



**Dive Policies and Procedures**  
**The Downtown Aquarium Denver**

**700 Water St.  
Denver, CO 80211**

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### **Revision Dates:**

February 8, 2007 by Todd Hall  
October 20, 2008 by Brian Saxon  
September 20, 2009 by Brian Saxon  
January 24, 2011 by Brian Saxon  
August 21, 2014 by Brian Saxon  
February 5, 2015 by Daniel Redinger  
May 2016 by Daniel Redinger  
June 2016 by Daniel Redinger  
August 2016 by Daniel Redinger  
September 2016 by Daniel Redinger

## **An Overview for Success!**

WELCOME to the Deep Blue Sea Foundation (hereinafter “DBSF”) Dive Team! The Downtown Aquarium, Denver (hereinafter “AQDV”) has a wide variety of diving activities in many different simulated environments with various aquatic animals. Learning to operate successfully as a Volunteer Diver takes time, dedication, understanding, flexibility and a professional commitment to being a great team member and dedication to the animals that volunteer diving supports.

Forget the diving you have done in the past as a recreational diver! You are now an “*Occupational*” Diver and that brings a new set of rules and standards into play. Many of the policies and procedures you will learn are similar to recreational procedures, it is still diving after all, but the rules and logic come from occupational entities like the Occupational OSHA and that changes things a bit. Because your volunteer activities support animals that are part of a business, all diving must be compliant with all applicable federal, state, and local regulations. Hence we operate in a similar fashion to recreational diving but not exactly the same and the differences are extremely important. *Our policies and procedures are not optional, and proper adherence and follow through are essential to your success as part of this organization.*

This manual details how Volunteer Divers should conduct themselves to ensure safe and proper diving practices. This manual should be considered a guideline and a minimum standard of how to conduct yourself in the new adventure you are starting with us. By no means can this manual teach you everything though! You will be learning every dive, every time and that’s part of the fun. Use this manual as a foundation for your knowledge and then build upon your professional development by listening well, asking questions and following procedures as you were taught.

Your safety is paramount and should always be your #1 concern. Human safety is *NEVER* overshadowed by animal safety *although both must be considered at all times*. As you move through your volunteer career with us it’s easy to get attached to the animals or lose perspective that the animals are wild. You should always consider our animals as wild creatures; anything less is complacency that can lead to easily avoidable accidents. Additionally, the tasks you perform are important but nothing you will be tasked with is important enough to take unnecessary risk or create exposure to unnecessary hazards. You never have to do anything you are not comfortable doing or you feel is unsafe.

Remain *FLEXIBLE* and go with the flow! This operation is multi-faceted and has many moving parts. Add in wild animals and the general public and you have a perfect recipe for an ever changing environment. Due to circumstances beyond our control we often have to adapt the plan to fit unforeseen situations. Expect the unexpected and you will always be prepared.

Last but not least....*HAVE FUN!* What we do is serious business, but you are heading down a path filled with great people, amazing animals, exciting opportunities and an area of knowledge you can’t get anywhere else. Always remember that as you move forward and you will already have everything you need to succeed!

## **Prerequisites for Volunteer Divers**

All DBSF volunteer dive team members must:

- Provide proof of current Rescue Diver certification from an internationally recognized recreational scuba training agency,
- (or) Proof of current and active status on a public safety dive team and proof of Open Water scuba certification from an internationally recognized recreational scuba training agency,
- Provide proof of minimum of 50 logged dives,
- Accept inherent risks of scuba diving and operating around wild animals,
- Have a great attitude and commitment to team work and supporting your dive buddy.

## **Job Description**

As a Volunteer Diver with DBSF, your position is designated in two ways that are connected:

1. Educational Ambassadors for our guests,
2. Diving Support for our Aquarist Staff.

### **Educational Ambassador**

You should notice that the educational role is listed first. *That's not an accident!* When acting in your volunteer role, remember that without the guests, we don't have an aquarium to dive in. Guest attendance drives our business and keeps the doors open. Guests love observing, talking to and learning from our volunteer divers. What you do is fascinating to them and they are interested! Always take the time to interact with guests whenever the opportunity presents itself. Educate the guest on what it is you are doing, why you are doing it and try to answer any other questions they have. Share your personal passion that inspired you to join our team. They will pick up on your enthusiasm and it will resonate...guaranteed! Maybe you will even inspire that guest to want to get dive certified or join our team! Whatever the outcome you will make an important and positive impact on our guests and give them a memory they will not forget.

### **Diving Support**

The Aquarists are all biologists employed by AQDV and responsible for the husbandry (care & maintenance) of the exhibits as a whole. Your role as Diving Support is to help them accomplish that goal by lending a helping hand on the diving side of their responsibilities. Some of the tasks and responsibilities you will be assigned are (but not limited to):

- Scrubbing rockwork and exhibitry to remove organic material and algae,
- Siphoning organic matter from substrate with hydro vacuums,
- Removing algae and other organic materials from windows,
- Feeding animals as requested,
- Assisting with other husbandry tasks as appropriate,
- Reporting any unusual behaviors of the animals to Aquarists,

- Accurately recording any requested information or observations collected during your dive to the appropriate individuals.

Understand that in the simplest terms, you are helping to create and maintain a healthy and biologically sound environment for marine animals in a “closed” ecosystem. Just like your fish tank, or your cat’s litter box at home, without periodic cleaning the environment becomes unhealthy for the inhabitants. All of our animals are important, but quite a few are endangered, threatened or some other critical classification of their status in the wild and we have a responsibility to maintain their living environments at the very highest standard. Your buy-in to this concept is critical as a member of this team.

## **Expectations: Ours and Yours**

### **Our Expectation of You**

For you to be successful as a member of DBSF Dive Team, it’s critical that our expectation of you is clear. You will be expected to:

- Honor your commitment. A whole lot of time, effort and resources from many individuals go into your training and support,
- Maintain a “guest first” attitude. Remember who we are really here for,
- Be a good team member. Help us maintain a fun and positive working environment,
- Follow all applicable regulations, standards, policies and procedures,
- Follow all safety rules,
- Use all required Personal Protective Equipment (PPE) and any other safety equipment you are directed to use,
- Listen to direction, follow direction and only complete tasks assigned,
- Keep all required certifications up to date as well as proficiency in respective certifications,
- Log all dives in the designated dive log system,
- Be professional. Arrive on time, bring the proper personal equipment, and communicate issues appropriately,
- Take care of the equipment we supply. Everyone shares most of the dive gear and your bad habits will negatively affect others,
- Clean up after yourself. Again we all share the dive areas so treat your work space as you would like other to as well,
- Ask questions, ensure understanding and maintain proficiency in general. Let your supervisor know if you need additional training or a reorientation of sorts in a specific area, task or skill,
- Work hard, produce quality work and have fun doing it!

