

FY20 FATALITIES

as of 4 June 2020

Aviation
0

Ground On-Duty
5

Car
9

Motorcycle
5

Other
7

TOTAL
26

www.safety.marines.mil

Numbers in fatality categories are subject to change based on final disposition of investigation.

Vol. 20 - Ed. 2



COMBATTING THE BLUE THREAT

"In the world of Aviation we finally got a handle on our accident rate when we approached mishaps not from the standpoint of telling pilots to 'be safe' . . . but from the standpoint of operational excellence.

In other words, if you are flying your airplane in an operationally sound and tactically proficient manner you will be flying safely within the risk parameters of those pilots and that situation. Therefore, the first step in riding a motorcycle "safely" comes from knowing how to control the bike, and without that foundation, trying to lower the motorcycle mishap rate is left to serendipity."

Robert E. Schmidle, Jr.

Principal Deputy Director for Cost Assessment and Program Evaluation, OSD (Lt. Gen., USMC (Ret))

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From the Director...

You Are Losing Your Marines on the Road

Statistically speaking, Marines are more likely to be killed simply driving to work in a car or on a motorcycle. This issue of the Blue Threat examines why these vehicle mishaps are occurring and how we can prevent them. As leaders we cannot turn our back on this insidious threat. Driving a vehicle every day just doesn't feel like a dangerous activity, but it is! Keep your eye on your Marines, and unleash your safety team on anyone cited for speeding or reckless driving. These are huge red flags for the poor decision making that leads to mishaps.



This Needs to Matter More

Car and motorcycle accidents accounted for over 50% of all preventable mishap fatalities in FY19.

This has a direct impact on mission readiness. It's time for leaders to engage with their units about how the decisions they make while off-duty are having lethal consequences. The deep dive on the following pages will point to unnecessary risks on the roads and too little training on motorcycles as the core issues behind the numbers. Leaders, this needs to matter more to you, and you need to convey that importance to your units.

FY19 Mishap Fatalities

| | |
|------------------|-----------|
| Aviation | 8 |
| On-Duty Ground | 4 |
| Vehicular | 28 |
| Other | 10 |

DID YOU KNOW?

Commanders, all motorcycle riders in your unit must be registered in the Marine Corps Training Information Management System (MCTIMS).

Recent Class A Mishaps

• AVIATION

30 May 2020: San Diego, CA – AGM: Civilian aircraft collided with a parked MV-22B Osprey. No injuries reported.

• GROUND ON-DUTY

27 May 2020: Camp Lejeune, NC – A PFC died during unit PT.

08 May 2020: Jacksonville, NC – A Sgt collapsed during a PT run and passed away on 11 May.

15 Apr 2020: Twentynine Palms, CA – A PFC collapsed during the run portion of the Physical Fitness Test.

• OFF-DUTY (CAR)

04 Apr 2020: Crestview, FL – A LCpl on emergency leave died in a single vehicle accident.

• OFF-DUTY (MOTORCYCLE)

NONE

• OFF-DUTY (OTHER)

08 May 2020: Jacksonville, NC – A LCpl died in a negligent discharge incident at an off-base, third party residence.

03 May 2020: MCB Hawaii, HI – A Cpl was found unresponsive in their barracks room.

18 Apr 2020: Douglas, GA – A Cpl died after from injuries sustained in a single-vehicle ATV accident.

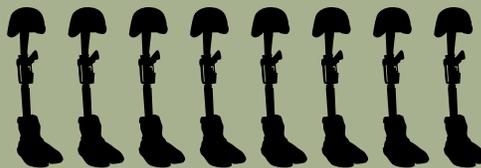
FY20 Class A Mishaps

5 GROUND MISHAP

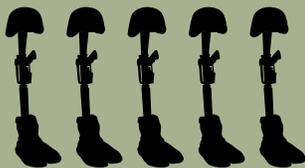
resulted in the **death of five Marines**

**8 CAR MISHAPS**

resulted in the **death of nine Marines**

**5 MOTORCYCLE MISHAPS**

resulted in the **death of five Marines**

**7 OTHER MISHAPS**

resulted in the **death of seven Marines**



Causal Factors for Class A Automobile Fatalities (2015-2019)



Automobile deaths are the single largest category of preventable mishaps in the Marine Corps. That is not a statistical anomaly; it is not simply a bad year for driving. The number of automobile deaths in the Marine Corps have risen every year since 2016. This is a problem that is only getting worse over time.

