GROUND WARRIOR

SUMMER 2021

MARINE CORPS GROUND AND NAVAL EXPEDITIONARY WARFARE SAFETY MAGAZINE

THE HALF-LIFE OF SCARED: WHAT'S OLD IS NEW AGAIN

EXCLUSIVE POSTERS AND GREAT STORIES

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To preserve warfighting capability and combat lethality by identifying hazards and reducing risk to people and resources.

REAR ADMIRAL "LUCKY" LUCHTMAN NAVAL SAFETY CENTER **COMMANDER**

Assistant Commandant of the Marine Corps
General Gary L. Thomas

Ground Warrior

Marines, Sailors, and Civilians of our Naval services,

In my role as the Assistant Commandant, I'm honored to be the Marine Corps' senior safety representative and welcome you to this issue of Ground Warrior magazine. Each and every one of you have safety-related experiences that can serve as a lesson for the rest of us. For this reason, we have brought Ground Warrior magazine out of retirement to provide a forum for you to share those experiences.

This edition of Ground Warrior touches on a number of topics, ranging from shallow water blackouts to tactical vehicle mishaps. As we improve our practices in each of these areas, we must also consider why these same mishaps keep happening even after we think we have learned our lessons. Why does there seem to be a shelf life for safe operations? The cover feature article, "The Half-Life of Scared," examines this trend and will help you understand the benefits of "healthy fear" and refresher training. This article and others in this issue will give you practical advice you can use to improve your performance and help the Marines around you do the same.

Over the past few years, the Marine Corps has improved its safety reporting mechanisms, information sharing, and safety management practices. As a result of these and other efforts, we are seeing a reduction in vehicle rollovers and historically low aviation flight mishap rates. However, several recent deadly mishaps clearly demonstrate that Marine Corps safety culture must improve and Marines at all levels must make better risk decisions.

Through Ground Warrior magazine and other venues, I encourage you to share your experiences and participate in improving our safety culture. We must all be a part of this change. Every Marine must be empowered to assess risk and to speak up when they see something unsafe. Leaders must provide the necessary oversight to mitigate risk and stop operations when the risk is too high. Commanders must develop command climates that value and reward hazard reporting. These, among other practices, will help us accomplish our missions and be the force this Nation needs in competition, crisis, and conflict. It will take all of us—I know you are up to the challenge.

Semper Fidelis,

General Gary L. Thomas

Assistant Commandant of the Marine Corps

Features

Mishaps diminish our readiness. They remove our Marines, Sailors and civilian employees from their units and workplaces and place them in hospitals, wheelchairs and coffins. Mishaps ruin equipment and weapons. This magazine's goal is to help make sure personnel can devote their time and energy to the mission. We believe there is only one way to do any task: the way that follows the rules and takes precautions against hazards. The Ground Warrior is published through a joint venture between the CMC Safety Division and the Naval Safety Center. Contents are not necessarily the official views of, or endorsed by, the U.S. Government, the Department of Defense, the U.S. Navy or the U.S. Marine Corps. Photos and artwork are representative and do not necessarily show the people or equipment discussed. We reserve the right to edit all manuscripts. Reference to commercial products does not imply Navy or Marine Corps endorsement. Unless otherwise stated, material in this magazine may be reprinted without permission; please credit the magazine and author.

The Half-life of Scared: How Long Does It Take Before We Repeat Our Mistakes?

While too much fear is bad, a certain level of fear is healthy. It is what keeps us alive and prevents us from doing something foolish or dangerous. If you aren't afraid, then you think you are bulletproof. It is fear (and wisdom) that makes us look both ways before crossing the street. Without a healthy amount of fear, we easily can fail to see or anticipate the hazards around us.

In late 2018, Commander, Naval Surface Forces sent a message to the surface force entitled "The Half-Life of Scared is Six Months." The Naval Safety Center recently validated that premise by analyzing 15 years of mishaps. The study determined the mean time it takes for us to forget our lessons, stop being "scared" (and vigilant) and thus repeat a similar mishap is 193 days. Knowing that number, we can better target our training frequency to help ensure we all stay just "scared" (i.e., vigilant) enough to not keep causing the same mishaps.

COMNAVSURFOR stated commanding officers are very good at making risk decisions if they recognize the risk and see that a mishap is possible, but this recognition requires a keen awareness of the most likely and most dangerous threats. While this was targeted at surface force officers, the statement is true across all our communities and paygrades. We all have a tendency to become less concerned about threats over time, and our awareness of the magnitude of the threat fades as Sailors and Marines transfer, we file away our lessons and we focus on the next challenge.

For many mishap types, this half-life of awareness is six months. In this context, half-life can be simply defined as the time it takes awareness to decrease by 50 percent. Using simulation modeling in studying seamanship mishaps, NAVSAFECEN determined that the mean time between mishaps was 193 days. While the study focused on afloat mishaps, the results and discoveries can apply to the entire Navy and Marine Corps team. These results identify an optimal frequency for recurrent primary skills training that is necessary for qualified personnel. Naval units must constantly balance the harmony between minimal qualifications and operational proficiency. By integrating skill proficiency limits and actively managing them, organizations can guard against becoming operationally complacent.

Ya know, I think you try harder when you're scared.

– Rocky Balboa

If we take the generally accepted definition of bravery as a quality which knows no fear, I have never seen a brave man. All men are frightened. The more intelligent they are, the more they are frightened.

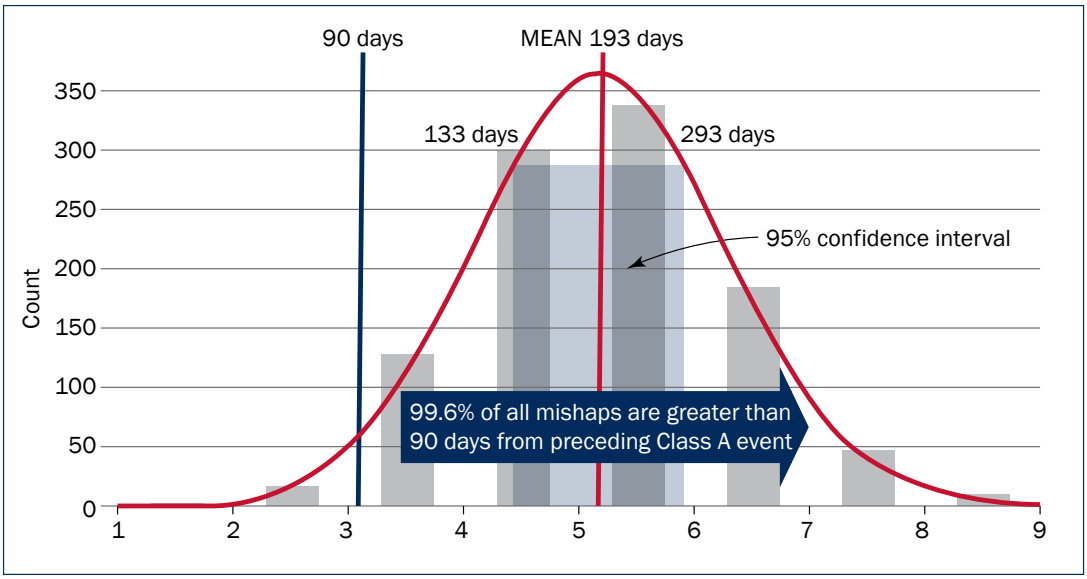
– George S. Patton

So, how do we know this? NAVSAFECEN's Knowledge Management (KM) team conducted a detailed analysis of available data. The multi-page summary explains all the academic details (pivotal events, Monte Carlo simulations, probabilistic models, exponential distribution, z-score and a host of other technical jargon).

The graph below gives you the overall picture, but the simple summary is this:

a. The model showed a mean time between failures of 193 days (roughly six months). Sixty-eight percent of the simulated mishaps occurred between 154-232 days (approximately six months) from the preceding mishap.

b. The model showed only 0.4% of mishaps were forecasted to occur again in the 90 days after a Class A mishap. That means 99.6% of all mishaps occurred after the initial 90-day interval.



IN PLAIN ENGLISH: We stay "scared" (and vigilant) for the first 90 days and don't make the same mistakes. After about six months we lose the healthy fear, get complacent and do it again.

