

Office of Marine and Aviation Operations

SAFETY NEWS

From the Safety and Environmental Compliance Division

TWELFTH EDITION

JANUARY 2013

We'd like to wish everyone a very safe and happy new year. Please be especially careful this time of year to avoid slips, trips and falls when moving about where there is snow, ice, and wet conditions on sidewalks, roadways, and workplace surfaces.

This month's Policy Spotlight features information on standards and best practices related to gangway safety. There is also updated OMAO accident statistics through December of last year, related information, and lessons learned in the Recent Incidents section. In the Common Interests section is this year's top ten list of safety violations issued by OSHA in 2012. There is an interesting article in the Best Practices section submitted by the safety staff at the Aviation Operations Center on Human Factors training and "safety nets." In the News and Notes section there is valuable information about food safety from the U.S. Department of Agriculture, important information about fall protection equipment, and also of interest is the most recent winner of the NOAA Ship of the Quarter Proactive Safety Award.

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POLICY SPOTLIGHT

Gangway Safety

"For many people the gangway or accommodation ladder is the first point of contact with a ship. Initial impressions are important, and a properly rigged ladder may be the first indication to a visitor that they are boarding a well run vessel. However, someone obliged to climb a ladder which is unsteady, slippery or unsafe may have formed an unfavourable opinion of the ship and its crew by the time they have reached the top."

The above quotation was taken from a *Loss Prevention Bulletin* published by the insurance services firm West of England. A copy of the entire bulletin is available at <http://www.westpandi.com/Documents/Loss%20Prevention/Loss%20Prevention%20Bulletins/100902%20Gangways%20and%20Accommodation%20Ladders.pdf>

The document highlights the main points of gangway safety, testing, maintenance, and inspection including the following:

Location - The means of embarkation and disembarkation should be positioned clear of the working area and should not be placed near obstructions or where cargo or other suspended loads may pass overhead. Steps should be kept free of oil, grease and ice.

Lighting - Lighting should illuminate the means of embarkation and disembarkation, the position on deck where persons embark or disembark, and the controls for the arrangement.

Lifebuoy - A lifebuoy equipped with a self-igniting light and a buoyant lifeline should be available near the embarkation and disembarkation arrangement for immediate use.

Arrangement - Each gangway should be of such a length to ensure that, at a maximum design operating angle, the lowest platform will be not more than 600mm above the waterline in the lightest seagoing condition, as defined in SOLAS regulation III/3.13. The arrangement at the head of the gangway should provide direct access between the gangway and the ship's deck by a platform securely guarded by handrails and adequate handholds. The gangway should be securely attached to the ship to prevent overturning.

Positioning - Gangways should not be used at an angle greater than 30° from the horizontal, unless designed and constructed for use at angles greater than these and marked as such. Gangways should never be secured to a ship's guardrails unless they have been designed for that purpose. If positioned through an open section of bulwark or railings, any remaining gaps should be adequately fenced. Adequate lighting for means of embarkation and disembarkation and for the immediate approaches should be ensured from the ship and/or the shore in hours of darkness.

Rigging (safety net) - A safety net should be installed in way of gangways where it is possible that a person may fall from the means of embarkation and disembarkation or between the ship and quayside.

Maintenance - Accommodation ladders and gangways, including associated winches and fittings, should be maintained and inspected at appropriate intervals, in accordance with manufacturers' instructions. Additional checks should be made each time the accommodation ladder and gangway is rigged, looking out for signs of distortion, cracks and corrosion. Close examination for possible corrosion should be carried out, especially when an aluminum accommodation ladder or gangway has fittings made of mild steel. Bent stanchions should be replaced or repaired, and guard ropes should be inspected for wear and renewed where necessary. Moving parts should be free to turn and should be greased as appropriate.

ACCIDENT STATISTICS

The total number of OMAO near miss; minor/first aid; medical treatment; lost time/light duty; and other incidents reported during the first quarter of FY2013 (October – December 2012) is listed in the table below and is shown as a percentage by incident type on the pie chart that follows. Arrows indicate changes from the previous quarter. Accident rates over the past 15 months are also shown on the bar graph that follows.