### **Your Expectation of DBSF and AQDV**

As a Volunteer Diver you commit your valuable time, effort and personal resources towards the goals of this facility. You also deserve an expectation of your volunteering environment. You can expect of us to:

- Provide a safe volunteering environment,
- Provide all required safety equipment and PPE,
- Ensure all emergency procedures are in place in the event of an injury,

- Provide all necessary tools and equipment to accomplish assigned tasks,
- Provide all necessary training to accomplish assigned tasks,
- Communicate effectively and ensure accessibility to DBSF/AQDV staff,
- Maintain all Life Support Dive Equipment in optimal condition and as advised by manufacturer and all applicable regulations.

## **Getting Started: Testing and Evaluation**

Before we can responsibly begin your training, your fitness and SCUBA diving ability will be evaluated by our Dive Operations management team. This is as much for your benefit and safety as ours. We must have confidence in your fitness to ensure your ability to safely perform your duties and provide appropriate support to your dive buddy in the event of an emergency. We also need to confirm your diving ability for the safety of your dive buddies, the animals, and the exhibits. This is accomplished by our swim test and a checkout dive.

### **Swim Test**

The swim test is based off of the American Academy of Underwater Science (AAUS) standards for Scientific Divers. The swim test is as follows:

- Swim a full length of a 25 yard pool underwater on a single breath and without surfacing,
- Swim 400 yards in less than 12 minutes without swim aids (a rash guard may be worn),
- Tread water for 10 minutes, or 2 minutes without the use of hands, without swim aids,
- Tow a person of equal size 25 yards.

You **MUST** pass the swim test in order to move on to the checkout dive.

### **Checkout Dive**

The checkout dive is a test designed to evaluate your SCUBA skills and confidence in a new and challenging environment around wild animals in the care of an aquarium. The skills that are listed here are some of the more difficult skills pulled straight from PADI's Open Water Diver Course, specifically the confined water curriculum. Plan on spending about 3 hours with us learning what it is to be a volunteer diver at AQDV. **For this test you are required to use an Aquarium's BCD and regulator.** You will also be using a weight belt as opposed to integrated weights. Once you have passed the test you may use your own BC and regulator with integrated weights (with proper documentation). You will be expected to have the following gear for your checkout dive:

- 3mm or thicker full bodied wet suit (2-piece suits are not allowed),
- Mask,
- Beanie or hood,
- Gloves,
- Boots (no full foot fins allowed),
- Strap Fins,
- Dive Certification Card,
- Completed and signed Volunteer Dive Manual knowledge review.



The reality is that 1 in 3 dive candidates fail this test due to a lack of preparedness on their part. Being an active diver may mean that your skills in the open water are adequate but aquarium diving is much more than displaying good neutral buoyancy. We are evaluating your ability to properly assemble your gear, don your gear and safely enter in and egress from the water using stairs, ladders, etc. Simply getting through these skills does not mean you have passed. The test starts when you begin to assemble your gear at the dive locker. In the water, you must show confidence and proficiency in your dive skills. It's your responsibility to arrive fully prepared by:

- Having all required gear and materials (above).
- Having read in full your Volunteer Dive Manual and filled out the knowledge review.
- Refreshed recently on SCUBA however you feel appropriate with the tasks listed below in mind.
- Having a good attitude and an open mind for learning new diving techniques and using new equipment.

The Checkout Dive skills consists of: *(Everything will be demonstrated beforehand)*

- Entering an exhibit by climbing up a 6' ladder fully weighted (20# on average). From the top of the ladder transition over the acrylic and in to the water. From the water, be able to pull yourself back out of the exhibit without the use of a ladder, transition from the top of the acrylic to the top of the ladder then climb down the ladder.
- Entering and exiting an exhibit using a ladder in full SCUBA gear and completing the following skills underwater:
  - 1) Primary Regulator Recovery
  - 2) No Mask Swim
  - 3) BCD Removal and Replace
  - 4) 30 Second Hover
  - 5) Air Sharing Ascent (Donor & Recipient)
  - 6) Controlled Emergency Swimming Ascent (CESA)

Upon successful completion of the test you will be oriented to the tools and techniques used on a daily basis by divers to maintain our exhibits and the health of our animals.

**Now you begin the adventure of DIVE ACADEMY!**

# **GENERAL POLICY**

## **Purpose**

This document sets forth policy and operational procedures for the AQDV and DBSF diving programs to ensure diving is conducted in a manner that will minimize the risk of injury and/or associated illness. However, no standard will ever exist which can substitute for common sense, sound judgment and a continuing concern and vigilance for maximum safety. The basic regulations and procedures for the safety of both divers and animals are set forth in this document, and are designed to assure general conformance with standards generally agreed upon by the scientific diving community.

This manual was developed and written by the AQDV Dive Operations Department to comply with the policies set forth in the AQDV Dive Safety Manual. Adherence to these standards has proven both feasible and effective in protecting the health and safety of divers.

## **Exhibit Diving Definition**

Exhibit diving is defined in this manual as any diving in a controlled body of water that's under the operational control of the AQDV. The purpose of these exhibits is to house, display or contribute in some way to the husbandry of the aquatic animal collection at the facility. These will include but not be limited to all of the main aquarium facility and quarantine exhibits and habitats. Diving is defined in these policies and procedures as anytime one is underwater while breathing compressed air using SCUBA or hookah diving modes.

## **Responsibility and Indemnity**

Although these policies and procedures are intended to ensure that exhibit diving activities at AQDV are carried out according to accepted industry and professional standards; they do not guarantee the absolute safety of all participants. Foremost, the individual is responsible for his/her own safety, and must acknowledge and accept that responsibility before participating in any diving at AQDV.

## **Workers Comp Insurance**

Volunteer divers are covered in case of injury by worker's comp insurance supplied by the DBSF and should contact the Volunteer Coordinator for more information or specific questions.

# **Supervisory Aquarium Staff Responsibilities**

## **Dive Safety Officer & Assistant Dive Safety Officer**

All diving operations conducted under the auspices of the AQDV will be supervised and approved by the Dive Safety Officer (DSO). The DSO is responsible for all dive operations and has both the authority and obligation to suspend any dive event they consider unsafe or unwise. In the event of a dive accident or incident, they will take charge of the recovery operations and coordinate all assistance efforts.