Lessons Learned / Recommendation

Quarterly training. Commands should conduct operational safety training (the study specified seamanship training for the surface warriors) on a quarterly basis. This training should include a review of historical examples of mishaps and the underlying causal factors. Commands should conduct an honest self-assessment to determine if they are susceptible to the causal factors that previously led to a mishap. Keeping the training interval to 90 days or less may help maintain the appropriate level of awareness and decrease the likelihood of repeating the mistakes.

Shallow Water Blackout

Breath-hold diving, also known as freediving, is the practice of holding one's breath until resurfacing rather than using breathing apparatus such as scuba gear. One common hazard of freediving is **Shallow Water Blackout (SWB)**, which is an underwater "faint" due to a lack of oxygen (hypoxia) to the brain brought on by holding one's breath over long periods. Freedivers often use hyperventilation techniques to "blow-off" carbon dioxide, which involves more than just taking two or three deep breaths. Hyperventilation is breathing at an abnormally rapid rate, which removes carbon dioxide (CO2) from the bloodstream more quickly. CO2 buildup in the bloodstream from holding your breath is what causes you to want to breathe. Without that urge to breathe, a freediver unknowingly depletes oxygen, which can lead to SWB (unconsciousness) and death. Not a freediver? Read on because SWB can occur in your backyard pool, too. Hyperventilating followed by long underwater swimming or breath-holding can cause SWB just as quickly at any depth.

The following on-and off-duty examples of SWB demonstrate even trained divers can be at risk.

- An instructor lost consciousness for a brief period at the completion of a working breath-hold dive in a 12-foot deep pool.
- Two instructors drowned after practicing breath-hold diving training. The facility manager previously briefed them breath-holding was not allowed at the pool.
- A qualified Navy diver died from drowning while conducting an unauthorized breath-hold dive in the vicinity of an ongoing diving operation. He was observed hyperventilating prior to the dive.

Note: The above tragedies happened to qualified military divers who must adhere to strict policies.

Here are two examples of off-duty mishaps where SWB was indiscriminate of duty status.

- A service member died while engaged in "breath-holding games" while snorkeling with two fellow squadron mates. They were at a well-known snorkeling and diving location.
- Two service members chartered a professional guide to take them on an all-day spearfishing trip. After approximately five hours of spearfishing, Diver 2 (on the surface) observed Diver 1 dive to a depth of 60 feet and start looking for fish. After 45 seconds, Diver 1 dove deeper. Diver 2 started swimming against the current to get a better visual on Diver 1. After another 20 seconds, Diver 2 observed Diver 1 swimming toward the surface. Halfway to the surface, Diver 1 started convulsing and stopped moving. Diver 2 sprinted across the surface, losing one fin in the process. Once on location, Diver 2 took two quick breaths and dove to assist Diver 1 to the surface. Diver 2 remembered being close to resurfacing when SWB occurred. The boat crew recovered Diver 2 and successfully rendered CPR. Diver 1 could not be seen from the surface and scuba divers later recovered his body.

Remember, SWBs can happen anywhere, even in a controlled training environment. Symptoms of hypercapnia (high carbon dioxide) or hypoxia (low oxygen) in the blood can show no signs — until it's too late. Know the activities that create the conditions for SWB and don't take unnecessary risks.

SWBs don't just affect those participating in recreational activities like spearfishing, freediving and snorkeling. It is also the single biggest killer of competent swimmers of all ages, according to the Aquatic Safety Research Group.

The best way to prevent SWB is to educate yourself (and your family) on the hazard and apply real-time risk assessment, both on-and-off duty.

If SWB occurs, recovery and prompt resuscitation are critical and impossible when you're by yourself. Since the brain is depleted of nearly all oxygen during SWB, brain damage can start in as little as two minutes, whereas a typical drowning victim has six to eight minutes before brain damage begins. This rapid onset of mortality makes it crucial that supervision be provided for those swimming in areas where the inherent risk of holding your breath is present. Children and adults alike should never swim alone.

Getting Deadlier in the Dark

by LCDR Matt Shipman[1], LT Jarrett Moore[2] and Capt Greg Giunta[3]

Operating at night presents a number of challenges that can impact operational and combat performance. When we are tired, our vision is limited by the low-light levels, since it's not a natural time for us to be awake. We rely on night vision devices (NVD) to dominate the battlespace at night. NVD is an umbrella term for electro-optical devices which use optical radiation to produce an image. These devices include night vision goggles (NVGs) and forward-looking infrared (FLIR). The following article will focus on NVGs. Properly employed, NVGs help make us the most effective and lethal ground force in the world. Unfortunately, recent live-fire mishaps have shown that ground forces need to rethink their approach on how to train and utilize NVGs. Understanding and properly employing NVGs will provide a significant advantage over adversary forces.

Using NVGs

NVGs, such as the AN/PVS14s and similar equipment, are sophisticated tools that amplify available ambient light and near infrared (IR) energy. This technology enables us to see in conditions that are otherwise too dark for the naked eye. Light enters through the objective lens, the signal is amplified by an image intensifier and then displayed through the eyepiece for viewing.

NVGs will automatically adjust the gain to compensate for higher or lower light levels to provide the most optimal image they can.

NVGs are a tool. Like any tool in our kit, NVGs require appropriate training, standardized procedures, currency, and a clear understanding of both their advantages and limitations. A standardized set of pre-operation checks, as well as a standard procedure for aligning and focusing the NVGs will provide you with optimal results.

Pre-Operation Checks

- Make sure the NVGs are turned off when you are first issued them. Verify you have batteries in the battery case and sufficient backup batteries for that night's operations.
- In a lighted area, ensure the lenses are clean and free of dirt, grime, or fingerprints. If necessary, clean the lenses with canned air or by wiping them with either a soft microfiber cloth or lens paper.
- Test all movable parts and rings, verifying full movement of the objective and diopter or eye piece. Ensure the white dot on the rim of the diopter does not move when you twist the diopter.
- See the table on Page 11 for problems with NVGs requiring maintenance. If you are issued NVGs that require maintenance, DO NOT ACCEPT THEM. Turn the NVGs into maintenance and draw another set.
- Once you have completed your pre-operation checks and have an acceptable set, turn the objective lens full counterclockwise until it stops, then set the white dot on the rim of the diopter to zero, then don your NVG and begin aligning and focusing them.

1. Aeromedical Safety Officer, Commandant of the Marine Corps Safety Division
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Issues Requiring NVG Maintenance

Examine your NVGs and look for all of the following during pre-operations checks. If any of the following are present, DO NOT ACCEPT THE NVGs. Turn them in to your maintenance and draw another set. Any of the following will cause the NVGs to perform poorly and will degrade both their performance and yours while using them.

Lenses	Scratches or cracks on one or both of the lenses.
Power switch and gain control	No definite stopping point and switch is broken or missing.
Eyepiece or diopter	Binding, not moving freely, jammed with grime and dirt, dot on the housing rim spins when adjusting lens.
Objective lens	Binding, not moving freely, jammed with grime or dirt, dents that prevent full field of vision or the ability to focus, housing is cracked or loose.
Viewed image	Flickering, flashing, edge glow or shading observed. If NVG image looks dim or foggy even after cleaning and adjustment, use a TS-4348/UV Test Set to determine whether NVG meets resolution requirements.
Visual acuity	When using an eye lane chart, should be able to focus to at least 20/30 vision. If you cannot focus to at least 20/30 with the NVGs using the eye lane chart, turn them in and draw another set. Results will vary if focusing the NVGs without the eye lane chart.

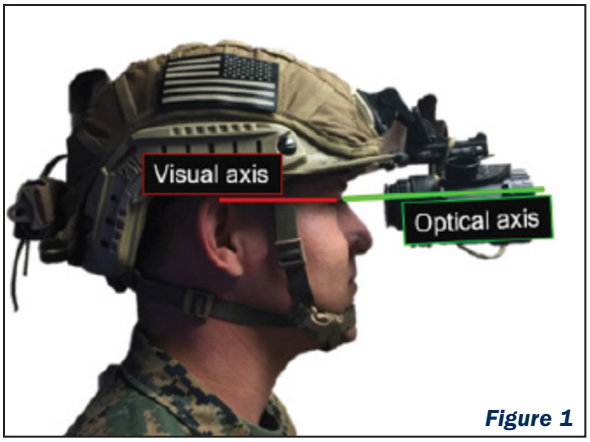


Figure 1:

Examples of principle components of NVGs and proper alignment of the NVG.

Note that to be optimally effective, your visual axis must be aligned with the optical axis of the NVG.

Alignment

NVGs must be properly aligned before they can be used. Proper alignment will center the NVG optical axis along your visual axis to provide the optimal field of view. See Figure 1 for more information.

