

***Oceanside Police
Department***

Harbor Unit

Dive Manual

Oceanside Police Department Dive Manual

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CHAPTER I **DIVING ORDERS**

A. PURPOSE

The purpose of the Oceanside Police Department Harbor Unit Dive Team is to safely perform emergency underwater rescues, conduct underwater salvage during exigent circumstances, recover evidence and conduct body recoveries.

B. GENERAL POLICY

All dive team members shall be certified as SCUBA divers by a nationally known dive education organization such as N.A.U.I., P.A.D.I, N.A.S.D.S., etc. It is expected that each member will strive to maintain a high level of diving competence during his/her tenure on the Dive Team. Each officer shall attend a minimum of three dive training sessions per year, unless specifically authorized by the Unit Lieutenant. All members are required to adhere to safe diving practices during department sanctioned dives. Diving practices and procedures not covered in this Diving Manual shall be obtained from the P.A.D.I. Open water Diver Manual.

C. MEDICAL EXAMINATIONS

All Dive Team members shall pass a medical examination conducted by an approved physician to determine their fitness for diving. These medical examinations shall be conducted on a yearly basis or after any pressure related injury or episode of unconsciousness. Each Diver will maintain a level of physical fitness to successfully pass the annual dive physical and swim test.

D. DIVE SITES

The regulations contained within this manual shall be in effect at all locations where the Dive Team conducts diving operations.

E. VIOLATIONS OF PROCEDURE

Violation of the regulations listed in this manual shall be referred to the Unit Lieutenant, via the "Chain of Command," for appropriate action.

F. EMERGENCIES-DEVIATION FROM PROCEDURE

Any Dive Team member may deviate from the requirements of this manual to the extent necessary to prevent or minimize a situation which is likely to cause death, serious physical injury or major environmental damage. A written dive report of such actions shall be forwarded to Harbor Unit Lieutenant via the Chain of Command.

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G. DEFINITIONS

Emergency Dive Operation - An incident in which an immediate response is needed to prevent death or injury to any person, or to prevent or reduce damage to property of significant value and/or damage or risk to the environment.

Non-emergency Dive Operation - Any scuba operation that does not fall within the scope of an emergency dive. This may include, but is not limited to:

- Maintenance of buoys
- Body recoveries
- Evidence recoveries or searches
- Vessel salvage
- Attempting to prevent or reduce damage to property without significant value
- Assisting other agencies and other City departments in routine matters

Rescue Mode - A search for a missing person when a possibility exists of saving a human life. Normally the rescue mode will not exceed one hour after the victim was reported submerged.

Recovery Mode - A recovery mode search is conducted when there is not a chance of saving a life or the object of the operation does not involve a victim in the water.

Training Mode - Scheduled dives to maintain proficiency in the various dive skills used by the Dive Team.

Diver - An Officer assigned to perform underwater diving duty with the Harbor Unit Dive Team. All Divers must have successfully completed their probationary dive-training period prior to this assignment.

Diver in Training - A diver new to the Harbor Unit Dive Team. A Diver in Training will be required to complete a Dive Training phase before being assigned as a Harbor Unit Dive Team member by the Dive Instructor or Harbor Unit Sergeant.

Dive Supervisor – The designated dive team member, who under the direction of the Incident Commander or Supervisor, is in command of the dive site and all personnel. The Dive Supervisor is generally not in the water. The Dive Supervisor will be responsible for monitoring the entry, exit, and diver profiles for each diver. In addition to individual members ensuring their own safety, the Dive Supervisor will act as the operation safety officer. The Dive Supervisor is also responsible for the coordination of the diving activity, as well as the general order of the boat and divers. Generally, this would be a senior officer when the Harbor Unit Sergeant is unavailable.

Dive Team Leader - Any Dive Team member who has been approved to be in charge of diving operations (See Section D for Details). The Dive Team Leader is responsible for

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approving dive plans and delegating Dive Team roles and positions during emergency and non-emergency dive operations.

Recorder / Scribe – The person responsible for recording events, times, personnel, and details of operations that may lead to a criminal investigation, prosecution, or litigation. The Recorder /Scribe will ensure all significant information is recorded and given to the Dive Supervisor.

Line Tender – A Dive Team member or other qualified person to tend the line in line searches on land or in shallow water. The line tender may be a non-team member, but the tender needs to be thoroughly familiar with the dive team's line use procedures.

Support Crew – City personnel who are not dive team members who may supplement dive team operations, such as OPD Resource Team members.

Buddy System – The required system of diving with another qualified diver. Divers shall be paired up with a buddy or, if odd numbers exist, a group of three. Buddies are responsible for each other's safety and should be in constant visual contact with each other.

