



**New York
Aquarium**



DIVE TEAM



**VOLUNTEER
DIVE TEAM
HANDBOOK**

Version 03.03, Summer 2021

WILDLIFE CONSERVATION SOCIETY MISSION STATEMENT

WCS saves wildlife and wild places worldwide through science, conservation action, education, and inspiring people to value nature.

Introduction

Welcome to the New York Aquarium Volunteer Dive Team. Our volunteers complete over 2000 dives annually at the aquarium and are an integral part of keeping our animals healthy and happy.

This handbook introduces basic rules and guidelines for working at the New York Aquarium (NYA) as a member of the Volunteer Dive Team (VDT). It is by no means a full picture of what you will do as a volunteer diver but will help you get started. More knowledge will be gleaned from your mentor, dive team, staff, and dive briefings. For general diving rules and minutiae not covered in these pages (always keep breathing, for instance, and never leave your tank standing) you should refer to your recreational dive training.

Your role at the Aquarium is to function as a member of the Animal Department staff, assisting keepers and trainers in the care of our animal collection. You will also serve as a docent, helping visitors connect their aquarium experience to the WCS' conservation work.

As the Aquarium grows and changes, so too will the role of the VDT. This manual will often change to better reflect the work that we do here. If you have suggestions to that end, they are welcome, but may or may not be implemented. While your suggestions are considered, please continue to follow the guidelines as laid out herein. It is important that all members of the dive team follow these guidelines so that we have consistency amongst teams as part of our overall program.

Though updated by current dive staff, this manual builds on the work of our predecessors Roger Williams, Dick Blankfein, and Pat O'Donnell. Thanks go to them and all past volunteer divers for the foundation that we build upon.

Our hope is that volunteers will want to stay diving here for many years. Thank you for your involvement, and please let us know what we can do to make sure NYA is a safe, educational, and enjoyable place to be a volunteer diver.

Joseph Gessert
Dive Safety Officer (DSO)

Shane Paradis
Assistant Dive Safety Officer (ADSO)

TABLE OF CONTENTS

I: NYAVDT STRUCTURE AND CONTEXT.....	Page 4
II: VDT COMMUNICATIONS.....	Page 5
III: ONGOING EDUCATIONAL REQUIREMENTS.....	Page 6
IV: FITNESS TO DIVE.....	Page 7
V: CONDUCT.....	Page 8
VI: TEAM COMMITMENTS.....	Page 8
VII: UNIFORM.....	Page 10
VIII: CLEANING & MAINTAINING VDT AREAS.....	Page 10
IX: ON OR IN EXHIBITS.....	Page 13
X: SURFACE SUPPORT.....	Page 15
XI: GUESTS OF VOLUNTEER DIVERS.....	Page 16
XII: DISCIPLINARY ACTION.....	Page 16
XIII: MENTORSHIP.....	Page 17
XIV: LEAVE OR DEPARTURE.....	Page 17
ADDENDUM: Sample EAP, DSP, and Radio Reference Sheet.....	Page 19

I: NYAVDT STRUCTURE AND CONTEXT

The New York Aquarium Volunteer Dive Team is part of the Animal Department of NYA. Along with the Bronx Zoo, the Central Park Zoo, the Queens Zoo, and the Prospect Park Zoo, NYA is one of the parks of the Wildlife Conservation Society, an international non-profit that works in 65 countries around the world to conserve over two million square miles of wilderness.

The WCS is based out of the Bronx Zoo and headed by a president who reports to a board of trustees. The president is responsible for the entire organization: from maintainers who sweep up after the sea lion show to park rangers working on anti-poaching elephant initiatives in northern Myanmar.

The NYA is administered by a director, who reports to the WCS president. The director oversees a large staff of both permanent and seasonal employees working in nine departments, including:

- A) Aquatic Health and Living Systems (the vets)
- B) Park Services (they keep NYA safe and clean)
- C) Plant Engineering (Operations and Life Support Systems)
- D) Animal (that's us)

The VDT falls under the umbrella of the Animal Department. The head of the Animal Department is the Director of Animal Programs, currently William Hana. Within the Animal Department there are the following divisions and their current supervisors:

- A) Sharks – Hans Walters
- B) Other Fish/Invertebrates – Aaron Brett
- C) Behavioral Husbandry and Sea Cliffs – Martha Hiatt
- D) Dive – Joe and Shane

Within the VDT there are appointed Dive Team Leaders (DTLs). DTLs serve in rotation as each day's Lead Diver and will provide dive briefing, debriefing, and exhibit support as needed. The DTLs communicate with dive staff about dive activities, team needs, and procedural updates. You are welcome to bring any concerns you may have to your DTLs or dive staff. If an issue is pressing, please follow up with an email or phone call.

All members of the VDT work with other areas of the Animal Department to ensure the cleanliness and health of the aquatic systems and animals in our collection. This also helps to ensure the beauty of our exhibits for guests, with whom we should interact, engaging visitors to think about their potential roles in global conservation.

