

## NOAA DUSA Guidance from Recent Inspections – June 2017

### How to Ace Your Diving Unit Safety Assessment (DUSA)

The DUSA measures Diving Unit adherence to the NOAA Diving Standards and Safety Manual (NDSSM) (<https://www.oma.noaa.gov/find/media/documents/noaa-diving-standards-and-safety-manual>) and other applicable standards (like OSHA). Adherence to standards is a proven method of reducing incidents. Discrepancies found during a DUSA suggest that a Diving Unit needs to improve compliance and may be increasing Diving Program risk. The Unit Diving Supervisor (UDS) is the person tasked with Diving Unit compliance; the UDS may designate tasks and duties to others in the Diving Unit but retains the responsibility for the safety of the Diving Unit.

### Prepare and Communicate

1. Inspectors will use NOAA Form 57-03-03 (<https://www.oma.noaa.gov/find/media/documents>) as a guide and record discrepancies in the DUSAs database (dusas.noaa.gov). Instructions for the database are provided to the UDS (or designee) before the DUSA, and during the DUSA as required.
2. Prepare for the DUSA by keeping the Diving Unit ready all the time.
3. Communicate all known non-compliance issues to the Program Manager (CO, Lab Director, etc.) or LODO, otherwise you cannot expect them to be corrected.  
If the UDS does not communicate known issues, then the UDS is taking on responsibility and liability he/she is not authorized to accept.
4. No UDS has the authority to waive a NOAA requirement except in an emergency.
5. Once a DUSA inspector is onsite, the inspection may/will not stop so that discrepancies can be corrected.
6. The Inspector may suggest a possible corrective action, but most often the NDSSM already points towards a solution, and the LODO approves corrective actions.
7. The Inspector is obligated to answer questions honestly, but may defer a question to a Supervisor, LODO or the DSO.

### Administrative (Recordkeeping)-

1. Use the most up to date version of the required forms (<https://www.oma.noaa.gov/learn/diving-program/diving/noaa-diving-forms> ).
2. Keep copies of the required forms at the Diving Unit.
3. Maintain a Unit Diving Log (using the NDC spreadsheet template or your own) or keep the information in an old fashioned bound notebook. At a minimum, this log should reflect the activities of the unit, the dates of the activities and who participated in them.
4. If you have questions, call your LODO, the Dive Center, or the DSO.
5. Keep complete records beyond the minimum; who did what, when, why, etc.

## **Training-**

1. Every year, view the training videos, get in the pool and conduct the annual watermanship assessment, complete all the required drills, and record the results on the newest forms (as of now 57-03-34) and in the Unit Diving Log.
2. Stage realistic emergency drills, be serious during drills, vary scenarios and roles, and practice as if it were a real emergency.

## **SCUBA Equipment-**

1. Clearly tag out gear that is out of VIP or hydro or is not functioning properly and keep it separated from gear that will be used operationally.
2. Do not dive with tagged out, broken or otherwise out of compliance gear.
3. Remove flammables, combustibles, and corrosives from dive lockers.
4. Ask vendors to include serial numbers or other identifying information on invoices to document which gear was serviced.
5. Discard excess gear or remove it from the active locker space.  
Divers, being human (or rats?), collect things. Out of date, broken, cracked, corroded, deteriorated, non-functional, but otherwise cool stuff belongs somewhere else.
6. Keep halls/passageways clear.
7. Maintain all diving equipment according to the manufacturer's and/or NDSSM instructions.
8. Use a designated place to hang wet gear, and then put the gear away when it's dry.
9. Knives rust; take care of them and they'll work when you get tangled in fishing line, and make you look like you value your dive gear.

## **Support Equipment-**

1. Don't dive if any gas supply is insufficient for the mission, including medical oxygen.
2. Replace out of date medications, AED pads and batteries, including the batteries in the pen light and otoscope. If you aren't sure what you have to have in your medical kit, how many kits you need, or have other questions, consult with the NDC.
3. Test the O2 positive pressure regulator, record the test (Form 57-03-84/85), and log the test in the Diving Unit Logbook.
4. Keep the Bag Valve Mask IN the O2 kit and ensure that it is ready to use.
5. Replace stiff, sticky, cracked, or dis-colored non-rebreather masks, true fit masks, oro-nasal resuscitator masks, and gloves.
6. Separate the masks used for drills from the clean, new masks needed for an emergency.
7. Use practice masks for drills and disinfect them afterwards.
8. Service Oxygen regulators according to the manufacturer's recommended schedule or every 2 years; send SEP provided regulators to SEP/NDC for service.
9. Display the correct sized warning signals (flags) properly per the NDSSM, OSHA 29CFR1910, and local requirements.