↑ Near Miss - 4

Near miss - 4

↓ Minor/First Aid - 5

Contact with - 2 Slip, trip, fall - 3

↓ Medical Treatment - 6

Contact with - 4 Unclassified - 2

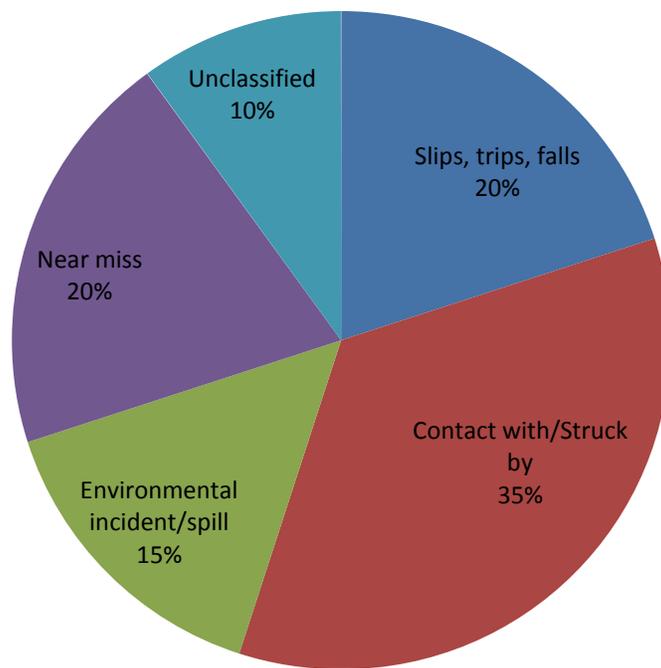
↔ Lost Time/Restricted Duty - 2

Contact with - 1 Slip, trip, fall - 1

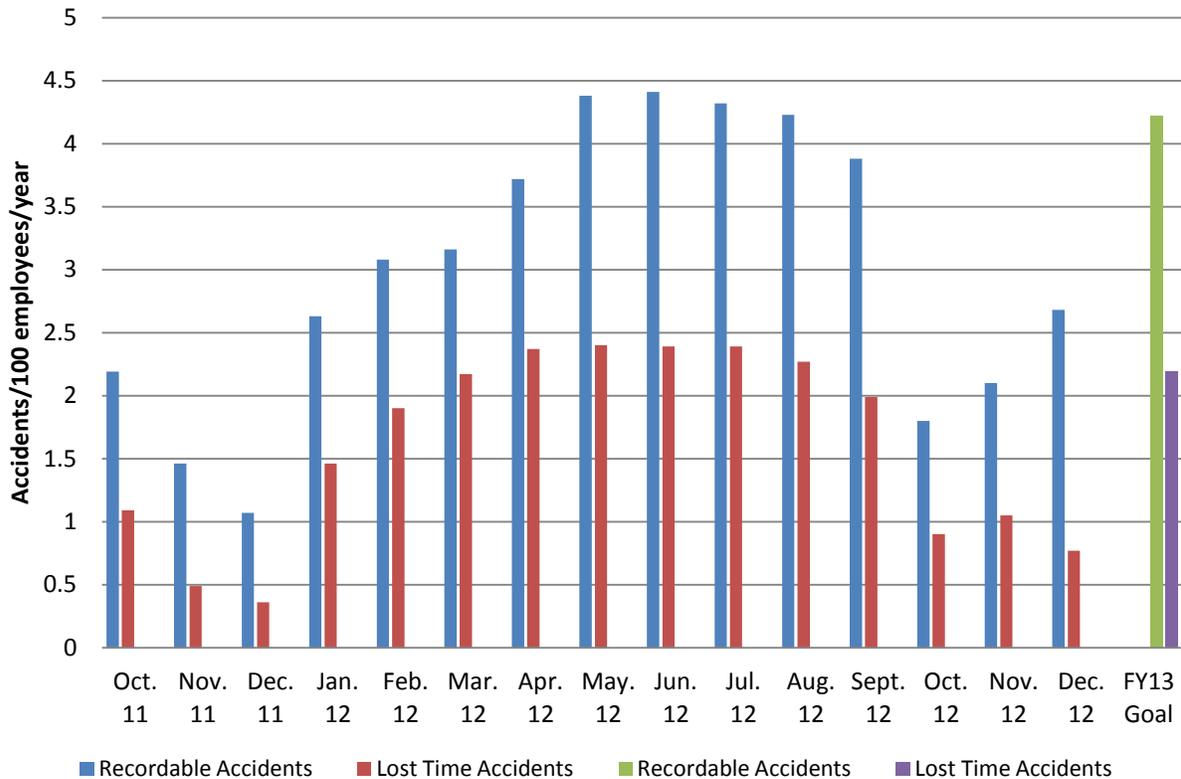
↔ Other - 3

Environmental - 3

Percentage of Total Number of Incidents by Type



OMAO Accident Rates



OMAO Annual Accident Rates*

	FY12 Total	FY13 YTD	FY13 Goal
Recordable Accident Rate	3.88	2.68 ↓	4.22
Lost Time Accident Rate	1.99	0.77 ↓	2.19