Volunteer divers are vital to the functioning of the Aquarium, and without volunteer efforts the aquarium would likely have closed following Hurricane Sandy in 2012. Your work is as essential to this facility as the operations department, security guards, parking booth attendants, curatorial staff, and our administrators. We hope you will enjoy diving at the aquarium every two weeks, that you will find friends and community at the aquarium, and that you will understand how our diving is an important part of a larger mission of education and conservation.

II: VDT COMMUNICATIONS

A) With DSO/Volunteer Coordinator

- i. All communications should be emailed.
- ii. Read all email from dive staff in a timely manner and respond promptly to class scheduling requests, insurance renewal reminders, etc.
- iii. Dive staff receives a high volume of emails, so if a request goes unanswered please feel free to send a reminder.
- iv. Checklists and written signs are posted to remedy recurrent problems. Please use the checklists and read the signs.

B) With Dive Team Members

- i. No dive team member is to disclose other members' personal information to any non-member of the team.
- ii. Any email communications to the entire dive team should be drawn from the current distribution list as found on the contact list in our shared Google Drive. Never simply reply to an old email as the distribution list may be out-of-date.
- iii. Dive team email distribution list is for official notices pertinent to aquarium business only. Current team email addresses are available on the shared Google Drive.
- iv. **Please do not reply all**, unless your message is important to the entire group.
- v. A private Facebook group may be used for informal notices to the team: <https://www.facebook.com/groups/NYAVDT/>. Any active team member may request permission to join of the site administrator.
- vi. Our public Facebook page may be liked, used, and commented on in accordance with Section D ("Outside Communication about the Aquarium") <https://www.facebook.com/NYAVDT>

C) Over Aquarium Radios

- i. Our radios are subject to FCC codes. Aquarium staff and many visitors hear transmissions, and we should thus use appropriate language and follow NYA radio protocol.
- ii. Channel 4 is home base: We stay on Channel 4 with the rest of the Animal Department, except for when we need to have longer conversations (Channel 5) or in case of emergency (security on Channel 1). Radio protocol is outlined in the sample emergency plan (for Glover's Reef) that is included in the addendum.
- iii. Watch your language! In addition to rude, offensive, or unnecessary traffic two words never spoken over the radio are "sick" or "dead"; if a fish is sick or distressed notify the keeper over channel 4 that you'd like them to take a look at an animal, and if a fish is obviously dead call the keeper on 4 and then switch to 5 to tell them that there is a "slow swimmer."

D) Outside Communication about the Aquarium

When not actively engaged in dive activities, photos are permitted in public areas and some backstage areas. Please **no photos** of construction, veterinary procedures, animals under veterinary treatment, backstage at Sea Cliffs, and backstage around the BH Compound. As NYA staff you will have access to more knowledge about the NYA than our visitors. Information which is never to be disclosed to non-NYA friends and family, or via social media include:

- i. Information which is sensitive or confidential;
- ii. Information concerning records, food intake totals, medications, physical condition of animals, animal transport, etc.

When on duty or representing the WCS (particularly while in uniform) dive team members should not speak or act publicly in a manner contrary to the stated objectives of the Wildlife Conservation Society.

III: ONGOING EDUCATIONAL REQUIREMENTS

A) First Aid, CPR, O2 and AED

- i. Within six months of joining the team, all members of the VDT are required to obtain and maintain certification in first aid/CPR/AED, emergency oxygen administration, neurological assessment, and treatment of hazardous marine life injuries, or equivalent for medical or emergency professionals.
- ii. For initial certification and recertification, the DAN Diving First Aid for Dive Professionals course will be offered to all dive team members at no cost. This course covers all emergency responder requirements. If divers are unable to schedule training at NYA, these certifications are available through local dive shops and Divers Alert Network instructors.
- iii. Divers will submit a copy of their CPR certification card for retention in their NYA file.

B) Rescue Diver

- i. Within one year of joining the team, all members of the VDT are required to obtain Rescue Diver certification. This certification is available through local dive shops.
- ii. When scheduling allows, this course will be offered to divers at a minimal cost (covering course materials and registration fees) once during the summer season.
- iii. Divers will submit a copy of their highest-level dive certification card for retention in their NYA file.

C) Scientific Diver Classes

- i. During evening Zoom meetings and in-person sessions following dives, all members of the VDT will attend modules to complete their education as scientific divers. These modules cover dive knowledge, aquarium-specific diver education, and collections biology
- ii. Divers missing these sessions will need to attend make up days to cover the required material. Some materials will be available for online review, while other classes require an in-person component.

- iii. Following completion of all modules, divers will take a final written exam towards scientific diver certification, and be scheduled for in-water sessions.