The data is clear. Marines continue to make high-risk decisions when they get behind the wheel of a car.

Marines, I challenge you to take a moment to reflect on your driving habits. Think about what high-risk decisions you have made in the past, and consider what could have easily gone wrong because of them. Now think about what you can do differently to make sure you don't become one of these statistics. Review the information below as it may be helpful in your efforts.

Automobile Causal Factors: How to Avoid Them



Speeding

Simply put, speed kills. Go the speed limit. Plan ahead and know your route so you have ample time to get from point A to point B. Avoid emotional driving—you're a danger to yourself and others if you get behind the wheel when you're amped up or angry. Pay attention to signs to note speed limits change and check your speedometer often to avoid speeding unintentionally.



Alcohol

If you know you're going to be drinking, don't plan on driving. Designate a DD, use a ride share (e.g., Uber/Lyft), or plan to have a friend to pick you up at the end of the night. Don't assume that anyone you're drinking with will be fit to drive when the time comes to leave.

No one wants to leave their car at the bar, and alcohol impairs your judgment. Don't put yourself in a position where you might be tempted to make the wrong choice. **A \$20 Uber is a hell of a lot cheaper than a \$10,000 DUI and losing your career.**



Fatigue

You leave for a trip right after a long shift. You prefer traveling during the night to avoid traffic. You want to power through a long drive so you can begin enjoying your downtime. These are the lines of reasoning that end up in WESS reports.

Create a plan for the trip. Change drivers frequently for longer trips. Take breaks every couple hours for driving. Make sure you get a good night's rest the night before. If you're driving tired, just pull over in a rest area or even on the side of the road. Getting there a little bit later is far better than not getting there at all.



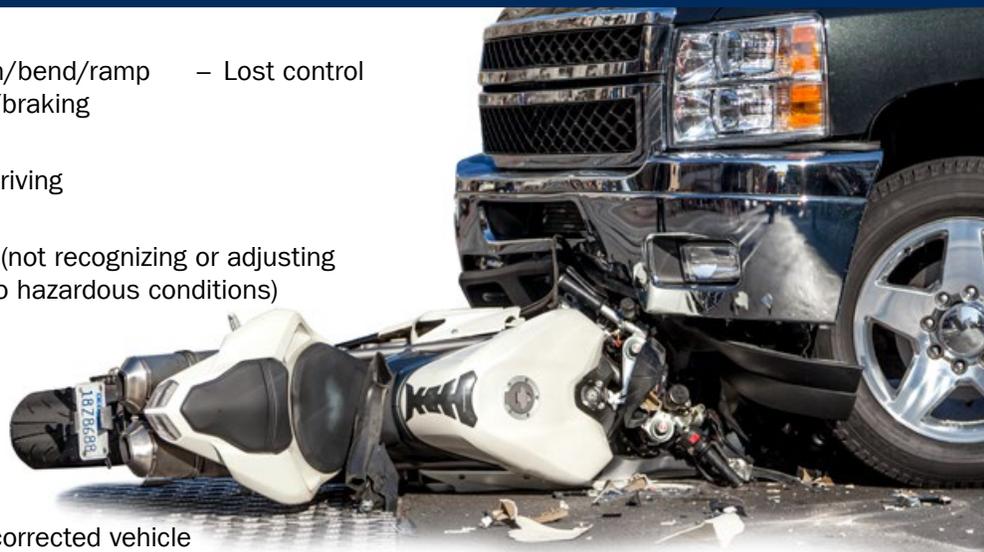
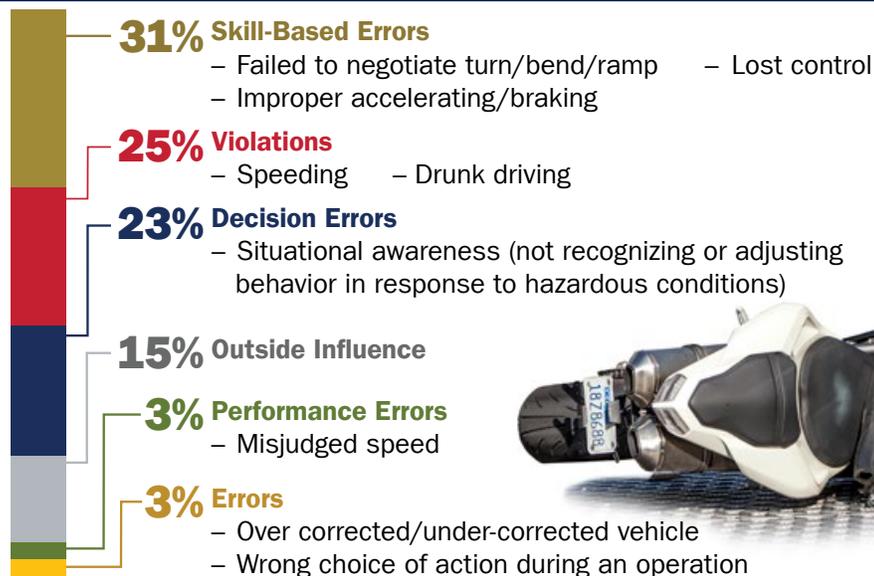
Loss of Control