*Accident rates are calculated based on the total number of recordable and lost time accidents that occur in the workplace compared to the total number of hours worked by all employees at that workplace. The accident rate represents the number of accidents that have occurred per 100 employees for the year.

RECENT INCIDENTS: CAUSES AND LESSONS LEARNED

This section provides a description of recent incidents that have occurred in OMAO. In many cases, more thorough follow-up investigations have been conducted and more comprehensive lessons learned have been disseminated to targeted audiences within OMAO. The information below is intended to remind us of the importance of staying safe.

Description: While drilling into a bulkhead, a shipboard employee drilled through a live electrical wire causing the wire to arc and the drill bit to melt. The employee immediately

Description: During recovery of a trawl net aboard a NOAA ship, a 35-foot recovery pole that an employee was using during the task became stuck in the trawl net. When the

informed the Duty Engineer who secured power to the circuit and notified the Officer of the Deck. Fortunately no injuries or significant property damage resulted from the incident. A safety stand-down was held with deck and engineering personnel on board the ship, in the space the incident occurred, to review procedures and lessons learned.

Causal Factors: The employee had checked behind the bulkhead but not behind the access molding in the bulkhead which was covering the live wire.

Lessons Learned: Thoroughly investigate the work area prior to starting work to ensure no hidden hazards exist. When in doubt, consult with others who have the right qualifications, more knowledge, or more experience related to the work being performed. Perform an operational risk management (ORM) assessment for new, complex, and non-routine tasks.

Description: A crew member aboard a NOAA ship was transiting from an upper deck to the main deck when ship's motion caused the crew member to slip on the ladder-well. The crew member was able to use the handrail to prevent a fall. In the process, the crew member suffered minor upper body muscle strains.

Causal Factors: The combination of ship's motion and deteriorated non-skid strips on the ladder-well directly contributed to the incident.

Lessons Learned: Routinely inspect non-skid tread areas where they are needed. Ships are reminded and encouraged that winter in-port periods may offer a good opportunity to install or renew non-skid strips and coverings.

trawl doors were lowered to untangle it, the net and pole surged causing the employee to lose footing, trip and come in contact with an obstruction fixed to the deck in the area. Contact with the obstruction caused an injury resulting in lost time. Once the recovery pole became caught in the head-rope of the trawl net, the net could no longer be recovered in a routine manner. The plan chosen for recovery was to use the ship's crane and a grapple hook to pull in the net. The aluminum grapple hook that was used bent and failed due to the weight of the net. An operational risk management (ORM) assessment had been conducted by the deck-watch leader and Officer of the Deck prior to the net recovery operation. Winds at the time were 16 knots and seas were 3-5 foot and diminishing. A safety stand-down was held for all members of the deck department following the incident.

Causal Factors: The tangling of the recovery pole, use of the grapple hook, and lowering the trawl doors in haste were all contributing factors in this incident. Flexibility in the 35-foot recovery pole, and positioning of the employee during the non-routine portion of the recovery operation, were also cited as contributing factors.

Lessons Learned: Take time to re-evaluate hazards especially when conditions change or when a change in operations is required. Ensure proper equipment and techniques are chosen and used, especially during non-routine and unplanned situations. Don't risk personal safety to prevent property damage or property loss without first evaluating risk via an ORM assessment.

Description: An engine department employee aboard a NOAA ship was attempting to turn a vice when his hand slipped, causing his elbow to contact the work bench. The impact caused a brief loss of sensation and motion to the hand along with pain and swelling, resulting in the need for first aid.

Causal Factors: Primary cause of the incident cited by the ship was hand cranking of a vice. It was reported that “it is not clear if special grip gloves may have prevented slippage. Special types of gloves will be investigated to determine if there are any that could help prevent this in the future.”

Lessons Learned: Use caution regarding the increased risks associated with applying brute force or using increased and excessive leverage when performing any task. Consider a different tool, additional personal protective equipment, or ask for assistance to reduce the force needed to perform the task.