D) VDT Handbook

- i. All new divers will read and familiarize themselves with this VDT Handbook with the assistance of a mentor (see section XIII).
- ii. New divers will pass a quiz covering core practices and guidelines as outlined in the VDT Handbook, with a score of no less than 80%.
- iii. Periodically this handbook will change and be reviewed with all members of the VDT.
- iv. All members of the VDT, upon review of the handbook will sign a statement of understanding to be retained in your file.
- v. Any divers may make suggestions for changes to the manual to dive staff, though these changes may or may not be implemented.

E) Operations Manual

The Operations Manual is still a work in progress, particularly given the large number of new exhibits coming online during post-Sandy renovation, and will likely take the form of a non-binding guide to best practices as suggested by veteran VDT members.

F) Dive Safety Manual

- i. The NYA Dive Safety Manual is less of a living document than the VDT Handbook, and ensures our operational compliance with national scientific diving standards.
- ii. Through the shared drive and printed copies in the dive shack, all divers have access to read and familiarize themselves with the Dive Safety Manual.
- iii. Periodically the manual may change and be reviewed with all members of the VDT.
- iv. Any divers may make suggestions for changes to the manual to dive staff, though these changes may or may not be implemented.

IV: FITNESS TO DIVE and INSURANCE REQUIREMENTS

To maintain active diver status, divers must provide proof of a current NYA dive physical. The dive physical form can be found on the shared drive and must be re-done by an MD or DO at the required following intervals (or at a more frequent interval as specified by your physician):

- A) Every 5 years – Divers under 40
- B) Every 3 years – Divers over 40
- C) Every 2 years – Divers over 60

To maintain active diver status, divers must have current dive accident insurance with Divers Alert Network at the Master level or higher. Dive accident insurance must be renewed annually. A photocopy of your current DAN insurance card will be submitted and the most recent copy will be kept in your file.

V: CONDUCT

- A) NYA is a workplace and you are expected to act respectfully and professionally at all times.
- B) Offensive language or actions will not be tolerated in any area of the park.
- C) Sexism, racism, homophobia, or other prejudicial actions based on an individual's identity will not be tolerated from VDT members.
- D) While in uniform you are a representative of the aquarium and will be held to the same standards of conduct as its employees.
- E) Volunteer divers should behave professionally at all times regarding socialization among members of the team and with our visitors and regarding public displays of affection.
- F) Abide by the WCS Code of Conduct, available on the shared Google Drive in the Administration folder.

VI: TEAM COMMITMENTS

A) Daily Time

A full workday for the VDT is 8:00AM until 5:00PM including a lunch hour. While a shift might sometimes end earlier, you should always plan for a full day at the NYA.

i. Time-keeping

- a. At the beginning of your shift, sign in on the hour or half hour.
- b. At the end of your shift, sign out on the hour or half hour.
- c. At the end of months and quarters, total up your hours on the timesheet.

ii. Procedures regarding time

- a. Start and end time for dives must be coordinated with the keepers for the well-being of the animals and timing of feeds/shows.
- b. You should not leave the NYA until dismissal following debrief, or by special arrangement with the Lead Diver—please **do not** leave the grounds without letting the Lead Diver know you are going.
- c. As some pre-dive tasks need to be done all divers should plan to show up between 7:30 and 8:00. Don't leave all the tasks to your team-mates all the time!

iii. Lateness and Absence

- a. Don't be late. Tardiness delays the start of diving, interferes with animal feeds and visitor experiences, and results in later dismissal for the whole team.
- b. If a lateness or absence is anticipated, contact (via text or phone call) the Lead Diver designated on that week's notice to inform him or her of lateness or absence.

iv. Walkabout

- a. To help further the mission of conservation education, divers should engage with the public whenever possible, and may participate in a walkabout following their dives.
- b. After or during daily dive activities, divers are encouraged to spend time in uniform or dive gear to answer questions and speak to the public about our work. This is a good opportunity to encourage future scientists and recruit new dive team members.
- c. One way to help engage visitors is to have a complete scuba unit in a non-congested public area. No visitor can breathe from the regulator, but young people may enjoy purging the regs and inflating the BCD. Purged regulators must be aimed away from faces and other body parts to avoid accidental embolism (this really is possible!).
- d. Dive team members unenthusiastic about public interaction should complete post-dive tasks such as the tank run and gas fill while other members are engaged in walkabout.

B) Changes in Regularly Scheduled Dive Dates

All divers are expected to work 26 days each year. When, for whatever reason, you will be absent:

- i. As early as possible, but no later than the Tuesday preceding your shift (the prior Tuesday for Wednesday divers), log into the shared calendar at <http://calendar.google.com>
- ii. Select the day you will miss, open the event, and write "***ABSENT**" next to your name; do not remove your name. Save your changes.
- iii. Find a day that suits your schedule, select the day, open the event, skip a line, and write your name below the existing attendance list with **MAKEUP** next to your name. Save your changes.
- iv. Note that this is a shared calendar; any and all changes you make will be visible to every member of the team. Don't ever delete text—only add.
- v. Occasionally a dialogue box will pop up asking if you want to make changes to this event only or all events. **Always** select "This event only."