While speeding, alcohol, and fatigue all contribute to loss of vehicle control, distracted driving (i.e., eating, talking, texting) is a big issue on the roads today. We need you to put your phone down. Pick a radio station beforehand. Use your cell phone for emergency situations only. If you're tired, take breaks. Limit the level of activity in your car with passengers. Avoid eating. Do your multitasking outside the car. It's a mindset.

DID YOU KNOW?

In addition to normal rideshare programs like Uber/Lyft, some areas or bases have "taxi reimbursement" or "free ride home" programs to promote safe driving behavior. Reach out to your local installation safety office to find out what's available in your area.

Causal Factors for Class A Motorcycle Fatalities (2015-2019)



Marines are provided with more motorcycle educational and training resources than any other military service. Through this, we believe we have saved a lot of Marine lives. With all of these resources available, however, motorcycle mishaps continue to plague our Marine Corps.

Developing your skills through training and mental preparedness can make or break your riding experience. **Most motorcycle mishaps point back to riders either making poor decisions (speeding and riding after using alcohol) or having poor reactions (insufficient skill and experience to safely respond to their circumstances).**

Respect the ride and the competence it requires. I challenge all riders to take advantages of the training being offered, participate in your unit's mentorship program, and plan each ride.

Motorcycle Causal Factors: How to Avoid Them



Skill-Based Errors

The skill-based errors highlighted below are often mitigated by training and experience, so take training. Take the available training. Skill and experience on a motorcycle plays a critical role in your safety because of how much more vulnerable you are. Practicing maneuvers in a controlled environment will increase your odds of handling situations competently when out on the road. **Receiving education through USMC-approved (and often, provided) courses goes a long way in providing riders with the skills and knowledge to negate avoidable risks caused by inexperience.**

- **Cornering.** Not knowing how to properly take a corner is the single biggest issue when it comes to motorcycle mishaps. You can improve your chances by going slower into the turn, looking through the turn, and accelerating out of the turn. Slow – Look – Press – Roll. Practice your cornering by going to familiar locations to practice the S-L-P-R technique.
- **Improper braking.** Also called panic braking, this is when a rider comes up on another vehicle or object too fast and then brakes too hard, leading to loss of control. Practice braking in open but closed-off areas like closed parking lots or large, unused lots to practice both front and rear braking at various speeds. **If you're going to drive at 70mph, you need to know how to brake at 70mph.**



Speeding

- Driving too fast makes all of these other errors more likely to occur. The faster you're going, the more skill plays a part in your ability to competently control your vehicle and respond calmly to changes in your environment.

Returning riders:

Don't assume, as a returning rider, that your skills are still as sharp as when you were actively riding. A number of accidents happen to riders who've jumped back into familiar speeds with rusty skills. Get back into the saddle with an advanced rider course.

Causal Factors for Class A Motorcycle Fatalities (2015-2019)



Photo courtesy of Mass U.S. Navy Seaman Apprentice Andrew Schneider

Motorcycle Causal Factors: How to Avoid Them (continued)



Alcohol

This is a no-brainer. If you're going out on the roads in a vehicle that requires a high degree of skill to safely operate and offers literally no protection in the event of an accident, DO NOT DRINK. Your clear head and skillful control of your motorcycle are required every single time you ride.



