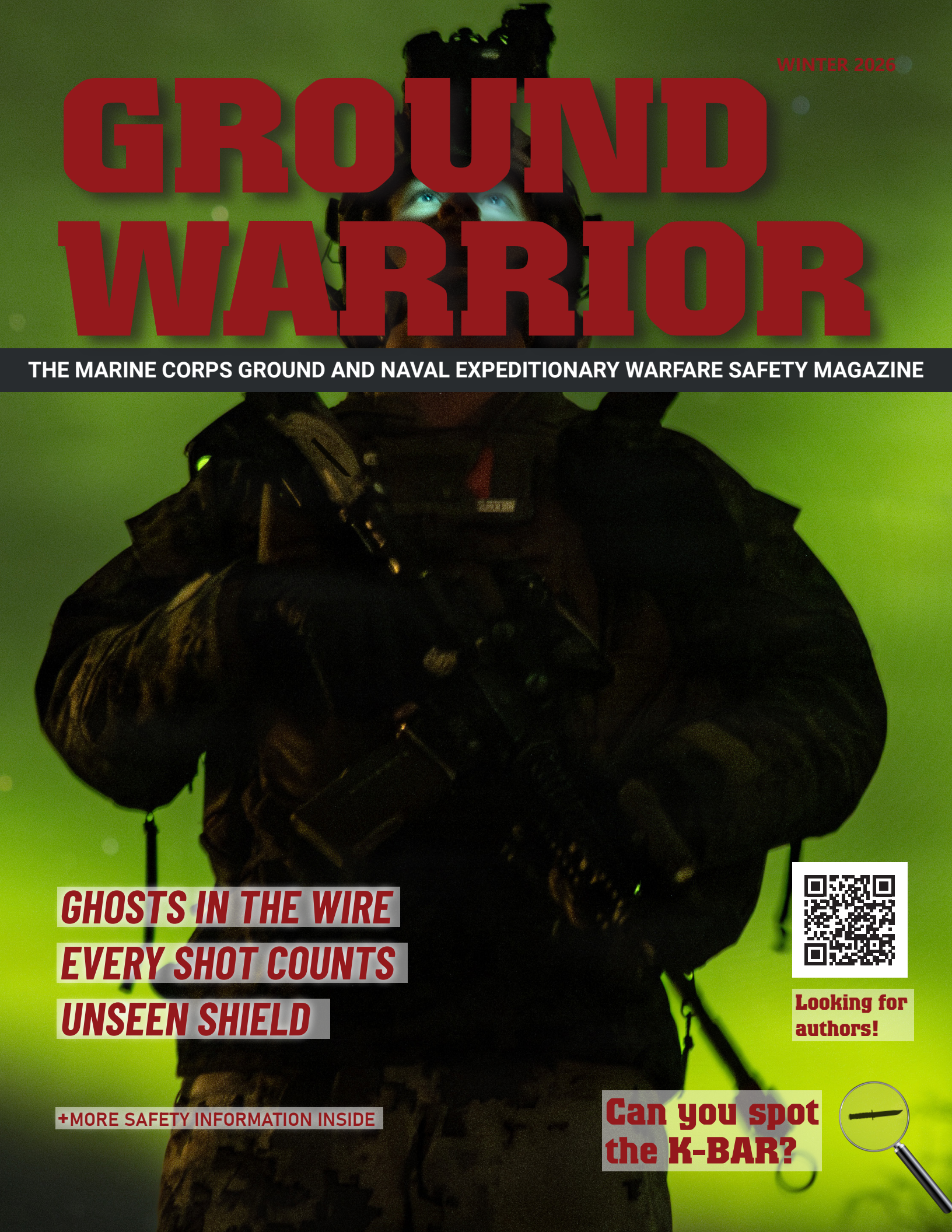


WINTER 2026

GROUND WARRIOR

THE MARINE CORPS GROUND AND NAVAL EXPEDITIONARY WARFARE SAFETY MAGAZINE

GHOSTS IN THE WIRE
EVERY SHOT COUNTS
UNSEEN SHIELD

+MORE SAFETY INFORMATION INSIDE

Looking for authors!

Can you spot the K-BAR?

A Letter from the Master Gunnery Sergeant
Risk Management Directorate



I am humbled to join the team at the Risk Management Directorate (RMD) and I look forward to visiting as many of you as possible over the next several months.

My career wasn't built in headquarters; it was forged in dirt across multiple deployments, continents and years spent away from loved ones. I learned this trade in the same boots our small-unit leaders wear today. Firsthand experience taught me one absolute truth: planning is not an administrative burden; it is a combat multiplier. We all know the enemy and the environment get a vote, but how we prepare for them is up to us.

To do that, we must master our most unforgiving resource: time. Ammo and chow can be resupplied; time cannot. In garrison, wasting time costs us opportunities to build readiness. On the battlefield, time is the initiative as sluggish execution hands the advantage to the enemy. Do not waste today's opportunity to prepare your Marines for tomorrow's fight.

Right now, respecting time means anticipating your environment. Cold weather is unforgiving. Losing Marines to preventable cold weather injuries or rolling a vehicle because no one considered tire chains is not simply bad luck; it is a failure to anticipate and prepare. Winter safety is a readiness imperative, not just a training slide.

Looking ahead, the Marine Corps is modernizing rapidly delivering unprecedented capabilities to the squad level. As this equipment reaches the fleet, standardized operational processes will establish our baseline for safe and effective employment, but those processes must remain flexible enough to adapt at the speed of relevance on the battlefield.

Make no mistake: war remains a fundamentally human endeavor. Technology can enhance our capabilities, but it cannot replace small-unit leaders who can think, adapt and act under pressure. We need leaders with the discipline to plan deliberately, the flexibility to pivot when conditions change and the confidence to execute decisively.

That is risk management at its core – not avoiding risk, but understanding it well enough to make sound decisions, preserve combat power and accomplish the mission. As I join the RMD team, that is the standard I intend to reinforce across the force.

Semper Fidelis!

Jonathan E. Taylor
Master Gunnery Sgt., U.S. Marine Corps
Senior Enlisted Advisor, Risk Management Directorate

THE GROUND WARRIOR TEAM WANTS YOUR STORY!

Risk Management Directorate-Safety Division is seeking articles for upcoming issues of the Ground Warrior Magazine, the premier magazine for Marine Corps safety.

The strength of the Marine Corps lies in the quality and character of those who lead and step up to share their experiences to improve the Marine Corps.

As Marines, you have seen all types of risk — good and bad — up close and personal. Use that experience to help improve the organization.

SUBMISSION TOPICS MAY COVER:

- Institutional risk and managing organizational vulnerabilities
- Identifying hidden risks in rapidly changing operational environments
- Sharing lessons learned on risk mitigation from personal experience
- Fostering critical thinkers who identify and act early, staying left of bang

WHO CAN SUBMIT:

All active-duty and Reserve Marines, Marine veterans and civilians. Officers from other countries are also welcome to submit articles.

SUBMISSION GUIDELINES:

- Length: 500–1,200 words
- Submit in a .docx file; provide citations as needed
- Include your full name, rank and mailing address in the body of the email
- Use DVIDS if you have specific photos you would like to include https://www.dvidshub.net/

Have questions?
Or an article ready for submission?
Email Ground_Warrior_Magazine@usmc.mil

THE GROUND WARRIOR TEAM
IS LISTENING!
WE WANT EVERY OPINION!

We want to improve upon every product we produce for our Marines, Sailors and civilians.

We need input from you, the ground warrior in the field, about the content we provide.

Scan the QR code to submit your feedback.

Stay Connected

Risk Management Directorate
Safety Division

Naval Safety Command

GROUND WARRIOR EDITORIAL STAFF

Risk Management Directorate-Safety Division
Lt. Col. William "Eric" Harley, Ground Section Head
Maj. Ronald Calloway, Maneuver Specialist
Maj. Samuel Modica, Engineer Specialist
Farah Siddique, Communication Specialist

Headquarters Marine Corps, Communication Directorate
Capt. Wesley P. Medeiros, Media Operations Officer

Naval Safety Command
Priscilla Kirsh, Department Head, Public Affairs
Sarah Langdon, Division Head, Media Communications
Mat Murch, Ground Warrior Editor
Kenneth Goss, Writer Editor
Rebecca Coleman, Writer Editor

Special thanks to USMC Range and Training Area Management, Chaplain of the Marine Corps Office and Marine Corps Community Services for their continued support.

Articles that have been generated or modified by AI shall be cited as such and labeled in accordance with DoDI 5400.19 Paragraphs 3.1.e.(4)(a) through 3.1.e.(4)(c).