C) Cell Phone Use

As in any workplace, cell phone use at NYA must be kept to an absolute minimum. Cell phone conversations interfere with your full attention to your duties as a VDT member and look unprofessional to our guests. Cell phones may be kept in your pocket during surface support and other activities, but must have volume and vibrate silenced, or be powered off. **No cell phone use during surface support shifts.** When absolutely necessary, and in a non-public area, a diver may take a **brief** personal break between activities to check urgent messages. If more than five minutes will be needed to take care of an urgent personal issue, the Lead Diver should be notified and the diver should exit the facility (for example to the parking lot or beach area) to conduct such business. Please do not disappear into your phone while your teammates finish the day's tasks. No cell phone use during debrief.

VII: UNIFORM

All volunteer divers will be dressed in the appropriate uniform when reporting to work and throughout the work day, except when in dive gear.

- A) NYA Dive Team shirt
 - *Newer divers lacking a uniform shirt will wear a plain navy shirt*
- B) VDT shirt, sweatshirt, or jacket, or navy blue or black outer layer, depending on weather.
- C) Khaki pants or khaki shorts
 - i. No jeans or skirts are permitted.
 - ii. Pants or shorts must be clean, of a modest length, unstained, and neat looking.
- D) Closed-toe shoes are required. No open toed sandals are permitted.
- E) Hats or caps must have VDT, Aquarium, or WCS logo only.
- F) No jewelry can be worn except a wrist watch and/or wedding ring. Any other jewelry must be removed or covered with waterproof tape.
- G) Unless you are in a closed changing room, your torso must be covered at all times either by uniform shirt, rashguard, or wetsuit. Similarly, please do not walk outside of the shower room in bare feet—wear either booties or your closed-toe shoes.

VIII: CLEANING & MAINTAINING VDT AREAS

Besides assisting Animal Department staff in maintaining animal exhibits and holding areas, the VDT must also maintain its own quarters, consisting primarily of the dive shack, the shower room, and Ocean Wonders and Playquarium dive areas.

The responsibility of ensuring the completion of daily team tasks falls to the dive team leaders. All volunteer divers are expected to fairly participate in the daily tasks on the task whiteboard in the dive shack. VDT members are meant to share equal responsibility for care of the dive facilities—please make sure you are helping with all tasks, and that everyone finishes together. At times, to ensure fairness, DTLs may assign or suggest tasks. Please note item VI C, “Cell Phone Use.” To reiterate, since phones should be stowed at all times, team members should not be checking phones in lieu of completing post-dive tasks.

A) Keys

- i. All members of the team share five sets of keys attached to a length of grey PVC, as well as five OWS key cards. These are stored in the dive shack.
- ii. If a set of keys is unaccounted for at the end of debrief, no divers are to leave the park until the keys are found and returned to their proper place.

B) Dive Shack

- i. All divers are responsible for the tidiness of the dive shack.
- ii. Check the whiteboard when you arrive for uncompleted tasks and use the checklist to monitor progress.
- iii. Food and drinks should always be sealed or stored appropriately, and no food waste should be left in the shack garbage can. Please avoid peanut products in deference to peanut allergies.
- iv. Equipment and reading materials should be reorganized if accessed.
- v. Check to make sure you have ALL your belongings before you leave for the day!
- vi. Always leave the shack better than how you found it.

- vii. The day is not completed until all tasks are completed.
- viii. Remember that the dive shack is shared space among all teams. Leave it nice for them, and they will leave it nice for you.
- ix. The last person to leave the dive shack, whether for a day's activities or at the end of the day, should always ensure that the lights are turned off and that the door to the shack is fully closed and locked behind them.

C) Shower Room

- i. NOTHING should be left behind after showering.
- ii. No booties are allowed in the shower stalls—they leave marks.
- iii. Each person will remove all hair or debris from the floor of the stall. Please squeegee, and then wipe down stalls with wipes located on the dressing bench.
- iv. Cups, bottles, etc. should not be left in the shower room.
- v. Each person will empty rinse tub when finished rinsing or soaking gear, and then squeegee it out or refill it as appropriate.
- vi. All weights are to be soaked outside the shower room in a bucket and never brought into the shower room, except during freezing weather—heavy metal can crack tile.
- vii. Once all team members have showered and rinsed gear, the mats should be removed and the floors hosed down as part of the post-dive tasks.
- viii. Always leave the shower room in the same condition or better than how you found it.