The DSO will be a full time employee of AQDV. They must hold both an instructor and rescue diver certification as defined by a national certifying SCUBA agency. An instructor has a working knowledge of recognizing diver stress; equipment considerations for a particular task; is sufficient in self, as well as diver rescue techniques; has been responsible for ensuring that all diving activities are conducted in a proper and safe manner and will coordinate with the designated Aquarist for each dive activity to ensure proper procedures are followed.

### **Essential Position Functions:**

- o The DSO, or designated representative, shall be present on premises whenever diving operations are conducted during normal diving hours
- o The DSO, or designated representative, does not have to personally oversee actual diving, but must be aware that diving operations are in progress. This will be accomplished through the master dive schedule. The DBSF dive team currently uses WhenToWork web services for its scheduling needs. Any dive operations not listed on the master dive schedule or not previously discussed with the Dive Safety Officer will be considered an unauthorized dive.
- o The DSO, or designated representative, coordinates and supervises emergency dives as necessary.
- o The DSO, or designated representative, ensures that divers are briefed by the aquarist on the objective of the dive(s) in the particular exhibit assigned.
- o The DSO, or designated representative, is responsible for making sure volunteer divers clear and rinse their equipment, however is not expected to do so personally unless a volunteer is unable to do so.
- o The DSO, or designated representative, shall update the master dive schedule as needed to maintain the schedule's accuracy for Volunteers and Aquarists.
- o The DSO, or designated representative, is responsible for making sure all divers log their dives.

<http://tdad.diveaus.com/>

- o The DSO, or designated representative, ensures volunteers and staff properly stow diving equipment upon completion of dive activity.
- o The DSO, or designated representative, ensures an accurate log of divers entering the exhibits is kept as well as duties and any problems encountered during the dive.
- o The DSO, or designated representative, ensures that all tanks are filled and ready for the next days dive activity prior to the end of his/her shift.
- o The DSO, or designated representative, if there are several diving operations commencing at the same time but at different locations, will ensure that there is effective, constant communications and supervision available between the divers, and all aquarists from their respective locations. This will be accomplished through either radios or house telephones.

- o The DSO, or designated representative is responsible for ensuring safety and emergency equipment is in working order and at the dive site.
- o The DSO, or designated representative is responsible for maintaining the DBSF website.

<http://deepblueseafoundation.org>

## **Aquarist**

The aquarist will be a paid team member (usually an aquarist or biologist) who will be assigned to oversee the diving activities occurring at particular location and at a particular time for accomplishing particular task(s). This person is assigned by a Curator, Assistant Curator, or Life Sciences Manager to oversee the diving activities at this location. The assigning manager is ultimately responsible for the animals and exhibit aspects for these dives, and needs to provide guidance and direction for the aquarist.

Essential Aquarist Position Functions (for diving):

- o The Aquarist is responsible for daily coaching and/or supervision of their volunteers.
- o The Aquarist is responsible for briefing the Dive Safety Officer on the objective of the dive(s).
- o The Aquarist, as directed by the assigning manager, has the final say over what happens in the exhibit they are assigned to oversee for the diving activity, to include the care of animals in that exhibit.

## **Life Support Systems Staff (LSS)**

The Life Support Systems staff will be a paid team member who will be responsible for activating siphons, deactivating siphons and communicating other necessary operational information concerning the life support systems (filters). Life Support staff can be reached on Channel 1 and should be notified when:

- o Activating a siphon
- o Deactivating a siphon
- o Alerting to issues involved with siphons or other filtration elements.

# **General Exhibit Dive Procedures & Protocols**

**(Staff & Volunteers)**

**All divers shall be responsible for the following items:**

- Logging all dives as per OSHA requirements.
- Coordinating all dives with the DSO, the aquarist and their dive buddy.
- Being aware of other known activities in the vicinity, which are likely to interfere with diving operations.
- Understanding dive objectives and planning dives in order to meet these goals.
- Understanding the following information prior to each dive. Information will be obtained from the aquarist responsible for the exhibit and the Dive Safety Officer or designated representative.
- Monitoring unusual hazards or environmental conditions likely to affect the safety of the diving operation.
- Understanding the modifications to diving or emergency procedures necessitated by the specific diving operation.
- Suspending diving operations if, in his/her opinion, conditions are not safe.
- The diver must be comfortable diving that specific exhibit, under the specific conditions, and must also be comfortable diving with the organisms in that exhibit, under the specific conditions of that dive.
- Reporting any consumption of alcoholic beverage in the 3 hours prior to the dive time.
- Reporting any physical problems or adverse physiological effects including symptoms of pressure-related injuries.
- Each diver shall conduct a functional check of his/her diving equipment in the presence of the diving buddy or tender.
- It is the diver's responsibility and duty to refuse to dive if, in his/her judgment, conditions are unfavorable, or if he/she would be violating the precepts of his/her training, or the AQDV diving manual.
- No dive team member shall be required to be exposed to hyperbaric conditions against his/her will, except when necessary to prevent or treat a pressure-related injury.
- Each diver shall have the capability of achieving and maintaining positive buoyancy with his/her buoyancy compensator device after donning the appropriate amount of weight on the weight belt.
- No dive team member shall be permitted to dive for the duration of any known condition which is likely to adversely affect the safety and health of the diver or other dive members.

## **Refusal to Dive**

- The decision to dive is that of the diver. A diver may refuse to dive, without fear of penalty, whenever he/she feels it is unsafe for them to make the dive.
- The ultimate responsibility for safety rests with the individual diver. It is the diver's responsibility and duty to refuse to dive if, in his/her judgment, conditions are unsafe or unfavorable, or if he/she would be violating the precepts of his/her training or the regulations in this manual.
- It is the responsibility of the diver to terminate the dive, without fear of penalty, whenever he/she feels it is unsafe to continue the dive, **unless it compromises the safety of another diver already in the water.**
- If the diver makes the decision to terminate the dive due to their opinion that it is unsafe to continue the dive, the DSO must be contacted immediately to speak with the diver to discuss and document the reasons that the diver felt it was unsafe to continue the dive. This document serves as an evaluation of the potentially unsafe conditions, and can assist to either correct the conditions if the DSO feels they were unsafe, or to evaluate the comfort level of that diver under those specific conditions, in that specific exhibit.
- The dive shall be terminated while there is still sufficient tank pressure to permit the diver to safely reach the surface, including decompression time, or to safely reach an additional air source at a decompression station.

### **Post Refusal to Dive Procedures**

- Should the DSO feel the problem was lack of training, the DSO will put said diver back through the specific training required for the diver to feel comfortable to return to diving.
- If it is determined that the issue is lack of training and after said re-training occurs and diver is still not comfortable with the given task then the diver will be removed from the dive team.