Front cover: U.S. Marine Corps Lance Cpl. Zayd Bittner, an intelligence specialist with 2nd Battalion, 6th Marine Regiment, 2nd Marine Division, participates in exercise Cold Response 26 in Setermoen, Norway, March 12, 2026. (U.S. Marine Corps photo by Cpl. Judith Ann Lazaro)

Back cover: U.S. Marine Corps Cpl. Xavier Allen, an electrician with Combat Logistics Battalion 6, Combat Logistics Regiment 2, 2nd Marine Logistics Group, mans an M2 .50-caliber mounted machine gun in Kamijarvi, Finland, March 14, 2026. (U.S. Marine Corps photo by Cpl. Apollo Wilson)

Ground Warrior Magazine is a forum where Marines, Sailors and civilians can share safety-related experiences, thereby providing valuable lessons learned to others. Input from the fleet is crucial to improving safety culture, conducting safe operations and thus maintaining readiness. Ground Warrior is published jointly between the Risk Management Directorate-Safety Division and the Naval Safety Command. Content within Ground Warrior does not necessarily represent the official views of, nor is it endorsed by, the U.S. government, Department of War, U.S. Navy or U.S. Marine Corps. Photos and artwork may be representative and not necessarily show the people or equipment discussed. The Ground Warrior editorial staff reserves the right to edit articles for readability. Reference to commercial products does not imply endorsement. Unless otherwise stated, content may be reprinted without permission by giving proper credit to the magazine, author and photographer when applicable.



6 ACCOUNTABILITY



8 AN OUNCE OF PREVENTION



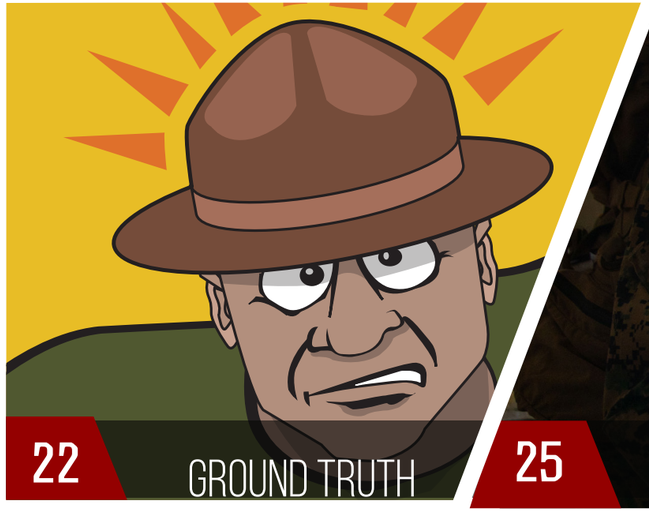
12 GHOSTS IN THE WIRE



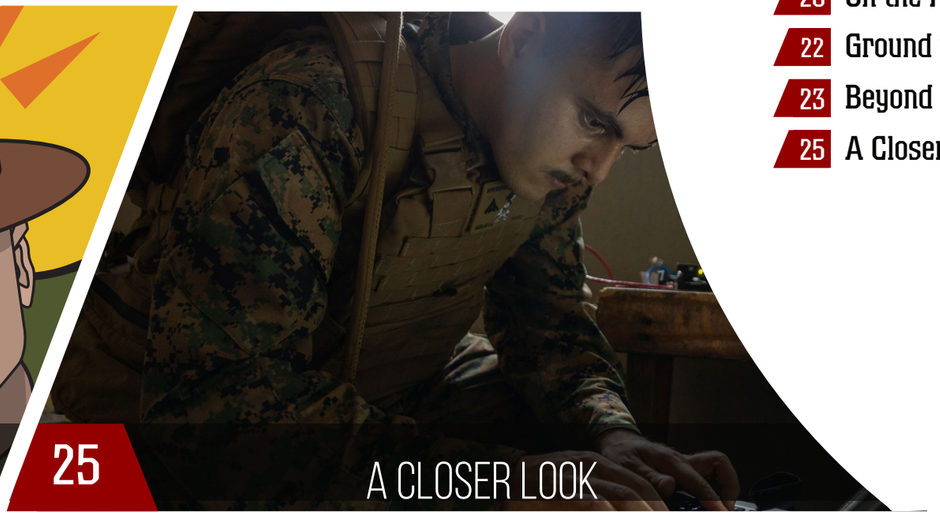
16 RISK MANAGEMENT



20 ON THE RANGE
EVERY SHOT COUNTS



22 GROUND TRUTH



25 A CLOSER LOOK

6 Accountability
8 An Ounce of Prevention
11 Master REM Sleep
12 Ghosts in the Wire
16 Risk Management
19 Know the Signs
20 On the Range: Every Shot Counts
22 Ground Truth: The Unseen Shield
23 Beyond the Badge
25 A Closer Look

Accountability

THE ESSENTIAL ELEMENT OF MISSION READINESS

By Dale A. Wisnieski, Safety and Occupational Health Manager, Risk Management Directorate-Safety Division

In the Marine Corps, accountability isn't a buzzword; it's the bedrock of trust between the Marine on your left and right. We are entrusted with immense responsibility, from the fire team to the Marine Expeditionary Force, and with that comes an absolute requirement for accountability, not just for our careers, but for the readiness of our unit and the welfare of our team.

This ethos doesn't stop at the end of the workday. The professional discipline ensuring a helicopter is safe to fly, or a vehicle is ready to roll, is the same discipline required to manage risk off duty. A single missed step during maintenance can sideline a critical asset and impact mission readiness. In the same way, poor decisions made off duty can remove vital members from teams depending on them. The consequences of decisions, good or bad, are the primary drivers of success or failure.

Nowhere is this truer than with motorcycle riding, an activity that remains a top safety challenge for Marines. Policies governing riding, from mandatory training and use of personal protective equipment to mentorship programs, are not in place to restrict freedom. They are safety mechanisms forged from the hard-learned lessons of those who came before us, designed to keep our riders safely in formation.

A common sentiment among riders is, "It's my life and I'm only hurting myself." While understandable from an individual's point of view, this perspective overlooks the truth of our profession: our individual readiness is a team asset. Our knowledge, skills and presence are all counted on by fellow Marines. A bad decision, like riding under the influence or forgoing a helmet, doesn't just endanger one person; it has the potential to remove a leader, a mentor, a friend from the lives of their family and from the ranks of their unit.



The motorcycle helmet and gloves Collin Cox was wearing on Oct. 24, 2024. Cox was involved in a near-fatal motorcycle crash and is returning to work after rehabilitation and therapy for multiple injuries including a broken neck, broken pelvis, motor function loss of his left arm, brain bleed, ruptured bladder, nerve avulsion and carotid artery trauma. (U.S. Air Force photo by Craig Z. Rodarte)



U.S. Marine Corps Maj. Gen. Brian Wolford, commanding general of Marine Corps Installations Pacific, inspects his helmet during the Advanced Riders Course on Kadena Air Base, Okinawa, Japan, July 21, 2025. (U.S. Marine Corps photo by Lance Cpl. Brody Robertson)

Accountability is a team sport. It demands not only personal discipline but also the courage to hold our fellow Marines to the same standard. Intervening when a fellow Marine disregards policy or makes a dangerous choice is never easy. But it will never be as difficult as attending the funeral of a Marine you could have helped. In our Corps, any Marine has the authority and the obligation to step in and save a life.

Ultimately, a culture of accountability is what strengthens a safety program and, more importantly, begins to change the very behaviors that lead to preventable mishaps.

If you would like additional information on improving your unit's motorcycle safety program, email me at: dale.wisnieski@usmc.mil or call 703-571-4583
Ride safe!



U.S. Marine Corps Cpl. Benjamin Albright, an aviation operations clerk with Marine Corps Air Station Kaneohe Bay, participates in alternating track rides during the advanced rider track day event hosted by California Superbike School at Marine Corps Base Hawaii, Sept. 19, 2025. The event allowed riders to develop or refine their motorcycle handling skills by pushing both the rider and motorcycle to physical and mechanical limits not possible under current on-base training conditions. (U.S. Marine Corps photo by Lance Cpl. Nicholas Figueroa)

WINTER WARFARE

Readiness is built before the mission begins. Winter brings unique hazards demanding deliberate risk management, on and off duty. Whether traveling on leave, commuting to work or training in cold environments, Marines who anticipate hazards and make sound decisions protect themselves, their fellow Marines and the combat readiness of the force. Mishap data consistently shows most winter injuries are preventable. They result from poor decisions, complacency and failure to recognize changing conditions, not bad luck.

Active Holiday Risk Management

Communicate Your Plans: Keep your chain of command informed of your travel plans. If something changes, a quick call ensures support is available if you need it.

Don't Drive Impaired or Fatigued: Alcohol and exhaustion are a lethal combination behind the wheel. A designated driver or rideshare is a far better choice than a DUI or a serious crash. Remember, your leadership would rather receive a call about a delay than a casualty report.

Check on Your Marines: Leadership responsibilities do not begin and end with the workday. Know your Marines, understand their plans and intervene early when poor decisions become apparent.

An Ounce of Prevention is Worth a Pound of Cure

Courtesy of Range and Training Area Management Division (RTAM)

The proverb, "An ounce of prevention is worth a pound of cure," means it is easier and more effective to prevent a problem than to fix it after one occurs. This proverb emphasizes taking small, proactive steps early to save a much greater effort, cost or trouble later. This principle applies to the sustainment of ranges and training areas.

The Marine Corps has a limited number of live-fire maneuver areas to accommodate large-scale, combined-arms training exercises involving high-explosive munitions. *MCO 3550.12A, Operational Range Clearance (ORC) Program,* directly addresses this challenge by providing safe and sustainable ranges to ensure Marines are ready when called.