1. Verify that your NVGs are powered off and don them in a lighted area.
2. Make sure that the distance from the eye piece to your eyes (the eye relief) is enough to prevent blunt force trauma to your eye when wearing the NVGs. This should be 1 inch (about one thumb`s-width distance from your eye) between your eye and the diopter.
3. Using the tilt adjustment knob, the fore or aft adjustment, and the vertical adjustment, align the eyepieces so they are centered in your vision when looking straight ahead. See **Figure 1** for an example.

Focusing

Once the NVG has been aligned, it can then be focused. While an ANV-20-20 (Hoffman Box) is generally considered to be the most accurate means of aligning and focusing NVGs, they are not always an available resource. The best alternative available for focusing is using a 20-inch eye lane chart in a controlled and dark environment, away from natural and artificial lighting. However, you can still use the eye lane chart in the field. See Figure 2 for an example of a 20-inch eye lane chart.

Focusing in the field with an eye lane chart

1. Stand 20 feet away from the eye chart.
2. Have someone shine a flashlight or tactical headlamp (white, not colored) on the chart from approximately 10 feet to one side.
3. Cover your unaided eye with your free hand.
4. Turn the outer objective lens clockwise until any of the vertical and horizontal lines on the chart are visible.
5. Turn the inner eyepiece diopter counterclockwise until the image becomes blurry and stare at the image for two to three seconds. Slowly turn the diopter clockwise until you have a sharp focus and then stop. If you overshoot and the image starts to lose focus, stop, turn the diopter counterclockwise and repeat this step.
6. Make fine adjustments to focusing using the objective lens. You should be able to obtain a visual acuity of 20/25 to 20/30.

Figure 2:

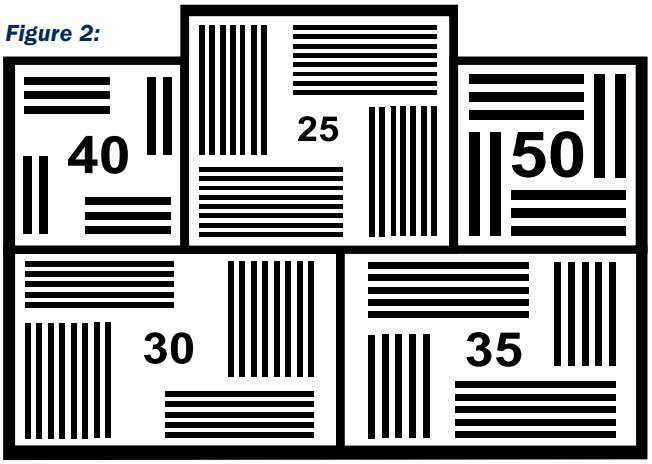
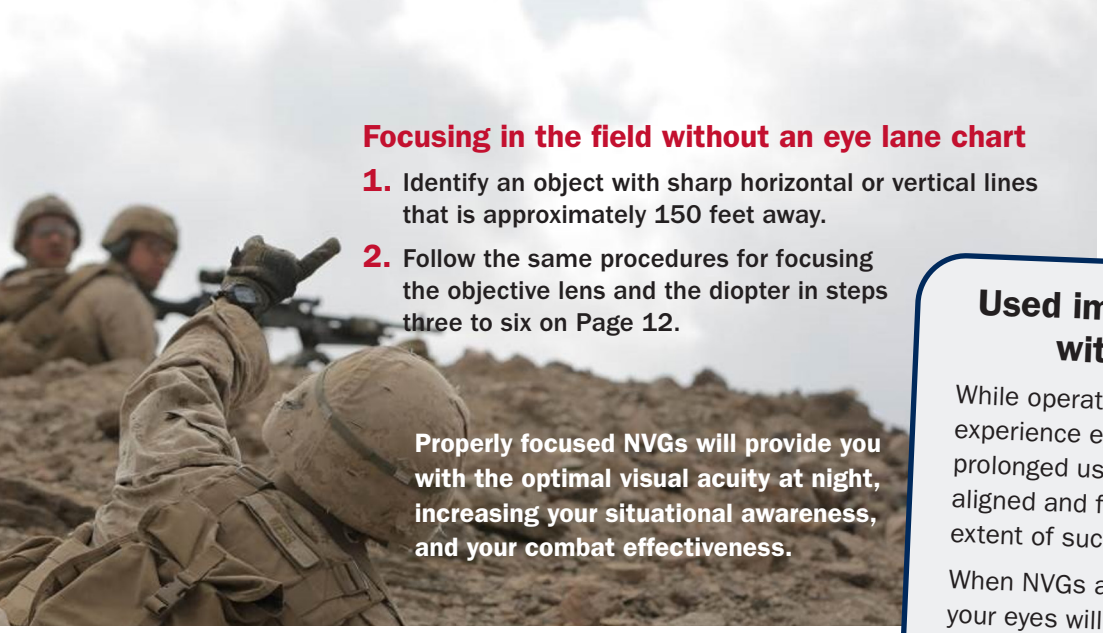


Figure 2:

Example of a 20-inch eye lane chart. An eye lane chart allows you to focus your NVG to achieve optimal visual acuity. Being able to clearly observe the lines around the numbers indicates visual acuity. For example, being able to clearly see the lines around "30" indicates visual acuity is 20/30. ***NOTE:*** *This image is not to scale, do not attempt to replicate this chart or use it for focusing NVGs. Contact the Regimental Gunner or Safety Division for replacements.*



Focusing in the field without an eye lane chart

1. Identify an object with sharp horizontal or vertical lines that is approximately 150 feet away.
2. Follow the same procedures for focusing the objective lens and the diopter in steps three to six on Page 12.

Properly focused NVGs will provide you with the optimal visual acuity at night, increasing your situational awareness, and your combat effectiveness.

Used improperly, NVGs come with consequences

While operating with NVGs, we can experience eye fatigue, especially with prolonged use. If the NVGs aren't properly aligned and focused, both the onset and extent of such fatigue will accelerate.

When NVGs are improperly focused, your eyes will attempt to compensate to create a clearer image. This can lead to a range of symptoms such as burning or itchy eyes, blurred vision, and headaches. These conditions will degrade your ability to focus on what you are doing and your ability to maintain situational awareness, ultimately reducing your operational or combat effectiveness. Should you begin to experience any of these symptoms, it may be advantageous to realign or refocus your NVGs, if possible.

Limitations of NVGs

While NVGs are a powerful tool, they are not without their limitations. Understanding these limitations will enable you to better interpret and respond to what you see using NVGs under a variety of conditions. **NVGs will reduce your field of view**. Unaided vision has a field of view of approximately 140° vertically and approximately 190° horizontally. With NVGs, your field of view is reduced to approximately 40°. To compensate for this reduced field of view, it is important to regularly and deliberately scan under or around your NVGs with your unaided vision to maintain full situational awareness. NVGs reduce visual acuity. Under optimal real-world conditions, visual acuity through NVGs is approximately 20/30 even if the NVGs are focused to 20/25 or better. Deteriorating environmental conditions (dust, smoke, snow, rain, etc.), low light or low-contrast terrain can reduce visual acuity further, but are normally an improvement over the 20/200 visual acuity typical of unaided viewing at night.

NVGs are monochromatic. They don't distinguish color, and as a result, cannot distinguish between differently colored lights (see poster on aided and unaided viewing of differently colored lights). During recent nighttime, live-fire mishaps, differently colored lights were used to distinguish targets from range observer or friendly forces (for further details, see the article '*Building Blocks Approach to Training-LFAM* on our website). The Marines involved did not understand the NVG limitations of color discrimination, and the results left several personnel injured, one permanent partial disability, and one fatality. Additionally, some colors of light show up more intensely on NVGs than others. This effect can lead to an illusion where it appears a more intensely colored light source is closer to the NVG user than a less intensely colored light source. The same illusion can occur between a more and less intense source of the same color. By scanning around the NVGs, it becomes possible to distinguish cues that place light sources in context and allow for accurate interpretation of the information provided by the NVG.

During recent nighttime, live-fire mishaps, differently colored lights were used to distinguish targets from range observers or friendly forces.

Because the Marines involved did not understand NVG limitations with regards to color discrimination, the results left several personnel injured, one permanent partial disability, and one fatality.