D) NYA Dive Gear

- i. To avoid cross-contamination between fish exhibits, please use only dry gear during set up.
- ii. Post-dive, all dive gear must be soaked in fresh water for a minimum of 15 minutes to avoid cross-contamination between exhibits. Use sink plates and weights to make sure dive gear is fully submerged during the 15 minute soak. After soaking please drain water and use a fresh bin for additional divers.
- iii. All NYA wet suits must be turned right side out, fully zipped and fastened, and returned to their place with the hanger pointed hook side to the back wall.
- iv. All NYA BCDs must be soaked, rinsed (interior), drained, and returned with weight pockets to their place on the appropriate hanger with the hanger pointed hook side to the back wall.
- v. Any used regulator should be dipped in blue Steramine solution, shook free of excess liquid, and hung on the wall-hooks to dry.
- vi. Gloves should be paired and placed on the appropriate glove hooks.
- vii. Hoods should be placed on the appropriate gear hooks.
- viii. NYA drysuits will only be used by divers who have provided a copy of their cert card or proof of experience (10+ logged drysuit dives) to dive staff, and permission will be revoked if drysuit care is not meticulous.

E) Personal Gear

- i. All divers are to supply masks, fins, booties, and exposure protection as desired.
- ii. Gear soaking procedures are identical to as outlined above for NYA gear.
- iii. All personal gear used at NYA, dive or otherwise, must be marked with your name or initials.

- iv. No personal dive gear may be stored in the dive shack unless used at NYA.
- v. All personal gear must be stored in assigned locations on dive hangers with the hook side pointed to the back wall.
- vi. If it's not yours, don't touch it without permission.
- vii. No cameras or other accessories are permitted in any exhibits without prior approval by the dive staff, and then only in accordance with the permission given.
- viii. Unmarked personal items left behind will be retained for two weeks before being discarded.
- ix. For grandfathered VDT members using personal life support equipment at NYA, all regulators and BCDs must be serviced annually. Most recent proof of service (receipt or photocopy of service log) will be retained in your file.

F) Weights

- i. All VDT weights and weight belts must be placed back into the appropriate box in a neat and orderly fashion. Weight belts must be stowed neatly on their bar or rack. No team weight belt or BCD is to be left with weights remaining in it.
- ii. After diving, weights should be removed from integrated weight pockets and soaked in grey buckets.
- iii. Weight pockets, sans weights, and ankle weights are soaked with scuba gear in the large tubs.
- iv. No diver is to borrow another diver's personally owned weights or weight system without explicit permission.

G) Cylinders

- i. All cylinders must be stored behind a taut chain or in a storage bin.
- ii. Don't leave tanks standing up, with or without gear attached.
- iii. Before putting your regulator on a tank, open the valve a little (let a little air out) to disperse any moisture or particulates from the valve
- iv. A dust cap on the valve indicates that the cylinder is full.
- v. Once the cylinder is used, the cap must remain off regardless of the remaining pressure.
- vi. Leave **no less than 500 psi** remaining.
- vii. Rinse tanks after use
- viii. Teams should complete a tank run at the end of their dive day to trade empty cylinders for full.

IX: ON OR IN EXHIBITS

Basic Diving Rules and Philosophy

You will be diving in an enclosed space with wild animals. We have three main priorities, in order of importance: to keep ourselves safe, to keep the animals safe, and to get our work done. Unless specified otherwise herein or in the dive safety manual, you will follow basic guidelines for safe recreational diving, including a pre-dive buddy check (BCD, Weights, Releases, Air, Final Okay), stowing SPG and octo appropriately, and ending dives with a safe air reserve (**NEVER** less than 500 psi). In addition, special consideration must be taken for diving with animals—entries should be smooth and minimize splashing, divers should avoid excessive finning or sculling, and everyone should work together in one area of the exhibit so animals do not feel surrounded. During dives, maintain the buddy system. No solo diving is allowed unless a fully kitted standby diver is available on site or the solo diver is harnessed, tethered, and buddied with a surface tender who is capable of conducting an effective rescue. In general, please keep an open mind to change and a keen eye for possible improvements to our practice, and as you learn the intricacies of aquarium diving please don't forget the fundamentals (like never, ever, leaving your tank standing or replacing the dust cap on a used tank).

A) For All Exhibits

- i. Prior to diving, please check your exhibit from the public side and prioritize areas of growth visible to visitors—initial cleaning should focus on glass and theming near the windows.
- ii. All non-public areas and exhibit decks must be accessed by an unlocked door or gate. Jumping gates or propping locked doors open is not permitted.
- iii. The surface support person, having confirmed permission with the keeper responsible for the exhibit area, should be the first person on and the last person off exhibit.
- iv. Check in and check out with surface support, prior to entering the water and prior to leaving the exhibit.
- v. Ensure you leave the exhibit with the same number of cleaning and personal items you took in.
- vi. The surface support person must keep an accurate account of all of the items which are brought onto the exhibit, but each person should confirm nothing is left behind. After diving is finished, surface support should always do a thorough 'idiot check' of the dive area to make sure nothing has been left behind. Brushes, glasses, or pens left in animal exhibits can be ingested and potentially lethal to animals.
- vii. Every diver should notify other divers in the water when exiting the exhibit.
- viii. Fins must be used in all exhibits unless harnessed for hookah or surface supply dives.
- ix. Sunscreen and excessive lotion or other body products should not be worn in exhibits.
 - x. No untaped jewelry in exhibits other than a dive watch or wedding ring.
 - xi. The exhibit acrylic (windows) is extremely delicate. Don't work with your back to the tank, and if you need to turn away from the acrylic please move at least an arm's length away before turning.
- xii. **NEVER** go directly from one fish pool into another. This can cause cross-contamination and be fatal to the fish.
- xiii. Do not intentionally engage, verbally or visually, any marine mammals.