The program is more than just maintaining impact berms. Benefits at the unit level include:

- **Recovering lost maneuver areas**: The program reclaims previously overgrown training areas, expanding capability and providing more maneuver space. One installation, for example, reclaimed a landing beach for amphibious operations.
- **Improving safety:** A primary benefit is the removal of hazardous unexploded ordnance (UXO) from live-fire areas, ensuring Marines can train safely.

Ranges and training areas are maintained across the Marine Corps; however, more attention is needed for monitoring impact berms on known-distance ranges. Impact berms are not required for small-arms ranges. However, they are required where the safety of non-participating personnel, infrastructure or the environment is at risk during live-fire operations. For sustainment and safety purposes, these berms require periodic maintenance to repair the face of the berm and to mine and sift the projectiles that have collected within them. This is accomplished through the ORC Program.



Explosive ordnance disposal Marines place unexploded 60mm mortars together at Suseongri Live Fire Range near Pohang, Republic of Korea, June 17, 2017, in preparation of Korean Marine Exchange Program 17-7. (U.S. Marine Corps photo by Lance Cpl. Andy Martinez)



A construction worker surveys the excavation site during Operational Range Clearance and Maintenance on Marine Corps Base Hawaii, Pu'uloa Range Training Facility, Foxtrot Range, Feb. 23, 2023. The ORC serves to remove unexploded ordnance and range debris from the operational ranges and the mining of munitions from the impact berms. Routine clearance and maintenance ensure the safety and sustainability of Marine Corps ranges and training areas. (U.S. Marine Corps photo by Cpl. Samantha Sanchez)

Institutional Responsibility for ORC

The ORC program is funded at the institutional level by Training and Education Command, and the responsibility for executing the program lies with the installation. Range clearance involves the destruction, removal and proper disposition of military munitions (i.e., UXO and munitions debris).

It also includes other range-related debris, target debris, military munitions packaging and crating material to maintain and enhance range safety and prevent the accumulation of such material from impairing continued operational range use.

Installation Responsibility for ORC

MCO 3550.10, Policies and Procedures for Range and Training Area (RTA) Management, and *MCO 3550.12A* directs installation commanders to establish ORC programs, ensuring safe, sustainable ranges. Range Control Facilities (RCFs) at each installation are responsible for implementation.



Operational Range Clearance and Maintenance commenced for Marine Corps Base Hawaii, Pu'uloa Range Training Facility, Foxtrot Range, Feb. 23, 2023. The ORC serves to remove unexploded ordinance and range debris from the operational ranges and the mining of munitions from the impact berms. Routine clearance and maintenance ensure the safety and sustainability of Marine Corps ranges and training areas. (U.S. Marine Corps photo by Cpl. Samantha Sanchez)

RCFs use the Range Facility Manager's Support System and the Range Clearance Tool to track training data, munitions fired and debris accumulation. However, because these digital tools cannot account for environmental degradation, installation range management personnel must conduct periodic physical inspections.

RCFs must consider the overall condition of the berms alongside regional environmental factors. Proper maintenance of impact berms helps delay or prevent erosion and other environmental issues.

Range management personnel should assess impact berms regularly, particularly on high-use ranges. During assessments, personnel may need to replace berm material displaced by live-fire operations or weather erosion (e.g., heavy rain or winds).

Raking the soil ensures an even depth across the berm's face. A best practice for mitigating erosion is placing sandbags at the bottom of the beaten zone. While bullet traps are sometimes presented as alternatives, traditional soil berms are often the more practical and less burdensome solution.

Bullet traps carry considerable operational and maintenance requirements, introducing complexities not found with soil berms.

For example, rubber mulch-filled traps require intensive weekly maintenance to ensure the rubber maintains the proper depth and has not solidified. They also require the periodic removal of lead and fragments, making them better suited for controlled indoor environments rather than outdoor ranges. Advanced "full containment" traps, which collect projectiles in a mechanical chamber, require specialized handling.

Disposing of captured lead necessitates a certified hazmat contractor and ensuring proper function requires ongoing maintenance contracts for periodic manufacturer inspections.

Ultimately, the intensive maintenance, specialized disposal procedures and reliance on external contractors associated with bullet traps underscore the advantages of soil as a simpler, more efficient solution.

Regardless of the system used, an improperly maintained berm or trap significantly increases the risk of spalling and ricochet hazards to training personnel.

Marines conduct high-risk training daily; an improperly maintained range increases the risk of injury. In range sustainment, proper maintenance truly is an ounce of prevention.

ASK.CARE.
TAKE ACTION

ASK

"HOW ARE YOU FEELING RIGHT NOW? THINKING OF GIVING UP?" then lead to **"ARE YOU THINKING OF KILLING YOURSELF?"**

Don't avoid the question. Don't be afraid of the answer.

CARE

LISTEN ACTIVELY, WITH RESPECT

No judgment. Let them know they're not alone.

TAKE ACTION

SECURE LETHAL MEANS (FIREARMS, MEDICATIONS, OTHER ITEMS)

Connect them with mentors, leaders, and resources. Follow up and keep showing up.

MASTER REM SLEEP



YOUR BRAIN'S RECOVERY PHASE IS A FORCE MULTIPLIER.

WHAT IS REM SLEEP?

REM (rapid eye movement) is the essential "active" phase of sleep. It is characterized by increased brain activity, vivid dreaming, and body temperature regulation.

WHY IT MATTERS: THE MENTAL EDGE

- Cognitive Sharpness: Refines decision-making and problem-solving skills.
- Memory Consolidation: Solidifies training, tactics, and new information.
- Emotional Armor: Regulates mood and builds stress tolerance for high-pressure environments.

THE COST OF POOR REM

Missing REM cycles results in more than just tiredness—it actively degrades your mission capability:

- Mental Lag: Slower processing and impaired judgment.
- Irritability: Decreased leadership capacity and team cohesion.
- Physical Decline: Lowered reaction times and reduced stamina.

TIPS FOR BETTER REM

- Consistency: Maintain the same bedtime and wake time, even on weekends.
- The "Dark" Window: Stop screen use (blue light) 30–60 minutes before you hit the rack. Use this time for reading, stretching, or breathing exercises.
- Morning Light: Get 10–30 minutes of direct sunlight shortly after waking to reset your internal "mission clock."

Sleep is a Weapon System. Mastering your sleep cycle isn't a luxury—it's a requirement for tactical excellence. Optimize your recovery to maximize your readiness.
Connect with your local WARR-Semper Fit team for more performance strategies.

WARRIOR ATHLETE
READINESS & RESILIENCE



MCCS
MARINE CORPS COMMUNITY SERVICES

Ghosts in the Wire

EXPEDITIONARY BASE SAFETY

By Master Gunnery Sgt. David Dahl, Risk Management Directorate

The global landscape is simmering. From the frozen forests along NATO's eastern flank, to the arid landscapes of the Middle East, and the tense littorals of the Pacific, the demand for forward-deployed, crisis-response forces has rarely been higher. For Marines on alert, the "what if" of a rapid deployment is no longer a distant training scenario; it is a palpable reality. The call could come at any time.

When it does, Marines will likely once again find themselves establishing expeditionary bases in a variety of austere environments. While the Marine Corps' primary focus will be on the enemy outside the wire, the hard-won lessons of the last two decades prove a difficult truth of the ghosts inside the wire.

> The detailed planning required for establishing a base to operate from requires extensive scrutiny.

The ghosts of real-world, preventable mishaps are a stark reminder that following the standard inside the wire is a prerequisite for victory outside of it.

In 2019, a group of special operators returned to a small joint expeditionary base in Southwestern Afghanistan. The base's policy required all crew-served weapons to be cleared by two personnel.

Due to overconfidence, the group conducted gunner-only weapons clearing. Later that day, while conducting weapons maintenance, an MK-19 discharged a 40mm high explosive round that was still in the weapons system from the patrol. The round struck a gunnery sergeant, badly injuring him. Luckily, the explosive round did not explode, but the force of the impact required the Marine to be evacuated.

An expeditionary base starts with the basic requirements for operations, with the potential to be scalable as the need arises.

As the Marine Corps looks forward to and defines how Expeditionary Advanced Base Operations will look, it is important to understand the doctrinal standards for its construction, detailed in manuals like *CENTCOM Regulation 415-1 (commonly known as "The Sand Book")*. These standards are not bureaucratic suggestions; they are non-negotiable safety imperatives.

Even in the training environment, as we establish the location for a unit exercise or conduct training with allies and partners in their nations, the detailed planning required for establishing a base to operate from requires extensive scrutiny.

Electrical Hazards and Infrastructure

A service member, while showering in his barracks in Iraq, was electrocuted due to improperly grounded and installed electrical equipment.

An investigation revealed this was not an isolated incident, but part of a wider pattern of careless electrical work. This real-world Class A mishap, which resulted in the service member's death, is the ghost now haunting every construction plan. It is why leaders must enforce the "electrical code" of the *Sand Book* with uncompromising vigilance. It is why a commander must hold contractors accountable and why a junior non-commissioned officer, seeing a frayed cable or an ungrounded generator, has a duty to act immediately.

The standards for grounding, bonding and cable management exist because we learned the lesson, at a terrible cost.

Take Away: As the concept of 21st-century foraging continues to be developed, contracting in a country that may not have as well-developed safety standards and noncompatible electrical systems will be a reality. This will require Marines to be proficient in understanding the safety standards and infrastructure nuances of their micro-region to avoid tragedy.