Description: A new employee aboard a NOAA ship hit the top of their head when walking through a main deck doorway leading to the weather deck. The resulting injury was treated using first aid.

Causal Factors: The accident report cited a lack of situational awareness as the root cause. No reason was cited as what may have caused the lack of situational awareness. In many cases, lack of situational awareness is due to a lack of training or unfamiliarity with the risks associated with a given action or task (in this case, transiting water tight doors). In addition, unnecessary haste, distractions, or fatigue are often found to be contributing factors.

Lessons Learned: As it relates to this incident, many “contact with” accidents can be prevented or avoided by making a habit of practicing increased bodily awareness – know at all times where your head, arms and hands, legs and feet are in relation to the objects around you.

OMAO Safety and Environmental Compliance Division regularly posts Accident Investigation and Lessons Learned on the following web site:

http://www.omaο.noaa.gov/accident_investigations_lessons_learned/index.html

BEST PRACTICES

Human Factors Training is just common sense....or is it?

Some folks may think they don't need Human Factors training because it is just common sense. Nothing could be farther from the truth. For example, look at the picture of the aircraft plumbing fittings below:



It should just be common sense that everyone would know to tighten every single one of those fittings. Yet, in all too many aircraft accident investigations very qualified, conscientious maintenance personnel with great common sense left a line loose on an aircraft. Human Factors training is nothing more than training the person on how to avoid the error they never intended to make. It calls for making the person aware of the things that set him/her up to make an error and more importantly, what “safety nets” the person can put in place in order to prevent an error from occurring or to prevent any error from becoming an accident.

So, what is a “Safety Net?” A safety net is a regulation, a policy, a procedure or a practice which if in place, might break a link or prevent a link in the accident chain from forming. An example is: developing the habit to always go back three steps in your work if at any point during the work you were distracted. In Human Factors training you are taught that your mind can work faster than your hands, and thus you may think and believe you have completed a task when in fact you have not.

Taking another look at the plumbing lines from above, a safety-net example might be to always use *TorqueSeal* to mark lines as you tighten each fitting which would let you and others know that each fitting is correctly tightened. A dual inspection by a second person would also help ensure no lines were left loose.

To error is human, but the fact still remains that human error is still our biggest problem and in order to lower human error we must provide the correct training to all humans in the organization because EVERY human can make a mistake even with years and years of experience.

The best ideas for improving safety come from the field. Do you have an idea to help prevent injuries? Please send it to the SECD Chief (omao.secd@noaa.gov) or to MOC safety staff at Safeship.moc@noaa.gov and we will plan to share it throughout OMAO.

NEWS AND NOTES

Ship of the Quarter Proactive Safety Award – Scoring for the Ship of the Quarter Proactive Safety Award has been tabulated and the winner is **NOAA Ship *Hi’ialakai***. Congratulations *Hi’ialakai!* Crew members will receive either one day or two days of additional time-off based upon their time spent aboard the ship during the quarter. Order of finish for the quarter was: *Hi’ialakai* (first); and *Shimada, Gunter, Bigelow, Explorer, Dyson, and Ron Brown* (all tied for second).

Scoring across the fleet was very close. The difference in scoring was primarily due to consecutive days since the ship last had a lost time accident, submittal of near miss reports, and time devoted to conducting proactive safety stand-downs above and beyond minimum requirements.

There are many things ships can do to increase their safety score. We believe many proactive activities are being done, but many are not being documented and submitted for consideration for the award. Please keep us in the loop regarding your safety activities. You may win the award and earn some well-deserved time off. Besides, we will share your best practices with the fleet and everyone will benefit.

Please remember to submit reports of proactive safety activities to Safeship.moc@noaa.gov. For more information about the award and the scoring criteria, please refer to safety procedures document 1701-23, Proactive Safety Improvement Award – Ship of the Quarter. The document

is available via the OMAO Document Management System on the inside OMAO website, <http://10.49.29.4/WebDesktop/Binders.aspx>.