Illumination is a key consideration to properly employing NVGs. NVGs amplify ambient light. The optimal illumination for NVG usage is a quarter moon 30° above the horizon. Higher illumination levels (for example, from a full moon or cultural lighting) can wash out or degrade the image while lower illumination can produce an image that appears dim and grainy. NVGs will automatically adjust the gain for ambient lighting conditions, which leads to these variations. These variations are normal and are not a maintenance issue.

The angle of illumination will also play a role and can cause changes in contrast that will impact the visual image through the NVGs and the interpretation of that visual image over the course of an operation. You cannot discern an image on NVGs where no illumination exists. The angle of illumination, as well as terrain features or vegetation can influence how much contrast a user can discern through NVGs. Areas such as terrain features illuminated from behind, creating shadows, will have poor to no visual clarity, and can hide obstacles or enemy forces. A similar issue will arise when trying to look beyond a relatively bright light source.

Contrast as it relates to NVGs is the degree to which you can distinguish between different elements in the NVG image. High contrast areas enable the user to discriminate more details in the image, low contrast areas result in reduced discrimination of terrain or object details, and can hide obstacles or enemy forces.

Environmental obscurants, such as rain, snow, smoke or dust interfere with NVGs. The larger the particulate, the more image quality will decline and limit both the distance you can see and the details you can discern. Recognize this limitation will impact both threat or obstacle detection and allow for more transit time and greater separation especially when operating vehicles. See Figure 3 for an example.

NVGs will impact your depth perception. NVGs make it difficult to interpret many of the visual cues that we use in depth perception. This can impact your ability to accurately estimate distances to objects and interpret the three-dimensional space around you. Maintaining an active, deliberate scan through and around your NVGs can help to mitigate this limitation.

Night live-fire training as viewed through NVGs.

These images were obtained from video of the event. In Figure A, we see a squad of Marines just prior to opening fire on a set of static targets. The red circle highlights terrain contours just behind the targets. Figure B shows the same squad seconds later after they began firing. The red circle highlights the same terrain contours. Figure B is an example of an environmental obscurant. Note that the dust kicked up in front of the target obscures the view of the terrain as viewed through the NVGs. Particulates, including dust, smoke, fog, snow or rain are opaque to NVGs, and will impact the image presented. The larger the particles, the greater the obscuration that will result. This will have an impact on personnel operating NVGs in environments where such obscurants are present, and can hide terrain features or enemy forces, ultimately impacting situational awareness.

Conclusion:

Used properly, NVGs are a powerful tool when conducting night operations. They enable our operating forces to see more effectively in low-light conditions, allowing for better situational awareness. Careful attention to functionality of issued NVGs prior to use, as well as taking the time to properly align and focus NVGs will ensure the optimal conditions for employment with minimal risk of impact on vision, headaches, etc. Like any piece of gear we employ, we must be familiar with the limitations of NVGs, and consider how to mitigate them during operations. It is equally important to practice a deliberate and conscious scan both through the NVGs and around them to optimize and accurately process the information, which ultimately translate into increased combat effectiveness and lethality during night operations.

RISKY BUSINES

S

What's wrong in this picture?

1. UNUSED SEATBELTS

WRONG: Not wearing the provided seatbelts.

RIGHT: Seatbelt use is MANDATORY in all tactical vehicles at all times.

2. BODY OUTSIDE VEHICLE

WRONG: Riding with foot outside the vehicle.

RIGHT: Keep arms and legs inside a moving vehicle at ALL times.

Operating the vehicle within its limits and observing mandated safety requirements will mitigate the potential for a mishap and minimize injuries.

CMC SAFETY DIVISION
MARINES TAKE CARE OF THEIR OWN

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Top's Talk

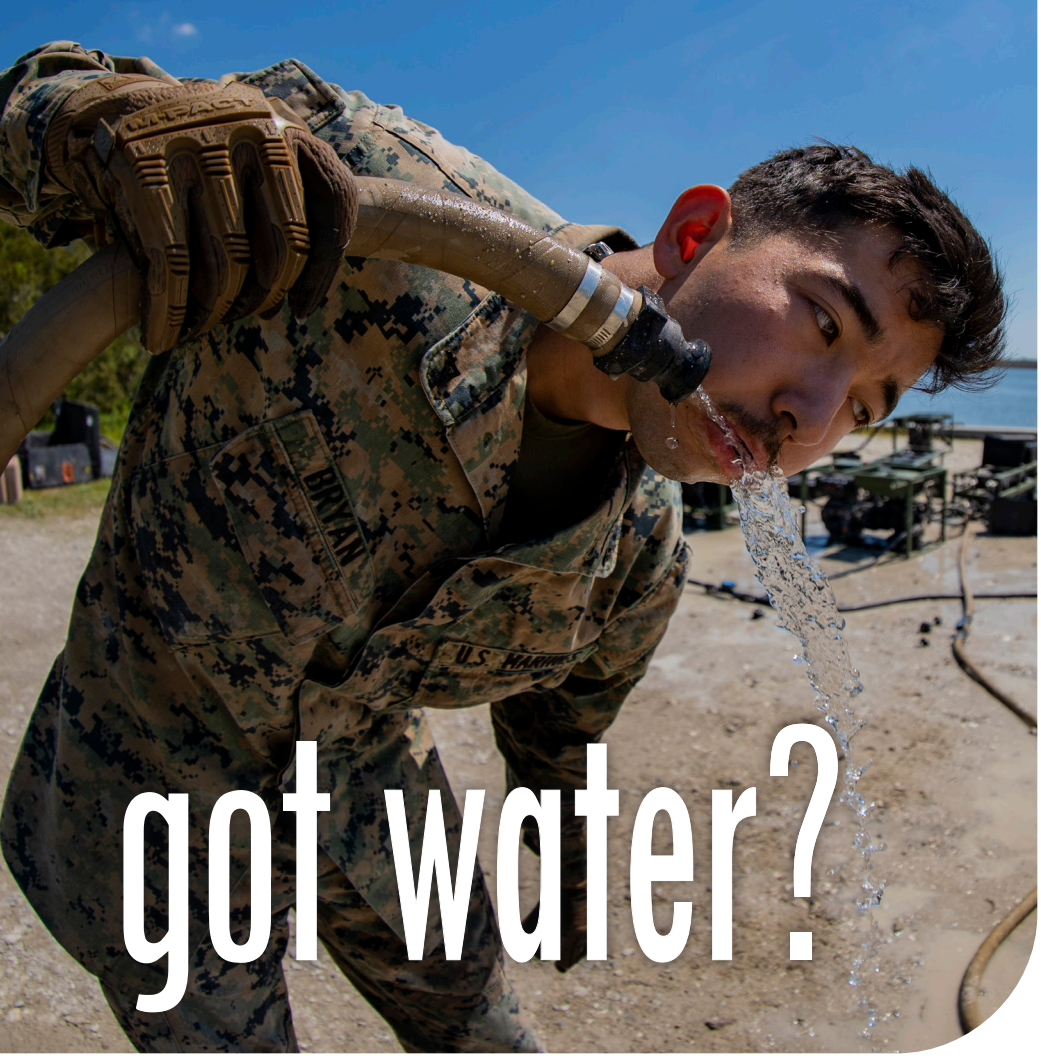
Despite the reduction in training because of COVID-19, heat-related injuries still account for the majority of mishaps when conducting unit hikes. Improper hydration, nutrition, conditioning and acclimatization remain the top causal factors or hazards for strenuous activities. Our reputation for being "America's force in readiness" is attacked every time we lose a part of the team to a preventable injury.

Chewonthis.....

"Marine Corporal recently transferred from an overseas duty station to my CONUS-based unit. Within three weeks of joining the unit, he was sent to a temporary assignment duty (TAD) for two weeks. He returned for three weeks and executed tasks that prevented him from participating in platoon events regularly, like physical training. Halfway through a 6-mile hike, he fell behind and failed to complete the hike. When our leadership asked when he had last hiked, they learned **he had fallen out of a 7-mile hike approximately two months before transferring**. The Corporal's leadership instructed him to maintain daily conditioning and then assigned him TAD for another two weeks. When he returned, we were scheduled to conduct a 10-mile hike the following week; it was the middle of July.