U.S. Marine Corps Lance Cpl. Philip Nguyen, right, demonstrates to First Sgt. Lakisha Harris, and both with 7th Communication Battalion, III Marine Expeditionary Force Information Group, how to operate the MEP-1060 generator during Stormbreaker 26.2 at Camp Hansen, Okinawa, Japan, March 15, 2026. (U.S. Marine Corps photo by Sgt. Juan Maldonado)

Fuel and Ammunition Storage

Every expeditionary base has its own supply of Class III (petroleum, oils, lubricants) and Class V (ammunition) materials. These are internal hazards with huge potential for catastrophic, instantaneous destruction.



5.56 mm ammunition is staged during a battle sight zero range on Marine Corps Base Camp Blaz in Guam, April 19, 2026. (U.S. Marine Corps photo by Lance Cpl. Nicole Stuart)

The doctrines governing their storage are absolute because the consequences of failure are unthinkable.

Imagine something that seems small, such as a worn-out part of a fuel bladder, a sun-rotted hose, or a worn-out valve that doesn't seal as well as it did before; a compromise is made in setting up due to terrain restrictions, or operational tempo (OPTEMPO) set up is rushed.

Then something happens. A tropical storm pushes the equipment beyond its limits, resulting in fuel leaks, the fuel safety infrastructure fails, and JP-8 flows to where Marines are sleeping. A single spark and the "small things" caused a catastrophic mission failure. This scenario is precisely why The *Sand Book* and *ATP 3-37.10 Base Camps* dedicate chapter after chapter to the meticulous details of berming, grounding and, most importantly, standoff distances. The separation of fuel from ammo and ammo from barracks is a life-saving equation.

Take Away: Marines at all levels need to know the safety considerations for setting up berthing and infrastructure. If a piece of gear still functions, but you can tell it is compromised, remember "see something, say something." Know the standard and follow it. If something seems off, speak up.

Vehicle Operations and Complacency

As days turn into weeks and months of continuous operations, the greatest threat inside the wire can become the mundane routine. Complacency begins as a shortcut that seems insignificant; overconfidence in doing the same tasks repeatedly with success, or policies that become



A U.S. Marine Corps Humvee assigned to Combat Logistics Battalion 2, Combat Logistics Regiment 2, 2nd Marine Logistics Group, is driven in a convoy during improvised explosive device training as part of a field exercise at Marine Corps Base Camp Lejeune, North Carolina, April 30, 2026. (U.S. Marine Corps photo by Sgt. Rafael Brambila-Pelayo)

viewed as "inefficient." This is where complacency claims its victims.

According to years of data from the Naval Safety Command, some of the leading causes of serious injury on bases are forklifts and tactical and non-tactical vehicles.

Consider this scenario: a Marine is working all night after several nights of limited sleep. They are in a rush to meet the mission and back up a tactical vehicle without a ground guide, crushing a fellow Marine who was walking through what they perceived as a "safe" area.

This isn't hypothetical; it is a recurring tragedy. It represents a failure to adhere to the principles of the *Marine Corps Safety Management System (MCO 5100.29C)* and a failure to apply basic *Operational Risk Management (OPNAVINST 3500.59)*.

This is why leaders must relentlessly combat the normalization of deviance. Enforcing seatbelt use inside the wire, mandating ground guides for all tactical vehicles and establishing clearly marked pedestrian lanes are not peacetime annoyances; they are direct, doctrinal controls against a proven killer.

As *MCDP 1-0, Marine Corps Operations,* emphasizes, force preservation is paramount. In an expeditionary environment where personnel levels are low and medical supplies and evacuation are challenging, imagine the tragedy of evacuating a Marine for follow-on care over something that could have been avoided. An even bigger tragedy is if the Marine does not survive the injury.

In 2007 at Camp Fallujah, a group of Marines was parking a section of armored Humvees. The unit's policy stated two ground guides were required while backing up a tactical vehicle.

Continued on next page



U.S. Marine Corps Staff Sgt. Shane Noble, a motor transport operations chief with Combat Logistics Battalion 24, Combat Logistics Regiment 27, 2nd Marine Logistics Group, ground guides a tractor rubber-tired articulated steering multipurpose vehicle onto a tractor trailer during exercise Aurora 26 in Kvarn, Sweden, May 3, 2026. (U.S. Marine Corps photo by Lance Cpl. Brady V. Hathaway)

One ground guide was required to be in front of the vehicle, whose instructions the driver was supposed to follow, and one ground guide behind and to the side of the vehicle, whose actions were mirrored by the forward ground guide.

Due to complacency, the Marines were backing up with only one ground guide who was located directly behind the vehicle.

The driver accidentally pressed the gas pedal instead of the brake, sending the vehicle back quickly. The ground guide was pinned between the rear bumper of the moving vehicle and the front bumper of a parked vehicle.

When the vehicle was moved, the sudden loss of blood killed the Marine instantly.

Take Away: In an expeditious environment it is easy to slip into a shortcut. This results from a "do more with less" mentality or Marines developing overconfidence from working at a high OPTEMPO for extended periods.

It comes down to Marines and leaders maintaining a ruthless adherence to the standards.



U.S. Marine Corps Lance Cpl. Madison Georgia, a machinist with Intermediate Repair Company, 3rd Maintenance Battalion, 3rd Marine Logistics Group, uses a computer numerical control machine during Valiant Shield 26 on Camp Kinser, Okinawa, Japan, June 22, 2026. (U.S. Marine Corps photo by Cpl. Rachel Mason)

Contested Logistics

In an austere environment where supply delays can be expected, it is more likely workarounds and improvised solutions can become common practice.

While this might be applauded for temporary mission success, this deviance from the standard can cause hidden risk.

In a high-stakes environment, the pressure to succeed can lead to a dangerous path where improvised solutions become the accepted norm, eventually paving the way for catastrophic failure.

This phenomenon, known as the normalization of deviance, begins with a single, seemingly harmless decision, but creates hidden risk to mission success.

A mission is on the line, but the correct, tested replacement part isn't available. A motivated Marine with a "can-do" attitude comes up with an improvised solution and it works. The mission is a success.

The initiative of that Marine is worthy of applause. But this initial success is the first step down a hazardous road. Because there were no immediate negative consequences, the team is rewarded for taking the shortcut.

The next time a similar problem arises, using an improvised part or procedure seems less like a risk and more like an efficient solution.

This is the "deviation spiral" in action. Each time the policy or rule is broken without a negative result, the deviation becomes more normal. This creates a culture where the question is no longer "Is it safe?" but "Has it failed yet?" Newcomers to the group adopt the deviant practice as the correct one, believing, "That's the way it's always been done around here."

The organization has now normalized deviance, and a major failure is no longer a question of if, but when. Eventually, under critical stress, the system fails.

The investigation reveals a series of untested, improvised parts were the cause, but the true root cause is cultural: the normalization of deviance.

The improvisation could be jerry-rigging, using an untested 3D printed part or just ignoring maintenance requirements.

In an austere environment where parts and maintenance are challenging, the importance of leaders maintaining a culture of not letting the standard slip is essential to long-term success.



A 3D print is displayed after U.S. Marines with Intermediate Repair Company, 3rd Maintenance Battalion, 3rd Marine Logistics Group, test print on-the-move capabilities during Valiant Shield 26 on Camp Kinser, Okinawa, Japan, June 22, 2026. (U.S. Marine Corps photo by Cpl. Rachel Mason)

Take Away: In an austere environment, know the standard and know when a deviation occurs, then make sure the standard is followed.

If Marines develop a unique solution to a problem, route it up to the program office so it can be tested. If it works, the solution becomes approved and authorized.

For Marines testing 3D printed parts, start the logging process now of the specs and durability of the part.

This ensures units in the future aren't at risk of printing an untested or unauthorized part.

A Culture of Vigilance

An expeditionary base's defenses are far more than its walls. They are the discipline of its inhabitants, the foresight of its engineers, and the constant, active vigilance of its leaders.

In a world demanding our presence, we do not have the option of re-learning lessons written in Marines' blood.

By honoring the memory of those lost to preventable mishaps and enforcing the rules their sacrifices helped write, we ensure our bases remain sources of strength, not sources of self-inflicted wounds.

SAFETY SPOTLIGHT



Master Sgt. Khristopher Karpati
Motorcycle Mentorship President I MEF
Camp Pendleton
San Diego, California

Master Sgt. Karpati is a Motorcycle Mentorship Program (MMP) President for 1st Intelligence Battalion, I Marine Expeditionary Force (MEF) Information Group, I MEF. By trade, he is an Imagery Analyst and currently serves as the operations chief for direct support company. While managing operational planning and mission execution, he has also dedicated over seven years to a critical safety role overwatching riders and advising commanders on motorcycle safety.

As MMP President, Karpati revitalized his commands' mentorship programs. He developed automated Excel tracking tools using advanced formulas to proactively flag training deficiencies and expired documentation before they became readiness issues.

This improved accountability streamlined administration and ensured continuous compliance with Marine Corps safety management system regulations.

Beyond tracking, Karpati regularly leads unit rides designed to reinforce safe riding techniques, strengthen cohesion and foster active mentorship between experienced riders and novices. His meticulous planning and risk management ensured every ride was executed safely.