Never intentionally touch any animal under any circumstances.
Doing so will result in immediate suspension.

B) Aquatheater and Behavioral Husbandry

- i. Never stop in front of any animal which is in the holding area.
- ii. If a trainer is with an animal in a holding area, always ask permission to pass through.
- iii. Always follow the direct instructions given by a trainer or a keeper, who are experts in animal behavior.
- iv. Never enter the Pinniped Compound or any mammal holding area without explicit permission from the keepers.
- v. Never enter the Aquatheater chute gates while the animals are on exhibit or during shows. Doing so will result in immediate suspension, and, probably, a sea lion bite.
- vi. Once in the holding area, you must be quiet, as some of the animals become nervous with noise and will not gate or positively respond to oral or visual commands when startled by noise.
- vii. All brushes and pads must be fresh water rinsed and returned to the Aquatheater brush bucket.
- viii. All Aquatheater dives are to terminate a minimum of 5 minutes prior to each sea lion show's scheduled start time.
- ix. Equipment can be left outside the gate to the west chute between shows, but nothing can be left on deck.

C) Glover's Reef

- i. All tools and brushes must be returned to the dive shack after being rinsed in fresh water.
- ii. Keep the back deck gate 'dummy-locked' while there are divers in the water.
- iii. When no one is on deck the gate must be kept locked.

D) Sea Cliffs

- i. Never stop in front of or bother any animal which is in the holding area.
- ii. If a keeper is with an animal in holding, always ask permission to pass through when you need to.
- iii. Never enter any Sea Cliff exhibit or any mammal holding area without explicit permission by the keepers.
- iv. Never enter the back of Sea Cliffs or any mammal holding area without permission from a Sea Cliffs keeper. Once in the holding area, you must be quiet, as some animals will not gate if disturbed by loud noises.
- v. Always follow the direct instructions given by a trainer or a keeper who are experts in animal behavior.
- vi. Scrapers, grippers, brushes, and rags are specific to Sea Cliffs. They are stored in the Sea Cliffs locker room.

E) Ocean Wonders: Sharks!

- i. Protocols for diving with large sharks are covered in the dive safety manual and a separate training. New VDT members are typically scheduled for Canyon’s Edge shark dives after a minimum of one year on the team.
- ii. New VDT members are typically scheduled for other OWS dives after a minimum of six months on the team. Prior to approval for OWS exhibits new VDT members should fulfill the following performance requirements for a dive team leader or dive staff:
 - a. 30 second hover (no sculling or finning);
 - b. Circumnavigation of Glover’s Reef or SC exhibit with no inadvertent window/theming contact;
 - c. Smooth and effective entry and exit of exhibits, with minimal time spent on the surface;
 - d. Consistent adherence to buddy system and other safe diving guidelines at NYA.
- iii. Due to the presence of sharks in all OWS exhibits, diver proximity should be much closer—within arm’s length at all times during OWS12 dives.
- iv. As soon as divers enter the water in OWS exhibits, awareness must be maintained of animal locations so as to avoid accidental contact with sharks or other animals that might defensively bite.
- v. Full face mask and surface supply training will be provided as dictated by facility needs, with a priority given to divers based on current standing with shift commitment (or total hours).

X: SURFACE SUPPORT

- A) The primary responsibility of surface support is to ensure that all divers in the water are monitored for safety at all times. Lead diver is available to assist with logistics as needed.
- B) Surface support must notify the keeper designated on the dive notice that divers will be entering the water. This should be done 15 minutes ahead of time, so that keepers can advise of any unusual conditions as well as tell Operations that we’ll be taking water out of the tank (for vacuuming).
- C) Surface support is tasked with ensuring the following items are brought to the dive location:
 - i. Oxygen kit/AED/first aid with cutting tool
 - ii. Radio in a closed, waterproof bag
 - iii. Recall device (rattle)
 - iv. Clipboard with pen and blank dive logs
 - v. Spare weights if requested by divers
 - vi. Cleaning implements
 - vii. Any additional tools or supplies required for the safe and effective completion of assigned tasks.
- D) Surface support will fully complete both sides of the dive plan and log including all requested information—please do not leave any spaces blank.
- E) Surface support will also ensure all dive gear and support materials are removed at the end of each dive—this is especially vital in the Sea Cliffs exhibits, where animals could ingest our left behind objects and cause themselves serious injury.
- F) Any scrapers, grippers, rags, etc., which were borrowed for the day must be rinsed and returned to their proper places.
- G) Make sure that all grippers are stored on end with handles in the open position.
- H) A reusable water bottle or thermos may be brought on deck during surface support duty.
- I) No food may be brought onto animal decks.