If the DSO finds an equipment or facility issue, the DSO will correct any issues to ensure the diver may return to diving safely.

## **Diving Equipment**

### **SCUBA and Hookah Equipment**

To ensure that all life support equipment is in good working order, all divers must use regulators and BCD's provided by AQDV, or provide the appropriate maintenance paperwork for personal SCUBA gear. If personal equipment is to be used during sanctioned fieldwork, the DSO must approve it. Divers using personal equipment shall understand that AQDV is not responsible for loss, theft, breakage or maintenance of that equipment.

- AQDV provided equipment:
  - BCD
  - Regulator or hookah unit
  - Weights and weight belt
  - Fins short enough in length for use in exhibits.
  - Tanks and/or hookah system

- Cleaning brushes for cleaning
  - Feeding containers for feeding
  - Rinse, shower, and changing facilities
  - Lockers for storage of clothing for the duration of a scheduled shift
  - Cut resistant gloves for use during feeding
  - Wet suits appropriate for diving in 50 degree or colder water
- Equipment each volunteer diver must supply:
    - Mask
    - 3 - 7mm full bodied wetsuit
    - Beanie or Hood
    - Booties
    - Gloves
    - Swimsuit
    - Locks for use in the dive locker room during scheduled shifts
    - Timepiece for accurately tracking in-water time for each shift for recording in dive log.

Each volunteer diver has the option of using their personal life support SCUBA gear (**Regulator and Buoyancy Compensator Device**) or using equipment provided by AQDV. **Volunteers who choose to use their personal life support SCUBA equipment must provide the following documentation before use in this facility:**

- Personal SCUBA Gear Statement of Understanding located in [Appendix 3](#) of this manual.
- Annual service records from a local service facility or a receipt of purchase if the gear is new.
- Volunteers who choose to use their own personal SCUBA gear are required to have life support SCUBA gear serviced annually and must supply records accordingly.
- Failure to comply with the above policies regarding personal use of life support SCUBA gear can result in loss of privileges to use your own personal life support SCUBA gear.
- Each diver shall insure that his/her equipment is in proper working order prior to entering the water and that the equipment is suitable for the type of diving operation.

## Full Face Masks

Full-face masks will be utilized during dive presentations and other specialized dive operations at AQDV. As it is a specialized piece of equipment, it does require an additional certification, and unique care and handling.

- **Training on usage**
  - All divers scheduled for performing dive presentations shall be checked out and trained by the DSO on its usage prior to actual use of the mask.
  - All divers using the mask will be trained how to don and remove the mask appropriately.
- **Care and maintenance**
  - The mask shall be stored in a secure and dry environment after proper rinsing and decontamination.
  - Any issues encountered during usage should be immediately reported to the DSO or designee.
- **Setup of mask and communications unit**
  - The mask and communications unit have been set up for optimal volume control. Please do not make any adjustments.

- Please leave all cables connected to the unit, except the communications cable, which will need to be removed for proper storage to occur.
- DRY YOUR HANDS PRIOR TO CONNECTING, DISCONNECTING OR HANDLING THE UNIT IN ANY WAY, EVEN IF IT IS ONLY TO TURN THE POWER ON.
- **Dive presentation procedures**
  - Dive presentations may be scheduled to occur several times a day, depending on the exhibit and the events that are occurring during that time.
  - Divers and tenders should be prepared to begin the dive presentation 5 minutes prior to the scheduled start time.
  - A presenter from outside the Under the Sea should radio the tender in order to determine who the diver will be, and to ask for a sound check.
  - The show should proceed from there.
- **Cleanup after usage**
  - The mask shall be disconnected from the communications cable and hookah line so that it can be rinsed in fresh water or water containing a disinfectant. The microphone inside the mask should be fine even if it gets wet as long as it is not under pressure. Please do not use a hose with running water to clean the mask itself. The whole unit should then be hung in an orderly fashion on the hooks provided on the wall opposite the Under the Sea. There is a plug to cover the COMM connections on the Full Face Mask. The COMM wire ends should be connected to each other.

## **Daily Diving Procedures**

### **Pre-Dive Procedures**

The Aquarist will brief the DSO and/or Divers as to what tasks are to be accomplished during the dive shift. The aquarist will make the final decisions as what occurs or does not occur in their exhibit and how they would like tasks performed. The DSO/aquarist will ensure the following topics are covered (but not limited to):

- Task(s) to be completed during dive,
- Buddy team assignments when subs are present,
- Animal interaction procedures:
  - Proper procedures around sharks, eels and rays,
  - Shark, eel, and ray behavioral patterns to look for,
  - Animals to be wary of,
  - Moving slowly and cautiously along bottom where animals may hide.
- Proper use of suction cups and acrylic cleaning pads (if applicable),
- Proper use of vacuum cleaner/gravel washer (if applicable),
- Proper use of pressure washer (if applicable).

During the briefing, the following points must be met:

- Diver must ensure the dive objective is clear.
- Diver must ensure his or her gear is assembled correctly and in good working order.
- Diver must fill out his or her dive profile under the correct day on the “Pre and Post Dive Check” board prior to beginning the dive.



- Notification of Exhibit Entry/Exit
  - Dive teams are responsible for notifying the DSO or an aquarist whenever they enter or exit an exhibit. If either the DSO or aquarist is unavailable, notification should be made to any Life Sciences personnel.
  - In most cases this will be implied by communications between staff and volunteers when briefing dive objectives pre-dive and operational communications at the start of the dive for siphon starting or other functional needs.
  - If the start of a dive is going to be delayed significantly the divers should communicate the new dive time to staff.

## **Post-Dive Procedures**

- Post-dive equipment check,
- Proper equipment rinse and stowage,
- Completion of dive log and exhibit log entries,
- Reporting any observations to the aquarist regarding animal behavior,
- Reporting any physical problems or adverse physiological effects including symptoms of pressure-related injuries.
- After the completion of a dive, Diver will return to the “Pre and Post Dive Check” board to complete their dive profile with the following information:
  - Time the dive was ended,
  - Ending PSI,
  - Using the Navy dive table provided, what pressure group they are currently at,
  - Are they in good health after the dive?
    - **IF NOT, DSO MUST BE CONTACTED IMMEDIATELY!**

## **Diver Suspension**

- The DSO has the ability to suspend dive privileges (staff or volunteer) for the following reasons:
  - Diver presents with a medical condition that is a contraindication to diving.
  - Diver is on prescription medications which impairs judgment and is a contraindication to diving.
  - A dive incident occurred that requires the DSO to investigate the circumstances which lead to the incident.
  - Diver willfully deviates from the dive plan and it is found the diver did so negligently.
  - The DSO feels the diver was not properly trained on assigned task.
  - Any other reason not listed that would be a contraindication to the safe diving practices as detailed in this dive safety manual.

