

Safety Lessons for Sport Divers from Public Safety Diving

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Public safety diving differs from sport diving in many ways. Public safety diving occurs in just about any water environment in which a person or a piece of evidence from a crime can end up submerged. Public safety divers (PSDs) are called to work in fast-moving rivers, debris-covered bottoms, black water, contaminated water, confined spaces such as submerged vehicles, ocean depths and ocean surf, ice-covered water, and ports with large ships creating overhead environments.

Some types of environments are similar to both groups, but PSD arenas encompass the extreme spectrum of each type. Both sport divers and PSDs conduct ice dives, but sport divers do not choose locations where the ice is too thin to support the child who fell through. Both groups dive in rivers, but sport divers do not plow through the bottom sediment of pollutant-laden, black-water shipping channels.

There are causes of dive accidents that are shared by both sport divers and PSDs, and sport divers can apply lessons learned by PSDs to improve their own diving safety.

RISK BENEFIT ANALYSIS

Possibly one of the most important lessons sport divers can learn from PSD teams is how to decide when to dive and when not to dive. Many sport diving accidents occur because divers did not properly evaluate the conditions in relationship to their skill levels and equipment capabilities.

There are two questions PSD teams should ask prior to anyone being put in the water. Sport divers and leaders should ask the same questions. Walt “Butch” Hendrick (NAUI 1724), founder of Team LGS, teaches them, and I teach them to all my students.



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1 “What can go wrong on this site? What can go wrong during this dive?”

Look at the water, review the dive plan, evaluate the experience and training level of the divers and their equipment, and compare these things to the environmental conditions.

Is there a potential for entanglements, loss of visibility, entrapments, contaminants, currents, depth issues, equipment freeze-ups, overhead environments? Is there any out of character behavior on the part of the divers? Does dive experience match the environment? Are there any weather condition risks? Is every diver feeling mentally or physically up to the dive?



- 2** For each thing that can go wrong, ask: “Do we have a proven, hands-on, practiced plan to get you out? Do I have a proven, hands-on, practiced plan to get me out?”

There’s only one mission, one job that everyone has to complete. At the end of the day — “Go Home.” If we compromise that, we fail. If you do not have a plan that has been proven and sufficiently practiced to manage any of the things that can go wrong (not just with tabletop discussions), then the dive should be a no-go. Stay out of the water.

ZERO VISIBILITY

Zero visibility and black water are common in public safety diving. Many sport divers have experienced brief moments of zero visibility when a silty bottom is accidentally stirred up by poor buoyancy skills. Few sport divers, however, purposely dive in zero visibility for the entire dive, and even fewer have experienced true black water.

First, you should know the location and function of your equipment reflexively by touch. This skill allows you to function when you can’t

see, either because of poor visibility or because your eyes are focused on something else, such as your buddy. If you need to ditch your weights or another diver’s, you need to do this with one swift maneuver. If you become entangled in fishing line on a stirred-up bottom, you need to calmly and confidently access your cutting tool, knowing that if you drop the tool, you can easily access your backup tool.

If you need to provide your octopus regulator to an out-of-air diver, you need to reflexively, and in one swift motion, retrieve that octopus, bring it up to the diver’s face, and tap the purge to clear it while effectively bringing it, mouthpiece downward, into the diver’s mouth. You also must be able to sense whether you are dropping in the water column and make the appropriate corrections to remain neutral.

Next time you dive, close your eyes, hover vertically and reach for your BC’s power inflator, your weight-release mechanism, your cutting tool(s), your octopus or pony regulator, your gauges, your drysuit inflator and exhaust valves, and your lost primary regulator. Perform the same skills while hovering horizontally face down, face up and on either side. If you find yourself visually looking or fumbling to find these items, then work needs to be done. Trimming out your gear will also greatly decrease entanglement risks.

Octopus second stage:

Secure it by the mouthpiece with a simple snorkel keeper or quick-release mechanism. If it is secured by the hose rather than the mouthpiece, the octopus can dangle and move around as you change position.

Pony regulator second stage:

Attach the mouthpiece to a neck strap for the most effective access. Keep it in the strap even when using it so it will remain in the same place if you were to drop it out of your mouth.

Gauges:

Run the pressure gauge hose through the BC armhole and under your arm to keep the hose running tightly against the BC. Then clip it to your BC chest strap with a side-release (“Fastex”) buckle, or simply tuck the gauge under the opposite BC shoulder strap when you get in the water. The gauge will then stay in the same place with no free hose swinging around behind or alongside you as it would if the gauge were secured to the outside of the BC.

Drysuit inflator hose:

Run this hose through a BC armhole and under your arm so that it enters the inflator valve at a 45-degree angle. The angle allows for the most effective rapid disconnect in the case of accidental inflator free flow.

BC power inflator hose:

To secure the inflator valve in one easy-to-reach location, run your arm between the corrugated BC inflator hose and the low-pressure hose, with the LP hose under your arm. You might need to get a longer LP hose to do this.

Cutting tools:

If you dive where you could become entangled in fishing line, nets, kelp or other items, you should be carrying at least a primary and a backup tool — with shears being the preferable tool for most environments. These tools need to be where you can reach them easily when in any body position. No cutting tools should be worn on legs as that puts the tools in the furthest possible location from your reach and also makes them entanglement hazards. Tools can be mounted on BC pockets, shoulder straps or cummerbunds. Mount the tools with either a downward or cross-draw for easy and safe access. Close your eyes and practice releasing the tools while wearing winter-weight gloves.

ENTANGLEMENTS AND ENTRAPMENT

PSDs are often faced with entanglement or entrapment hazards. The techniques that well-trained PSDs use to decrease entanglement and entrapment risks provide many valuable lessons for sport divers.

First, trim your dive gear as described above. An additional step might include not diving with a snorkel. If you feel the need to have a snorkel in case you are stranded far from shore or a boat, or if it is a long surface swim to get to a dive site, consider a snorkel that will fit in a BC pocket.

Duct tape the outside fin buckles and straps to prevent fishing line from becoming caught in them. You can reach your inside fin buckles, but the outside ones are not so easy.

Once you have trimmed your gear to decrease entanglement risks, practice cutting yourself out of entanglements you might encounter. Most divers cut something for the first time during a real entanglement. That’s not good; it can lead to stress and panic. We should train divers how to manage entanglements. They would learn that divers should carry shears in an easily accessible place, and that knives on legs are difficult to reach and an invitation to entanglement.

Opportunities for training in these techniques with NAUI Course Directors Butch Hendrick and Andrea Zaferes can be found at teamlgs.com and by attending a NAUI Leadership Rescue Workshop. The next workshop will be held Aug. 30-Sept. 3, 2018, in Cebu, Philippines. For more information, visit nau.org/events/leadership-rescue-workshop-philippines/.