Outside Influence

You're not on equal footing with the other vehicles on the road—you are far more vulnerable. Even if you know how to control your ride, you can still suffer from other drivers who don't properly control theirs. Maintain situational awareness at all times and watch out for potential threats.

When riding, be an adult about it. Know the time and place for certain types of riding. If you want to go 100mph, do it at a race track. Plan ahead so that you aren't putting yourself into high-risk scenarios or making high-risk decisions. Go to those places where you can practice your skills without doing it on the highway. Be a student of the sport.

Pedestrian Fatalities

There are other dangers on the road besides when you're the one driving. Since 2015, the Marine Corps has had **19 pedestrian fatalities**. Pay attention to how these deaths occurred, and exercise caution when in similar situations.



- 7** were crossing the highway
- 6** were walking along the highway
- 2** were tire changes
- 2** were helping stranded
- 2** were after an accident

Training and Mentorship

Automobile

- Driver awareness training on Marine.net (online course) for those 26 years old and younger
- Alive at 25 (classroom course)
- Attitudinal Dynamics (classroom course)

Motorcycle

- USMC rider training courses: Level 1/Entry level training, Level 2/Follow-on training, and Level 3/ Specialized training
- Commercial courses (depending upon availability) such as training at race tracks, "Ride Like a Pro," and Police Motor Training for Civilians
- Unit-level mentorship programs and local riding clubs that specialize in their interest in riding (Harley Davidson riders, combat veterans riding club, etc.)



DID YOU KNOW?

Previous Blue Threat editions can be found at: www.safety.marines.mil. You can also contact us with questions or suggested topics by emailing BlueThreat@usmc.mil.

Flat-Hatting Isn't New, and Neither are the Results

Non-Privileged Mishap Description

An aircraft struck a wire while conducting a ferry flight. Class B.

Narrative

After a squadron static display at an approved community outreach event, a crew was ferrying an aircraft from a civilian airfield to their home air station. Prior to departure the pilot conducted a flight brief that consisted of a NATOPS brief between the pilot and crew chief #1 (CC1) which covered the general conduct of the flight. Their brief did not specifically cover terrain following flight (TERF) or address obstacles in anything more than a general fashion. The crew consisted of the pilot in the right pilot's seat, CC1 in the left pilot's seat, CC2 in the right gunner station, aerial observer 1 (AO1) in the left gunner station, and AO2 in the left aft seat. There was also one passenger on board in the right aft seat.

The aircraft departed the civil airfield at mid-day in daytime Visual Flight Rules (VFR) conditions. Approximately six nautical miles (NM) southeast of the airfield over a nearby lake, the pilot descended to and maintained an altitude between 35ft above ground level (AGL) and 200ft AGL for more than six minutes (with the crew waving at boaters and posting snapchat footage of the event). Upon departing the

lake, the aircraft entered a draw in the mountains, crested a ridge line, and descended into another draw, following a Nap of the Earth (NOE) profile, leveling off below 100ft AGL. The crew failed to observe a set of high tension power lines perpendicular to their flight path with sufficient time to maneuver clear. In an attempt to avoid striking the wires (which were at 88ft AGL, at or above the aircraft's actual altitude), the pilot initiated a cyclic climb, and the aircraft struck two non-energized support wires in a 55 degree nose-up and slightly right-wing down attitude. The aircraft struck the wires with the Forward Looking Infra Red (FLIR) sensor ball and wire cutters, causing damage to the FLIR turret and severing the right elevator from the aircraft. Following the collision, the pilot performed a slide on landing to an austere site immediately south of the power lines. The total time of flight from takeoff to landing was 22 minutes.

Mishap Costs

Non-DoD Damaged/Destroyed Property: **\$275,000**
 DoD Damaged/Destroyed Property: **\$577,000**

Causal Factors

- 1. Pilot conducted TERF in violation of orders.** — The pilot violated a number of regulations that put the aircraft and crew in a position where they were unable to see the power lines in time to avoid them. The pilot and crew conducted unscheduled TERF, without a qualified crew, outside of approved areas, without an aircraft observing from above, and without appropriate planning and briefing, violating CNAF-M-3710.7, Aviation Training and Readiness Program Manual, and squadron SOP.
- 2. Pilot failed to reset the Radar Altimeter (RADALT) to above 50' AGL after leaving the river.**— During the initial portions of this flight overland, the pilot set the RADALT to 150ft. Once overwater, he set the RADALT to 50ft, but did not reset it to 150ft after departing the lake. If he had done so, it would have given an aural alert after the aircraft descended lower into terrain. The RADALT notification after descending below 150ft AGL would have informed the crew of a need for corrective action one NM north of the wire strike. At the aircraft's ground speed, this distance would have resulted in about eight seconds of increased reaction time for the pilot that would have allowed him to climb back to an appropriate altitude before reaching the wires.

