety pertains<sup>2</sup>. Members should not dive when any temporary medical condition, injury or infection is likely to compromise their dive skills or ability to dive safely.
- g. Reporting any matters, whether procedural or equipment-related, that cause them to be concerned about the safety of dive activities. Reports should be made to any supervisor present or directly to the TSO (see Paragraph 10. Below).
- h. Recognizing that, whatever other conditions apply, they must approach their diving as any reasonably prudent person might be expected to do, avoiding any unnecessary risk.

## **GENERAL**

- 4. **Recreational Diving.** Recreational diving is defined, for the purpose of these Orders as:
  - a. Diving restricted to a maximum depth of 130 feet (40m) or whatever shallower depth is dictated by the level of training / certification of the individual diver.
  - b. Diving that does not involve planned, or otherwise deliberate, decompression. (i.e. No Stop diving as defined by the recognized training Agencies).
  - c. Permitting the use of enriched air only when:
    - i. The diver is appropriately certified by a recognized Agency.
    - ii. The diver personally fulfills all of the obligations implicit in their certification to prepare, check and use enriched air and acknowledges the additional risks represented by diving with it.
- 5. **Insurance.** The Club carries no insurance to cover individual members against any of the risks associated with recreational diving. Specifically, members are not protected from any third party liability for injury or damage arising as a result of their actions or inactions. Members are encouraged to ensure that they arrange appropriate personal insurance against any and all risks arising from participation in recreational diving activities.

## **TRAINING**

- 6. **Instruction.** Only instructors currently certified by one of the recognized dive training Agencies may provide instruction within the Club. They must also carry professional liability insurance. Courses and training provided are to follow the relevant syllabuses of one of the recognized training Agencies. They must not involve any activity that exceeds the definition of recreational diving provided in these Orders (Paragraph 4. above) and in Reference A.
- 7. **Documentation.** The Club is to maintain a record of dive qualifications held by its members, specifically recording the highest level of certification. Individual instructors are to maintain copies of training records and other related material meeting the requirements of their parent training agency.

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<sup>2</sup> The list of conditions is contained in the medical statement available to all members and online. Particular note should be taken of the need to obtain a doctor's permission to dive if any of the listed conditions apply.

8. Equipment. Only equipment owned and maintained by the Club, or inspected and approved by an instructor, is to be used for diver training. All equipment is to meet the standards described in the Equipment section of these Orders (Paragraph 13. below). Instructors may refuse training to anyone whose equipment is deemed unsuitable or unfit for purpose.

## **SUPERVISION**

9. Committee Function. The Club's committee is charged by Reference A with the exercise of appropriate supervision of all diving activity. They will normally do so through the Technical Safety Officer (TSO) and approved instructors and certified assistants<sup>3</sup>.

10. TSO. The TSO is to be appointed by the Club Executive Committee. The appointed individual should have substantial experience of recreational diving and an understanding of the function of associated equipment. Ideally, they will be an instructor or divemaster currently certified by a recognized training agency. The TSO is to monitor all Club activity with a view to ensuring compliance with these Orders and the instructions contained in Reference A. They are immediately to draw attention to any infringement, correcting it if possible, or referring the matter to the Executive Committee, if not. They should conduct themselves in a manner that encourages early consultation and constructive dialogue to resolve potential problems. They have a particular responsibility to support the Equipment Manager's work to maintain Club equipment and to ensure its serviceability.

11. Training. Supervision of individuals in training is the responsibility of their instructor. Agency guidelines permit appropriate delegation. Individual students are reminded of the Club's expectation that they will accept personal responsibility as outlined in Paragraph 3. above.

12. Recreational Dives. A dive supervisor is to be identified for any recreational dive organized by the Club. The supervisor may, in the case of dives made from a charter boat, be a member of crew. The dive supervisor identified must hold a current divemaster certification or higher. Responsibilities of the dive supervisor are to include:

- a. Maintenance of a log for each dive identifying at least details of the date, site and participants.
- b. Confirmation that all divers are present and accounted for at the conclusion of each dive.
- c. Liaison with charter operations staff (where the supervisor is not a member of same).
- d. Confirmation that medical oxygen and first aid supplies are on hand and serviceable. In the case of medical oxygen, the check is to include confirmation that sufficient supplies are available to administer oxygen at continuous flow (normally 15 liters/min) for as long as it will take to reach Emergency Medical Services from the furthest point of any trip.
- e. Recording and reporting of any accident or incident that involves, or may later result in, injury to a diver. Reports are to be made as soon as possible to the Club Executive Committee and not later than 24 hours after the occurrence. Specific actions are detailed in a later section on accidents and incidents.

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<sup>3</sup> A Certified Assistant is a currently certified Instructor, Assistant Instructor or Divemaster holding professional liability insurance.