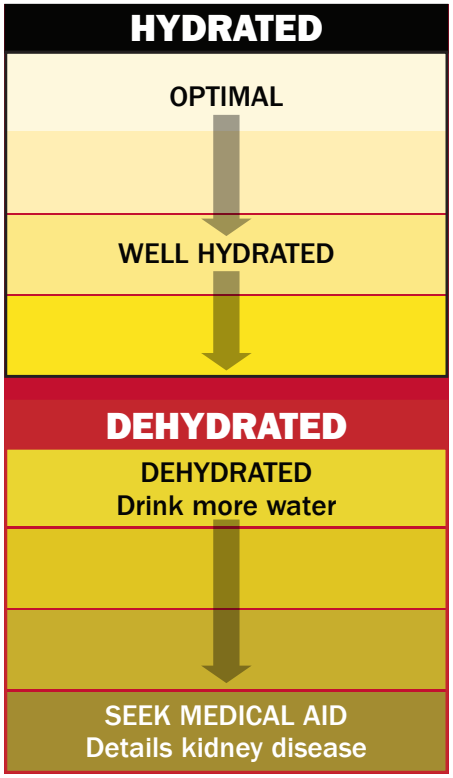
The morning of the hike, unit leadership checked weather conditions and realized the recent heat wave was going to impact the WBGT flag conditions. With a start time of 0500, "GREEN" was the projected flag condition for the start of our 10-mile hike, but flag conditions that morning were "YELLOW" and there was a risk of flag conditions potentially becoming "RED" later in the day. The hike was still considered to meet "GO" criteria; however, leadership decided to monitor personnel closely and implement more frequent halts, if necessary.

We stepped-off and **during the initial one-minute equipment check the Marine's camelback hose become stuck. He didn't inform leadership and the issue wasn't addressed, leaving him without a personal water source for much of the hike**. During the last mile of the hike, he started feeling dizzy. One of the NCOs observed him and immediately took him out of the formation. As he began to take a knee, he lost consciousness and we removed both his pack and tactical vest. We relocated him to the safety vehicle and the corpsman treated him for heat stroke. His core temperature registered 108 degrees and by now, he lost consciousness. The corpsmen gave him CPR, and we took him to the hospital where he was admitted to the emergency department. All of this happened within 10 minutes of the Marine falling out."



Are you hydrated?

Urine Color Test



QUICK TIP: Try to drink half of your body weight in fluid ounces per day.

Example: 180lb Marine /2= **90 oz per day** *without any exercise involved*.
(For reference, 1 gallon = 128oz) With exercise, add approximately:

- 16 ounces* -> 2 hours prior to exercise
- 4-8 ounces* -> 10 minutes prior to exercise
- 4-8 ounces* -> every 20 minutes during
- 16-24 ounces -> after exercise

* For most people, 1 large gulp = 1 ounce

In CY 2019 we experienced 25 mishaps while conducting unit hikes. Forty-four percent were from effects of the environment (body temp too high or too low,) 36 percent were heat-related illnesses. Fast forward to CY 2020 we had 14 total mishaps, 93 percent were heat-related injuries. While the specific circumstances differ, we can conclude that less than optimal conditioning and dehydration played a major part in all cases.

Remember, hydration is not instantaneous. You cannot effectively prepare your body with one canteen the night prior. Hydration requires consistent consumption of water and nutrients. Pay attention to the charts in the heads, you know what I'm talking about, and if you don't have hydration charts posted, print one out and slap that bad boy on the bulkhead. Don't wait for somebody else to do it, fix what you see broken.

Brothers and sisters, we must live up to the expectations of our fellow citizens. Drop the cheeseburger for a chicken breast, replace the Monster with some H2O (water). We're not foregoing all the fun stuff, just enjoying the junk in moderation.
Stay safe and stay fit! Top Out!

Risk Management

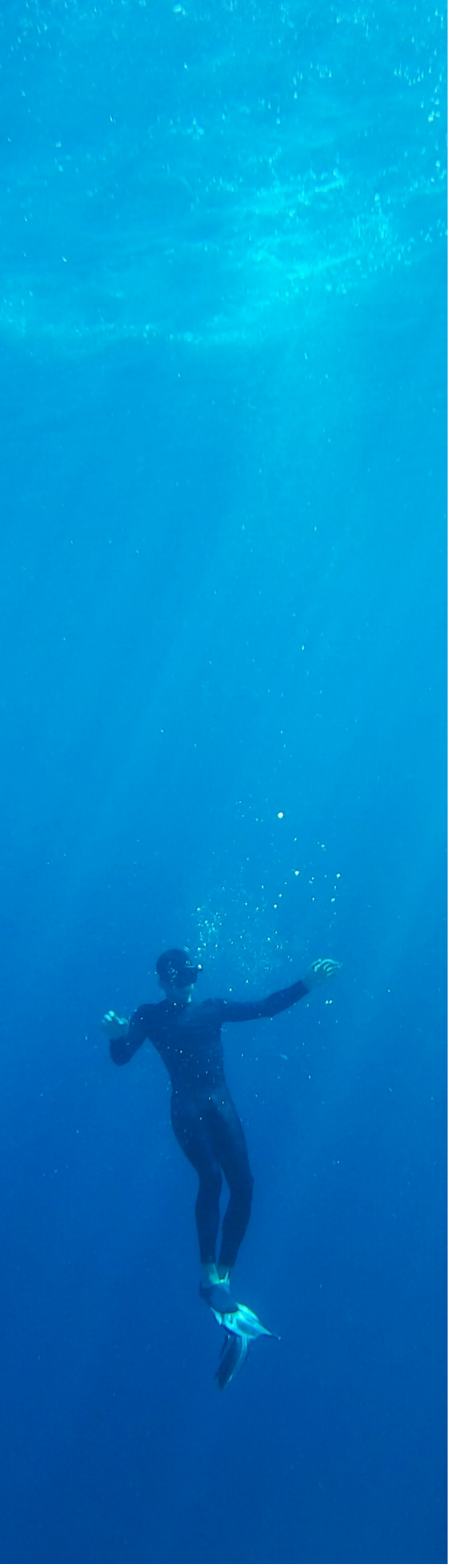
Navy and Marine Corps units execute missions or tasks every day in a variety of conditions, some ideal, some not so much — but always with the goal of completing the event safely and professionally.

Whether you're planning dive operations, restricted waters transits, live-fire and maneuver, or [***fill in your mission here***], these events often involve some level of risk.

Human error continues to be the leading cause of Navy and Marine Corps mishaps. The most frequent causal factor is inadequate risk assessment, either in the planning or execution stages of a mission. Inadequate risk assessment is a frequent and avoidable factor. Risk management assists in identifying hazards and implementing controls to mitigate hazards. Incorporating risk management with the right attitude and "going through the motions" can be the difference between a mission well done and a mishap investigation.

With an understanding of the applicable instructions — **OPNAVINST 3500.39 (series) Risk Management (RM)**, and **Marine Corps Order 5100.29C, Volume 2** — commands can determine how to identify hazards and mitigate risk before the mission using a Deliberate Risk Assessment Worksheet (DRAW). While it's common for units to maintain a library of old DRAWs on a shared drive for ease of access, beware: no two evolutions are exactly the same. Carefully review the worksheet and honestly ask yourself and your team, "What's different today?" NAVSAFECEN operational risk management staff repeatedly see the practice of commands using "canned" risk assessments to brief operations without updating them for current conditions and hazards. Mission planners often become complacent about the risks associated with operations. Here are a few examples where accounting for or ignoring the risks associated with the details of a mission determined whether a mishap occurred:

- A Marine battalion was conducting training in groups on various weapons systems to include an Anti-Personnel Obstacle Breaching System (APOBS). An APOBS is an explosive line charge that uses a rocket to fire a string of charges into a minefield. Once deployed, the charges will detonate and clear a safe path. A training cell member asked one of the Marines if he "was good to do the APOBS," implying that the Marine would set up the APOBS under their supervision as roughly 30 Marines observed. As the Marine was going through the steps to arm the device, the rocket portion of the APOBS ignited and shrapnel struck a Marine in the helmet, fracturing his skull and rendering him momentarily unconscious. The safety investigation revealed the safety pin was inadvertently removed from the rocket portion.



This mishap was completely avoidable. Among the many causal and contributing factors identified in this mishap were poor planning; both in allowing a non-instructor to demonstrate the procedure, and in that the risk assessment worksheet for the training made no mention of the APOBS or the associated risks with it. Without any risk management or plan, the range safety officer and instructor at the site had no shared understanding of the plan to employ the APOBS.