CHAPTER II **DIVE OPERATIONS**

A. SOLO DIVING PROHIBITION/BUDDY SYSTEM

Generally, department diving operations shall be completed with a minimum of two fully equipped divers. Effective communication must be maintained between divers at all times or diving operations will be terminated. The "Buddy System" is required to facilitate assistance in an emergency situation, and shall be used during all sanctioned dives. All dives shall include two divers and a surface support person who is informed of the dive plan.

B. ENCLOSED OR CONFINED SPACE

Where an enclosed or confined space is not large enough for two divers, a diver shall be stationed at the underwater point of entry and an orientation line shall be used for guidance. Examples of a confined or enclosed space would be the interior of a submerged vessel or vehicle, a small cave in a rocky reef or a confined area underneath a dock or vessel.

C. MAXIMUM DIVING DEPTH

Unless otherwise cleared by the Department Director, the maximum depth for department sanctioned dives shall be one-hundred (100) feet.

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D. DIVER RESPONSIBILITY

Each diver shall conduct a functional check of their diving equipment in the presence of their dive partner. A diver shall refuse to dive when, in the diver's judgement, conditions are unsafe, beyond the diver's level of training or would be violating provisions of this manual.

Each diver shall be trained, qualified and/or certified for the diving mode/equipment being used prior to diving.

E. DIVE LEADER

The Dive Leader shall be at the site during the actual diving operation, and will be responsible for the following:

- **Coordination**: Diving shall be coordinated with other activities in the area which may interface with underwater activities (i.e. boating, constructions, etc.)
- **Briefing**: Dive team members shall be briefed on:
 - Dive Objectives
 - Dive Location
 - Entry and exit points
 - Planned maximum depth and bottom times
 - Repetitive dives (if applicable)
 - Unusual environmental conditions or hazards which could affect diving safety (surf, currents, etc.)
 - Any modifications of standard diving procedures
 - Review of emergency procedures
 - Minimum tank pressure prior to ascent
 - Reporting of existing physical problems or injuries
- **Dive Plan**: The dive plan shall include considerations of safety and health aspects of the following:
 - Dive mode
 - Surface and underwater conditions
 - Thermal protection
 - Diving equipment required
 - Team assignments
 - Emergency plan
 - Communication procedures
 - Entry and exit points
- **Diving log**: The dive leader shall maintain a diving log for each dive operation, and provide a summary to the Harbor Unit Lieutenant via their Chain of Command.
 - The logs shall contain, at a minimum, the following information:
 - Name of diver/ partner and dive leader
 - Date, time and location of dive
 - Diving mode

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- General nature of dive objective
- Approximate conditions
- Maximum depths and bottom/surface interval times
- Details of accidents or potentially dangerous incidents
- Equipment lost or damaged during the dive operation
- Record Retention: All dive records, to include but not limited to, physician reports, pressure related injury assessments, dive operations, equipment inspections and testing records will be maintained for a minimum of 5-years.

F. POST DIVE EVALUATION

A debrief of each dive operation will be conducted. Topics of discussion should include:

- Accomplishment of dive objectives
- Damage or loss of department equipment
- Diving related injuries
- Review efficiency of gear and procedures

G. DIVE REPORTS

The Dive Leader is responsible for the completion of the department Dive Report. A diving report summarizing the events of the dive shall be submitted for every dive made. The department Diving Report Form shall be used for these purposes. It is the ultimate responsibility of the Dive Leader to be certain that the report is accurate, complete and submitted promptly after each dive. If members of the dive team have different diving profiles, each diver's information shall be fully noted on the diving report.

H. REFILL DIVE TANKS

Each diver is responsible for filling their used tank. The Dive Leader, is responsible for ensuring all dive tanks used during a department sanctioned dive are full prior to the dive. The air storage banks must also be recharged to at least 3000 PSI after each dive however, 3500 PSI is preferred for each bank.

I. FINAL SECURING OF DIVE EQUIPMENT

The Dive Leader, shall be responsible for the final securing of all equipment used during a sanctioned dive. The Dive Leader shall ensure vessels or vehicles utilized during the dive operation are returned to their original clean and organized fashion, and patrol ready.

J. TERMINATION OF A DIVE

It is the responsibility of any diver to terminate any dive whenever s/he feels it is unsafe to continue the dive. Termination of a dive shall not compromise the safety of another diver. The dive shall be terminated while there is still sufficient tank pressure to permit

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the diver to safely reach the surface, including decompression time, or to safely reach an additional air source at the decompression station. The Dive Leader or designated person in charge may terminate any dive at any time due to a change in weather conditions or other circumstances which necessitate such action.