Flat-Hatting Isn't New, and Neither are the Results

3. **CC1 failed to correct the pilot's altitude violation.** — CC1, in the left pilot's seat, was a highly qualified and experienced crew chief. Had he asserted himself and directed the pilot to climb out of the TERF regime, this mishap would not have occurred.
4. **CC2, A01, and A02 failed to correct the pilot's altitude violation.** — Self explanatory. As part of the crew, each of them could have spoken up regarding the TERF regime and averted the mishap.
5. **Aircrew failed to visually identify wires or power line stanchions.** — The pilot and CC1 knew there was a set of power lines in the vicinity of the mishap. They expected this set of wires to be both further south and lower than they actually were. Prior to descending into terrain, the crew was flying into the sun which was low on the horizon and directly in their field of view. The sun was also diffused by high overcast clouds. This scene made it extraordinarily difficult to see the wires. The power lines were not marked, as they were not considered obstacles.

Report Recommendations

1. Mishap squadron:

- A. Update Training and Readiness (T&R) program manual with specific guidance for squadron activities.
- B. Adopt minimum cross country altitudes.
- C. Submit an aircraft T&R code change request to establish T&R code for familiarization flights.
- D. Submit an information paper to the appropriate chain of command in pursuit of material solutions to improve obstacle avoidance systems.

2. All rotary-wing activities: Brief this mishap to all crewed aviation activities.

Key Takeaways/Lessons Learned

This mishap is a textbook example of a highly-trained and qualified, trusted, superior-performing pilot whose flight discipline eroded over time, leading to a mishap. It is also a textbook example of Flat Hatting, right out of the CNAF M-3710.7: "Flat hatting or any maneuvers conducted at low altitude or a high rate of speed for thrill purposes over land or water are prohibited. Any acts conducted for thrill purposes are strictly prohibited."

The pilot's desire to reward the crew with a unique flight experience led him to enter the TERF environment in violation of orders and directives. The rest of the crew, through complacency and ignorance of the rules, went along for the ride in a flagrant breach of flight discipline. Thankfully, this was an ugly and expensive lesson re-learned instead of a tragic one.

1. **Rules exist for a reason.** We've all heard it said, "NATOPS is written in blood." This crew came close to using theirs to write more. There is a time and place for flying low. This flight wasn't it. One of the most basic assumptions we make executing a flight schedule is that the crews will comply with the rules, regulations, and directives that govern Naval Aviation. Exceptional violations of that assumption remove all margin built into how we operate. Had this pilot operated the aircraft at the lowest edge of the authorized flight regime (201ft AGL), the worst outcome would have been a near miss with late recognition of the wires. Instead, his actions removed all margin for safety and nearly killed himself and his crew.
2. **Lead your crew (regardless of your assigned seat).** The mishap recommendations will strengthen and clarify existing rules, but unless all aircrew (both front seat and back) act with professionalism and uphold the trust commanders place in them, this hazard will always remain. In Crew Resource Management (CRM), leadership and assertiveness don't just apply to the aircraft commander. Every member of the crew has a duty and responsibility to act.

School Circle

Leader's RM Checklist with RM Steps

1. Have we read – and are we complying with – all orders/directives governing this event?
2. Are we adequately trained and prepared for this event?
3. What unnecessary risk(s) will I assume with this scheme of maneuver?
4. Can I achieve the same training value without it or by changing scheme of maneuver?
5. Have I set all the conditions necessary to respond to assessed contingencies?
6. Have I ignored any obvious or foreseeable contingencies?
7. Are the leaders supervising this event qualified to do so by experience and training?
8. Have I set all the conditions necessary to respond to the most dangerous outcome?
9. Have I supervised appropriate briefs, rehearsals, and inspections?
10. Have I positioned myself and other leaders in the best positions to make risk decisions?