- The NAVSAFECEN RM assessment team was on a carrier observing a Composite training unit exercise. While sitting in on an anti-terrorism force protection brief for a strait transit, it was readily apparent that the risk assessment worksheet used for the brief was for getting the ship underway from port versus an actual at-sea strait transit (not the same). About one-third of the way into the brief, the commanding officer (CO) stopped the presentation and asked where the security department got the information for the brief. The answer: "Well, we used the DRAW from the "S" drive and thought it would work." The CO stopped the brief and told the department to go back to the drawing board. Fortunately, in this case, the planners got a redo.
- In a Navy diving near-mishap, the location and diving scenario were the same for the morning and afternoon sessions. The team conducted the first dive 100 percent by the book, including a deliberate risk assessment worksheet and brief. After a lunch break, the dive team splashed to continue their work, but the dive was abruptly stopped when the divers realized they entered the water with air tanks that did not have enough air left for the dive. Fortunately, all divers were evaluated by medical with no issues. This incident could have been fatal, but was easily preventable had the dive supervisor reviewed the approved pre-dive RM checklist and operation procedures for the dive system after the lunch break. The Navy dive manual identifies any subsequent dive as an entirely new evolution, requiring the dive supervisor to conduct another RM brief and pre-dive checklist. Risk management is a continuous process and a way of operating, not just a check in the box for the day.

The examples above had minimal consequences, but the missed warnings and chains of errors could have easily ended in tragedy. A recent series of catastrophic mishaps, a grounding and three collisions, resulted in 17 Sailors' deaths. The severity of these mishaps led to a comprehensive review of surface force incidents. The review team found poor risk management and planning were factors in all four mishaps.

If you use an old risk assessment worksheet; review the hazards that were identified during the initial development and see if they are still applicable. Apply the Five **Ws (who, what, when, where and why) and ask, "What's different about today's mission?"** to capture and mitigate any new hazards. Do not reinvent the wheel, but use your risk assessment library as a starting point, as opposed to a "check in the box." "Reduce, Reuse, Recycle" might be a good mantra if you want to protect the environment, but it's not so good for risk management. Follow the spirit and intent of the risk management process to keep you and your command safe and operationally effective. Team members should be part of the process to help identify hazards before and during an event. It's not just a brief for the CO. Like the mission itself, it takes a team to manage risk correctly.

Recognizing Excellence

Safety promotion consists of a wide range of activities that shape organizational safety culture through communication and training. One such way is to promote the growth of a positive and proactive safety culture through recognition of Marines, Sailors and civilians for their achievements in Safety. It`s essential to the overall function of a Safety Management System which cannot succeed by mandate alone.

FY 2020 Ground Safety Awards

Warrior Preservation Award (WPA):

This award is presented each fiscal year to the Marine Corps installation that has maintained the most comprehensive safety management system. All bases, air stations, depots, and support activities are eligible to be nominated.

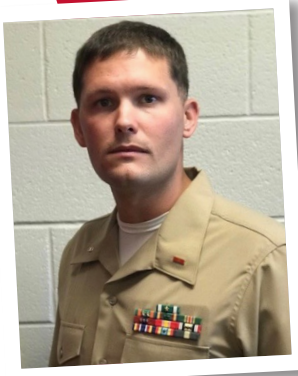
The WPA winner for FY 2020 is Marine Corps Base Camp Butler, Japan. Camp Butler faced numerous challenges over the past year. Each safety program has included English and Japanese languages to allow for a fully implemented Safety Management System. Camp Butler mishaps, whether on-or off-installation, on-or off-duty, civilian or service member, directly impact the alliance between the Japanese and the U.S. governments. Protecting the force and safeguarding materiel by lessening the number and severity of preventable mishaps is one of leadership's top priorities for preserving the partnerships between the two nations. Two noteworthy mishap reduction achievements during FY20 include zero fatalities for on-and-off installation licensed motorcycle riders and personnel participating in recreational water activities.

Marine Corps Safety Excellence Award: Officer, Enlisted and Civilians:

This award recognizes one officer, one enlisted and one civilian, who each made the most significant contribution to the Marine Corps Safety Management System.

MCSA Officer: (FY20) - CWO2 Brandon Grzyb - 2nd Marine Division

As the 10th Marine Regiment Ground Safety Officer, Grzyb's efforts consistently earned him the distinction of being the highest performing Safety Officer within the 2nd Marine Division. His constant presence and oversight of the 10th Marine Safety Program has resulted in a 100% compliance in all safety-related inspections, to include the Commanding General Readiness Inspection. Grzyb further involved himself in every force preservation counsel, personally leads all training related to Workplace Safety, Safety Supervision, Lockout Tagout Procedure, and he actively initiates and participates in Safety Command Climate Surveys and Back-in-the-Saddle training to ensure requirements are met and Marines remain engaged with the safety program. These efforts have allowed the 10th Marine Regiment to remain operationally relevant, while ensuring not a single Class A or Class B mishap has occurred throughout Grzyb's tenure. Grzyb further extends his leadership to the Regiment Light Amplification Stimulated by Emission of Radiation (LASER) Safety Program as the regiment's LASER Safety Officer. Grzyb ensures the safe storage, handling and use of more than 2,400 Class I, Class 2, Class 3b, and Class 4 LASERs. Grzyb further serves as the Radiation Safety Officer and oversees the training and regular duties of 17 Radiation Program Assistants (RPAs) throughout the regiment, effectively managing associated task.



CWO2 Brandon Grzyb

MCSA Enlisted: MSgt. Benjamin Woods - 2nd Marine Aircraft Wing (MAW)

MSgt. Benjamin Woods has served more than 14,000 Marines and civilians alike, covering 43 subordinate commands across three separate air stations with the highest distinction, while earning the accolades of General Officers, noting several 'Best Practices' and superior performance during Inspector General Marine Corps (IGMC) inspection. Woods' meticulous management, leadership and dedicated engagement has led to a mishap reduction rate across every spectrum of the safety program. Woods has conducted training and assist visits for 26 subordinate ground safety officers during this time ensuring that each safety officer is fully trained and aware of the responsibilities of the position held. Woods covers additional billet requirements as the Enterprise Safety Applications Management Systems administrator and serves as the Suicide Prevention Program Specialist (SPPO) with distinction. Additionally, Woods serves as the 2nd MAW Commanding General Inspector, performing 24 CGIP's over the past 12 months. Woods provides a detailed and unparalleled approach to the safety culture of 2nd MAW in all matters that he is involved with. Woods' tireless efforts, unparalleled leadership and relentless attitude have earned him the admiration and respect from 2nd Marine Aircraft Wing and made the unit a safer place to work.

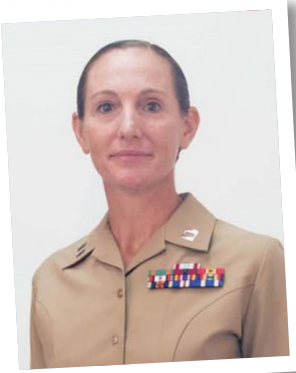
MSgt. Benjamin Woods

MCSA Civilian: (FY20) - Mr. Shawn Curtis - Marine Corps Base Camp Butler, Japan. Curtis manages the largest and most complex Safety Occupational and Health program within the Marine Corps enterprise. Curtis conceived and oversaw the Status of Forces Agreement (SOFA) driver education training, ensuring all personnel were properly trained. Curtis established the regional Explosive Safety Officer billet, which encompasses the Indo-Pacific region.

Mr. Shawn Curtis

Curtis further created an N95 respirator fit testing team to support local commanders and personnel during the COVID pandemic. As a result of this action the Okinawa community has avoided a significant spread of the virus. Curtis has energized the command`s Safety and Drive Safe Councils. Bi-weekly status reports are distributed to local commanders and action officers alike. Curtis oversaw the successful implementation of the Ground Climate Assessment Survey System which encompassed both English and Japanese language versions to allow host-nation employee participation. New products were added to the command`s Water Safety web page. With this effort, live radio specials were provided by subject matter experts to include the Air Force Safety Center which promoted public service announcements via Armed Forces Network. Curtis participated in the Kadena Elementary School career day and provided a PPE demonstration to the children. In keeping with MCO 5100.29C, Curtis has ensured the implementation of risk management throughout all aspects of work, physical training, and recreation.

Superior Achievement Award



Capt. Kassia Regehr

Given to recognize individuals for significant contributions and in the field of safety and mishap prevention. This is an individual award presented annually to the officer who has made the most significant contribution to the Marine Corps Safety Program during the fiscal year.