Karpati's expertise extends beyond his own command. He actively assists other I MEF units in evaluating their motorcycle programs, helping them prepare for and achieve compliance in Commanding General's Inspections. Through proactive leadership and practical safety management, Karpati continues to make a lasting impact on rider safety and operational readiness across the force.

Risk Management

A LEADERSHIP IMPERATIVE FOR MARINE CORPS OPERATIONAL EXCELLENCE

By Marine Corps Capt. Nicholas Groene, Naval Safety Command

Between 2017 and 2019, a series of serious live-fire mishaps resulted in nine gunshot wounds and one fatality across the Marine Corps. When mishaps like these occur, it is easy to draw conclusions and attribute these incidents solely to "operator error." By doing this, we as a Marine Corps rob ourselves of lessons we could learn about systemic failures in risk management at every echelon of leadership within affected units.

Conducting a thorough analysis can reveal recurring deficiencies in proactively identifying, assessing and mitigating risk, leading to preventable incidents degrading combat readiness. Marines operate in an inherently hazardous environment. From live-fire exercises and amphibious assaults to forward operating base security and logistical convoys, danger is a constant companion.

The question is not if Marines will face risk, but how effectively it is managed. Fortunately, the Marine Corps possesses units that exemplify risk management best practices, such as the Tactical Training Exercise Control Group (TTECG). From the fire team leader to the commanding general, understanding and applying sound risk management principles can mean the difference between mission success and catastrophic failure.

Key principles common among effective risk management applications, drawing on examples from TTECG's current model to illustrate best practices, are highlighted here. The most catastrophic and preventable failures rarely stem from a single, dramatic error, but from the slow erosion of standards and the treatment of risk management as a "check-the-box" administrative drill.



A Joint Light Tactical Vehicle with Combat Logistics Battalion 7, Combat Logistics Regiment 1, 1st Marine Logistics Group, suppresses simulated targets during an Advanced Motorized Operations Course as part of Integrated Training Exercise 1-26 at Marine Corps Air Ground Combat Center, Twentynine Palms, California, Jan. 28, 2026. (U.S. Marine Corps photo by Lance Cpl. Jozef P. Majewski)



U.S. Marine with Tactical Training and Exercise Control Group, Marine Air Ground Task Force Training Command, Marine Corps Air Ground Combat Center, assesses Marines with 2nd Combat Engineer Battalion during platoon attacks as part of Integrated Training Exercise 2-26 at Range 410A, MCAGCC, Twentynine Palms, California, April 6, 2026. (U.S. Marine Corps Photo by Lance Cpl. Gracelyn Hanson)

The TTECG model is the epitome of a best practice precisely because it directly counters these root causes. It elevates risk management from a static, pre-execution task to a dynamic, continuous dialogue woven into every phase of an operation.

Treating risk management as a real-time warfighting function and embracing these practices will enhance mission effectiveness, preserve combat power and safeguard Marines.

The Building Blocks of Effective Risk Management: Assessment, Adaptation and Control

Effective risk management relies on a three-pronged approach: comprehensive assessment, adaptive real-time management and rigorous control. Before any operation or training event, leaders at all levels must evaluate potential hazards and the competency of their Marines to mitigate those risks.

This is not just checking a box, but rather critical information directly informing the structure and execution of every task.



Service-level training instructors with Tactical Training and Exercise Control Group, Marine Air Ground Task Force Training Command, Marine Corps Air Ground Combat Center, assess Marines with 1st Battalion, 24th Marines, 4th Marine Division, during a live fire night platoon attack on Range 410 Alpha as part of Integrated Training Exercise 3-26, Marine Corps Air Ground Combat Center Twentynine Palms, California, June 7, 2026.
(U.S. Marine Corps photo by Cpl. Kanoa Thomas)

- **Application for Junior Enlisted Marines**: Within your sphere of influence, apply these principles by honestly assessing your team's capabilities before any operation, exercise, patrol, maintenance task or while transporting equipment during an administrative movement. Are your Marines properly trained, alert and focused? Do they understand the risks involved? Your assessment should dictate actions, informing your attention to detail and adherence to standard operating procedures.
- **Application for Officers and Staff NCOs**: Conduct formal assessments and certifications before operations, verifying competency rather than assuming it. Evaluate technical skills, mindset, fatigue levels and comprehension of risk factors. Before operations, ensure performance evaluation checklists are conducted not only for the shooter, but the gun line, leaders, safety teams and all personnel involved. As TTECG demonstrates, rigorous assessment forms the bedrock of effective risk mitigation.

Dynamic Risk Management in Action

One of the hallmarks of effective risk management is the ability to make real-time judgments, dynamically calibrating the level of control based on demonstrated competency and evolving conditions.

This dynamic assessment is not simple in nature, but rather a demanding art, requiring seasoned judgment, especially amidst the friction of real-time operations.

Leaders must be prepared to teach, test and then allow subordinates to execute tasks, while remaining vigilant and ready to reassert control and implement risk mitigation when necessary. Consider high-risk scenarios like non-illuminated night attacks, a dangerous live-fire exercise often employed at facilities like Range 400 in Twentynine Palms, California. Units must implement layered control measures that can be adjusted as conditions evolve.

When Marines demonstrate competency, leaders grant greater autonomy; when risk factors increase or performance degrades, they immediately reassert control. Without a deliberate plan to reassert control, when risk factors increase, hazards can start to spiral out of control.

Practical Application:

- Start with maximum control, then gradually reduce it. Whether leading a fire team or supervising equipment maintenance, begin with close supervision and detailed guidance. As Marines demonstrate competence, grant them more autonomy, remaining prepared to reassert control.
- Recognize changing dynamics. Risk isn't static. Factors like weather, fatigue, equipment malfunctions and enemy actions constantly shift. Continuously reassess and adjust your risk management approach.
- Teach, Test, Execute. Don't assume understanding after a single briefing. Teach the task, test comprehension through rehearsals or questioning and only proceed to execution when learning has occurred.

Rehearsals: Proactive Risk Mitigation

Effective risk management includes Rehearsal of Concept drills, ensuring potential challenges are addressed cohesively across all levels. Leaders should prioritize that rehearsals are not perfunctory exercises, but intensive problem-solving sessions identifying gaps and building confidence.

- **Application for All Leaders**: Transform rehearsals from checkbox events into genuine risk mitigation tools. Actively challenge the plan with "what if" scenarios, identify critical decision points, and ensure every Marine understands not just what they're supposed to do, but why and what could go wrong.

Shared Responsibility: Risk Management at Every Level

Effective risk management isn't a command responsibility delegated downward, but a shared obligation embraced by every Marine. Create an environment where everyone feels empowered to identify and communicate risks.

- **Junior Marines**: You are the eyes and ears of risk management. Voice concerns regarding unsafe conditions or practices. Your squad and team leaders rely on your observations. Don't assume someone else will notice a problem; you might be the only one in a position to see a developing hazard.
- **Company Grade Officers and NCOs**: Cultivate an environment where junior Marines feel empowered to identify and communicate risks. The Marine who spots a potential hazard, recognizes equipment failure,

Continued on next page

or notices a struggling teammate could save lives, but only if they feel confident speaking up. We are all referees in this profession and can call a time-out if needed, reset and continue training.

Consistent Application: From Hot to Cold

The most effective risk management programs maintain consistent principles from start to finish.

Too often incidents occur during transitions when focus wavers and procedures relax. Leaders must ensure the standards of operating stay consistent throughout.

- **Apply this principle universally**: Whether conducting live-fire training, motor transport operations, or routine maintenance, use the same disciplined approach to risk management. Preventable mishaps occur when the convoy relaxes procedures during the "safe" return journey, the range detail becomes careless during cleanup, or the maintenance team rushes through final checks.

Building a Better Fighting Force

The goal of effective risk management isn't to eliminate danger but to enable maximum lethality while preserving our Marines. Driven by the national security threat from pacing adversaries and the complexities of the modern battlefield, this focus on lethality through effective risk management is a core component of strategic risk management.

Our Force Design is constructed on the principle that, for it to be successful, risk must be managed at all levels, from the individual operator to strategic planners. Therefore, by applying mature, disciplined leadership and sound risk management principles throughout the force, leaders at all levels can minimize unacceptable losses while maximizing the combat effectiveness required to fight and win.

Every Marine who applies these principles in their daily duties, every sergeant who conducts thorough assessments before operations and every lieutenant who fosters an environment of shared risk management responsibility contributes to a more effective fighting force.

The Marine Corps' reputation for accomplishing impossible missions doesn't come from reckless disregard for safety, but from our ability to assess, manage and overcome risk through superior training, discipline and leadership.

Safety is continuous, just like chow and rest, and if taken seriously, we allow for a more lethal and disciplined force in readiness. We must continuously improve our risk management practices at every level, ensuring the safety and success of our Marines.

WINTER WARFARE: Mastering Winter Driving

Every winter, experienced drivers are caught off guard because snow isn't the biggest threat; complacency is. The same discipline keeping Marines alive during operations applies behind the wheel. Preparation, patience and smart decisions ensure you arrive ready for the next mission instead of becoming the next accident report.