Non-injury Incident Reporting - Employees are reminded that all accidents that occur while on the job or in a duty status are required to be reported. **In addition to accidents resulting in injury and situations leading to work-related illness, reporting is required for near miss incidents, property damage incidents, and environmental incidents.** All shore-based accidents, incidents, and near misses are to be reported using the NOAA on-line reporting system at http://www.seco.noaa.gov/incident_reporting/. Shipboard accidents, incidents, and near misses are to be reported using the NF-57-17-137 form and submitted via email to MOC.Fleet.Accidents@noaa.gov. A copy of the NF-57-17-137 form is available on the Forms page of the Document Management System on the inside OMAO website, <http://10.49.29.4/WebDesktop/Binders.aspx>. In addition to the required NOAA report forms, additional incident reports involving, or taking place aboard NOAA ships and aircraft may be required to be submitted directly up the OMAO chain-of-command via phone and email in accordance with Marine and Aviation Operations Centers' policy and direction.

Government Vehicle Accident Reporting - All accidents occurring on or to government property are required to be reported including accidents involving government operated vehicles. Shore-based personnel are to report via the NOAA online incident reporting system at http://www.seco.noaa.gov/incident_reporting/. Shipboard personnel are to report vehicle accidents using form NF 57-17-137. Currently there isn't an option for property damage - no injury, on the 137 form, but please indicate in the incident description if there were no injuries. In addition, per NOAA policy and online NOAA safety training, the following government vehicle accident report forms are required to be submitted: SF 91, [Motor Vehicle Accident Report](#); SF 94, [Statement of Witness](#); and SF 95, [Claim for Damage, Injury or Death](#). These forms are to be sent to:

Senior Counsel, DOC,OGC
14th St and Constitution Ave NW
Room 5890
Washington DC 20230
ATTN: Gene Del Tredici

Fall-Protection Equipment - Two similar products by two different manufactures, appear to be equal, but according to the manufacturers are not interchangeable.

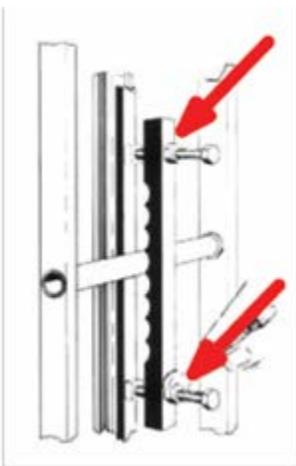
The North Saf-T-Climb system is designed to utilize a red safety sleeve.



The Antenna ladder climbing device uses a stainless sleeve marked with an “M”



While the poles of both of these units appear similar, they are brand specific and not interchangeable. The only way to tell the two apart is by measuring the spacing between mounting bolts (on the back side of the rail); North mounting holes are spaced 9” apart, while the Antenna are nearly 10” apart. Ships that have the North product must use a Y lanyard when going aloft or replace North poles with the Antenna poles to utilize the ladder climbing device.



Additionally there is an Important Safety Notice published on the North system which states, “North Safety is instructing all climbers to tie-off with a Shock Absorbing Y-lanyard (no longer than 6’), that is ANSI Z359.1 compliant, in addition to using the Saf-T-Climb Fall Prevention

System....”

Please contact MOC Safety Training Environmental Management Division (STEM) for additional clarification or if assistance is needed.

Food Safety - Considering the potential for severe winter storms this time of year, and other natural disasters that can cause prolonged power outages at any time of the year, below is a link to “Keeping Food Safe During an Emergency,” a fact sheet published by the U.S. Department of Agriculture (USDA) Food Safety and Inspection Service. We believe the information on the USDA fact sheet could prove very useful.

http://www.fsis.usda.gov/Fact_Sheets/keeping_food_Safe_during_an_emergency/index.asp

Fleet Inspection News – The latest updates to the fleet inspection schedule, guidance to prepare for inspections, resources and references, and access to ship Inspection Criteria References (ICRs) are available at <http://www.oma.noaa.gov/noaafleetinspection/index.html>.

JJ Keller Safety Training – The customized safety training provided by JJ Keller via MOC Safety Training Environmental Management Division (STEM) continues to get high marks for being practical and applicable to the work done aboard NOAA ships. Recent feedback from NOAA Ship *Ka'imimoana* states, “[The training] clearly resonated with everyone in attendance and the response upon completion was, ‘That’s the best safety class I have ever been to.’” Kudos to STEM for making this training available.

NOAA Annual Safety Training - Per the email sent from the NOAA Chief Administration Officer to all employees on December 13, 2012, annual NOAA Safety Awareness training is required to be completed by all employees by March 13, 2013.

The course is available via the Commerce Learning Center website at

<https://doc.learn.com/login.asp?lcid=178418&requestedurl=courseredirect.asp?courseid=10638>.