Capt. Kassia Regehr is currently serving as a Ground Tactical Mishap Investigator at the Naval Safety Center, Norfolk, Va. Regehr has been instrumental in setting the standards for both the Navy and Marine Corps safety program, contributing to the operational readiness of the fleet. She single-handedly assisted and advised 14 senior members, and the mishap boards under their charge, resulting in more than 50 recommendations to the fleet forces directly improving the readiness and safety of the fleet. Regehr is a consummate professional who, along with being an investigator, has taken the reigns as the USMC's ground mishap investigation course lead instructor. Traveling all over the world, she instructed more than 320 hours, certifying more than 120 Marines as ground safety managers.

2020 Naval Expeditionary Readiness Through Safety Award

The Naval Expeditionary Readiness through Safety Award is awarded for outstanding achievement in readiness and economy of operations through safety. This distinctive accomplishment is the result of leadership's commitment to fostering a positive safety culture and constantly improving the team's warfighters.

The Chief of Naval Operations takes pleasure in awarding the 2020 Naval Expeditionary Readiness Through Safety Award to:

Naval Special Warfare Seal Team Five

This award is a testament to the exemplary efforts of all Naval Special Warfare SEAL Team FIVE personnel who exhibited exceptional technical skill and outstanding operational risk management. This superlative performance is in keeping with the highest traditions of the United States Naval Service.

GEICO Awards

ND1 Todd Verhagen

SSgt. Beau Ramos

The FY 2020 Winners for the GEICO Military Service Award are ND1 Todd Verhagen (Navy) and SSgt. Beau Ramos (Marine Corps).

The GEICO award recognizes achievements in any of the following three areas of endeavor: drug and alcohol abuse prevention; fire safety and fire prevention; and traffic safety and accident prevention. In total, there are six awardees each year, an enlisted active duty or reserve member of each of the five branches of the armed forces and one enlisted member from the National Guard.

Disclaimer: The appearance of the above mentioned company does not reflect implied endorsement by the U.S. Navy and U.S. Marine Corps.

Petty Officer First Class Todd Verhagen is assigned to Naval Submarine Support Facility (NSSF), New London, Conn., and is the Navy's 2020 GEICO Military Service Award winner. As a Navy diver, he is responsible for teaching Sailors about hyperbaric fire safety, as well as detection, prevention and suppression aboard naval vessels. Prior to becoming a Navy Diver, Verhagen served as a Damage Controlman, which made fire prevention and safety one of his primary duties. While serving in this rate, he was assigned to USS Ardent (MCM-12) and USS Chief (MCM-14), Avenger-class mine countermeasure ships known for their unique hulls constructed of wood. This made his job that much more important especially when the ship was underway. While off-duty, Verhagen has been extremely active in the community, volunteering with fire departments in every location where he served. Since joining the dive team at NSSF, he has dedicated more than 200 hours of his time with the Lisbon Volunteer Fire Company. Additionally, he provides training to citizens at local hardware stores on the importance and proper use of smoke detectors and fire extinguishers for home fire safety. Verhagen's nomination centered around his work in fire safety and fire prevention.

SSgt. Beau Ramos is assigned to the Marine Detachment, Keesler Air Force Base (AFB), in Fl., and is the Marine Corps' 2020 GEICO Military Award winner. As an Aviation Precision Measurement Equipment Calibration or Repair Technician, Ramos is currently serving as a Substance Abuse Control Specialist and has continuously demonstrated a superior commitment to training the future of the Military Occupatinal Specialty (MOS) field and providing consistent and engaged drug and alcohol screening, training and education to the 200 students and staff of Keesler AFB. Ramos' nomination centered around his work in drug and alcohol abuse prevention.

The award winners will be recognized at a special ceremony in Washington D.C., where each winner will receive a plaque as well as a cash honorarium of $2,500 from the GEICO Philanthropic Foundation. GEICO will pay for the lodging and round-trip transportation to Washington, D.C., for the awardee and one guest.

Information about the nomination process and other service's award recipients can be found on the GEICO website: https://www.geico.com/information/military/returning-the-favor/service-awards/

Keep Your Head Above Water

From FY-14 to FY-18, eight Navy and Marine Corps service members lost their lives to water-related mishaps. These accidents do not discriminate: junior and senior Marines, officer and enlisted are susceptible to the dangers of being around water. Okinawa, Japan is one area where drowning is a known risk.

Recreational drowning incidents are the No. 1 killer of status-of-forces-agreement personnel on Okinawa. This statistic makes the island the most dangerous duty assignment in the Marine Corps. Shawn Curtis, an occupational safety and health manager, explained the severity of the problem.

"We have more drowning fatalities on Okinawa than the rest of the Marine Corps combined. The reason the area is such a hot spot for drowning incidents is the six-month and one-year duty assignments. The Marines don't have the experience on-island to let them know how dangerous the water is," Curtis said.

Most drowning deaths involved military members swimming, cliff-diving, snorkeling and diving in rough conditions or standing too close to the surf. As Curtis noted, "They simply got caught in currents and were swept out to sea."

Water safety is ultimately driven by sensibility and information. Planning ahead of time (referring to the most timely, accurate weather forecasts available, checking sea conditions, etc.) is pivotal in avoiding swimming-related mishaps. Having the awareness to avoid water conditions that exceed a swimmer's capabilities and certifications also serves as water safety best practice.

Curtis has developed four rules for swimmers to follow at Okinawa beaches and pools:

- Swim in a supervised area where lifeguards are on duty. Only 10 percent of water-related accidents happen when lifeguards are on duty. Swimming under supervision greatly reduces the chance of drowning.
- Never swim alone; use the buddy system. It's easy for friends to assist or get assistance when they notice a partner having trouble in the water.
- Know your swimming limits and stay within them. Weaker swimmers should not attempt something they know they're not capable of doing.
- Always enter the water feet first, especially when diving in an unfamiliar area or in murky-water conditions. That way, you avoid hitting your head on underwater rocks or coral.

Another thing to remember is, to never swim during a typhoon or rough sea conditions. "People don't consider just how dangerous the water is," said Curtis. "During rough sea conditions, even strong swimmers have trouble in the rip currents."

Even though the water can be a dangerous place, it doesn't have to be if people take precautions during summer trips to the beach or pool.

TOP 5 Things to do in an MRZR: Spoiler alert, rolling it isn't one of them

Regardless of whether you're the operator or the passenger, knowing how to safely operate and ride in your Miitary RZR (MRZR) can mitigate any injuries that may occur from accidents similar to the below.

The MRZR is a light, all-terrain vehicle with many uses, including communication abilities, transport in unforgiving terrain for small teams and the ability to get to the battlefield via the MV-22 Osprey. All of the positive aspects of using the MRZR can come to a screeching halt when used improperly and someone is injured. Here are five ways one can ensure safety in this tactical vehicle.

1. Wear your seatbelt This sounds easy enough, but not everyone adheres to this one, simple rule. It's always the same excuses:

- **The gear worn is too bulky and the seatbelt doesn't fit around it.** This has become an issue in many vehicles, as required gear has become more cumbersome. This doesn't have to be the excuse for disregarding your seatbelt, though. The seatbelts can be adjusted to the person wearing it, which brings us to our next excuse.
- **The seatbelts are stiff and difficult to adjust.** When we have to get somewhere fast, we want to jump in and go without spending five minutes adjusting a stiff and unyielding seatbelt. If the adjustment process just takes some getting used to, take a few moments during your pre-op checks to size your seatbelt according to the mission and the associated gear. This will better prepare you for the ride and possibly uncover an actual problem with the seat belt that you should bring up to the leadership. Addressing the problem is always a better solution than avoiding a nuisance or side-stepping protocol. If the problem is the seat belt, store the MRZRs in a building away from the elements, submit the issue to maintenance. There are options. Work the problem, but wear the belt.

2. Know your vehicle the personal protective equipment (PPE) prescribed for it, and how to respond to certain situations. Just as we learn our T/O weapon, we need to learn the ins and outs of the vehicle we are operating.

- What knowledge does the operator need to know in order to safely operate the vehicle?
- What does the operator need to wear to be safe, and concurrently, what does the operator need to make sure their passengers are wearing to be safe? PPE? Check. Seatbelts? Check.
- What situations could arise that have special instructions? One of those situations is a rollover.

The JXRS-10-3505-022 states:

If attempting to negotiate an obstacle and the UTV begins to roll over, keep your limbs inside the Rollover Protection System (ROPS). Release throttle, steer directly into the direction of the rollover, tuck chin into chest and prepare your crew by yelling "ROLLOVER, ROLLOVER, ROLLOVER!" Brace yourself for impact and exit only after vehicle comes to a complete stop.