## EQUIPMENT

13. General. All diving equipment used during Club-organized activities is to be provided by reputable manufacturers and maintained in accordance with the original equipment manufacturers' (OEM) instructions. Every member must understand that diving equipment, in a very real sense, is life support equipment; its proper care and maintenance make a vital contribution to overall safety.

14. Equipment Management. The Executive Committee will appoint an Equipment Manager (EM). The appointed individual should receive instruction in basic maintenance and fault finding if they do not already have relevant experience or training. The EM's responsibilities will include:

- a. Record Keeping. Maintenance of purchase and servicing records, where applicable, for all dive equipment owned or on charge to the Club is to be effected by the EM.
- b. Equipment Inspection. The EM is to ensure regular inspection of equipment for serviceability. Assistance and advice on this task will be provided by the TSO.
- c. Handling of Unsafe Equipment. The EM is to ensure the immediate removal from service of any equipment identified as unfit for service. Such equipment is to be secured to ensure that divers cannot accidentally take it into use.
- d. Equipment Servicing. The EM is to arrange for periodic servicing of all equipment in accordance with OEMs' instructions and in compliance with local regulations.
- e. Maintenance of Air Quality. The quality of breathing air supplied to divers must be very high. Maintenance of standards, as well as protecting divers from injury, extends the life of dive equipment, particularly Scuba cylinders. CF requires regular air quality checks of compressed breathing air produced by Scuba Clubs by an approved external agency and it is the EM's responsibility to ensure compliance. However, it is the responsibility of any member suspecting contamination of the air supply to report this immediately to the Committee. If there is reasonable suspicion of contamination after an initial check, use of the equipment is to cease immediately. Any Committee member or supervisor receiving a report of contaminated air is immediately to suspend cylinder filling operations. The power supply to the compressor is to be padlocked in the 'OFF' position and issue of filled cylinders is to be suspended.

15. Modification. Modification of Club equipment is not permitted unless authorized by the OEM and undertaken by their representatives or service agents. Dates and details of all modifications are to be recorded by the EM. The Club Safety Committee may authorize minor alterations to Club equipment that do not affect their function or fitness for purpose.

16. Fault Reporting. Every Club member is required to inspect equipment issued to them for basic function and serviceability as taught by their training Agency. They are immediately to report any faults or defects discovered to the EM or issuing individual. Members are not to attempt repairs themselves and faulty or defective equipment is not to be used. Faults or defects identified in use must be brought to the attention of the EM when the equipment is returned.

17. Compressed Gas Management. Recreational diving involves the use of compressed gases stored in metal containers at very high pressures. It is essential that appropriate care be taken to avoid injuries resulting from mishandling. The following specific instructions are to be observed by all Club members:

- a. Only individuals authorized by the Executive Committee may operate the air compressor and fill Scuba cylinders after appropriate training. Unauthorized individuals are never to operate the valves controlling the air storage banks and air supply 'whips'. A list of authorized persons is to be posted beside the fill station.
- b. During cylinder filling operations only the approved operator is to approach and handle the air banks and fill 'whips'. All other Club members are to remain at least 4 feet away from them.
- c. Scuba cylinders are to be handled carefully and protected from shock and excess heat. They are to be firmly secured in transit and whenever they are unattended (except for storage within controlled areas) they are to be laid down to reduce the risk of damage from falls.
- d. Particular care is to be taken to avoid injury resulting from the injection of high-pressure air into soft tissues. Specifically, situations where cylinder valves could accidentally be opened while hands or other body parts are in contact with the valve orifice, are to be avoided.

18. Individual Equipment. Divers engaged in Club-organized recreational diving are to carry and use the following equipment:

- a. Complete Scuba unit comprising; a buoyancy compensation device, Scuba cylinder(s) and a regulator set (which must include an Alternate Air Source).
- b. Exposure protection suit and accessories appropriate to the anticipated conditions and consistent with the diver's individual requirements.
- c. Mask, fins and snorkel.
- d. Submersible Pressure Gauge (SPG).
- e. Timing device (which may be a waterproof watch, a bottom timer or a dive computer).
- f. Cutting tool (knife or EMT<sup>4</sup> shears / snips).
- g. Recreational dive tables or dive computer.

## **DIVE CONDUCT**

19. 'Buddy' System. Solo diving is not permitted during Club dives. A minimum of two divers is to be under water at any time. 'Buddy' pairs are to operate in close proximity to one another and in positions allowing them to render one another immediate assistance.

20. Dive Planning. Certified divers are individually responsible for planning their dives to ensure that they remain within 'no decompression limits', have sufficient air for the intended dive and allow a sufficient surface interval when repetitive diving is involved. Instructors will assist and advise student divers on dive planning during training.

21. Pre-Dive Safety Check. Divers are to complete a pre-dive safety check before every dive.

22. Maximum Depth. Divers are not to exceed the maximum depth stipulated by their level of certification. The recommended limit for recreational diving is 100 feet (30m) and the absolute limit 130 feet (40m).