K. PRE-DIVE SAFETY CHECK

Each diver shall conduct a functional check of his diving gear in the presence of his dive buddy, safety diver or tender prior to entering the water. Each buddy team shall review the dive plan, communication signals (hand, line or light) and safety limits.

L. POST DIVE CHECK

With the completion of a dive, it is the responsibility of each diver to:

1. Report any physical problems or symptoms of decompression sickness or air embolism to the Dive Leader.
2. Report any equipment loss or malfunction to the Dive Leader.
3. If diving was conducted outside of the “no decompression” limits, the divers should remain awake for at least one hour after diving and in the company of a dive team member who is prepared to transport him to a hyperbaric chamber, if necessary. Divers who have grossly exceeded the “no decompression” limits, or feel for any reason that they have or may develop decompression sickness, shall be transported to a hyperbaric chamber immediately.

M. CLEAN UP RESPONSIBILITY

After the completion of a dive, every effort shall be made to return used dive equipment to its normal storage place. Wet dive equipment may be stored on the drying racks on a temporary basis only. It is the responsibility of every diving member to properly clean and secure all equipment that he/she has personally used during a dive. It is expected that each member will assist the Dive Leader or his/her designee in the clean-up of supplemental dive gear, the dive locker and any vessel or vehicle used in a diving operation.

N. TRAINING

Annual training will consist of a minimum of 30 hours of formalized training to include, but are not limited to the following:

- Search and recovery techniques
- Evidence handling
- Vessel / Vehicle recovery

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- Body recovery
- Lift bag training
- Contaminated water dive procedures
- Dry Suit familiarization
- AGA Mask / Underwater communications
- Buoy maintenance
- Night diving
- Diving Safety and planning
- Dive computers
- Miscellaneous certification / Training upgrades
- Deep water dive
- Underwater crime scene investigation
- Dive skill checklist (See Appendix A)

CHAPTER III **DIVE EQUIPMENT**

A. DEPARTMENT ISSUED DIVE GEAR

The Department shall make available SCUBA diving equipment that will allow dive team members to safely and successfully perform specific tasks underwater. The Department shall provide regulators, depth gauges, pressure gauges, compasses, buoyancy compensators and SCUBA tanks for use. Each diver shall be issued the following equipment in (Appendix B) for their use. Department issued dive gear, once accepted by a member, becomes that member's responsibility. All items of department issued dive gear shall be clearly marked with letters or numbers to identify it as department equipment.

B. PERSONAL DIVE GEAR

Personal dive gear will not be used. All dive team equipment shall meet the standards as determined by the Dive Team Instructors, and only the makes and models of equipment approved shall be utilized by divers with the appropriate training.

C. USE OF DEPARTMENT DIVE GEAR BY OFF-DUTY MEMBERS

Use of City of Oceanside dive equipment SHALL NOT be used by any member in an off-duty capacity.

D. EQUIPMENT MAINTENANCE

All inspections, tests and routine maintenance referred to in this section must be performed by a technician or facility approved by a national certifying agency or equipment manufacturer approved by a Harbor Unit Supervisor.

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Each equipment modification, repair, test, calibration or maintenance service shall be recorded. These records shall include the date and nature of work done, serial number and/or equipment number of the item, and the name of the technician performing the work for the following equipment:

- Regulators: First and Second Stage
- Scuba Cylinders (tanks)
- Air Storage Cylinders (banks)
- Submersible Pressure Gauges
- Depth Gauges
- Dive timing instruments
- Cylinder Valves
- Air filtration systems
- Compressors

As required by O.S.H.A., the dive equipment listed below must be serviced at the following intervals:

- **SCUBA Cylinders (tanks):** Visual inspection of tank (VIP) once every 12 months; Hydrostatic test of tank (HYDRO) once every 5 years.
- **SCUBA Tank Valves:** Tank valves shall be tested for function once every 12 months.
- **Air Compressor System:** The Air Compressor shall be tested for air quality once every 3 months; the filter chemicals shall be checked and replaced once every 12 months or after 75 hours of use; The compressor oil should be replaced every 12 months or after 30 hours of use;
- **Compressed Air:** The compressed air used by divers shall not contain:
 - (a) A level of carbon monoxide (CO) greater than 20 p.p.m.
 - (b) A level of carbon dioxide (CO₂) greater than 1,000 p.p.m.
 - (c) A level of oil mist greater than 5 milligrams per cubic meter
 - (d) A noxious or pronounced odor.
- **Regulators:** Regulators (both first and second stage) shall be given a complete overhaul once every 12 months and shall be submitted to a functional test every 6 months. Each regulator must be adjusted so that it maintains an exhalation pressure not to exceed 3 inches of water and a negative inhalation pressure not to exceed minus 3 inches of water at a breathing rate of 15 breaths per minute.
- **Buoyancy Compensators:** Buoyancy compensators shall be tested for function once every 6 months.
- **Depth Gauges:** Depth gauges shall be tested against a master gauge at intervals not to exceed six months. Any gauge that shows a discrepancy of 10 feet (plus or minus) shall be repaired or taken out of service.
- **Weight Belts:** All weight belts must be capable of quick release.