Before Your Trip

- **Prepare Your Vehicle**: A vehicle that starts every morning in October can become a liability in January. Five minutes checking tires, batteries, fluids and emergency gear can prevent hours stranded in freezing temperatures. This includes having appropriate tires, topping off antifreeze and other essential fluids. Keep an emergency kit with blankets, water and a flashlight. Scrape ice and snow from all windows before you drive.
- **Monitor the Forecast**: No weekend, holiday or liberty period is worth gambling your life. Weather delays can be explained. A fatal crash cannot. If conditions deteriorate, communicate early with your chain of command and adjust your timeline.

Slow is Professional

Winter driving rewards patience, not confidence. Four-wheel drive helps you go, but it does nothing to help you stop. Reduce speed before you need to, leave three times your normal following distance and make every steering, braking and throttle input smoothly. Black ice gives no warning. If your vehicle begins to slide, your first reaction determines the outcome. Stay calm. Ease off the accelerator, look where you want the vehicle to go and steer smoothly. Panic creates secondary accidents.

- **Buckle Up**: Enforce a strict seatbelt check for everyone before putting the vehicle in gear.
- **Stay in the Vehicle**: On high-speed roadways, your vehicle is usually your safest position. Seat belts and airbags create a protective shell. Unless fire or another immediate danger exists, remain inside until emergency responders direct otherwise.

KNOW THE SIGNS POST-TRAUMATIC STRESS



MISSION READINESS INCLUDES MENTAL HEALTH.
Seek help when you need it and offer support to your peers when they need it.

Post-traumatic stress, or "PTS," is a normal response to trauma. Symptoms such as feeling on edge and avoiding people, places and things that remind the person of the trauma may occur. Symptoms often subside over time, especially when the individual reaches out to their support system, or trusted helping professional, and engages in self-care. Recognizing the signs of PTS is the first step. Reaching out for help is a sign of strength.



KNOW THE SIGNS

Recognizing the signs is crucial for yourself and your fellow Marines. Symptoms often fall into four categories:

INTRUSION	Flashbacks, nightmares, or recurring memories.
AVOIDANCE	Shunning people or places that trigger memories.
MOOD CHANGES	Persistent guilt, fear, or a distorted worldview.
HYPERAROUSAL	Feeling on edge, easily startled, or sleep deprived.

TAKE ACTION

SELF-CARE	Prioritize exercise, mindfulness, and routine.
CONNECT	Reach out to a friend, leader, or chaplain.

RESOURCES

VETERANS CRISIS LINE	Dial 988, press 1
MILITARY ONESOURCE	1-800-342-9647
COMMUNITY COUNSELING	Click to visit today!

MCCS MARINE CORPS COMMUNITY SERVICES



ON THE RANGE

Courtesy of Range and Training Area Management

Every Shot Counts

HOW DATA IS RESHAPING MARINE CORPS RANGES

Every year, thousands of Marines step onto Known Distance (KD) ranges to build and maintain marksmanship skills that have long defined the Corps.

What most Marines don't see is the extensive work happening behind the scenes in the installation range control to ensure those ranges remain safe, sustainable and compliant with institutional policy. Thanks to advances in technology and data capture capabilities for range analysis, the Marine Corps is modernizing how it approaches danger zone development for KD ranges.

Looking Beyond Tradition

For generations, Surface Danger Zones (SDZs) have been used to protect personnel, facilities and equipment from the hazards associated with live-fire training. These SDZs have historically used a "worst case" methodology to protect participating and non-participating personnel from projectile hazards.

> Surface Danger Zone
> The ground and airspace designated within the training complex (to include associated safety areas) for vertical and lateral containment of projectiles, fragments, debris, and components resulting from the firing, launching, or detonation of weapon systems, to include explosives and demolitions.

This standard has maintained safety on ranges historically; however, it can contribute to conflicts with adjacent ranges and training events.

Traditionally, one of the key components of a small-arms SDZ, where the opening angle for ricochet starts, was calculated beginning at the firing point.

The assumption was simple: a bullet could potentially ricochet anywhere along its path to the target. But assumptions are only as good as the data behind them.

Recent studies conducted by Training and Education Command (TECOM) and the Range and Training Area Management Division sought to answer a straightforward question: Where are rounds actually impacting during static KD range firing? The answer would challenge decades of conventional thinking.

Source: MCO 3570.1D

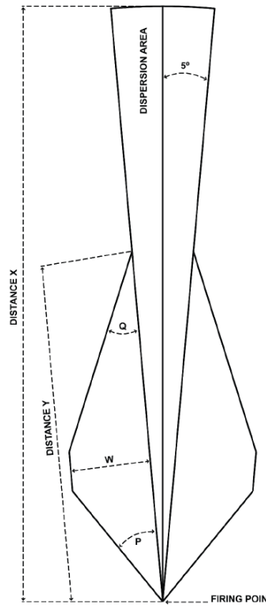


Figure 5–3. Batwing surface danger zone for small arms direct-fire weapons without exploding projectiles, except 5.56mm M1037 Short-Range Training Ammunition, 7.62mm M793 Short-Range Training Ammunition Ball, and M794 Short-Range Training Ammunition Tracer

Following the Bullet

To better understand projectile behavior, Marine Corps range professionals turned to advanced technologies that allow impacts to be measured with unprecedented accuracy. Using the Location of Miss and Hit system, analysts tracked thousands of rounds fired during live-fire testing. Simultaneously, Light Detection and Ranging technology mapped the terrain around the target area in extremely high detail. Together, these tools created a comprehensive picture of where rounds were landing and how terrain influenced bullet behavior.

What the data showed was clear. During static KD firing, impacts consistently occurred in and around the target area. The analysis also identified that terrain within the final meters leading to the target influences how rounds interact with the ground.

The evidence demonstrated ricochet hazards do not begin uniformly at the firing line as previously assumed.

A New Approach to an Old Range

Armed with this information, TECOM developed what is now known as the **Target Centric Batwing** methodology for static KD ranges. Under this updated approach, Angle P no longer begins at the firing point. Instead, Angle P will begin **10 meters in front of the target location**, reflecting where empirical data indicated ricochets generally start on KD Ranges. All other SDZ distances and angles remain unchanged, preserving the safety margins Marines rely upon every day. This may sound like a small technical adjustment, but its impact can be significant.

> Angle P
> The angle beginning at the firing point, located to the left and right of the dispersion area, that defines the area that contains projectiles after making initial contact with the target medium.

By basing SDZ design on empirical and observed data rather than historical assumptions, the Marine Corps has modernized the opening angle approach using empirical evidence to support risk decisions while maintaining the highest range safety standards.

Why Marines Should Care

For the Marine on the firing line, the answer is simple: Better data leads to better training opportunities. Many installations face challenges balancing training requirements with limited land, environmental restrictions, infrastructure and competing range schedules. When SDZs are larger than necessary, they can limit how training areas are used.

This updated SDZ allows range managers to maximize available training space while protecting Marines and surrounding facilities. In some cases, this may reduce conflicts with adjacent training areas, roads or installation infrastructure, providing commanders with greater flexibility to conduct realistic training.

Most importantly, it ensures safety decisions are being modernized while still rooted in maintaining the institutional standard as well as NATO Allied Range Safety Publications and Standardization Agreements.

The Future of Range Safety

The Target Centric Batwing methodology represents more than a change to a range risk discussion — it demonstrates how the Marine Corps is embracing data-driven risk decision making. From advanced sensors and precision mapping to large-scale live-fire analysis, modern technology is helping range professionals better understand the realities of training environments.

These tools allow the Corps to continuously improve range safety, increase efficiency and ensure Marines have access to the training areas they need to prepare for future conflicts.



A controlled explosion erupts as U.S. Marines with Fox Company, 2nd Battalion, 2nd Marine Regiment, 2nd Marine Division, conduct a night-time live-fire company attack on Range 400 during Service Level Training Exercise 4-26 on Marine Corps Air Ground Combat Center, Twentynine Palms, California, July 31, 2026. (U.S. Marine Corps photo by Sgt. Alexis French)

The rifle range may look much the same as it did years ago, but the science supporting it continues to evolve behind the scenes. Every round fired contributes to a growing body of knowledge. Every data point helps improve the ranges of tomorrow. Because in the Marine Corps, every shot counts — not just on the target, but in shaping the future of training itself.

WINTER WARFARE:

Preventing Cold Weather Injuries

1. **Assess Hazards and Know Your Limits**: Before heading out, take a few minutes to assess the hazards. Select activities that match your skill level, understand the weather and terrain and recognize when conditions change. Many reported mishaps occur after individuals attempt maneuvers beyond their experience or continue at high speeds despite crowded slopes or poor visibility.

2. **Make Personal Protective Equipment (PPE) a Priority**: PPE is a simple way to reduce risk. For any winter recreation like skiing, snowboarding or skating, a properly fitted helmet should be standard equipment. While helmets cannot eliminate all injuries, they consistently reduce the severity of head trauma. If you take a significant hit to the head or experience dizziness, nausea or confusion, stop the activity immediately and seek medical attention.

3. **Layer Clothing**: Dress in layers and adjust them before you sweat. Wet clothing rapidly accelerates heat loss and increases the risk of hypothermia.