## **Dive Status Reinstatement**

- Once a diver has been placed on suspension a dive incident report will be opened. In the report, a description of the incident or situation that caused the diver’s privileges to be revoked will be described.
- In the report under “REQUIRED ACTIONS” the DSO will provide what it is that diver must do in order for his/her dive status to be reinstated.

- Once the REQUIRED ACTIONS are complete, the DSO will circle “YES” under “Diver Reinstated to Active Diving Status”. The DSO will sign the form as well as the Diver who was suspended. Then and only then can the diver return to active diving.

## **Emergencies and Deviations from Regulations**

- Any diver may deviate from the requirements of these procedures to the extent necessary to prevent or minimize a situation which is likely to cause death or serious physical harm to a human, or cause death or serious physical harm to an animal, or damage to the exhibit. A written report of such actions must be submitted to the Dive Safety Officer explaining the circumstances and justifications.

### **Flying after Diving**

- Divers are required to have a minimum surface interval of 18 hours before ascending to altitude after a single non-decompression dive in a 24-hour period. Multiple dives in a 24-hour period require a minimum of 24hrs of off-gassing before flying. Dehydration plays a significant factor in decompression sickness, divers are strongly encouraged to drink at least one liter of water per day.

### **Emergency Procedures**

- AQDV procedures for emergencies follow the standards of care of the community and include procedures for emergency care, recompression and evacuation for divers from AQDV to the nearest facilities. The DSO and security personnel will coordinate any necessary evacuation procedures.
- **Emergency Procedures are located in Appendix 1 of this manual.**

### **Panic Buttons**

#### ***Locations***

- On the 3<sup>rd</sup> floor next to the Entry/Exit points above Reservoir, Under the Sea, Ship Wreck, and next to the SCUBA fill station.

#### ***Usage***

- In case of a diving emergency or other emergency occurring on the 3<sup>rd</sup> level where a human life is in immediate danger, one of the red emergency panic buttons located on this level may be pressed. Audible alarms sound will notify staff. All notified staff will immediately proceed to the 3<sup>rd</sup> level in order to render assistance.
- Base station radios are kept at the larger dive sites to contact staff during dives and in case of emergencies. All radio communications should be on Channel 1.

### **Special Dive Operations**

If a specialized dive needs to be scheduled, the following protocols must be met:

- Staff members who are cleared to dive by the DSO may conduct dives as necessary at times that they feel dives are needed. Any dives between 8am-6pm is considered normal dive activity under this dive manual and does not require a dive plan to be submitted to the DSO. Any dives outside of that time

frame WILL require a dive plan to be submitted to the DSO for approval. Volunteer divers may only dive after 8am. Any dives done before 9am may only be done for training purposes for Dive Academy.

- DSO will notify appropriate staff members of any changes in the Master Dive Schedule. (Lack of aquarist, emergency, medicated exhibit, etc.)
- DSO is responsible for assigning an approved supervisor for each diving activity not scheduled within the normal diving hours of AQDV.
- The aquarist is responsible for checking the Master Dive Schedule for updates, and meeting volunteer divers for their assigned shifts.

### **Compressor and Fill Station Operation and Maintenance**

- The DSO, Assistant DSO, A1 Scuba dive guides, life support personnel and aquarists who have been properly trained in the use of the fill station shall be the only persons authorized to operate this equipment and to fill cylinders.
- *Volunteer divers will not be involved in compressor operation in any way.*
- The DSO will complete quarterly air quality tests to be kept on file by the Dive Operations Department. Those can be made available upon request at any time.

### **Buddy System**

All diving activities shall assure adherence to the buddy system. Two comparably equipped scuba divers in the same exhibit with no physical barrier between them, in constant communication for scuba diving. This buddy system is based upon mutual assistance, especially in the case of emergency.

- A minimum of two divers must be present for any diving in large exhibits.
- If diving is occurring in smaller exhibits, in order for a buddy team to exist the two divers must be in the same, small exhibit with no barrier separating them (i.e. acrylic) and equipped with a means to communicate with the rest of the staff via radio and or phone, on the outside in order to render assistance if necessary.

### **Single Divers / Tender**

A single diver is to be tended by a non-diving surface buddy who is an AQDV-approved certified diver. As a minimum, the Tender should know the location of a mask, fins and a flotation device, or any other necessary emergency equipment so in the event of an emergency; the necessary equipment is readily available. The tender must also have adequate communications with the DSO or assigned representative. This can be accomplished through AQDV radios monitored on channel 1.

- During dive presentations a tender must be present and able to render assistance if necessary.

### **Essential Tender Position Functions**

- Maintain proper communications with the diver from an area close enough to render immediate assistance to the diver if necessary. This communication can either be visual or through the underwater communication system used for dive presentations.
- Responsible for assisting the diver with assembly/breakdown of dive gear.

- Responsible for performing Pre-Operation/Preparation of full-face masks and communications unit for dive presentations.
- Responsible for performing Pre-Operation/Preparation for additional programs requiring use of full-face mask and communications unit for use during special events.
- Responsible for performing Post-Operation/Preparation for storage of full-face mask and communications unit for dive presentations.

### **Exhibit Feeding**

When feeding in any exhibit at AQDV you must always wear chain mail gloves on both hands. These chain mail gloves should be worn over the top of your normal gloves, another glove can be placed over the top of the chain mail for added grip.

### **Hookah Diving**

- Hookah Rigs are used in small exhibits where a BCD and tanks are not practical. The tank will be placed on the floor or left on travel cart during the dive. Divers should, in the event of emergency, remove their weight belt to establish positive buoyancy. The Hookah Rig air gauge should be placed in a visible location from exhibit window.
- A tender is necessary unless there are two hookah divers acting as a buddy team that are in the same exhibit not physically separated by any means and in close enough proximity to render aid if necessary.

### **Cleaning Materials and Techniques**

The curators and aquarists of the exhibits must approve all cleaning materials used in the exhibits where dives are to take place. General cleaning materials include, but are not limited to: special acrylic cleaning pads and holders, nylon bristle brushes, suction cups, test-tube cleaning or bottle brushes, underwater vacuum system, gravel attachment and underwater pressure washer.

When cleaning the exhibits, care must be used to not move too fast, as this will spook the animals and possibly cause them to jump about and injure themselves. Be aware of where your hands and feet are placed. Many animals will seek cover close to the crushed coral or the reef. When cleaning the acrylic panels, move from top to bottom, then move over slightly and continue the process. It is important to slightly cross over the area that was just cleaned to be sure that the entire panel is cleaned. Suction cups are provided to help maintain position on the panels.

