

DIVE SAFETY

BUDDY SYSTEM – OSHA & everybody else requires it.

(Except when using surface supply with voice comms and safety diver)

PURPOSE:

1. "Ensure every diver maintains constant, effective communication with at least one other comparably equipped scientific diver in the water." Federal OSHA
2. Based on mutual assistance, especially during an emergency
3. Dives are planned around the competency of the least experienced diver
4. If loss of communication happens, all surface and reestablish contact
5. Lost buddy procedure _____

Starts with dive planning--mobilization--suiting up--check buddy's gear--buddy check--entry--
SWIMMING ON SURFACE--during dive--exit--cleaning up

BUDDY CHECK CONSISTS OF:

1. Familiarization with buddy's weight belt release
2. Able to inflate buddy's BCD by two different methods
3. Location of safe second
4. Procedure(s) to follow in out-of-air situation
5. Pressure in buddy's cylinder, is it full? On all the way?
6. Hand signals, emergency signals
7. Hoses not tangled? No obstructions to regs & l/p & weight release?
8. Discussion of dive depth/time, turn around point, alternate exit point, objective

GROUP BUDDY SYSTEM, - plan ahead what happens if one person in the group needs to return to the beach/boat early, if 2 need to, etc.

Divemasters do not want to be surprised by one person coming back by themselves

3 person buddy system, A-B-C-A, is not recommended, especially in low vis.

Don't change buddy during dive, all surface at same time. (*Unless previously discussed before getting in the water*).

DESCENTS--feet first --equalize early and often. Maintain buddy contact. Adjust buoyancy as needed while descending.

ON THE BOTTOM; take time to adjust gear & tighten straps, determine direction to work; Monitor buddy, depth, time, psi remaining, buoyancy, breathing rates, possible hazards

BE AWARE OF EVERYTHING = "Global awareness"

Should something go wrong: **Stop –Breathe - Think – Breathe - Act - Breathe**

IF THERE IS AN AIR SOURCE PROBLEM:

1. Switch to your redundant system
2. Depth $\leq 30'$ do a CONTROLLED emergency ascent--Tell your buddy! Ascent rate
3. Switch to buddy's redundant system
4. Switch to buddy's alternate air system ("octopus") - watch ascent rate, buoyancy, buddy
5. Buddy breathing ascent--monitor buddy, buoyancy, rate of ascent

Many other equipment problems can be handled on the bottom

GENERAL

- Keep track of individual depth/time/PSI. Write it on your slate
- 500 PSI at arrival safety stop or end of dive, unless given different instructions by an instructor.
- Ascent rate is no more than 30'/min --maintain buddy contact
- Safety (precautionary decompression) stops if depth > 30 fsw. @ 15 to 20' depth is good.
 - Does not count on BT, or on SIT
 - Minimum of movement, no bent limbs.
 - Can be done on shallow reef or along a depth contour on the bottom.
 - Near (but not holding onto) a down or anchor line.
 - Midwater hover --- currents, in a 1 knot current cover $\sim 100'$ /minute, for 3 - 5 min....
 - Can omit if large aggressive marine life is in the area.
 - USN & NAUI say done with mouth at depth of stop
 - Accuracy of depth gauge?
- Exit (& entry) - Watch the ocean. Alternate exit point selected?
- "Community" gear taken care of before personal.

DIVE PLANNING--Do it for each dive, (except rescue). You will need to tell me AMDT and NDL before each repetitive dive

Careful monitoring the tables, double check, confer with buddy, but always do your own calculations

Repetitive dives—Sit of $>:10$ min—Minimum recommend is an hour, not always possible:

Log it

See addition next page

FITNESS TO DIVE

Physical

Contraindications to diving

Absolute

Relative

Temporary

State of health that day

Mental

Location – conditions

Objective

Peer pressure

Just one of those days

REFUSAL TO DIVE: You cannot be forced or coerced to dive. There will be no recriminations.
THIS IS IN EVERY INSTITUTION'S STANDARDS

KEY POINTS:

SAFETY + SEABAG

Communication & discussion of dive objectives, plan, signals, emergency procedures,
etc.

Monitor everything-buddy, depth, time, air, buoyancy, breathing (“**Global Awareness**”)

Common Sense

In unusual situations – **stop - breathe – think - breathe – act – breathe**

SEABAG

S = SITE ASSESSMENT

- A) Shore Features and Facilities
 - 1. Name of Area
 - 2. Type of Beach
 - 3. Restrooms and Showers
 - 4. Parking and Fees
 - 5. Beach Access
 - 6. Food Facilities
 - 7. Trash Containers
- B) Water Conditions – Check carefully, sleeper waves @ > :20
 - 1. Tides
 - 2. Waves
 - 3. Surge
 - 4. Surf
 - 5. Currents (long/rip)
 - 6. Visibility
- C) Entry and Exit Points
- D) Reef and Bottom Composition
- E) Local Plants and Animals
- F) Danger Areas

E = EMERGENCIES

- A) Phone Locations and Numbers (911) - Appendix 8
- B) Beach Name
- C) First Aid Kit Location (Oxygen)
- D) Out of Air Emergencies
- E) Lost Buddy Procedures
- F) Emergency Signals
- G) Chain of Command

A = ACTIVITIES AND SIGNALS

- A) Entry and Exit Procedures
- B) Maximum Depth
- C) Maximum Time
- D) Minimum Air, Turn Around, and Check Points (PSI)
- E) Objectives and Sequence of Events

All of the above is to be done before getting geared up

Suit up - buddy check

Do these after gearing up and before getting in the water!

B = BUOYANCY

- A) BC (buoyancy compensator)
 - 1. Holds Air
 - 2. Oral and Power Inflators Operate
 - 3. Dump Valve Functions
 - 4. Hoses Not Tangled
- B) Weight Belt
 - 1. Free of Strap
 - 2. Can Operate Release Mechanism
 - 3. Buckle is Centered and Closed (right vs left)

A = AIR

- A) Tank is Full (check before leaving dive locker/store)
- B) Regulator Breathes Well (watch SPG)
- C) Tank is Secure (watch tank height)
- D) Air is On

G = GEAR AND GO

- A) Assist with fins (Figure 4)
- B) Check mask seal (hair and hood)
- C) Enter Together with snorkel or regulator in mouth