Step 1. Identify hazards



Step 2. Assess hazards to determine risk



Step 3. Develop controls and make risk decisions



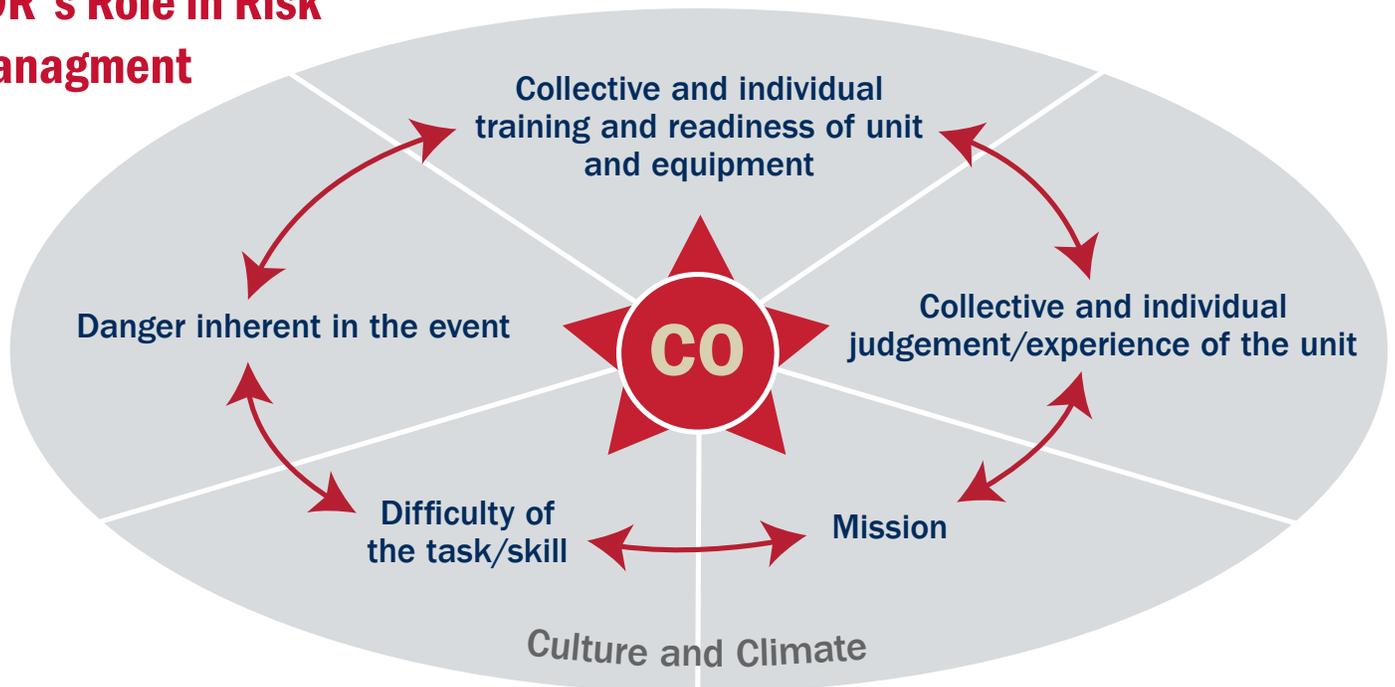
Step 4. Implement controls



Step 5. Supervise and evaluate



CDR's Role in Risk Management



Risk Management Information

Risk Management Information (RMI) is a Department of the Navy (DON) initiative, endorsed by the Assistant Secretary of the Navy for Energy, Installations, and Environment (ASN EI&E) for a single Program of Record for Safety to improve the quality and accessibility of risk management information associated with naval safety management.

The DON's RMI initiative promulgates the intent to create a safer environment for Navy and Marine Corps personnel by capturing and analyzing safety incident reporting data and assisting safety professionals with managing their programs. RMI will synthesize incident reporting data into useful and relevant products for improving risk and safety conditions by consolidating existing legacy and core safety programs and risk management systems, applications, and data.