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<sup>4</sup> Emergency Medical Technician

23. Safety Stops. All recreational diving is predicated on making a continuous ascent to the surface safely without mandatory stops. However, the training Agencies all encourage the adoption of a safety stop on every dive, typically at 15 feet (5 m) for 3 minutes. Members are encouraged to observe this practice. They are to make any mandatory stops required after accidentally exceeding 'no decompression' limits.

24. Ascent Rate. Divers should ascend at a rate not greater than 30 feet (10m) / min, and ideally more slowly. They should take particular care to ascend slowly from any final safety stop to the surface.

25. Air and Time Limits. All dives are to be completed within 'no decompression limits'. Divers should plan their dive and calculate their air consumption to return to their exit point, be it a boat or shore, with at least 500 psi<sup>5</sup> remaining in their cylinder.

26. 'Calling' a Dive. Every diver has the right to cancel or 'call', a dive. They may do this at any time, including during the planning and preparatory stages of a dive. The ability to do this is an essential safety element in recreational diving. Other divers affected must respect the right of the person 'calling' the dive to do so. No explanation needs to be given and there must be no recriminations.

27. Charter Operations. Club dives will often involve the use of charter boats. The following specific instructions are to be followed:

- a. Only boats compliant with Canadian Coastguard regulations are to be used.
- b. The Club coordinator for the dive is to ensure that medical oxygen, first aid supplies and emergency equipment are available for all members present.
- c. An appropriate dive flag<sup>6</sup> is to be flown from the vessel during diving.
- d. Club members are to respect the authority of the Captain, who has ultimate responsibility for all aspects of safe operation of the vessel. His / her instructions are to be obeyed immediately.
- e. The permission of the Captain, or an authorized representative of the charter operation, is to be obtained before any person boards the vessel or any equipment is loaded.

28. Shore Diving. Club dives are to be conducted only from sites that have previously been inspected and checked by an instructor. Site plans are to be made available and a briefing is to be conducted before diving commences. The Club coordinator / dive supervisor is to ensure that emergency equipment is on hand and that an Emergency Action Plan covering the site is immediately available and up to date. When diving from shore, a surface marker buoy displaying the North American dive flag must be used. Divers should remain as close as possible to this buoy when completing an ascent or floating at the surface.

## **ACCIDENTS AND INCIDENTS**

29. Definitions. For the purposes of these Orders, an accident is defined as an unexpected event that results in damage or injury. An incident is defined as an extraordinary occurrence that may require later action or lead to later identification of an injury.

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<sup>5</sup> This quantity presumes the use of an 80 cubic foot cylinder. Allowances should be made for any lesser capacity.

<sup>6</sup> The dive flag to be flown is the North American flag showing a white diagonal stripe (top left to bottom right) on a red background. It is to measure at least 50cm square.

30. Reporting. All accidents and incidents taking place during organized Club activities are to be reported and recorded in accordance with the procedures set out in Reference A. CF Regulations require submission of a report to higher authority in the following circumstances (The reporting format provided at Annex C of Reference A should be used):

- a. Any death or life-threatening dive-related injury.
- b. Convulsions or serious impairment of consciousness during or after a dive.
- c. Decompression Sickness (the Bends).
- d. Air Embolism.
- e. Any significant mishap, even though the diver escapes actual injury, or a series of incidents that render suspect any equipment or procedure.

31. Preservation of Evidence. The investigation of accidents provides information that, as well as determining cause, can significantly assist in the prevention of future occurrences. The success of an investigation may depend on the preservation of available evidence. The following procedures are to be followed in the event of an accident:

- a. Any equipment involved is to be secured and protected from external interference. It should be handed over to relevant authorities (usually the RCMP / OPP) when requested.
- b. Air cylinders should be closed and the number of turns it takes to do this recorded.
- c. Any recording devices such as bottom timers / dive computers should be brought to the attention of investigating authorities, but no attempt should be made to interrogate them.
- d. Note should be taken of any obvious abnormalities in the configuration of the equipment involved and these should be reported to investigating authorities. Since digital cameras are frequently available at dive sites, it is worth taking pictures of the scene and any equipment involved. These may be of great value to investigators.
- e. Individuals involved in, or witness to, an accident should record their observations / actions as soon as possible, while memories are fresh.

32. Release of Information. Club members involved in, or witness to, an accident or incident are to comply fully with the requirements of any investigating authorities. They should restrict any comments and statements to matters of fact or the reporting of things that they have personally observed.

**Signed for Dolphin Scuba Club:** Original Signed \_\_\_\_\_ **Name:** M K Hill

**Appointment:** TSO \_\_\_\_\_ **Date:** March 6<sup>th</sup>, 2007