Rollovers can happen in mere moments. It's best to be prepared before that happens with a simple thing like keeping limbs inside the vehicle at all times.

3. Keep your hands and arms inside the vehicle at all times Statistics show the injuries of those wearing their seatbelts in MRZR rollovers consist of broken arms, wrists or fingers. This is likely from holding onto the roll bar or flailing their arms out as the vehicle rolled. Following and practicing guidelines of what to do in a rollover situation can prevent these unnecessary injuries.

4. Be humble, yet fierce Sometimes in an effort to prove our worth, we don't want to ask for help nor admit to lacking experience in a certain area. We might even consider accepting a lower standard of training because we are expected to be somehow smarter or absorb new information and not need the full training.

A one-or two-day class on operating a vehicle may not be adequate to ensure our operators have enough knowledge of all the systems to be able to effectively operate and know their limits. Humility does not mean one cannot enforce rules and regulations. One can be humble and yet fiercely stand by the rules and regulations and make sure they are followed. One of those rules can even apply to oneself.

5. Be well-rested before driving any vehicle. Although the MRZR is a simple and easy vehicle to operate, it still needs the operator's full attention. Not having enough rest before operating any vehicle puts a person and their fellow passengers in danger. The reaction time is slowed and time critical risk assessment is hindered. One of the reasons rollovers occur is by overcorrecting the vehicle. Think back to the last time you may have jerked the wheel of your vehicle and the reason behind it. A reason could be a microsleep caused the car to drift, letting the vehicle go too fast on an unimproved road and needing to correct a quick swerve of the tires. Or maybe an animal got in the way of the vehicle. In any case, being well-rested may prevent the lead up of events causing the overcorrection and ultimately the accident.

The MRZR is an amazing lightweight vehicle that can get our troops to more places on the battlefield that the bigger vehicles cannot. We will not be effective on the battlefield when we suffer from self-inflicted injuries when we dismiss safety, especially when we do not adhere to the rules in training, administrative movements or otherwise. The rules need to be followed at all times, even when no one is watching, because they need to be habits, not just rules. If we can instill habits, those will endure longer than rules. We first need the rules and strong-willed Marines and Sailors to enforce them, turning them into long-lasting habits.

Tactical Vehicle Mishaps

Type of terrain, angle and grade of the route, time of day, road and weather conditions, weight distribution and crew positions, proximity and position in convoy–these are just a few of the factors that I know will affect how I drive before I even turn the ignition.

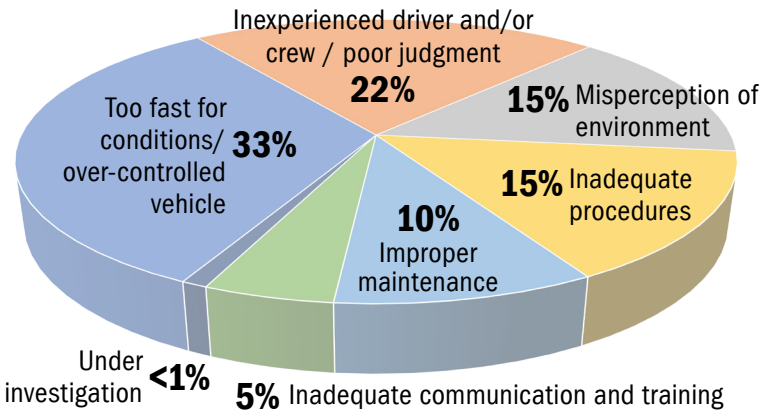
When it comes to tactical vehicles, we don't just get behind the wheel and go. We receive our initial training at school. We use our training and readiness manuals to guide our follow-on training and to maintain our currency and proficiency. We have formalized into policy and procedure the understanding that there is a level of skill and experience required to deftly operate these vehicles. Whenever we bypass these training milestones, we are accepting risk of serious injury, death, and damage to property at the wrong level.

Tactical vehicles are incredibly valuable assets. They enhance our combat power through increased mobility, cargo capacity, armor, and firepower. They provide us the logistical sustainment to pursue the fight against the enemy with as minimal of an interruption as possible. For all the advantages they offer us, however, tactical vehicles are only safe to use when operated within their designed and published parameters.

From FY15 to present, there have been 71 tactical vehicle mishaps in the Navy and Marine Corps. Understanding the patterns of behavior that lead to tactical vehicle mishaps is fundamental to reducing the number of injuries and deaths that occur as a result of their use.

Driving too fast for conditions, over-controlling the vehicle, having too little experience or poor judgment behind the wheel—these most commonly occurring causal factors all point towards an insufficient level of knowledge and skill to operate the vehicle safely.

Tactical Vehicle Mishap Causal Factors FY15-FY20



As capable as our tactical vehicles are, they can be devastating when not used properly.

During a routine mission in a Utility Task Vehicle known commercially as the MRZR, the driver executed a hard turn, which caused the MRZR to rollover. One Marine was killed and two others suffered non-life threatening injuries during the ensuing crash.

Not understanding the limitations of a tactical vehicle can have terrible results. Not only can a rollover cause significant damage to the vehicle, it also puts to the test every other safety precaution that should be in place to keep both the driver and passengers safe. Operating a tactical vehicle within its limits will mitigate the potential for mishaps to occur, and observing the mandated safety requirements will minimize injury to those involved.

Failing to wear the appropriate safety equipment during maneuvers can elevate the risks of injury and death when a mishap occurs.

While conducting a platoon level maneuver course, the driver of a Mine Resistant Ambush Protected (MRAP) was operating too close to a drop off when the vehicle rolled down the embankment. Proper wear of seatbelts was impeded by overloading of gear. The injuries sustained were exacerbated by lack of safety equipment use. Two Marines and one Sailor suffered injuries.

Every Marine must enforce something as simple as the use of seatbelts and restraints (including gunner harnesses!).

While the number of mishaps could be reduced by emphasizing the importance of proper training and developing skilled drivers, many of these mishaps could have been far less severe had the passengers been wearing their restraints. Drivers, do not move the vehicle until all occupants are belted in and armored-up when required. Leaders, ensure you are engaged with your Marines. Inspect what you expect and enforce this simple rule! The culture has to change.

The number of required safety procedures, restraints, briefs, and communications are in place to minimize and mitigate any risks related to the route traveled. An inexperienced driver can drive cautiously, receive a comprehensive route briefing, continuous communications en route, and make sure all passengers are properly harnessed for the trip.

The potential for this inexperienced driver to have a mishap, however, compounds with every safety precaution and procedural step that isn't followed. That same driver, without the necessary safeguards and support, can end up in a mishap that results in loss of life.

A HMMWV driver and crew running a routine resupply mission in mountainous terrain were involved in a Class A mishap. The driver did not have the adequate amount of mileage and hours required to drive the HMMWV (The driver was normally a MTVR driver) and the crew (vehicle commander and gunner) did not have the experience necessary to safely fulfill their roles.

The vehicle commander did not conduct a proper convoy brief, and ensure two means of communication, nor did he inspect his crew and the gunner did not know how to use a gunners harness. This mishap resulted in a Marine being killed.

The best way to prevent tactical vehicle mishaps is through engaged and unwavering leadership and supervision. It is incumbent upon leaders and supervisors from the corporal to the colonel to check for seatbelts and PPE (PCCs and PCIs), enforce SOPs, orders and safety regulations that apply to the vehicle.

It must be embedded in the minds of all Marines that NO mission or movement is just an "Admin run." Every time we take the vehicle out of the motor pool, it is an assigned mission and must be treated accordingly.

Movement orders, convoy briefs, pre-movement inspections, emergency action drills, PCCs, PCIs, and reporting near misses and hazards must be ingrained in all drivers and crews. When leaders and supervisors ensure this is occurring, it saves lives and equipment.

Warrior Toughness + Resiliency = Warfighter Safety and Readiness

It is highly likely that members of our warfighter force have experienced some form of COVID fatigue.

This fatigue can present itself as letting one's guard down, such as not complying with COVID-19 safety protocols. Or the fatigue is caused by the "new normal" of increased screen time and multitasking that can impair one's ability to apply critical thinking when making safety decisions.

Reach out to your Chain of Command for assistance.

In keeping with a warrior mindset, let's dedicate ourselves to the pursuit of higher performance. **Remember: Warfighter Warrior Toughness + Resiliency = Warfighter Safety and Readiness.**

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