10. If diving from a boat or ship, the boat operator is responsible for properly displaying warning signals as required by Coast Guard Navigation Rule 27; however, if the boat operator does not display the correct warning signals the DM/LD should not assume the risk and put divers in the water.
11. No matter what method you use to recall your divers, confirm that this method will work at every diving site.

#### **Air Fill Systems, Compressors, Pressure Vessels-**

1. Ensure the system is serviced and tested as required in the NDSSM, manufacturer's instructions, and other applicable regulations.
2. Allow only qualified people to service, test, and maintain compressor systems.
3. Tag out compressor systems when cylinders, valves, or gauges are past required test and service dates.
4. Verify the location of each required component in the inspection checklist, or ask the qualified servicer.
5. Tag out a compressor system which has missing components.
6. Post compressor and fill station instructions at the fill station.
7. Allow only qualified people to fill cylinders and operate the compressor.
8. Ensure sufficient communication with the bridge watch and engineering to keep carbon monoxide and hydrocarbons away from the compressor intake when filling cylinders or banks.
9. If the compressor system has a CO monitor installed, the monitor must work and receive regular service.
10. Post instructions to wear hearing protection if noise levels are above exposure limits. Work with ship Safety Officer to determine the applicable exposure limits.
11. Provide clear instructions and training to every person on every piece of equipment, and document the training. Include annual refresher training. If in doubt, ask for help, from NDC, the manufacturer, or a qualified training agency.
12. Route all high pressure flexible hoses where they can be visually inspected for chafing and damage
13. Secure high pressure flexible hoses properly using supports designed by the manufacturer for high pressure hose or piping and install according to manufacturer's instructions. Plastic "tie wraps" do not constitute a proper, permanent way to secure high pressure hoses. Consult the manufacturer or a qualified engineer for technical advice.
14. Keep fill station and compressor room clear of flammable and combustible items.
15. Maintain sufficient space around the compressor and banks to maintain and inspect the system.
16. Tether SCUBA/SCBA fill whips using whip checks or whip socks rated for the hose pressure and capable of resisting a 200 lb. axial load. Install them according to the manufacturer's instructions. Consult with the hose manufacturer or a qualified engineer for technical advice.
17. Log every action thoroughly in the compressor logbook including the first and last name of the person making the logbook entry.

#### **Diving Operations- (Dive Briefing and Rescue)**

1. The DUSA Inspector should establish a professional atmosphere and let everyone know what to expect before beginning the rescue drills.
2. Everyone should stop any drill for any unsafe situation.
3. Prepare and execute the dive the same way you were taught by your NOAA Instructor(s) and/or Trainer.

4. Set up the dive site to simulate a typical dive site as much as possible, even if on a pool deck.
5. Speak up at any time you do not understand what to do or what just happened.
6. Practice hand positions and making good mask seals on manikins and real faces.
7. Communicate with your rescue team.
8. Consider worst case scenarios and whether your rescue plan is adequate; consider everyone's suggestions.
9. Practice until every diver can get effective control of the victim in the water and provide effective rescue breaths.
10. Don't choose to give up any skill once it's been gained, even if it may be used rarely.

**General Advice-**

1. As a NOAA diver, you may have limited opportunities to interact beyond your Diving Unit. Use this opportunity to pass information along or ask questions. The DUSA informs in both directions; Inspectors often pass ideas up to the larger NOAA Diving community.
2. If it's not logged or documented, it is a discrepancy.
3. If you correct it during the inspection, the record will verify the correction but it will still be a discrepancy.
4. If it's required in the NOAA Diving Standards and Safety Manual, it's required at your Diving Unit.
5. Inspections can prepare your Diving Unit to prepare for an incident and subsequent investigation; ironically, being prepared usually makes incidents less likely.
6. If you have any concerns or questions, address them during the DUSA with the Inspector.
7. If you cannot reach agreement, or still have questions, address them with your Supervisor and your LODO.