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E. MANDATORY DIVE EQUIPMENT FOR TEAM DIVERS:

* See Appendix B for equipment list*

In addition to masks, fins, snorkel and compressed air cylinders (for SCUBA diving), each diver shall be equipped with the following:

- **Exposure Suit:** While diving, every team diver shall wear some type of exposure suit to protect his body from injury and hypothermia.
- **Depth, Pressure and Timing Gauges:** While SCUBA diving, every team diver shall possess an accurate depth and tank pressure gauge and some form of timing instrument. Diving tables or some other device having the ability to calculate the no decompression limit, residual nitrogen and repetitive dive group shall be available at the location of the dive. Divers engaged in dives of short duration such as a rescue, recovery or vessel maintenance dives shall only be required to use a tank pressure gauge as long as the dive will not exceed thirty feet in depth.
- **Dive Knife or Dive Tool:** While diving, every team diver shall possess a device that can be used to effectively cut lines and other obstructions commonly found in an aquatic environment.
- **Night Diving:** Generally, night diving is not recommended. Night is defined as one half hour before sunset to one half hour after sunrise. Dive leaders may define diving under extremely low ambient light as a night dive.
 - While diving between sunset and sunrise, each team diver shall be equipped with a reliable underwater flashlight and an attached long term light source such as a cylume stick or a strobe.
- **Dive Flag:** The standard divers' flag (red field with white diagonal stripe) is to be posted in a conspicuous location while diving operations are underway. Additional signs, flags, buoys or other devices are encouraged to better protect divers. When department vessels are serviced by divers, a "Diver Down" sign placed on the dash shall be sufficient. It is also recommended that the keys are removed from the vessel's ignition switch.
- **Alternate Air Source:** Every diver shall possess an alternate air source when diving in close proximity to other divers so that they may render assistance in an out-of-air situation. The alternate air source shall be either an octopus regulator (safe second) or a second air source such as a pony bottle with regulator attached.

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F. EMERGENCY EQUIPMENT

A first-aid kit and oxygen supply adequate for members of the dive team shall be present and accessible at the dive site of all sanctioned dives. In addition, a Radio capable of transmitting information shall be available at the dive site during all sanctioned dives.

CHAPTER IV **DIVE LOCKER**

A. HARBOR UNIT DIVE LOCKERS:

The primary purpose of the Diving Lockers is for the storage, maintenance and preparation of diving equipment. A storage locker and lock shall be made available to each team member for the storage of issued dive gear. All gear shall remain secured when not in use.

B. TANK STORAGE

SCUBA diving tanks shall be stored by securing them to a vertical surface in an upright position or by laying them on their side. Tanks shall not be left unsecured in an upright position.

C. COMPRESSOR SYSTEM USE:

All team members shall be educated in the safe and proper use of the SCUBA air compressor system. When filling dive tanks after a sanctioned dive, it is the Dive Leader's responsibility the air compressor storage banks are refilled to no less than 3000 P.S.I.

APPENDIX A

DIVING SKILLS CHECKLIST

- _____ Surface Swim (launch ramp to fuel dock).
- _____ SCUBA gear set up.
- _____ Water entry.
- _____ Buoyancy / Weight check.
- _____ Diver tow.
- _____ Mask, Guardian removal / replacement.
- _____ Regulator recovery.
- _____ Buoyancy control: Hover.
- _____ Remove / Replace weight belt and BC (submerged).
- _____ Alternate Air Source (donor and recipient).
- _____ CESA.
- _____ Remove / Replace weight-belt and BC (surface).
- _____ Exit water.

Officer: _____ ID: _____ Date: _____

Instructor: _____ ID: _____ Date: _____

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APPENDIX B

Item	Qty	Make	Model	Serial #
Mask				
AGA Mask				
1 st Stage Regulator				
2 nd Stage Regulator				
Alternate Air				
Dive Computer				
Pressure Gauge				
Compass				
BC Vest				
Dry Suit				
Dry Suit Thermal Wear				
Snorkel				
Fins				
Wetsuit				
Hood/Hooded Vest				
Boots				
Gloves				
Weight Belt				
Knife				
Pelican Buoy				
Dive Light				