- J) Cell phones may be brought onto animal decks, but should be powered off or silenced, and **must be used only in an emergency** for contingency communications.
- K) Surface support is always the last diver to leave the area. Before leaving they must notify the keeper designated on the dive notice that all divers and gear are clear of the exhibit and must securely lock access gates.
- L) Surface support will also notify the lead diver that divers have left the exhibit.
- M) In case of thunderstorm, surface support should recall all divers to exit the water until 20 minutes after the last peal of thunder depending on the forecast, excepting Ocean Wonders exhibits.
- N) In case of fire alarm, surface support should confirm that alarm is valid with lead diver or security, and then recall divers and help them to the nearest evacuation point.
- O) In case of a diver emergency, surface support should switch to Channel 1 and issue an emergency call to Security (“Glover’s surface support to Security, we have an emergency on the Glover’s deck.” Wait for acknowledgement, and then repeat. Surface support should then recall other divers and assist with exiting the injured diver from the water, then provide emergency care within the scope of their training. Security will repeat the emergency call on Channel 4, call 911, and arrange EMT access to poolside (see attached example, Emergency Action Plan and Dive Site Plan for Glover’s Reef).
- P) In case of a diver emergency in another exhibit, surface support should recall their divers, and once their exhibit is stabilized, go to assist with the diver emergency. Possible roles might include assisting with exiting the diver from the water, setting up AED or oxygen, crowd control, recording accident narrative, or managing the accident scene and response.

XI: GUESTS OF VOLUNTEER DIVERS

All WCS staff are entitled to five guest passes plus one guest parking pass annually. You may gift these passes to anyone for any of the five WCS facilities. Under no circumstances may guests be brought to, or given access to, any non-public area of the park, without the explicit permission of dive staff.

Currently dive staff lack the capacity to issue photo IDs to dive volunteers. Once we are able to again issue photo IDs, these can be used for admission to any WCS park. Until ID is issued you will have to use your guest passes for WCS park admission.

XII: DISCIPLINARY ACTION

- A. Please be kind, be safe, be here on time, and represent the WCS well.
- B. Remember that you are part of a team and our rules serve to ensure the safety of all divers, the safety of our animals, and the optimal functioning of a large team of volunteers.
- C. If you disagree with a VDT rule, please speak to your DTLs and/or dive staff, and continue to follow the rule unless a formal change is made.
- D. VDT members that don’t follow the rules will generally be reminded to follow protocol. However, some circumstances as well as persistent problems can result in suspension or exclusion from volunteering at NYA. Circumstances that may result in immediate suspension or exclusion from volunteering include, but are not limited to:

- i. Any action deemed (deliberately or negligently) threatening to the safety of one's self, any other diver or staff member, any visitor, or any animals in the collection, whether above or below water.
- ii. Any action deemed (deliberately or negligently) substantially detrimental to the status, reputation, growth, community cohesion, and/or character of the volunteer dive program, the New York Aquarium, or the Wildlife Conservation Society.

XIII: MENTORSHIP

- A) Mentors will be divers who have been with the team for longer than one year.
- B) New VDT members will be assigned a mentor with whom they will often dive and participate in pre- and post-dive tasks. Once assigned a mentor, it is the responsibility of the new diver at the end of each shift to review their dive with their mentor and record any lessons learned on the sign-off sheet.
- C) The mentor's responsibility is to ensure that new divers are familiar with this handbook and with operational procedures relating to the day-to-day work of the VDT.
- D) Please note that mentors do not function as dive instructors or divemasters; while your mentor may review and discuss safe dive practices at the NYA, you are expected to follow proper, safe diving procedures based on your training as a certified diver.
- E) Mentors will provide updates to the DSO and/or ADSO to review a new diver's progress towards sign-off, which will typically occur after a minimum of 12 logged dives and at least 4 surface support shifts.

XIV: LEAVE OR DEPARTURE

A) Leave of Absence

- i. Personal
 - a. After one year with the dive team a personal leave of absence may be granted on a case-by-case basis. Leave will not be granted for longer than 6 months.
 - b. Request for a leave of absence must be made via email to the DSO.
 - c. If, after 6 months, no effort has been made to schedule a reliable return to diving duties, the leave will be terminated and the diver dismissed from the program.
- ii. Medical
 - a. Medical leave of absence will be granted at any time to any member of the dive team for any duration. If medically feasible, divers are still welcome to work surface support shifts while waiting for medical clearance to return.
 - b. Notification of medical leave of absence must be made via email to the DSO.
 - c. A diver will only be reinstated to active status in the dive program after a medical leave of absence when a hard copy of the medical approval to return form (available on shared drive) has been submitted to dive staff.

B) Departure

- i. Please notify DSO of your intent to leave the program with as much advance notice as you are able to provide.
- ii. On your last day please remove all personal dive gear from the Dive Shack, and leave your parking pass and NYA ID (if issued).
- iii. Any dive gear left in the dive shack will be moved to team long-term storage for no longer than 3 months.
- iv. After 3 months any gear left in long-term storage will be considered abandoned as a donation to the VDT.
- v. Your file will be kept for seven years. If you choose to return to volunteering at the Aquarium within that period, you will only need to re-file any expired paperwork.

ADDENDUM

1. Sample emergency plan (Glover's Reef)
2. Sample dive site plan (Glover's Reef)
3. Sample radio reference sheet (Glover's Reef)
4. Statement of Understanding

Glover's Reef

Emergency Assistance Plan



1. Call security on channel 1 (for 911)

Call text: "Glover's surface support to security. We have an emergency on the Glover's deck. Please call 911." (*Wait for response and repeat:*) "Glover's surface support to security. We have an emergency on the Glover's deck. Please call 911."

2. Remove victim from water and assess
3. Provide primary care and/or oxygen as required
4. Monitor lifeline and provide secondary care
Stabilize and reassure victim
Control accident scene and record treatment
5. Call DAN if appropriate
6. Call Joe/Shane if not on site

Emergency roles:

- Call security
- Remove victim from water and provide care
- Retrieve oxygen/first aid/AED and prepare for use
- Record treatment and dive information
- Control onlookers and accident scene
- Call DAN and Joe/Shane

Dive Site Plan and Emergency Information

Glover's Reef exhibit in Conservation Hall building

Near main entrance to NYA at Surf Avenue and West 8th Street, 602 Surf Avenue, Brooklyn, NY 11224

Ambulance access: via exit gates and staircase or elevator to Oceanview/Glover's deck—security will meet and escort to poolside

Diver entrance: via diver ladder

Diver egress: via diver ladder or over pool lip—retrieve rescue board from Sea Cliffs if necessary

Oxygen, first aid, AED: poolside

Nearest telephone: NYA radio, diver or guest cell phones, admissions

Emergency numbers: NYA Security on channel 1 for 911

DAN emergency hotline: call 800-684-9111 or 919-684-9111. Give maximum depth, bottom time, signs and symptoms, and any other relevant information.

Nearest hospital:

Coney Island Hospital, 2601 Ocean Parkway, Brooklyn, NY 11235

Main number: 718-616-3000; Emergency department: 718-616-4400

Nearest hyperbaric chamber:

Jacobi Medical Center, 1400 Pelham Pkwy S, New York, NY 10461

Main number: 718-918-5000; Patient admissions: 718-918-5370

Staff numbers:

Joe Gessert: Dive 1 on radio, cell 718-288-8092/Shane Paradis: Dive 2 on radio, cell 347-546-4612

Security phone line: 646-533-4065

Exhibit max depth and approximate temperature: 12 fsw and 74 degrees F

Dive qualification and mode: scientific dive via SCUBA

Dive objective: monitor animal health and algae growth, husbandry and guest interaction in accordance with WCS mission of conservation education

Nitrogen exposure planning method: US Navy dive tables; unlimited NDL at max 15 fsw

Hazards: slip/fall, objects and cleats on deck, overhead structure, entanglement, stingrays and eel, electric fixtures, seasonal concerns (ice and cold in winter, overheating in summer)

Emergency contact list: posted on bulletin board in dive locker

Radio Reference and Protocol

Channel 1: Security

Channel 3: Operations

Channel 4: Animal and Veterinary Departments

Channel 5: open channel for longer conversations

- Remember to call keepers 15 minutes before and immediately after every dive
- Push and hold the upper left button before speaking—if it beeps at you, wait a moment and try again
- Identify who you are and who you're calling (i.e. 'Glover's surface support to Fish 2')
- Wait for acknowledgement (i.e. 'Go for Fish 2')
- Keep your messages brief and clear (i.e. 'Divers are out of Glover's')
- For longer conversations ask your contact to go to channel 5 (may not work to/from Ocean Wonders)
- When you're finished, say 'thank you'/'copy'/'back to 4'/etc., so the other person knows the conversation is over
- Blinking orange light means the radio is scanning Channel 1—all is well

Common Call Signs

DIVE 1—Joe Gessert

DIVE 2—Shane Paradis

DIVE 3—Lead diver (volunteer)

ANIMAL 1—William Hana, director of animal programs

ANIMAL 2—Hans Walters, shepherd of sharks

ANIMAL 3—Aaron Brett, inspirer of invertebrates

BH 1—Martha Hiatt, president of pinnipeds

FISH 1—Wayne Stempler, guvnor of Glover's

FISH 2—Michelle Winship, wrangler of reef fish

STATEMENT OF UNDERSTANDING

I, _____, have received and read the New York Aquarium Volunteer Handbook version 03.03.

I understand and agree to abide by all rules as laid out therein, and all other applicable WCS policies and procedures.

I understand and agree that failure to do so may result in disciplinary action, including but not limited to exclusion from volunteering at the New York Aquarium.

(Diver's Name)

(Diver's Signature)

(Date)