Ground Truth

The Unseen Shield

Why Personal Protective Equipment in a Medium Tactical Vehicle Replacement is Non-Negotiable

Courtesy of Risk Management Directorate

When moving troops and equipment, the formidable presence of a Medium Tactical Vehicle Replacement (MTVR) is a common sight. This powerhouse is essential for logistics, capable of navigating challenging terrains to deliver troops and supplies. However, its high center of gravity, especially when armored, increases rollover risk, a significant military vehicle safety concern. While the vehicle itself is built for toughness, the steel alone doesn't guarantee the Marine and Sailor passenger's safety in the event of a mishap. The combination of seatbelts, flak vests and Kevlar helmets are not just recommendations; they are critical necessities standing between the passengers and life-altering injury or death.



U.S. Marines with the Arrival and Assembly Operations Group (AAOG), practice driving a Medium Tactical Vehicle Replacement (MTVR) in snow and icy conditions during the Slippery Driver training in preparation for the arrival of personnel from II Marine Expeditionary Force to participate in exercise Nordic Response 24, in Stjordal, Norway, Jan. 19, 2024. (U.S. Marine Corps photo by Lance Cpl. Alston)

The physics of a vehicle rollover is violent and unforgiving. If passengers are unbelted in a 10 to 30-ton steel and aluminum box, they may become a projectile. Seatbelts are the primary line of defense, designed to secure passengers in their seats. Without this restraint, they are subject to catastrophic injuries, including ejection from the vehicle, bone fractures from striking bulkheads, as well as severe internal organ damage and spinal cord injuries that can result in permanent paralysis, which guarantees they will be taken out of the fight. By keeping passengers secure, seat belts ensure they aren't thrown onto others, or crushed by shifting heavy equipment within the cabin, dramatically increasing chances of survival.

Beyond the immediate danger of being thrown around, tactical vehicle passengers can face other threats. Body armor, like a Kevlar helmet, is a form of personal protective equipment (PPE). In a rollover, a body can suffer severe blunt force trauma. Body armor distributes the force of an impact over a wider area, providing a crucial buffer for the torso. Specifically, it helps prevent injuries such as broken ribs, a punctured lung (pneumothorax) or life-threatening internal bleeding from a lacerated liver or spleen. It can also offer protection from penetrating injuries caused by sharp, broken metal or equipment dislodged during the chaos of a rollover.

Similarly, the Kevlar helmet is indispensable. Head injuries are among the most severe and common injuries in any vehicle accident, and the risk is magnified in a military rollover. The helmet is designed to protect the skull and brain from devastating impacts. This is critical in preventing skull fractures, cerebral contusions (bruising of the brain tissue) and intracranial hemorrhages (bleeding within the skull). By absorbing and dissipating the energy of an impact, a helmet can reduce a potentially fatal head injury to a survivable concussion, preventing the long-term consequences of a severe traumatic brain injury.

The Marine Corps recognized the systemic problem of vehicle rollovers and the importance of PPE. Investigations have highlighted many non-combat vehicle fatalities are preventable. Leadership failures in enforcing the proper use of seatbelts and helmets has been cited as contributing factors in tragic incidents. Consequently, there is a renewed focus on training and the enforcement of safety protocols.

For the personnel riding in the back of an MTVR, the combination of a seatbelt, body armor and Kevlar helmet forms an essential, integrated safety system. It is an unseen shield working together to protect against the violent, multi-dimensional vehicle rollover dangers. Following these control measures is not a matter of personal comfort or convenience, it is a matter of professional discipline and survival.

Beyond the Badge

HOW TO WIN AT SAFETY BY LEVERAGING THE CHAMPION FROM WITHIN

By Shawn Curtis, Safety and Occupational Health Manager, Risk Management Directorate–Safety Division

The role of a safety and occupational health (SOH) professional is often a thankless one. Whether in uniform, or as a civilian, stepping into the safety field means confronting a stubborn, pre-existing stigma. Labeled the "Safety Cop" or "Captain Caution," you are frequently seen not as a mission enabler, but as an obstacle to production, the person who quotes regulations and threatens to shut down operations.



U.S. Marines with Headquarters Battalion, Marine Corps Base Hawaii (MCBH), learn how to tie a rope during a rappel tower training at MCBH, Nov. 18, 2025. This allowed Marines to familiarize themselves with rope tying, operations in austere environments.. (U.S. Marine Corps photo by Lance Cpl. Nicholas Figueroa)

This perception, born from encounters with overzealous predecessors, undermines the very goal of the profession: to protect the force and ensure mission success.

Thriving in this environment requires a radical shift in strategy. It demands more than just technical expertise; it calls for diplomacy, teamwork and the ability to build powerful relationships. The key to transforming a culture of reluctant compliance into one of proactive ownership lies not in wielding a clipboard, but in identifying and empowering the hidden asset already within your organization: the internal safety champion.

Finding Your Echo: The Power of a Trusted Voice

A positive safety culture is built on a foundation of shared values and beliefs. When the safety message originates solely from the SOH office, it often lands as a top — down mandate — another rule to be followed.

However, when that same message is delivered by a respected senior enlisted leader, a veteran on the shop floor or a civilian division head, it is internalized in a fundamentally different way. These "safety influencers" lend an invaluable layer of credibility and authenticity to the initiative. Their advocacy proves safety isn't just a separate policy, but a core operational value integrated into the mission itself. Research has consistently shown messages from peers are trusted far more than those from official corporate channels.

When a trusted leader advocates for a new safety protocol, it's not a directive, it's sound advice from a proven operator. This is the crucial pivot: moving safety from a list of regulations to a shared responsibility for everyone's well-being.

The Champion's Advantage: From Resistance to Results

Earning buy-in from senior leaders and frontline operators does not happen automatically. It requires a deliberate effort to build trust and demonstrate value.

By collaborating with existing safety champions, you can amplify your message and achieve wins that are impossible to secure alone.

Key advantages include:

- **Authenticity and Trust**: Marines and workers are far more likely to listen to and act on safety advice from a leader they respect or a peer they work alongside daily. The champion translates abstract rules into practical, relatable actions that make sense in their operational context.
- **Unparalleled Reach**: A single conversation with an influential leader can cascade through rank and file, creating a ripple effect of awareness and buy-in that a lone safety professional could never achieve. They become your force multipliers.
- **Bridging the Culture Gap**: In environments like the Marine Corps, the job is inherently dangerous. Marines exist to fight and win battles, accepting risks far beyond the norm. A safety message that fails to acknowledge this reality will fail. A champion from within, one who has shared those risks, can frame safety not as a hindrance, but as a critical component of operational readiness and combat effectiveness. They can help you understand their world so your message resonates with their reality.

Continued on next page

To break the cycle of misunderstanding, safety professionals must look beyond their own role.

- Be attentive to the voices already carrying weight and influence.
- Find the executive officer, staff non-commissioned officer or civilian manager who already advocates for the well-being of their people.
- Collaborate with them, equip and empower them to carry the safety message forward.

By leveraging the champion from within, you can transform safety from a competing priority into a shared value that powerfully enables mission success.



U.S. Marine Corps Cpl. Edwin Lunamiranda, a combat engineer with 1st Combat Engineer Battalion, 1st Marine Division, inspects an M500 pump action shotgun during a battalion level force-on-force exercise as a part of Adversary Force Exercise 4-26 at Marine Corps Air-Ground Combat Center Twentynine Palms, California, Aug. 6, 2026. (U.S. Marine Corps photo by Sgt. Vincent Needham)

WINTER WARFARE: Operational Readiness Doesn't Stop When Temperatures Drop: Convoy Operations

Cold weather attacks equipment long before it attacks Marines. Batteries lose power, fuel thickens, lubricants change viscosity and traction disappears. Leaders who prepare early maintain combat power when conditions deteriorate.

- **Conduct Thorough Vehicle Prep**: Before winter sets in, conduct thorough preventive maintenance. Check that heaters, defrosters and wipers are fully functional. Ensure all fluid levels, especially antifreeze, are correct. Inspect door and window seals to prevent drafts that can fatigue personnel.
- **Protect Your Batteries**: Cold weather exposes weak batteries without warning. A vehicle that won't start delays missions, convoys and recovery operations. Preventive maintenance before the storm is always easier than emergency maintenance during it.
- **Prevent Fuel Gelling**: Fuel that gels doesn't simply inconvenience a driver; it immobilizes a vehicle and disrupts convoy operations. Winter fuel and approved additives are inexpensive insurance against mission failure. Keep fuel tanks as full as possible to reduce water condensation.
- **Use Tire Chains**: Chains are mission-essential for traction on ice and packed snow. The first time Marines install tire chains should never be during a snowstorm on the side of a mountain. Build proficiency before winter arrives. When chains are on, vehicle speed must be significantly reduced.
- **Inspect Recovery Equipment**: The chance of a vehicle getting stuck is higher in winter. Every vehicle must have appropriate recovery gear, including properly rated tow bars or straps, shackles, and shovels.
- **Adapt Convoy Operations**: Winter convoys demand more discipline, not less. Increase interval, reduce speed, communicate hazards early, and anticipate longer stopping distances. Maintaining convoy integrity is more important than maintaining speed. Conduct detailed pre-mission briefs covering weather forecasts, road hazards and recovery procedures.

Winter doesn't create unsafe drivers; it exposes them. Every decision behind the wheel reflects the same judgment expected in training and combat. Prepare your equipment, slow down, communicate early and make disciplined decisions.