The RMI initiative encompasses the following four capability areas:

- **Streamlined Incident Reporting (SIR)** – will provide enterprise reporting enhancements to include streamlined reporting processes, improved unit reporting access and capabilities, and enterprise/unit level tracking and verification of reportable injuries.
- **Safety Program Management (SPM)** – will provide users with capabilities needed to plan, prepare, and execute a well-rounded safety and occupational health program. Specific capabilities will include: Confined Space Entry, Deficiency Abatement, Fall Protection, Inspections, Job Hazard Analysis, Medical Surveillance, Respiratory Protection, Safety Committee, Self-Assessment, and Training.
- **Analysis and Dissemination (A&D)** – will provide an advanced analysis/analytic capability for SIR and SPM data to enable trend analysis and proactive decision making related to mishap and injury avoidance in compliance with DoD Safety and Occupational Health standards and policy.
- **Single Point of Entry (SPOE)** – will provide a single point of entry available to Sailors, Marines, and Safety professionals to reduce the inconsistencies introduced by dissimilar legacy systems and organizations.

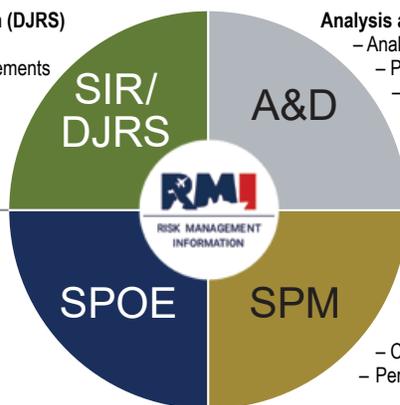
RMI Capabilities Overview

Streamlined Incident Reporting (SIR)/Dive Jump Reporting System (DJRS)

- Single stop to easily submit incident information
- Improved user interface and incorporates updated policy/legal requirements
- DJRS captures qualifications and tracks historical event for divers and jumpers
- SIR is a data collection tool supporting formal workflow management and record-keeping following incidents to ensure incidents are managed appropriately and accurately

Single Point of Entry (SPOE)

- Portal to gain single access/entry into RMI
- Provide unified user experience to increase content management and collaboration



Analysis and Dissemination (A&D)

- Analyze data and report information to identify cause and effect
- Provides business intelligence tool set to perform predictive analysis
- Leverage Enterprise Data Warehouse as a validated DoN source of safety data
- Provide canned reports and ad-hoc reporting with opportunity to create dashboard reporting

Safety Program Management (SPM)

- Process oriented functionality to plan, prepare and execute safety and occupational health program
- Implements policy, instructions, processes, and core management practices
- Capture safety information to support full life cycle risk mitigation
- Perform safety management functions efficiently regardless of location

Streamlined Incident Reporting (SIR) Deployment

The full SIR capability is scheduled for deployment in August 2020. SIR will replace the legacy system WESS and ESAMS IIRTS. SIR will provide a Navy-wide capability to identify and report hazards and their associated risks from all sources, report actions taken to eliminate and/or mitigate hazards, and monitor implementation/status of recommended corrective actions. RMI SIR is also web-based and CAC-enabled. Users will find data is easier and faster to input, forms are pre-filled with relevant data, errors will be reduced, workflow guides are built-in and ad hoc reporting is improved. Mobile Training Teams (MTTs) will conduct “train the trainer” RMI SIR orientation sessions via online training sessions beginning this May.

Mobile Training Plan SIR User Training

See the SD website for more information about accessing training: <https://www.safety.marines.mil/Reporting-and-Investigations/RMI-SIR/>

All online instruction is a full day:
0800-1630

| | May | | | July | | | |
|------|------|-----|-----------|--------|-----|-----------|-----|
| | Date | Day | Time Zone | Date | Day | Time Zone | |
| | 19 | T | EST | 9 | TH | PST | |
| | 20 | W | EST | 14 | T | PST/JST | |
| | 21 | TH | EST | 16 | TH | JST | |
| | 27 | W | EST | 21 | T | EST | |
| | 28 | TH | EST | 23 | TH | ChST | |
| June | 3 | W | PST | 28 | T | PST | |
| | 4 | TH | PST | 30 | TH | HST | |
| | 9 | T | JST | August | 4 | T | EST |
| | 11 | TH | JST | 6 | TH | EST | |
| | 16 | T | EST/PST | 11 | T | JST | |
| | 18 | TH | ChST/HST | 13 | TH | JST | |
| | 23 | T | PST | 17 | M | EST | |
| | 25 | TH | PST | 18 | T | JST | |
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- EST Eastern standard time
- CST Central standard time
- HST Hawaii standard time
- ChST Chamorro standard time (Guam)
- JST Japan standard time
- AST Asian standard time (Bahrain)
- CET Central European time (Spain, Italy)