### **Exhibit Siphon**

Exhibit siphons are used to gravel wash or pull debris and impurities from the exhibit. Each exhibit's siphon varies in how it is assembled and activated. Refer to the particular exhibit's policies and procedures for specific instruction on its siphon.

### **Acrylic Scratch Protection**

To prevent the possibility of scratching the acrylic panels, special care must be taken to properly prepare the equipment. All divers are responsible for ensuring the following:

- Hookah hose connections should be checked to make sure rubber hose protectors are in proper position.
- Wetsuit booties are to be tucked inside wetsuit bottoms to prevent scratching from zippers.
- Watches should be covered.
- Special care must be exercised when working with acrylic cleaning pads where acrylic panels and gravel meet.
- Always use the mesh side of the cleaning pad when working on the acrylic.
- Suction cups must be placed carefully on acrylic panels and special care used when moving them.

## **Cross Contamination Prevention**

To prevent the possibility of cross contaminating exhibits, all divers must adhere to the following guidelines.

### **General Minimum Procedures**

- Prior to entering any exhibit, each diver must rinse off with a minimum 5 minute hot shower.
- Prior to entering any exhibit, foot baths, located by Reservoir, Under the Sea, Shipwreck, and Dining Room, are to be filled with freshwater and stepped into.
  - Foot baths are to be emptied in a nearby drain upon completion of the dive.
- All equipment must be thoroughly rinsed in the fresh water rinse bin for a minimum of 10 minutes after each use, no matter how short the dive or its location.
  - BCD bladders must be filled with fresh water and drained. This is extremely important as the bladder can carry large amounts of water from one exhibit to the next if no rinsed properly.

### **Salt to Fresh, or Fresh to Salt Exhibit Change**

- Following a dive in an exhibit where there is a water-type change, the diver must remove their wetsuit to their waist, and rinse off with a minimum 10 minute hot shower.
- The diver must also soak all equipment in the fresh water rinse bin for a minimum of 10 minutes.

### **Fresh to Fresh, or Salt to Salt Exhibit Change**

- These procedures shall be strictly adhered to, and these dives are allowed only under special authorization by the DSO or an aquarist.
- Following a dive in an exhibit where there is no water-type change, the diver must remove their wetsuit entire and soak in the fresh water rinse bin for a minimum of 15 minutes.
- The diver must rinse off in the shower for a minimum of 15 minutes and don their wetsuit back on in the shower.
- The diver must rinse all equipment in the fresh water rinse bin for a minimum of 15 minutes and follow the aforementioned BCD bladder rinse instructions.

## **Dive Equipment Maintenance and Storage**

Each diver is responsible for rinsing most of his/her dive equipment for a minimum of 15 minutes upon completion of his or her dive.

- **Regulators** should be rinsed with a quick dunk the rinse tank with the dust cap tightly in place to prevent water from entering the first stage regulator; this should be done on SCUBA and HOOKA set-ups.
  - The second stage primary regulator should then be placed in the *regulator disinfectant container* for a minimum of 10 minutes.
  - Regulators should then be hung in their appropriate place to dry.
- **BCDs** should be soaked for 15 minutes with dust cap firmly in place over Air2 inlet (where inflator hose connects).
  - The Air XS regulator should be soaked for 10 minutes in regulator disinfectant if it comes into contact with a diver's mouth for any reason.
  - Then the internal air bladder should be thoroughly rinsed with fresh water and drained.
  - BCD should be re-inflated and hung in their appropriate place to dry.
- **Masks, Fins, Weights, Weightbelts, Gloves and Hoods/Beanies** should all be soaked in freshwater for 15 minutes and put away appropriately.
- **Tanks** should be rinsed with freshwater and placed in empty tank rack.
- **Wetsuits and Booties** should be placed in the freshwater rinse tank and replaced in the appropriate place to dry.

Regulators, hookahs, BCD's and weights are to be returned to their proper locations outside the dive locker as soon as their 15-minute rinse is completed. Staff wetsuits should be placed on hangers and left to dry. The DSO or dive supervisor is responsible at the end of his/her shift for ensuring that all equipment has been stored in the dive locker.

Equipment that is still damp at the end of the day should be placed in its proper location outside the dive locker for storage overnight. Suits that are wet from afternoon diving activity should be placed in individual drying areas drying overnight. Wet boots and gloves should be placed in drying racks and thoroughly dried before being returned to a locker for storage.

### **Dive Equipment Repairs**

If any piece of equipment malfunctions during the dive, it is the responsibility of the diver to rinse the equipment, **note the problem as best as possible** on the "Dive Equipment Problem" whiteboard located just inside the dive locker. Once noted, place the piece of equipment on the bench below the board.

Repairs on the diving equipment are to be done only by the DSO or by an authorized repair technician. Any problems with dive equipment should immediately be brought to the DSO's attention and the equipment should be pulled from service. The DSO is responsible for repairing the equipment in a timely fashion, completing the inventory/management report and keeping the appropriate maintenance logs.

### **Dive Gear/Locker Room/SCUBA Cylinders Care**

- Showering
  - A minimum hot shower (while wearing wetsuit and booties) of 5 minutes in duration is required before any diver enters any exhibit.
- Cleaning and storage of equipment

- Every diver is responsible for soaking dive gear and accessories worn during a shift for a minimum of 10 minutes after each shift.
  - Every diver is responsible for soaking regulator mouthpieces (2<sup>nd</sup> stages) in the supplied disinfectant for at least 10 minutes, and returning the equipment to its appropriate location.
  - Divers are responsible for rinsing BCDs both inside and outside. Water used during rinsing of the inside of the BCD bladder should be dumped out over the drain.
  - Used SCUBA cylinders should be placed in the tank cart near the fill station after they have been rinsed thoroughly.
- General cleanup
    - Care should be taken to keep the locker room and dive areas clean.
    - All brushes, hoses, tools, or equipment used during the dive need to be returned to their appropriate storage location.
    - Dive entry/exit areas should be rinsed with fresh water after every dive (except for Main Dining, and exhibits using hookah next to the pathway).
    - If water is present on the floor divers should use a squeegee or deck brush, or both to push any excess water towards the nearest drain. No standing puddles of water should be left on the floor as these are slip hazards.
  - SCUBA cylinder
    - Any cylinder that is pressurized over 40 PSI is considered a hazardous material.
    - At no time should a SCUBA cylinder be left free standing. A cylinder must be secured in a basket, strapped to the wall, or lying down and chalked so it will not roll.

## **Dive Logs**

Every dive made at AQDV using scuba or hookah must be logged as per OSHA requirements. You must log your dives using the following URL:

<http://tdad.diveaaus.com/>

Divers are responsible for tracking their own entry and exit times and recording their dive in the dive log. This information will then be entered into a dive log database for use in providing dive information to insurance providers and the AAUS.

## **Grievance Procedure**

- Dive Operations issues are handled by the DSO or authorized representative. Email is the best medium.
- Volunteers can also contact the Volunteer Coordinator at 303-561-4474 with any issues, not just grievances.
- Fish issues should be brought to the attention of any aquarist, the Assistant Curator of Fishes, or Curator of Fishes.
- Mammal issues should be brought to the attention of any mammal trainer, the Assistant Curator of Mammals, or the Curator of Mammals.
- If you are unsatisfied with the assistance you were given after contacting the correct person above, you may make an appointment with the Life Sciences Manager to discuss your grievance.

# **Appendix 1: Emergency Procedures for Dive-related Incidents**

## **Closest Medical Services**

### **Hospital**

- Denver Health
  - (303) 436 – 6000
  - 777 Bannock St., Denver, CO 80204

### **Hyperbaric Facility**

- Presbyterian / St. Luke's
  - (303) 839 – 6900
  - 1719 E. 19<sup>th</sup> Ave., Denver, CO 80218

In the event of a dive related incident (pressure-related injury, animal bite, medical problem (i.e.: heart attack, sudden loss of consciousness, etc.) or power failure the following procedures should be followed:

## **Under the Sea, Reservoir, Dining Room**

**There are red emergency buttons at each of these exhibits, which are linked up to audible alarms that sound when activated.**

These exhibits are dove in buddy teams of 2-3 divers. If there is a diver-related emergency, the diver(s) involved or their buddy will establish positive buoyancy for anybody in the water and depress the emergency button, if dive buddy must exit the water to call a DIVER DOWN over the radio, ensure victims head will remain above water. Response to the signal will be as follows:

1. A staff member will acknowledge the panic alarm at the panic alarm station next to the 1<sup>st</sup> floor elevator, or in the administration office.
2. The same staff member will make a radio call on channel 1 that there is a diver down at the exhibit indicated on the panic alarm screen.
3. All responding staff will acknowledge the diver down call at the exhibit indicated and proceed to the exhibit. En route to the exhibit, responding staff will also gather and bring the rescue gear listed:
  - a. **D.A.N. O<sub>2</sub> Emergency Kit**
  - b. **A.E.D. / Towel,**
  - c. **First Aid Kit,**
  - d. **Backboard.**
4. One staff member will then head to the nearest phone and standby for confirmation of emergency before calling 911.
5. Once on scene the responding staff will relay the confirmation of an emergency and 911 needs to be called.
6. The staff member at the phone will confirm emergency on the radio and announce that 911 is being called. The responding staff will relay the condition of the diver via radio (channel 1) to the staff member on the phone with EMS.
7. Once 911 dispatch indicates they have enough information, the staff member will proceed to the Nautilus Ballroom entrance at the front of the building and escort EMS, once they have arrived, to the dive emergency.



8. If the injured diver is able to exit the exhibit under their own power, trained staff persons will administer first aid for animal bites, or oxygen for suspected pressure-related injuries.
  - a. Oxygen kits are located on the third level at Under the Sea and on the second level behind the Dining Room Exhibit.
9. If the injured diver is unable to exit the exhibit under their own power, trained staff persons will:
  - a. Remove diver's equipment and lift them from the exhibit if no neck injury is suspected, or:
  - b. Remove diver's equipment and immobilize them to the backboard before removing them from the water if a neck injury is suspected.
  - c. The backboard is located on the third level at Under the Sea and on the second level behind the Dining Room Exhibit.
10. The injured diver, and only the injured diver if said diver is of sound mind, may refuse medical treatment from EMS. If the injury is not immediately life threatening, a staff person may transport the injured diver.

\*\*\* In the event the panic alarm goes off and the system gives incorrect information as to the location of the emergency in the building or the area indicated has been checked and there is no emergency, the staff are to respond to all locations in the building that a panic alarm is located to ensure that no one has pressed the panic alarm in an emergency and are left unattended due to a malfunction of the equipment in place.

### **Indonesian Rivers, North American Wilderness**

These exhibits will usually have a single diver with a staff person tending from the dry side for support. If there is a diver-related emergency, positive buoyancy needs to be established for the diver. If the diver cannot accomplish this for him/herself, the staff person will most likely have to enter the exhibit in order to establish positive buoyancy for the diver in the water (by ditching the weight belt). The staff person will call for assistance on the radio, stating the exhibit they're in and that they need assistance for a diver injury/illness. Response to the call will be as follows:

1. Life Support, Life Sciences, or Dive Operations staff member will respond to the call and will copy the radio request and identify the exhibit from which the call was made.
2. All responding staff will acknowledge the diver down call at the exhibit indicated and proceed to the exhibit. En route to the exhibit, responding staff will also gather and bring the rescue gear listed:
  - a. **D.A.N. O<sub>2</sub> Emergency Kit**
  - b. **A.E.D. / Towel,**
  - c. **First Aid Kit,**
  - d. **Backboard.**
3. One staff member will then head to the nearest phone and standby for confirmation of emergency before calling 911.
4. Once on scene the responding staff will relay the confirmation of an emergency and 911 needs to be called.
5. The staff member at the phone will confirm emergency on the radio and announce that 911 is being called. The responding staff will relay the condition of the diver via radio (channel 1) to the staff member on the phone with EMS.
6. Once 911 dispatch indicates they have enough information, the staff member will proceed to the Nautilus Ballroom entrance at the front of the building and escort EMS, once they have arrived, to the dive emergency.
7. If the injured diver is able to exit the exhibit under their own power, trained staff persons will administer first aid for animal bites, or oxygen for suspected pressure-related injuries.

- a. Oxygen kits are located on the third level at Under the Sea and on the second level behind the Dining Room Exhibit.
8. If the injured diver is unable to exit the exhibit under their own power, trained staff persons will:
  - a. Remove diver's equipment and lift them from the exhibit if no neck injury is suspected, or:
  - b. Remove diver's equipment and immobilize them to the backboard before removing them from the water if a neck injury is suspected.
  - c. The backboard is located on the third level at Under the Sea and on the second level behind the Dining Room Exhibit.
9. The injured diver, and only the injured diver if said diver is of sound mind, may refuse medical treatment from EMS. If the injury is not immediately life threatening, a staff person may transport the injured diver.

NOTE: The radios should be used *in the event of a diver injury/illness* that needs immediate attention. This needs to be specifically stated in the radio call. If the diver(s) need assistance with something else that is less immediate, they need to be sure to state that in the radio call to prevent unnecessary alarm and response.

*\*Security will need an incident report from the diver(s) involved as soon as possible after the incident has occurred. The severity of the injury/illness is inconsequential—a report must be filed in any and all matters regarding diver health/safety.*

## Emergency Jump Pack Locations and Usage

In our facility we have employed emergency jump packs, the components of which include a pony bottle mounted to a simple backpack, a primary regulator, and a dive mask, to aid in diver recovery. These emergency units are deployed at the following exhibits: Reservoir, Under the Sea, Shipwreck, and Dining Room. In the event that a diver would need to be retrieved from the exhibit.

The emergency jump packs can be used to accomplish this. To use the jump packs, you must **TURN THE AIR ON**; the bottles are stored OFF. Take the entire unit out of its holder, if it sits in a holder, and don the Pony bottle pack like a BC with the second stage regulator coming over your right shoulder.

It should be noted that the emergency jump packs are by no means full size SCUBA cylinders. All units are for use in RESCUE OPERATIONS ONLY! These units and masks are to be left at the exhibit and are to be checked regularly for function and full air charge by the DSO daily.

## Additional Rescue Gear

In the event that a diver rescue is needed we have Shepherd hooks and floatation throw rings on our large exhibits. When using any of the previously mentioned devices one must be careful to not cause further harm by hitting the victim. On level two (above the Dining Room Exhibit) and on level three (near Under the Sea) we have rescue Dolphin board spine boards (hereafter known as backboards) that can be used to rescue divers from the exhibits. All rescue gear is to remain in its proper location if not in use.

Two D.A.N Oxygen delivery and first aid kits are located in the building; one near Under the Sea and one on the second floor above the Dining Room Exhibit. There are also two Automated External Deliberators (A.E.D) located in the building. One is located next to the third floor D.A.N O2 kit, in a yellow and red striped box marked "A.E.D". The other is located in the first aid room in the admin office. Regardless of where a diver injury may occur a D.A.N O2, A.E.D, First Aid Kit, blanket, and backboard should be quickly taken the exhibit to aid in dive rescue.

## **Appendix 2: Emergency Recall Procedures for Exhibits**

In the event of a situation that divers need to be called out of the exhibit on short notice (fire alarms, power outages, tornados, etc.), the following procedures need to be followed:

### **Under the Sea, Shipwreck, Reservoir, Dining Room**

**1. Fire Alarms, other emergencies that require clearing the building:**

There are shakers (fluorescent PVC “rattles”) located on pegs near the entrances of each of these exhibits. In the event of an emergency, The DSO, dive supervisor, or supervising Aquarist will signal the divers using this device, or any means possible to gain the divers attention. The staff person will assist the divers from the exhibit.

**2. Power Failure**

In the event of a power outage, divers should settle to the bottom of the exhibit and wait for emergency lights to come on (a few seconds). Once their eyes adjust to the lower light levels, divers should slowly make their way across the bottom of the exhibit and ascend at the exit point to avoid disturbing the animals.

### **River Otter, Indonesian Rivers, North American Wilderness**

**1. Fire Alarms, other emergencies that require clearing the building:**

There are no shakers at these exhibits; however divers are equipped with long second-stage hoses that connect them to the scuba cylinder at the surface. Staff people can signal these divers to exit the water by giving several slight tugs (not forceful enough to dislodge the regulator) on the hose. Diver(s) can then be assisted from the exhibit.

**2. Power Failure**

In the event of a power outage, divers should settle to the bottom of the exhibit and wait for emergency lights to come on (a few seconds). Once their eyes adjust to the lower light levels, divers should slowly make their way across the bottom of the exhibit and ascend at the exit point to avoid disturbing the animals.

## Appendix 3: Personal Dive Gear Disclaimer



I, \_\_\_\_\_ fully understand and acknowledge that the Downtown Aquarium Denver and all staff, the Deep Blue Sea Foundation, and any other entity working with any of the aforementioned parties will not, under any circumstances, be liable or responsible for any personal SCUBA or dive related articles brought into this facility (The Downtown Aquarium). This includes but is not limited to:

- Normal wear and tear
- Annual services
- Damage of any kind
- Theft

\_\_\_\_\_ (initial)

Additionally, I fully understand and acknowledge that annual maintenance/ service must be performed on all life support equipment, including all buoyancy compensator devices and breathing regulators. I also fully understand that all costs to service or repair this equipment will be my responsibility, and that the Aquarium will bear none of these costs. All life support dive equipment not within the yearly service requirement will under no circumstances be allowed for use in this facility (The Downtown Aquarium).

\_\_\_\_\_ (initial)

I also understand that service records in some form must be provided and kept on file at The Downtown Aquarium as evidence that all life support equipment is within the yearly service requirement.

\_\_\_\_\_ (initial)

I fully understand and acknowledge that any violation of the above mentioned rules can result in revoked privileges and disciplinary action including termination from the Deep Blue Sea Foundation volunteer dive team.

\_\_\_\_\_ (initial)

\_\_\_\_\_  
Name (print)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date (Month/Day/Year)

## **Appendix 4: Knowledge Review**

*All answers can be found in the above text.*

1. Diving is defined in these guidelines as?

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2. According to the text: \_\_\_\_\_ is responsible for his/her own safety.

3. Complete this sentence:

“The Aquarist, as directed by the assigning manager, has the \_\_\_\_\_  
for the diving activity, to include the care of animals in that exhibit. In addition they have the authority, as  
directed by the assigning manager, to have divers removed from the exhibit and dive team if exhibit protocols  
are not followed.”

4. According to the General Exhibit dive procedures and protocols, can volunteer divers operate the fill  
station? \_\_\_\_\_

5. What constitutes the buddy system according to this manual?

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6. List all required equipment that a volunteer diver must provide.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_

7. List three ways you can prevent acrylic scratches?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

8. In regards to cross contamination, why is it so important to rinse the bladder of the BC after every use?

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9. Any cylinder that is filled over 40psi is considered a hazardous material.

TRUE    or    FALSE

10. How should SCUBA cylinders be stored?

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11. Who are the personnel that can use the fill station?

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12. Where are the red emergency buttons located?

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13. Your dive buddy goes unconscious while diving, as the dive buddy what is your primary role?

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By completing this knowledge review and signing below you are stating that you understand fully all the policies and procedures in this manual. Should any questions arise you agree to contact the DSO immediately for any follow up.

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Name (print)

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Signature

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Date (Month/Day/Year)