Additional information about accessing the course is available on the NOAA Safety and Environmental Compliance Office (SECO) website <http://www.seco.noaa.gov/>.

TERM OF THE MONTH

Safety Management System (SMS) is a term used to refer to a comprehensive business management system designed to manage safety elements in the workplace.

SMS can be defined as a systematic, detailed, comprehensive process for managing safety risks. As with all management systems, a safety management system requires goal setting, planning, measuring, and improving performance.

The [International Maritime Organization \(IMO\)](#) is one of several organizations that have adopted SMS. In the preamble to the International Safety Management (ISM) Code, the IMO states, “The cornerstone of good safety management is commitment from the top. In matters of safety and pollution prevention it is the commitment, competence, attitudes and motivation of individuals at all levels that determines the end result.”

COMMON INTERESTS

OSHA's Top Ten

In fiscal year 2012, which ran from October 2011 through September 2012, the Occupational Safety and Health Administration (OSHA) conducted almost 41,000 workplace safety and health inspections. Below are the top ten citations the agency handed to companies (the numbers in parenthesis reference the sections found in Title 29, Code of Federal Regulations, that apply):

1. Fall Protection – General Requirements ([1926.501](#)) Total violations: 7,250
2. Hazard Communication ([1910.1200](#)): 4,696
3. Scaffolding ([1926.451](#)): 3,814
4. Respiratory Protection ([1910.134](#)): 2,371
5. Ladders ([1926.1053](#)): 2,310
6. Machine Guarding ([1910.212](#)): 2,097
7. Powered Industrial Trucks ([1910.178](#)): 1,993
8. Electrical – Wiring Methods ([1910.305](#)): 1,744
9. Lockout/Tagout ([1910.147](#)): 1,572
10. Electrical – General Requirements ([1910.303](#)): 1,332

The 2012 top 10 list was released at the [National Safety Council's 2012 congress](#) in Orlando, Florida. Source: <http://www.safetynewsalert.com>

SAFETY STAFF

OMAO	MOC	AOC
Mr. Kevin Ivey Chief, SECD Kevin.ivey@noaa.gov 301-713-7706	Doug Friske Chief, STEM Douglas.a.friske@noaa.gov 757-441-6709	CAPT Mark Nelson AOC Safety Officer Mark.b.nelson@noaa.gov 813-828-3310 x3102
Bill Cunningham SECD Staff Bill.cunningham@noaa.gov 301-713-7666	Doug Smith STEM Staff Douglas.w.smith@noaa.gov 757-441-6465	LCDR Nick Toth AOC Safety Staff Nicholas.j.toth@noaa.gov 813-828-3310 x3015
Jim Kelley NOAA Aviation Safety Jim.kelley@noaa.gov 301-713-7612	Julie Wagner STEM Environmental Officer Julie.n.wagner@noaa.gov 541-867-8808	LT Chris Kerns AOC Safety Staff Christopher.kerns@noaa.gov 813-828-3310
Jack Burks	Kevin Fleming	CDR John Harris, USPHS

<p>Fleet Inspection Sylvester.j.burks@noaa.gov 757-441-6766</p> <p>LCDR Paul Kemp Small Boat Program Paul.w.kemp@noaa.gov 206-553-0258</p> <p>Doug Schleiger NOAA Dive Program Douglas.schleiger@noaa.gov 206-526-6476</p> <p>Steve Urick NOAA Dive Safety Steve.urick@noaa.gov 206-526-6223</p> <p>CAPT Jane Powers, USPHS Director, Health Services Jane.powers@noaa.gov 541-867-8821</p>	<p>STEM Fleet Training Coordinator Kevin.j.fleming@noaa.gov 757-441-6800</p> <p>Ted Fulton STEM Staff Ted.fulton@noaa.gov 757-441-3484</p> <p>CDR Les Cruise, USPHS Regional Director, Health Services, MOC-A Les.cruise@noaa.gov 757-441-3004</p> <p>CDR Michelle Pelkey, USPHS Regional Director, Health Services, MOC-P Michelle.pelkey@noaa.gov 541-867-8822</p>	<p>Aviation Medical Officer John.harris@noaa.gov 813-828-3310</p> <p>Jon F. Dixon Aviation Life Support Equipment Jon.f.dixon@noaa.gov 813-828-3310 x3040</p>
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Safety . . . our mission depends on it