A Closer Look

TRENDS IN REJECTED RISK MANAGEMENT INFORMATION INVESTIGATION REPORTS

By Winston Plonza, Risk Management Directorate-Safety Division

The Risk Management Information (RMI) system is the primary tool for identifying U.S. Marine Corps hazards, preventing future mishaps and ensuring the safety of our personnel. However, a rejected RMI report is more than just an administrative hurdle; it represents a delay in critical safety action, a drain on valuable man-hours and a flaw in our risk management process. The good news is most rejections stem from a few common, avoidable mistakes. This guide provides a comprehensive, step-by-step process to help you write a rejection-proof RMI report from the start, ensuring your findings are addressed swiftly and effectively.

The True Cost of a Rejected Report

A rejected RMI report creates a cascade of problems, seriously impacting operational readiness, resource management and our overall safety culture.

- **Delayed Hazard Mitigation**: The most critical consequence is the delay in implementing corrective actions. While a report undergoes revision, identified hazards remain unaddressed, exposing Marines, equipment and missions to unnecessary risk.
- **Distorted Safety Analytics**: The Marine Corps relies on aggregated RMI data to identify widespread trends and allocate safety resources. Improperly classified or unclear reports contaminate this data pool, leading to incorrect conclusions and the misallocation of time, funding and training.
- **Wasted Man-Hours**: Every rejection creates duplicated work. The individual who submitted the report must revise it, and supervisors must then re-review the submission, amounting to thousands of lost man-hours that could have been dedicated to mission-essential tasks.

A 5-Step Guide to Getting Your RMI Report Approved

By following this workflow, which addresses the top five reasons for rejection, we can ensure our findings are acted upon effectively.

Step 1: Get It in the Right Box — Correct Classification from the Start

Before you write a single word of the narrative, your first action is to classify the event correctly. Getting the duty status, event type or mishap class wrong is a primary reason for rejection.



U.S. Marine Corps Lance Cpl. Aguilar Francisco, a transmission systems operator with 9th Communication Battalion, I Marine Expeditionary Force Information Group, conducts a system check to establish computer access as part of a hasty command and control center training simulation at Marine Corps Base Camp Pendleton, California, Nov. 18, 2025. (U.S. Marine Corps photo by Lance Cpl. Gregory Hudson)

- **Key Point**: Always refer to the mishap classifications outlined in *MCO 5100.29C, Vol 9* to ensure you are categorizing the event correctly. Refer to Figure 2-2 in the MCO for a flow chart to guide you.

Step 2: Tell the Story, Stick to the Facts — Writing a Clean and Objective Narrative

The narrative sections must be clear, logical and complete. They tell the story of the mishap and must be free of opinions and confusing language.

- **Key Point (Narrative Quality)**: Write a factual and concise account. Present events chronologically and avoid personal feelings ("I believe the Marine was complacent"). Do not copy and paste the same text into different sections; each box has a purpose. A "Peer/Supervisory Narrative Review" is crucial to check for logical flow and clarity.

Continued on next page



Kert Lang, installation emergency manager, Marine Corps Air Station New River, types on a computer using generator power as part of an energy resilience and readiness exercise at MCAS New River, Jacksonville, North Carolina, May 5, 2026. (U.S. Marine Corps photo by Lance Cpl. Erica S. Padgett)

Step 3: Protect All Private Information (PII) — Scrub the Narrative Clean

This is a critical, non-negotiable step. The improper inclusion of Personally Identifiable Information (PII) is a frequent and easily avoidable error resulting in immediate rejection.

- **Key Point (PII Protocol)**: PII is only authorized in the dedicated "persons" section. Use only non-identifiable, gender-neutral terms like "the operator," or "they." Before submitting, perform a final, dedicated "PII Purge" and use the "Preview Final Message" function to ensure no names, ranks or other identifiers are in the final text.

Step 4: Craft Recommendations That Drive Action — Beyond "Be Careful"

The entire point of the report is to recommend a real, actionable solution. Vague recommendations that cannot be definitively closed out are a primary cause for rejection.

- **Key Point (Actionable Recommendations)**: Every recommendation must be S.A.F.E. (Suitable, Acceptable, Feasible, Enduring). Instead of a general reminder like "be more careful," recommend a concrete task. For example: "Incorporate a new warning in Step 4 of *Technical Order 1-A2B* to caution operators about the hazard, with verification of completion by the unit Safety Officer within 30 days."

Step 5: Connect the Dots — Link Findings, Factors and Recommendations

A quality report demonstrates a clear, logical link between what happened (Finding), why it happened (Factor) and what should be done about it (Recommendation). Breaking this chain is a common flaw.

- **Key Point (Logical Flow)**: Ensure your analysis is coherent. For every causal factor you identify, you must have a recommendation directly addressing that factor. Your proposed solution (recommendation) must logically fix the "why" (Factor) of the mishap.

Accessing Available Training and Resources

A key component of improving report quality is leveraging existing training. All personnel involved in the RMI process are encouraged to take advantage of these valuable resources:

- **Immediate Help within RMI**: Training is available directly within the RMI system by navigating to the "Help" tab. This provides on-demand assistance and guidance while working within the platform.
- **Comprehensive Online Courses**: The Naval Safety Command provides a formal online course covering all modules within RMI. Personnel can sign up for this training via the Naval Safety Command website: https://navalsafetycommand.navy.mil/Learning/NAVSAFENVTRACEN/RMI-Training/

A Chain of Accountability: Roles and Responsibilities in the RMI Process

Improving RMI reports is a shared responsibility. Every individual in the review process is accountable for upholding the standard:

- **The Investigator/Author**: Responsible for drafting a clear, objective and compliant report from the outset.
- **The Immediate Supervisor**: Serves as the first line of quality control, providing immediate feedback and coaching.
- **The Unit Commander/Safety Officer**: Ensures the report is operationally relevant and that recommendations are feasible.
- **The Final Review Authority**: Acts as the ultimate gatekeeper of quality and compliance, providing clear feedback to drive force-wide improvement.

The Bottom Line: Excellence in Reporting is Mission Readiness

This isn't about perfecting paperwork; it's about upholding our shared responsibility to protect our fellow Marines. A clear, actionable and compliant report ensures hazards are mitigated quickly, contributing directly to operational excellence and a more resilient force.

Ground Branch Section

To access the RMI Operating Guide and other assets, visit the "Quick Links" section of the Ground Branch page.

Sample Pre-Submission RMI Checklist (Expanded)

Use this comprehensive checklist to conduct a final quality check before submitting your report. This covers the most common reasons for rejection.

1. Initial Setup & Classification

Status	Item	Notes
☐	Mishap Class is Correct?	A, B, C, D, or E. Class D for medical treatment > first aid. Class C for any lost workdays.
☐	Investigation Type is Correct?	Mishap, Hazard (near miss), or Incident (off-duty, no lost time).
☐	Duty Status is Correct?	Commuting is Off-Duty. Command PT is On-Duty.
☐	Category/Subcategory is Correct?	E.g., Command PT is Combat Support & Training. PMV events are Motor Vehicle.
☐	Event One-Liner is Complete?	Does it answer: Who, What, When, Where and the Outcome?
☐	SIB Requirement Checked?	Does this mishap require a Safety Investigation Board (SIB) per MCO 5100.29C?

2. Narrative & PII Protocol

Status	Item	Notes
☐	All Narratives Scrubbed of PII?	No names, ranks, ages, unit info (RUC/MCC), or medical facility names.
☐	All Narratives Scrubbed of Pronouns?	No "he," "she," "his" or "her." Use neutral terms like "the operator" or "they."
☐	Narrative Sections are Unique?	Sequence of Events, Conclusions and Background are not copied and pasted.
☐	Sequence of Events is Clear?	Is it a logical, step-by-step story of what happened?
☐	Narrative is Factual and Objective?	No personal opinions ("I feel..."), feelings or unverified assumptions.
☐	Proofread for Spelling & Grammar?	Has a supervisor or peer reviewed it for clarity?
☐	"Preview Final Message" Used?	Have you used this function as a final PII check?

3. Analysis: Findings, Factors & Human Factors Analysis and Classification System (HFACS)

Status	Item	Notes
☐	All Causal Factors Identified?	Have you determined the root "why" for each finding?
☐	Factors are Associated with Findings?	Have you used the "Associate" button in RMI to link factors to findings?
☐	HFACS Codes Assigned Correctly?	Are human factors identified and coded where applicable?
☐	Investigation Conclusions are Complete?	Is it a brief summary of "why" the event occurred, based on your factors?

4. The Solution: Recommendations

Status	Item	Notes
☐	Is Every Recommendation Actionable?	It must be a specific, verifiable task. Not just "brief personnel" or "be careful."
☐	Is Every Causal Factor Addressed?	Does every causal factor you identified have a corresponding recommendation?
☐	Recommendations meet SAFE Criteria?	Suitable, Acceptable, Feasible, Enduring.
☐	Correct OPR Assigned?	Is the Office of Primary Responsibility the organization that can actually fix the problem?



Why does this magazine's rank abbreviations, dates, and time format differ from standard military usage? This magazine follows AP style, which is the standard for news writing. AP style of writing is also mandated by the Department of War (DOW) Visual Information Style Guide and (DoDI) 5040.02 for publicly released communication. To learn more about AP style, scan this QR code to read the DOW Style Guide: