



Diving Safety Lines

Spring Edition

2005

Diving Safety Lines is a semi-annual release by the Afloat Safety Directorate of the Naval Safety Center. The information contained herein is a summary of research from selected reports of diving hazards to assist you in your mishap prevention program. *Diving Safety Lines* is intended to give advance coverage of safety-related information while reducing individual reading time. This bulletin does not, in itself, constitute authority but will cite authoritative references when available. It is recommended that this bulletin be made available to all hands.

IMPROVE DIVING SAFETY

LCDR Bob Crouch, Ext. 7086

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Since reporting aboard in December, I have completed several safety surveys and gained an appreciation for what the safety organization does and can do for the whole diving community. Everyone knows about the diving safety surveys required by OPNAVINST 3150.27A. However, I would like to focus on the mission of taking a hard look at "How we do business." More specifically, the Naval Safety Center collects data from dive surveys and mishaps, and then pushes that knowledge/information out to you, the diving community, to help ensure the same mistakes don't happen again. In reviewing mishaps and surveys, you can easily claim, "it won't happen to me!" But the view from the cheap seats is vast, almost always allowing you a better perspective than being on the field. But we have all been there and made some of those same mistakes others have already made. Just check out the "Top Ten Discrepancies" list and "Mishap Corner." For example, one of the top ten hits on surveys for 2003, 2004, and staying strong for 2005:

Is all dive equipment covered by PMS?

The only way we improve is to focus on what has been done wrong in the past and either improve procedures, design better equipment, or just simply go back to the basics and do the right thing.

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Diving Safety Lines

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Master Diver's Corner

Diving Safety Survey

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This is going to be the last you hear from me at the Naval Safety Center. If everything works out, I will be relieved by MMCM (MDV) Mallet and will report to EOD Mobile Unit Two, Little Creek Virginia in July. It has been a distinct pleasure serving you as the Safety Center Master Diver for the last three years. Traveling the planet to various dive lockers and noting that the young and not so young divers around the fleet are still the can-do professionals that I remember during my early diving career in the 1980s your professionalism and can-do spirit have set USN diving apart as the safest professional diving organization in the world. As I leave this desk to report to my next command, I would like to remind you of several ways in which you can make Master Diver Mallet's job a little easier as he steps into the role of diving safety analyst and maybe let you remain more relaxed at your next diving safety survey out-brief with your Commanding Officer or Officer in Charge.

The following are some points that would help you achieve the above goals:

1. Pull the checklist from our website www.safetycenter.navy.mil.
2. Have your people go through the checklist. This checklist is your guide and tool to have a successful survey and should be used periodically for performing self-assessments.
3. Have all administrative publications and required instructions out and ready to be evaluated. Don't have your number one seaman recruit running around with his head cut off trying to find them after the surveyors arrive.
4. Have all your planned maintenance material available with your main 3-M guru ready to show the documentation of all maintenance being performed in your locker.
5. Have your maintenance technicians standing by with all diving and support equipment ready for examination.

Thank you,
R/Douglas Roberson
Master Diver USN

Transferring to the Fleet Reserve

M. J. Redeen

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My time on the active rolls with those who dwell on the realm of Neptunus Rex is quickly coming to an end. I'm transferring to the Fleet Reserve on 31 July 2005. I just wanted to say it was a pleasure, privilege and honor to work with everyone out there. Take care, dive safe and if you're ever up in big sky country give me a holler and we'll go drink a blue yummy or two and tell lies. With that, I'll say many mahalos and close with a favorite quote from Texas Bix Bender, "Never miss a good chance to shut up"

Doc

Why Submit Dives via DRS?

HMCS(DSW/SS/DV) Michael Redeen
miachel.redeen@navy.mil

It may not always be obvious why we need to expend time and resources to log every Navy dive. The first reason: It is a requirement directed by OPNAVINST 3150.27A, Navy Dive Program. The second reason is for statistical use. Each dive submitted to the Naval Safety Center is entered into our database (called SIMS). This information is used for statistical analysis to improve dive tables, observe safety trends, account for fleet-wide diver use by category, and maintain individual dive logs. The latter service is not required, but is provided as a helpful service to divers by the Safety Center. Remember, the US Navy Diving Manual requires you, the diver, to maintain your own personal dive history. This is important when it comes to pay verifications for dive pay.

Now, how well do commands do at this requirement? Some commands do well and some are terrible. Most commands submit reports correctly and regularly; however, we continue to receive dives conducted from previous years and some commands have not submitted a dive in many years. This makes the data incomplete and inaccurate which diminishes its usefulness. As an example, a commanding officer recent called to get statistics of his command's dives to submit his Sailors for an award. He was very surprised to find out that his command had not submitted a dive via DRS since 1998!

If you have a need for diving statistics for safety or training reasons, you may request information in the Naval Safety Center's database. Submit the request via e-mail or command letterhead. See our web site for information on how to request your personal dive history. A report will be provided as soon as the information can be retrieved. An example of how this database can be used is provided below.

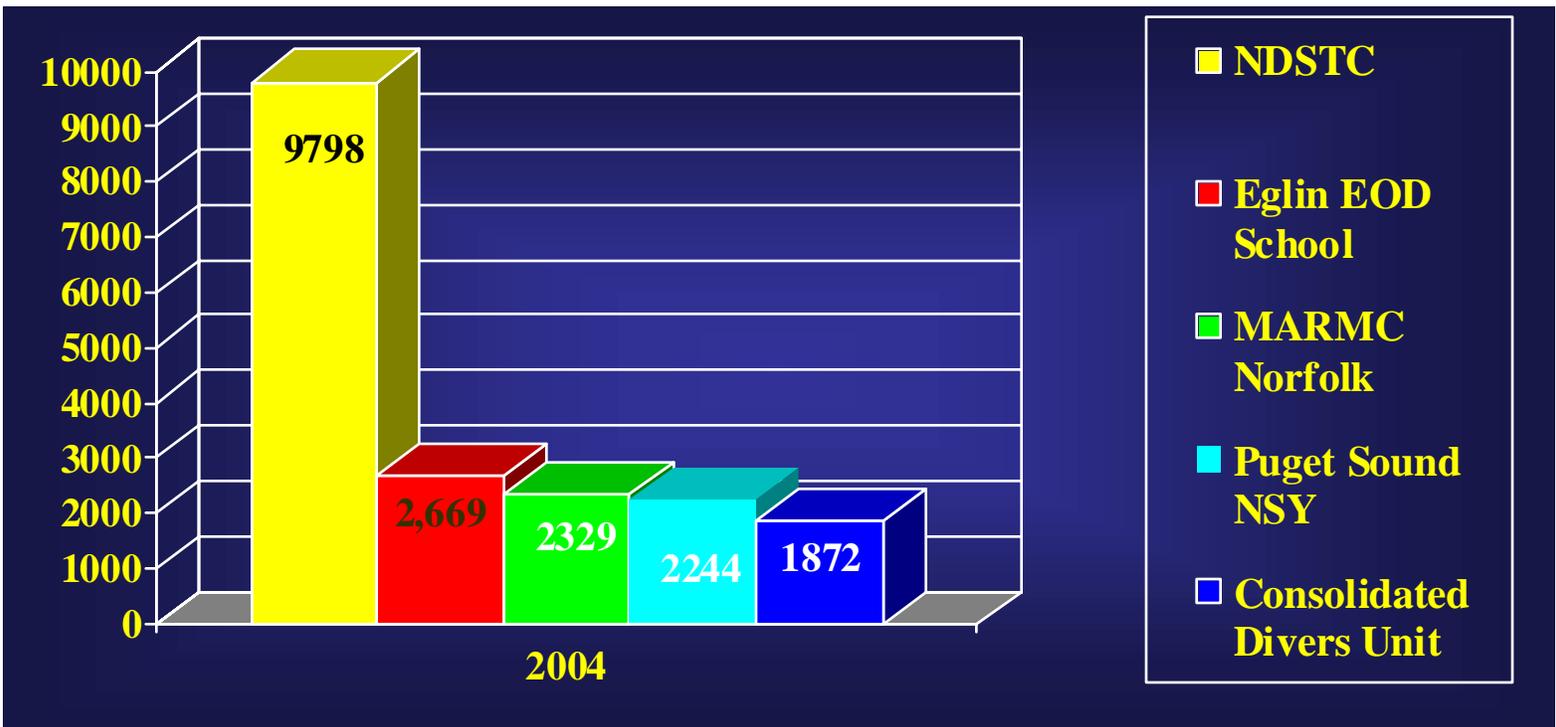
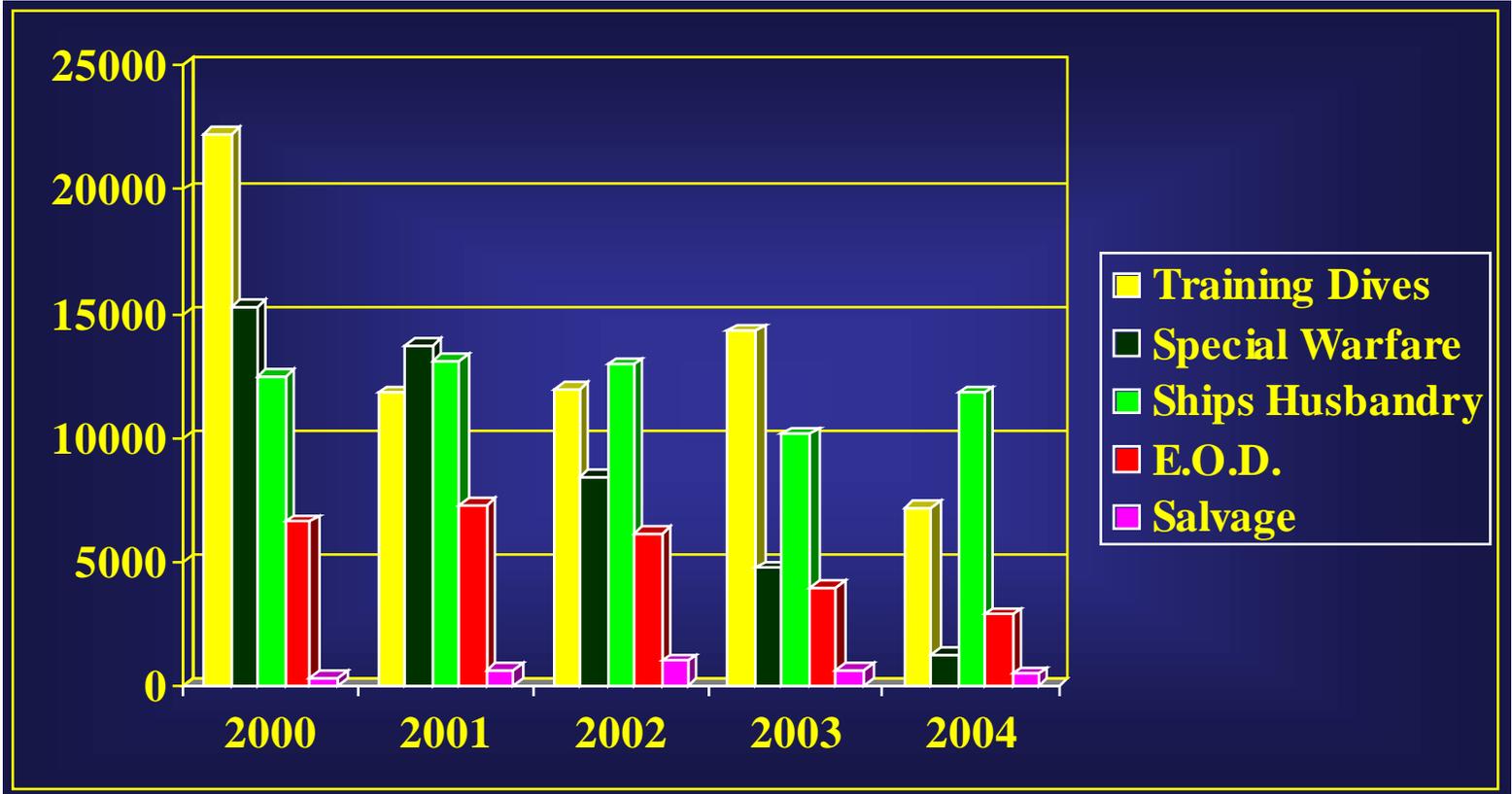
2004 Diving Statistics

The numbers are out. As of 10 March 2005 inputs, the total number of dives reported for calendar year 2004 is 48,582. With some of calendar year 2004 dives still not reported, that number will continue to grow. Here are the dives by purpose:

2004 Diving Statistics			
Purpose	# of Dives	Purpose	# of Dives
Aids to Navigation	70	Research	1515
EOD Ops	2902	Routine Working Dive	872
Indoctrination	111	Salvage/Recovery	472
Inside Tender (aviation bends)	2	Search	2995
Inside Tender (clinical HBO treatment)	425	Security Swim	944
Inside Tender (humanitarian treatment)	7	Selection Pressure Test	243
Inside Tender (recompression treatment)	171	Ships Husbandry/Repair	11083
Inside Tender (pressure test)	194	Spec War Ops	1251
Inside Tender (Sur "D" dives)	18	Student Training Dive	11053
Inspection	1121	Training (Diver)	6346
Instructor Safety Observer	1210	Underwater Construction Ops	1423
Re-qualification	3926	Workup Dive	180
		Other	48
Total Number of Dives: 48, 582			

Top Five lockers by the Number of Dives & Purpose

Top Five lockers by the Number of Dives & Purpose



The Non-technical Causes Of Accidents: *What Can Navy Diving Learn from other Industries*

In Washington, DC, Air Florida Flight 90 plunged into the ice-covered Potomac River killing 81 people on 13 January 1982. The causes of this accident included the flight crew's failure to use engine anti-ice during ground operation, the decision to take off with snow/ice on the airfoil surfaces of the aircraft, and the captain's failure to reject the takeoff during the early stage when the co-pilot had called his attention to anomalous engine instrument readings.

During the early morning of 26 April 1986 at the Chernobyl nuclear power plant in the former USSR (now Ukraine), a chain reaction in one of the reactors went out of control and created explosions and a fireball. The accident immediately killed more than 30 people, and the resulting high radiation levels forced 135,000 people to evacuate. This accident was attributed to a poor safety culture, inadequate training, poor communications, and violation of safety procedures.



Chernobyl Nuclear Power Plant.

Divers on a U.S. Navy salvage ship were approaching the completion of the recovery of an aircraft. During the early hours of 5 May 2001, on the 14th day of operations, two Divers descended 41 feet to the sea floor. In the poor bottom conditions they became disoriented and, instead of making their way to the debris field, became entangled in the anchor chain of the salvage ship. While attempting to recover the Divers, one of them was apparently struck by the anchor chain and disappeared from the rescuers' view. His body was recovered a month later. This accident can be attributed to a poor safety

culture, poor leadership, bad decision making, inadequate risk assessment, inexperience, and fatigue.

These accidents illustrate the risks of failing to understand the human and organizational dimensions of accident causation and prevention. Significant failures in human factors, or non-technical skills such as communications, decision making, situation awareness, and leadership, are not confined to those accidents described previously. Research has shown that approximately 80% of all accidents are caused by human error. High-risk industries such as aviation, medicine, nuclear power generation, and offshore oil production have acted to improve their ability to identify and head off potential non-technical causes of such accidents. Can the Navy learn from these techniques for identifying and mitigating human causes of diving accidents?

Although Navy diving is remarkably safe, accidents and mishaps do occur because of the high-risk environment in which the Divers work. The U.S. Navy diving community is adept at identifying and mitigating technical problems. However, as in other industries, the Navy is not as adept in dealing with the non-technical causes of accidents.

NAVSEA Deep Submergence Biomedical Development has funded NEDU to provide a better understanding of the non-technical skills required for safe and effective diving operations and learn how to use this knowledge to improve both safety and productivity. Borrowed from other industries, the techniques to be used are specifically tailored for military diving. Currently we are one year into the three-year project and have been examining diving mishap reports, interviewing Divers, and collecting questionnaire responses. Although these data are still being collected, it is possible to draw conclusions from the information gathered to date.

Our analysis of dive mishap reports shows that the causes of the majority (70%) of the mishaps were classified as

unknown; human factors accounted for 23% of the mishaps. Five reports of fatal diving mishaps were also examined. The most common causes identified from the reports include poor leadership, poor situation awareness (particularly environmental awareness and anticipation), poor risk and time assessment, and lack of personal resources (coping with stress and fatigue).



Air Florida Flight 90.

When we interview Divers about accidents or near misses in which they have been involved, our preliminary results show that they identify failures in situation awareness, communications, decision making, and leadership as causal.

Responses to our attitude questionnaire show that 1st Class Divers are more likely to deny that personal limitations affect their performance than 2nd Class Divers. Furthermore, 1st Class Divers have a significantly higher belief in the authority of senior team members than 2nd Class Divers and Diving Officers. We also asked respondents to list what they believe to be the three main causes of diving accidents. "Complacency" was the most commonly identified cause, followed by "fatigue" and "training."

Although data collection is not complete, it seems to indicate that the training of 1st Class Divers or Diving Supervisors as well as of Diving Officers could benefit from incorporating instruction in diving-specific leadership, developing and maintaining situational awareness, and assessing how risk, time, and personal limitations affect performance.

LT Paul O'Connor is a Research Psychologist at NEDU.

MK 16 UBA AIG 7603-56 TELEDYNE R10-DN OXYGEN SENSOR

REF/A/DOC/NAVSEA/YMD:20040615//

AMPN/REF A IS UBA MK16 MOD 1 TECHNICAL MANUAL//

POC/D J. ROBERTS/CIV/PEO LMW PMS-EOD/LOC:INDIAN HEAD MD

/TEL:DSN 354-6837/TEL:(301) 744-6837//

RMKS/1. THIS AIG IS PROVIDED TO CLARIFY MK16 MOD 1 OXYGEN SENSOR MANUFACTURER WARRANTY AND SERVICE LIFE DEFINITIONS.

2. THE INITIAL FLEET FILL OF TELEDYNE R10-DN OXYGEN SENSORS HAVE OR ARE APPROACHING THE END OF THE MANUFACTURERS 24 MONTH WARRANTY.

3. MANUFACTURERS WARRANTY IS DEFINED AS FOLLOWS: "SENSOR WARRANTY SHALL BE 24 MONTHS FROM MANUFACTURE DATE, I.E. 12/03 AS INDICATED ON THE PROTECTIVE PLASTIC BARRIER BAG AFTER THE LOT NUMBER. SENSORS THAT ARE FOUND TO BE DEFECTIVE DURING THIS 24 MONTH PERIOD WILL BE REPLACED BY THE MANUFACTURER."

4. SERVICE LIFE FOR R10-DN SENSORS IS DEFINED AS FOLLOWS: "SENSOR SERVICE LIFE SHALL NOT EXCEED 24 MONTHS FROM THE TIME THE SENSOR IS REMOVED FROM THE PROTECTIVE PLASTIC BARRIER BAG. A SENSOR WHICH FAILS ANY PART OF THE INITIAL SETUP PROCEDURE, AS SPECIFIED IN REF A, SHALL BE REMOVED FROM SERVICE REGARDLESS OF THE REMAINING SERVICE LIFE."

5. NEW SENSORS THAT ARE BEING PLACED IN SERVICE SHALL BE INSPECTED FOR DEFECTS AS FOLLOWS:

A. REMOVE THE SENSOR FROM THE GLASS JAR AND INSPECT PROTECTIVE PLASTIC BARRIER BAG FOR BREACHED SEALS.
B. CAREFULLY INSPECT THE INTERIOR OF THE BAG FOR SIGNS OF LIQUID OR LABEL DISCOLORATION.

C. REMOVE THE SENSOR FROM ITS PROTECTIVE PLASTIC BARRIER BAG AND CONFIRM BLACK (+) AND RED (-) LEADS ARE PROPERLY ATTACHED TO THE SENSOR.

D. SENSOR SHOULD BE ALLOWED TO SIT UNPACKAGED FOR 30 MINUTES PRIOR TO TESTING FOR FIRST TIME. IF ANY OF THE ABOVE CONDITIONS ARE PRESENT AND THE SENSOR IS WITHIN WARRANTY, PLACE SENSOR IN ORIGINAL GLASS JAR AND CONTACT POC FOR REPLACEMENT INSTRUCTIONS. IF SENSOR IS NOT WITHIN WARRANTY, DISPOSE OF PROPERLY USING LOCAL CONTROLS.

6. MAKE THE FOLLOWING PEN AND INK CHANGES TO REF A:

A. PARA 2-5.5 - CHANGE THE LAST SENTENCE OF THE PARAGRAPH TO READ: "SENSOR SERVICE LIFE SHALL NOT EXCEED 24 MONTHS FROM THE DATE SENSOR WAS REMOVED FROM THE PROTECTIVE PLASTIC BARRIER BAG AND PLACED IN SERVICE".

B. FIGURE 3-1 INITIAL SETUP CHECKLIST, NOTE IMMEDIATELY FOLLOWING STEP #1 CHANGE TO READ: "ENSURE THAT SENSOR SERVICE LIFE DATE DOES NOT EXCEED 24 MONTHS FROM THE DATE SENSOR WAS REMOVED FROM THE PROTECTIVE PLASTIC BARRIER BAG AND PLACED INTO SERVICE. IT IS RECOMMENDED THAT SENSOR SERVICE LIFE START DATE BE LIGHTLY SCRIBED INTO SENSOR BODY OR A SENSOR LOG BE MAINTAINED BY USER COMMANDS TO TRACK MANUFACTURE AND SERVICE LIFE DATES. MARKING OF SENSORS WITH LIQUID INK DEVICES IS NOT AUTHORIZED.

C. FIGURE 3-1 INITIAL SETUP CHECKLIST: CHANGE STEP 1 TO READ:"RECORD OXYGEN SENSOR SERVICE LIFE START DATES".

D. TABLE 3-2 STEP 1.A, CHANGE TO READ: "REMOVE SENSORS FROM STORAGE CONTAINER. INSPECT EACH SENSOR FOR DETERIORATION, DAMAGE, CORROSION, DAMAGED CONNECTORS AND WIRES. IF OPENING A SENSOR FOR THE FIRST TIME, RECORD THE DATE THE SENSOR WAS REMOVED FROM THE PROTECTIVE PLASTIC BARRIER BAG IN A SEPARATE LOG OR BY LIGHTLY ETCHING SENSOR BODY WITH SERVICE LIFE START DATE. MARKING OF SENSORS WITH LIQUID INK DEVICES IS NOT AUTHORIZED. ENSURE THAT THE SENSOR SERVICE LIFE DOES NOT EXCEED 24 MONTHS FROM THE DATE THE SENSOR WAS REMOVED FROM THE PROTECTIVE PLASTIC BARRIER BAG AND PLACED INTO SERVICE. RECORD THE SENSORS SERVICE LIFE START DATE

ON THE INITIAL SETUP CHECKLIST. REPLACE SENSORS AS NECESSARY.

7. ANY QUESTIONS SHOULD BE DIRECTED TO THE POC LISTED ABOVE.//

"Special Notice From the Naval Safety Center"

MMC(DV) Kevin Gest otherwise known as the **DRS God !!!!!**

has retired from the USN. If by some miracle he answers you on his phone line, his time is billed at \$200.00 & hour. This would dramatically impact the budget. In all seriousness please refrain from calling his old number. Thank you !

R 220635Z MAR 05 Diving AIG 05-03

FM COMNAVSEASYSCOM WASHINGTON DC//00C//

TO AIG 239

AIG 11295

INFO COMNAVSEASYSCOM WASHINGTON DC//00C//

COMNAVSUBFOR NORFOLK VA//N4/N43/N433//

COMARFPCOM NORFOLK VA//N3//

BT

UNCLAS //N03150//

MSGID/GENADMIN/NAVSEA 00C//

SUBJ/DIVING ADVISORY 05-03: DIVING ON SSN 688 CLASS SUBMARINES//

REF/A/LTR/PNSY/04APR2003//

REF/B/LTR/NEDU/08MAR2005//

REF/C/EML/COMNAVSUBFOR/18MAR2005//

REF/D/DOC/NAVSEA/29JUL2003//

REF/E/DOC/NAVSEA/01OCT2003//

NARR/REF A IS PNSY REQUEST FOR A CHANGE TO DIVE MANUAL GUIDANCE WRT DIVING ON ACTIVE SUCTIONS FOR SSN 688 CLASS SUBMARINES. REF B IS NEDU TECH LTR 05-02. REF C IS COMNAVSUBFOR (N433)/CWO3 MILKULSKI CONCURRENCE WITH PROPOSED CHANGE. REF D IS THE US NAVY DIVE MANUAL. REF E IS THE U/W SHIPS HUSBANDRY MANUAL.//

POC/FRED ORNS/BMCM/NAVSEA 00C34/LOC:WASHINGTON DC

/EMAIL: FREDERICK.ORN@NAVY.MIL/TEL: 202-781-0526// RMKS/

1. REF A REQUESTED PERMISSION TO DIVE WITHIN 50 FT OF ACTIVE SEA SUCTIONS FOR ROUTINE MAINTENANCE AND INSPECTIONS ON SSN 688 CLASS SUBMARINES WHILE SUCTIONS ARE OPERATING IN EITHER SLOW OR SUPER SLOW MODE.
2. REF B CONFIRMED THAT DIVING DIRECTLY ON ACTIVE SSN 688 AUXILIARY SEA WATER (ASW) AND MAIN SEA WATER (MSW) SUCTIONS DOES NOT PRESENT A HAZARD TO DIVERS PROVIDED THE PUMPS ARE IN SLOW OR SUPER SLOW MODE.
3. AS CONCURRED REF C, DIVING COMMANDS ARE AUTHORIZED TO DIVE WITHIN 50 FT OF AN ACTIVE ASW OR MSW SUCTION ON SSN 688 CLASS SUBMARINES PROVIDED:
 - A. ASW/MSW PUMPS ARE IN SLOW OR SUPER SLOW MODE.
 - B. DIVER TAG OUT PROCEDURES MUST BE COMPLETED IAW WITH THE TUMS, SHIPS SORM AND OI 637. THE ASW AND MSW PUMPS MUST BE DANGER TAGGED.
 - C. DIVERS ARE PROPERLY BRIEFED ON LOCATION OF SUCTIONS AND CURRENT STATUS OF EQUIPMENT.
4. THESE PROCEDURES WILL BE REFLECTED IN THE NEXT CHANGE TO REFS D AND E.//



Lets not forgot to check those relief valves

A special thanks to Ade Gorst (*Buster Lung*) for the use of his comic strip, you can visit him at <http://www.busterlung.co.uk/>. Hooyah !

Dive Reporting System (DRS) Information

M. J. Redeen
michael.redeen@navy.mil

Just a reminder. The default group e-mail address provided in the DRS program divesaivage@safetycenter.navy.mil is no longer valid. Our new group e-mail address to send your reports to is SAFE-Divesaivage@navy.mil. If you are E-Mailing your reports from the DRS program, current business rules require you to enter the new address each time you send a report.

UICs reporting dives for calendar year 2004*

ADSLAA	N21101	N30715	N43505	N55569
AH08AA	N21302	N30720	N44466	N55570
FAF6FV	N21367	N31968	N45254	N60514
FB4830	N21413	N32082	N45255	N61331
FFF07F	N21466	N32232	N45598	N61755
FFF3N6	N21468	N32253	N45682	N62640
FFF6D2	N21605	N32399	N46985	N62758
G15245	N21690	N32770	N46987	N63154
M13004	N21692	N35000	N47150	N63387
M14704	N21762	N39431	N47151	N66604
M28350	N21806	N39585	N47316	N66830
M67355	N21816	N39592	N47355	N66937
M73010	N21831	N39675	N47627	N68288
NO0251	N21832	N39676	N47737	N68316
NO0750	N30121	N39679	N49093	N68438
NO463A	N30202	N39680	N49715	N83917
NO464A	N30213	N39681	N49769	N85605
NO610A	N30215	N39682	N49974	N85606
NO8842	N30217	N39684	N52861	N85612
NO8943	N30631	N39924	N53808	N85613
NO8973	N30697	N42038	N53991	N85614
N20345	N30702	N42270	N53997	N87065
N20828	N30704	N42838	N55238	N89662
N20886	N30712	N42969	N55447	N20204
N21023	N30713	N42970	N55496	N21102
N21029	N30714	N43504	N55568	N30203
	N32779			

* 131 UICs as of 11 March, 2005. Total dives reported: 48,582

Note – Calendar year 2003 166 UICs reported as of 11 March, 2005. Total dives reported 62,536

Diving mishaps/hyperbaric treatments reported calendar year 2004: 34

AGE – 7
Type I DCS – 9
Type II DCS – 16
Barotrauma – 1
Hypoxia - 1



DRS 5.15



Dive Reporting System Investigation

M. J. Redeen HMCS (DSW/SS/DV)
michael.redeen@navy.mil

Here's the case. You are printing a personal dive log for one of the divers and you get the infamous "20515" error, followed by an error in formula statement. You try several more times with the same result. You decide to try another diver and that personal log prints out just fine. By now you're probably confused and questioning mentality of the people who developed the DRS program. **Not to fear grasshopper:** here's what is happening. Your command had one of the earlier versions of DRS e.g. 5.1.3 loaded on the computer which caused an occasional error in the fields involving time. In the DRS database, here's how the time fields appear: LS: HH:MM, TBT: DD:HH:MM, SI: HH:MM, TDT: DD:HH:MM and RS: HH:MM. Now with 5.1.3, on occasion the times would be entered into the database as this for example: LS: 9:00 TBT: 00:1:11 SI: 00:00 TDT: 00:00:2 RS: 10:13. Notice the leading zeros are missing on the LS, TBT and TDT fields. The upgrade to 5.1.5 corrected this problem; however, this did not fix dives entered prior to the upgrade. So when you tried to print personal dive logs for that person, the program was unable to compute the TBT in days, hours and minutes for that period of time due to the incomplete data field, the missing zeros.

So now we know what's wrong how do we fix it. When we receive your dive reports we uncompress and extract the data. We do a QA looking for major errors such as incorrect UIC "12345", missing lines of data and colons in the data field. Colons are very bad and usually indicate an earlier version of DRS, which as stated above drops off the leading zero's. We would fix the errors in the report and then send you an e-mail telling you to upgrade to 5.1.5 and asking you to send your database (drs.mdb) to us so we could fix the errors. After the errors were fixed, we sent the database back to you and it was pasted back into the DRS program. This however has one drawback, any dives you enter after you sent the database will be lost when you paste the corrected database into the program. So here's how **you** can fix the problem.

DNA (dive number analysis):

1. Identify the dive in question for that person by using the report tree in the reports section of DRS. This lets you look at every dive that person has made either approved (**green check**) or unapproved (**red X**) while at the command.
2. Once the dive (s) is identified, note the date of the dive and dive ID number.
3. Exit from reports and click the administration button, then approve dives.
4. Enter the date range and the Dive ID. Click on show all.
5. Highlight the dive and click unapprove.
6. Highlight the dive again and click on edit. This puts you in the dive grid.
7. Correct the errors, then click accept dives, and exit.
8. You are now back at the approve dives screen. Highlight the dive again and click approve. Just a reminder to print personal or command smooth logs, the dives must first be approved.
9. Exit to the main screen and select reports, personal logs.
10. Select the diver and date range and click view. If you corrected all errors, you should be able to view the report and print it.

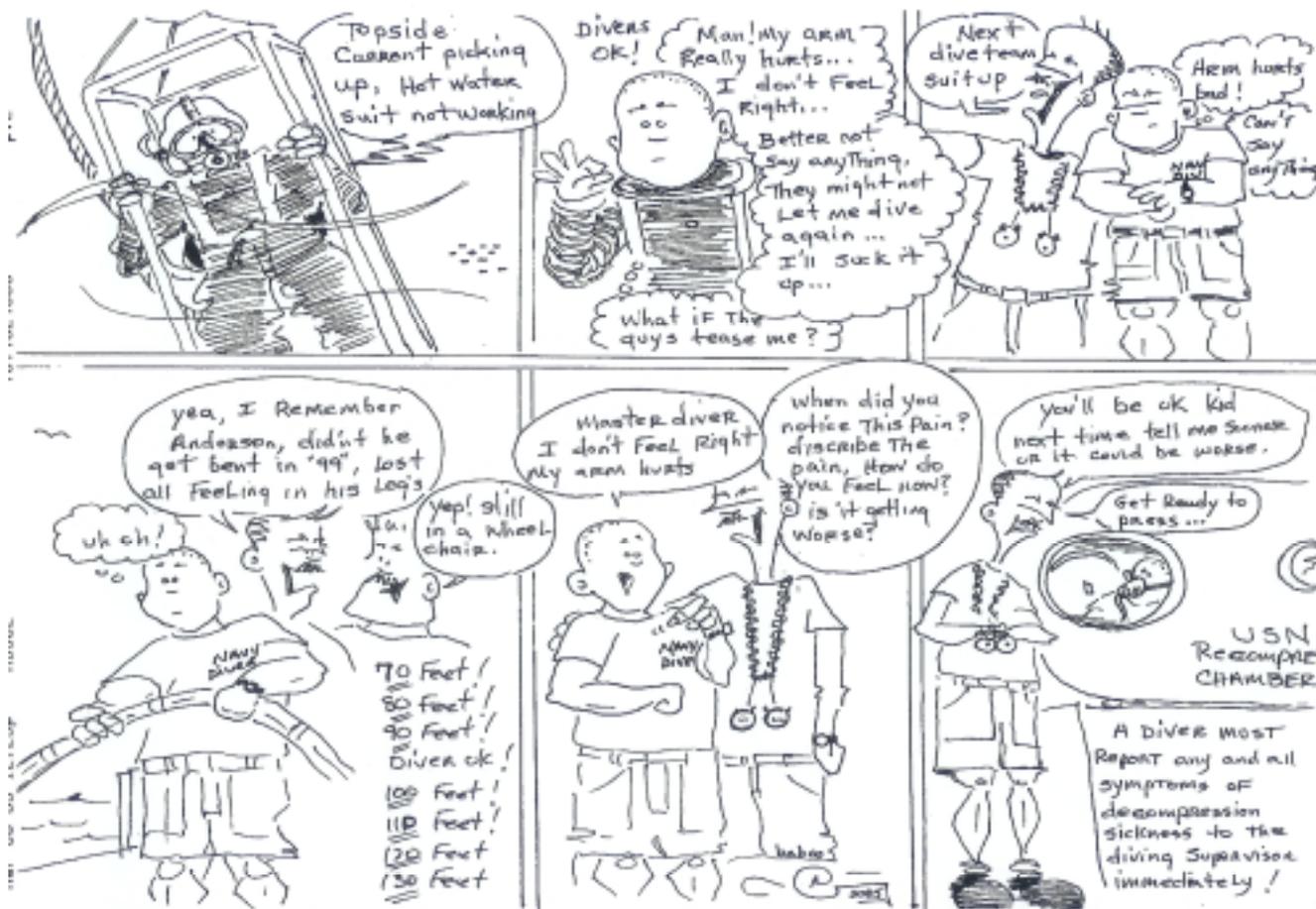
If you have a questions, give us a call.

Divers Reporting System

ETC (SW/DSW) Greg Barnett, ext. 7081
Gregory.Barnett @navy.mil

Just a heads up, The long awaited DRS Web base program is still in the future .So we will have to live with what we have for now. Here are a few problems you may be experiencing with the latest DRS 5.1.5 version (the one all commands should now be using)

1. E-mailing dives - If you sent the Safety Center any dives after September 04 and your e-mails were kicked back with a unknown address or undeliverable message , it would be with our resent move to NMCI our e-mail address was changed , Therefore, when you go to the Admin section of DRS, to send dives, you must change the address each time before sending the file, use the following address SAFE-Dives@navy.mil .
2. Printing Problems - If you had to replace a printer with a updated one or have a new system and you cannot print reports, the reason could be that DRS is using a old version of a DLL file not compatible with the newer lazer jet printers. Sadly, all we can tell you is try another printer. We have programmers working on this issue.
3. Password Problems - If you are getting a error during login and you have had the DRS program installed remotely from the LAN, you will need to install the program locally from CD, or you can download it from the Naval Safety Center's web site . If you need a copy of the DRS program on CD ROM or If you have forgot your password, you can contact the Safety Center via SAFE-Dives@navy.mil.



PRODUCT NOTICE

Powerline Airway Ribbed Hose Replacement

Aqua Lung has received reports that some of the ribbed hoses (Fig. 1) on the Powerline Airway have been tearing at the top near the dual exhaust valve. The problem has been traced to an error in the molding process from our supplier that occurred over a three-month period between 2001 and 2002. The best way to confirm whether or not you have one of the questionable hoses is to look at the serial number on the lower unit of the Powerline (fig. 2). If the serial number falls within the range of **M48H to M52H** (*M48H, M49H...M52H*), or **M01I to M08I** (*M01I, M02I...M08I*) and is the original hose, then it should get replaced. This affects both SeaQuest and Aqua Lung BCs utilizing the Powerline inflator.

If the ribbed hose were to tear near the top, the BC would not be able to hold air and a loss of buoyancy would occur. This could result in the need for the diver to ditch their weight pockets or rely on their buddy for assistance. In extreme cases it could result in result in panic, injury or death.

If you have a spiral hose that falls within the serial number range, please have the hose replaced by this authorized Aqua Lung retailer.



Fig. 2 - Serial number stamp

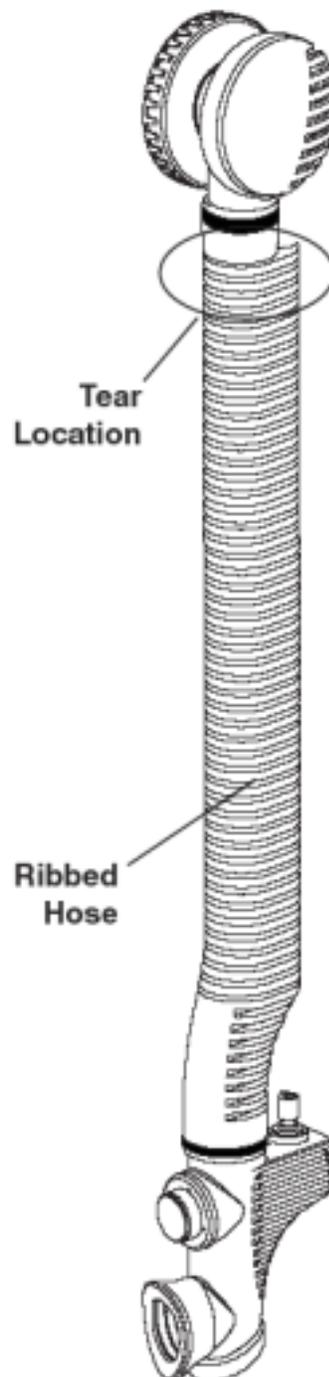


Fig. 1 - Powerline Airway

Aqua Lung America, 2340 Cousteau Court, Vista, CA 92081 (760)597-5000



Rapture Of The DEEP

"Service to the Fleet"



This page is designed to give the readers the latest "Buzz" on various topics to USN diving and its systems.
Compiled and written by MDV Steve Smith (smithss@navsea.navy.mil)

Kinked Umbilical Casualty

On 23 September 2004, Mobile Diving and Salvage Unit Two (MDSU TWO) Divers were tasked with assisting SIMA Norfolk Dive Locker during the removal of USS HARRY S. TRUMAN (CVN 75) #1 propeller off the shaft taper. MDSU TWO Divers splashed to apply and initiate detonating cord (high explosives) to the forward end of #1 propeller hub. MDSU TWO Divers utilized MK 21 deployed from Charlie Team dive boat. While at depth on the project, Red Diver reported loss of air and immediately initiated EPs. Diving Supervisor asked Green Diver how he was breathing and Green Diver reported he was okay with no air supply problems, Console/Bank pressures were satisfactory. Red Diver reported that his air had been restored almost immediately after reporting the loss. The dive was aborted and both Divers returned safely to the surface. Once topside, the Divers were unhatted and it was immediately determined that Red Diver's umbilical had kinked at the hat connection (non-return valve).

Root Cause: The root cause of umbilical failure at the hat connection was primarily due to the frequency of removing the MK 21 helmet without sufficient support of umbilical weight in conjunction with setting the helmet on faceplate.

Corrective Action: Inspect umbilical shackle points on dive benches to ensure there is sufficient support to relieve the strain experienced from umbilical weight and assume the practice of resting the MK 21 helmet on the neckdam area vice the faceplate. Routinely inspect umbilical end fittings during pre-dive setup.

Umbilical Information: JDR Aqualite Divers Air Hose HA0106. AMRON International, P/N: ADU3-MK21-MH-0-330. In Service Date: August 27, 2003.

Buoyancy Compensator and Hose Recall

The U.S. Consumer Product Safety Commission announced the following



MK 21 kinked umbilical.

recall in voluntary cooperation with the firm, Halcyon Manufacturing, of High Springs, Florida. Commands should stop using the Halcyon SCUBA Buoyancy Compensator (BC) Inflators immediately. The SCUBA BC bladder may have a slow leak because of imperfections within the machining of the stainless air barrel of their inflators. This can cause unexpected buoyancy problems with Divers, possibly resulting in decompression sickness. Halcyon is recalling all stainless steel Power Inflators. They have a stainless steel oral and power inflate button. Inflators made of plastic are not included in this recall. The repaired inflators have a groove at the base of their retainer nut. The BCs sold with these inflators are black and the Halcyon logo is on the front and collar of the BCs. For further information go to: <http://www.cpsc.gov/cpsc/pub/prerel/prhtml04/04209.html>

Aqua Lung has received reports that some of the ribbed hoses on the Powerline Airway have been tearing at the top near the dual exhaust valve. The problem has been traced to an error in the molding process from their supplier that occurred over a three-month period between 2001 and 2002. The best way to confirm whether or not you have one of the questionable hoses is to look at the serial number on the lower unit of the Powerline. If the serial number falls within the range of M48H to

M52H (M48H, M49H...M52H), or M01I to M08I (M01I, M02L...M08I) and is the original hose, then it should get replaced. This affects both SeaQuest and Aqua Lung BCs utilizing the Powerline inflator.

Power Inflator Recall

Another consumer recall is on Pelagic Pressure Systems, of San Leandro, California, Power Inflators. The buttons can stick, which can cause uncontrolled inflation of the BC. The recall includes Oceanic-brand Reliant BC inflators and AERIS-brand AW3 BC inflators. The Oceanic Reliant-type inflators have three flow-through holes in the hand grip of the lower inflator mechanism. The AERIS AW3 inflator has one flow-through hole in the hand grip of the lower inflator mechanism. Authorized Oceanic dealers sold BCs fitted with Reliant inflators nationwide from February 2004 through June 2004. Authorized AERIS dealers sold BCs fitted with AW3 inflators from May 2004 through June 2004. For more information go to: <http://www.cpsc.gov/CPSC/PUB/PREREL/prhtml04/04210.html>.

Compressor Interstage Relief Valves

Surface Force Maintenance Effectiveness Review (SURFMER) has found that the relief valves and settings provided by the manufacturers of ANU compressors are appropriate and calibration of Interstage Relief Valves is no longer needed or required. PMS MIPs affected are all MIPs that have relief valve maintenance, this includes 5921/H-012 series MIP.

Navy Divers Website

The Navy Divers website is up and running. It can be found at: <http://navy.com/navydivers>. If you have any comments or suggestions for website, please let us know.



Web-Enabled Safety System

The Web-Enabled Safety System (WESS), with complete, on-line mishap reporting and data retrieval for non-aviation mishaps, went "live" July 12, 2004. It simplifies and brings the field and fleet mishap- and hazard-reporting procedures and safety data analysis into 21st century. It is a major improvement over its predecessor, WESS 1, and all previous PC-based and naval message-reporting methods.

When fully implemented, WESS captures reports and identifies the who, what, when, where, how, and why of mishaps and hazards. It also allows users to enter mishap and hazard notifications, route them through the proper releasing chain for validation, and electronically submit them to the Naval Safety Center. Upon receiving this information, the Naval Safety Center will give the data a quality-assurance review and then store it in a consolidated database. WESS users are able to retrieve data and to access a variety of data report options.

WESS will come to the fleet in three releases:

1. Non-aviation mishap and hazard reports: on-line now
2. Aviation hazard reports (HAZREPs): January 2005
3. Aviation mishap reports: December 2005

The non-aviation release includes shore, afloat, ground, work-related illnesses and injuries, home and recreational, motor vehicle, diving, helo rope suspension techniques, cargo air drop, parachuting, combat zone, and aviation/non-aviation explosive mishaps. WESS reporting will consolidate more than a dozen other previous reporting formats under one system.

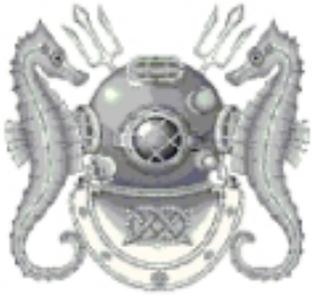
Another major improvement of WESS over all previous mishap-reporting methods is that users no longer must prepare lengthy mishap messages, maintain time-consuming shipboard accident and injury logs, develop their own record-keeping for trend data, or send mishap-report summaries through to their chain of command. Instead, the answers to questions

about Navy mishaps or recurring hazards is available in real-time data, as is information enabling a user to compare past safety records for trends.

Many suggestions received from customers during the beta testing of WESS have been incorporated. The new program's enhancements include:

- Expanded pull-down menus and pick lists.
- Question-filtering or Turbo Tax® methodology – Customers will be prompted for information relevant only to the event, based on previous information entered. This capability reduces the number of reporting screens the customer sees and reduces event entry time.
- Page level saves – Data (or information entered) is saved as a draft after each screen is completed. This feature allows the customer to exit at any time before completing the mishap or hazard report, to return and continue later.
- Sidebar navigation – This feature lets the user jump directly to the desired screen, instead of having to page through unrelated information. Users also can easily return to a specific section of the report to complete those questions as information becomes available.
- Custom templates – This section lets the user create and store templates for information repetitively reported.
- Help system – This section provides a link for page-, question- and terminology-level definitions.
- WESS Users' Guide – This set of PowerPoint modules offers step-by-step instructions on how to best use various features in WESS.
- Injury Log and PDF Report – At any time while preparing the report, the user can print off the entire report from a PDF file or print off just their Injury Log.

WESS promises to be a powerful new tool for safety personnel and will help them to manage their mishap-prevention efforts.



Traffic Safety



Drunk Driving, Specifically in Virginia, Can Be Costly

By Dan Steber, Naval Safety Center Traffic Safety

The Naval Safety Center is partnering with local, state and nationwide agencies to help prevent private-motor-vehicle mishaps and deaths. At a recent meeting of Southeast Virginia's Impaired Driver Prevention Committee in Virginia Beach, this group discussed several joint projects and changes in state law that are of interest to local Sailors and anyone planning a trip to Virginia.

The Naval Safety Center and other Navy organizations have been working diligently to find ways to reduce DUI incidents and alcohol-related deaths from traffic wrecks. DUI enforcement is key. Virginia Beach Master Police Officer Brian Woltemath surprised the group when he pointed out that a mandatory jail sentence for a first-time offender is now part of state law. "Drivers who are driving impaired can go to jail," Woltemath said. "A person with a .15 to .19 BAC will receive a mandatory sentence of five days in jail. A .20 or higher BAC will land them in jail for 10 days." He stressed the "mandatory" part of the law. The judge must sentence the first-time offender to jail. This fact was not well known to many of the members in attendance and a follow-up survey of Hampton Roads Sailors and Marines showed that few knew about the change or the possibility of jail time for a first offense. PN3 Shahidul Islam, mail yeoman at the Naval Safety Center, said, "I didn't know about this law, and I'm sure others don't, either. I don't drink, but I have friends who do. They should be aware of this potential problem."

Naval Safety Center stats show that 20 of 73 Navy deaths in FY04 were alcohol-related. A study of BAC rates showed that 19 of 28 people involved in alcohol-related mishaps (includes drivers or passengers not killed) had levels between .10 and .20. Two of those Navy personnel had levels above .20. A recent report on Navywide DUI/DWI incidents shows an increase to the highest level in five years (from 907 in FY00 to 1833 in FY04—a 100 percent increase). These trends are a concern and are being addressed, but every supervisor should be aware of these numbers. It will take involved leaders to help curb this growing problem. The Director of Shore Safety Programs at the Naval Safety Center, Capt. Bill Glenn, said, "We want every Sailor and Marine in the Hampton Roads area to know about this change. We also want people around the fleet who visit Virginia to know about this change. The easiest way to avoid a DUI is not to drink at all, to follow the designated-driver program, or to use Safe-Ride or Topsy-Taxi program." Other alternatives exist, as well. Some bars and restaurants in parts of the country offer free taxi rides. The designated-driver program is another good option, but the non-drinker must not drink for it to be effective. It pays to have a well-developed plan before going out on the town. Sailors can have a good time, be safe, and return home alive, but they must take the appropriate actions ahead of time to ensure that success. An Air Force base has a program called "0-0-1-3," which provides a clear set of standards for drivers to remember: zero underage drinking, zero DUIs, one drink an hour, and a maximum of three drinks a night.

The Director of Programs for the Virginia Association of Chiefs of Police, Frank Kowaleski, is a supporter of Virginia's "Checkpoint Strikeforce," and he added, "There's a [DUI] checkpoint happening every week and everywhere in Virginia." His group is working with the Impaired Driver Prevention Committee to design and distribute cards that can be handed out at sobriety checkpoints that thank responsible drivers for putting up with the stop and for being sober. It also will remind drivers that the slight inconvenience is better than the cost of a DUI (\$5,000 to \$20,000), the time (jail, even for first-time offenders), and a life (which is priceless). "It's imperative that supervisors pass this information to their people because other communities around the country have similar laws," said Bonnie Revell, traffic-safety specialist at the Naval Safety Center. "Jail time is one heck of a punishment for a night out on the town. It takes just a little planning for a Sailor or Marine to have a good time and to get home safely, avoiding an accident, death or a trip to a courthouse and jail." The impaired-driver working group includes representatives from Drive Safe Hampton Roads, Hoffman Beverage, Virginia Beach Police Department, Virginia Checkpoint Strikeforce, AAA Virginia, Virginia DMV, Chesapeake Bay ASAP, and Naval Safety Center. They meet bi-monthly to discuss issues that affect the community and the military.

For more information on strategies to reduce impaired driving, visit the Safe Drive Hampton Roads website at www.drivesafehr.org/dshr/index.shtml; Naval Alcohol and Drug Abuse Prevention Program at ; National Commission Against Drunk Driving (NCADD) website at www.ncadd.com; and National Highway Transportation Safety Administration (NHTSA) website at www.nhtsa.dot.gov. Links and additional information can be found on the Naval Safety Center website at safetycenter.navy.mil/ashore/motorvehicle.