TRAINING RANGE SAFETY

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https://safety.army.mil
The U.S. Army Combat Readiness Center has developed multiple tools to provide leaders information on risk mitigation, all available at https://safety.army.mil, including the following:

• **Army Readiness Assessment Program** — a web-based tool that provides battalion or equivalent commanders with data on their formations’ readiness posture by sampling unit safety climate and culture in five key areas: process auditing, reward systems, quality control, risk management, and command and control.

• **Army Risk Management Information System** — the central repository for all Army mishap data (Class A-D ground, on and off duty; Class A-E aviation). RMIS is designed to give leaders, safety officers and other personnel access to both current and archived mishap reports, with a goal of preventing similar incidents within their formations. Among other functionalities, users may search RMIS for specific mishaps by case number; conduct searches for a given timeframe or accident class; and obtain risk and hazard reports broken down by age, grade, equipment and additional variables. All data retrieved from RMIS is classified For Official Use Only and limited in use to accident prevention.

• **USACRC Lessons Learned** — one-page mishap investigation summaries produced for accident prevention purposes. Summaries contain information protected by DODI 6055.07 under safety privilege and are available only to CAC holders within the .mil network.

• **Ground Risk Assessment Tool** — a mission planning tool developed to augment the military decision-making process. Consisting of five integral parts, it assists users in identifying potential hazards and controls for specified ground missions or activities, both on and off duty.

• **Off-Duty Safety Awareness Presentation** — a highly informative safety presentation containing statistics, contributing factors and other relevant information regarding off-duty mishaps. Developed for use at battalion level and below, the presentation comes complete with embedded videos and speaker notes that may be used as is or modified to reflect unit-specific mishap trends.

• **Preliminary Loss Reports** — short synopses of recent Army mishaps resulting in Soldier or civilian employee losses that alert commanders, leaders and safety professionals to circumstances affecting readiness. PLRs provide actionable knowledge and real-time information regarding accidental fatalities, both of which are critical in prevention through risk management.

• **Safety Campaigns** — a monthly focus on seasonal and non-seasonal risk management products and tools. Each monthly topic includes supporting videos, graphics and posters, articles and external links for additional resources.

• **Risk Management Magazine** — the official safety magazine of the U.S. Army, published online quarterly. In addition to the online version, the USACRC releases a weekly RM newsletter highlighting a variety of safety articles, posters and videos, seasonal safety campaigns and USACRC tools and programs.

• **Flightfax** — an aviation safety publication published online monthly. It provides leaders a snapshot of Army aviation hazards through analyses of mishaps within the last 30 to 60 days, near-term mishaps, aviation safety issues and historical context via a “blast from the past” feature.
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FALL SAFE WINTER
WHY?
You never know when you will encounter winter weather or an emergency road closure.
Don't let a winter storm take you by surprise!
One of the biggest challenges military units face is the ability to train as they fight — firing all weapon types and engaging targets much like they do in combat. Too often I hear, “We did this in combat, so why can’t we do it at my installation.” During peacetime live-fire exercises, however, the Army standard is to have rounds contained to one in 1 million on training ranges while maintaining a safe environment. That sometimes hampers the way units want to train.

Firing weapons on training ranges requires detailed planning and coordination on both the using unit and the installation range operations team. Much of the planning focuses on developing surface danger zones (SDZ), which allow for the safe integration of fires with various weapon platforms from simple zero-type ranges to complex combined arms live-fire exercise (CALFEX)-type ranges. It helps if units have a better understanding of the procedures required for safe training.

So how does the Army do this? Well, TRADOC Capabilities Manager (TCM) Ranges provides both distance learning (DL) and resident courses designed for active-duty service members and civilians to learn the procedures for safe training. The DL courses offer a self-paced learning environment that can be located on the SRP website at https://srp2.army.mil/training/_layouts/15/student/studenttrainingmain.aspx. Resident courses are held on Army and Marine Corps installations worldwide.

One of the best courses service members can take is the Range Safety Course (Basic), which is a five-hour DL program. This course provides a lot of information that can reduce mishaps on live-fire ranges and is designed and focused on officer in charge and range safety officer duties. You may be wondering if you can take this course, and the answer is yes! In fact, here’s a list of folks who should take it: range managers, range operations staff, safety managers, master gunners, unit-level trainers and anyone unfamiliar with the tools used to support range safety. Below are some of the other available courses and a brief outline of what to expect if you choose to attend.

The Inter-Service Range Safety Course (Intermediate) is a one-week, hands-on program offered to train Army, Marine Corps and other safety and range professionals in the policy and techniques required by Army Regulation (AR) 385-63, Range Safety, for firing current and future weapons, and to ensure safe and efficient range operations in support of the commander’s mission. This
A multi-service suite of desktop tools designed to meet the needs of range managers throughout the Army, Marine Corps, Air Force and Navy by automating range operations, safety and modernization processes. Tools may be used individually or in conjunction, depending on the task. Tool outputs are in accordance with applicable policy documents. The RMTK training course introduces students to the concepts of geographic information systems (GIS) and the RMTK suite of tools. Lessons focus on how GIS and RMTK can be integrated into range operations to help with daily tasks to ensure safe and efficient training in support of the commander’s mission. The four-day resident course covers fundamental GIS and RMTK concepts through lecture, instructor demonstrations, hands-on exercises and performance tests. The following individual courses are available within RMTK and outlined below.

- The RMTK Surface Danger Zone Tool generates SDZs in accordance with parameters in DA Pam 385-63. The SDZ Tool enables range operations to ensure live-fire training activities are conducted in a safe manner.
- The RMTK Explosive Training Range (ETR) Tool generates the danger zone associated with explosives training in accordance with parameters defined in DA Pam 385-64. The ETR Tool includes modules for explosives training using bare charges, direction/breaching and dynamic breaching scenarios.
- The RMTK Weapon Danger Zone Tool evaluates the explosive potential of ammunition temporarily stored on ranges during training events in accordance with parameters in DA Pam 385-64. The ORAH Tool evaluates explosive safety arcs depicting required standoff distances for personnel, buildings and public transportation routes and also warns users in cases of incompatible storage scenarios.
- The RMTK Noise Tool models the probability of receiving noise complaints for a given training scenario based on impulsive noise guidelines developed by the U.S. Army Public Health Center and includes modules for ground-to-ground, air-to-ground and aircraft noise.
- The RMTK Laser Range Management Tool (LRMT) automates the process of certifying military ranges for safe laser operations and supports planning and conducting laser operations on certified ranges in accordance with MIL-HDBK-828C. The LRMT LRMT supports both airborne and ground-based laser platforms. The LRMT training course focuses on the creation of basic Laser Surface Danger Zones (LSDZ) given standard ground and aviation gunnery parameters for lasering from static and moving positions to ground targets on DoD training ranges. Additional functionality of the RMTK LRMT covered during the course includes the creation of composite LSDZs that are commonly used on DoD training ranges. Additional functionality of the RMTK WDZ Tool that is covered during the course includes the creation of composite WDZs, the use of precision-guided munitions and the creation of areas of critical concern for risk evaluation and mitigation. The one-day resident course includes lectures, instructor demonstrations, hands-on exercises and performance tests.
- The RMTK Explosive Training Range Tool generates the danger zone associated with explosives training in accordance with parameters defined in DA Pam 385-64. The ETR Tool includes modules for explosives training using bare charges, direction/breaching and dynamic breaching scenarios.

In conclusion, all of these courses will assist installation range management authorities, master gunners and commanders with range planning to ensure training is safe and as realistic as possible. These tools are free to download from the SRP website. The SRP program also will supply an ArcGIS license, which is required to operate the tools. When units are fully operational and proficient with these tools, they will develop a much better understanding for planning and safe operations on live-fire ranges.
As fall approaches and the weather begins to cool, hunters nationwide are preparing for their pursuit of North America’s most popular big-game animal — the white-tailed deer. Whether it is because the white-tail can be found in almost all of the lower 48 states or because it can be harvested with several different types of weapons, one thing is for sure: They cannot legally be taken year round. That makes harvesting this deer a bit of a challenge, especially for bow hunters. Before this and every archery season, bow hunters should familiarize themselves with their equipment, their state’s regulations and education requirements, and weapon safety.

ARCHERY HUNTING PREPARATION

Equipment

One of the first decisions archery hunters need to make is what type of equipment they’ll use for their specific hunt. There are long bows, recurve bows, compound bows and crossbows. A bow’s basic function as a hunting weapon is to store energy in a limb system and then transfer that energy via the string to an arrow — or bolt, when using a crossbow — when released. Hunters should consider what game they are looking to harvest and then select the appropriate bow or crossbow.

The evolution of bows has progressed so much that there are modern models capable of shooting an arrow more than 400 yards; however, the bow and arrow is still generally considered a short-range — but very lethal — hunting tool. Depending on the situation, the average shooting distance for most bow hunters hunting white-tailed deer is less than 40 yards. At this distance or less, the arrow, more specifically the broadhead, is still capable of delivering a low-energy impact with enough cutting force that will ultimately result in a mortal wound, depending on the hunter’s accuracy. This is why bow selection, draw weight, draw length, arrow selection, shaft materiel, arrow length, and broadhead design and choice is so important. A hunter’s ability to handle the bow properly and safely, combined with their accuracy, will greatly improve the chances of a successful hunt.

Hunter education

Regardless your state’s requirements, it’s a good idea for all hunters to familiarize themselves with the hunting regulations before their first hunt of the season because the rules may have changed. Nearly every state requires hunters to take some type of education or safety course. In some states,
the course must be completed prior to purchasing the actual hunting license; proof of course completion may also be required to be in the hunter’s possession when hunting. A few states will allow hunters, generally minors, to hunt without having completed a course as long as they are accompanied or supervised by a person who has passed an approved hunter education program. Each state sets its own requirements based on either a “born-on” or “born-after” date or a minimum age required to complete a hunter safety course.

It is safe to say, however, that almost every state does require hunter education to be completed, either in a formal classroom setting or via an online program such as the one offered on the Hunter-ed.com website, which is approved by the International Hunter Education Association-USA. All states that have a mandatory hunter education requirement will accept your state’s completion certificate or card. This is known as reciprocity and makes it easier to travel to other states to hunt different species, assuming you purchase the required hunting license as an out-of-state resident.

But what if you are going to hunt with a bow or crossbow? Are you aware of the laws regarding archery and/or crossbow hunting? Do you know if your state even allows the use of a crossbow? Does your state, or the state you are visiting, require you to complete a bowhunter education course? There are several states that now require hunters to take an International Bowhunter Education Program (IBEP) course before bowhunting or obtaining a bowhunting license. The IBEP course is administered by the National Bowhunter Education Foundation, Inc. Again, make sure to check your state’s bowhunting regulations because they might have changed since last season.

Although basic hunter education programs include archery and bowhunting, the IBEP requirement goes above and beyond. The IBEP can be taken online, but some states require both the online course and a “field day” in order to satisfy the requirements to obtain an archery permit and legally hunt with a bow or crossbow. Additionally, several states have a minimum age before obtaining an archery permit.

DID YOU KNOW?

In an effort to prevent accidents and save lives, Hunter-ed.com works with the International Hunter Education Association-USA, more than 45 state agencies responsible for hunter education, and various industry partners to develop comprehensive online hunter’s safety courses that teach students important laws and regulations, game identification, and safe, responsible weapon handling. Visit the site at https://www.hunter-ed.com/, click your state of residence and get educated.
In your haste to enter the hunting area at the beginning of the archery season, your ability to operate the archery equipment safely and accurately is not the legal requirement to harvest your game. The legal requirements are your hunter education, your hunting license, completion of an archery education course if required by your state, and the legality of using a crossbow versus a compound bow (state laws). Not all states allow archery hunters to use a crossbow to harvest game. Some have outlawed the use of crossbows, while others allow their use by disabled hunters only. Harvesting a white-tailed deer with a bow is a significant achievement for anyone. It clearly shows your commitment, dedication and prowess to the sport of archery. With this much investment, it would be a shame to add a fine or revocation of your hunting privileges to the end of a successful archery hunt solely because you were unaware or chose to ignore the state's requirements.

Safety
Bows and crossbows are an excellent way to add another dimension to your hunting season; but they are also dangerous if handled improperly. Long before your first bow hunt, you should spend as much time as possible honing your skills. Continued practice and your comfort with the equipment is imperative to your success.

Bowhunter-ed.com offers the following archery safety rules:

- Only point the bow and arrow in a safe direction.
- Only nock an arrow when it’s safe to shoot.
- Be sure of your target and what is in front of it, immediately behind it and beyond it.
- Never shoot over a ridge.
- Only shoot when you have a safe range or shooting area and a safe backstop or background.
- Avoid dry-firing a bow (releasing the bowstring without a nocked arrow). It may cause serious damage to the bow and can injure the archer.
- Do not shoot an arrow straight up into the air.
- Wear an armguard and finger protection while shooting bows and arrows.
- Handle arrows carefully. Protect yourself and the arrow points with a covered arrow quiver.
- Use a bow stringer for stringing longbows and recurve bows.
- Immediately repair defects in equipment.
- Prior to each use, check your bow for cracks, dents, breaks, separating laminates, peeling glass and defects in mechanical parts.
- Check the bowstring regularly and replace it if it becomes worn or frayed. Frequent use of bowstring wax greatly extends the life of a bowstring.
- Check arrows for cracks, dents or bends; discard any that have permanent flaws.
- Store your bows in bow cases — preferably hard cases — and store recurves and longbows unstrung.
- Store arrows in quivers and accessories in a sturdy box or padded bag.
- Keep your emotions under control and think about safety first.
- Do not drink alcohol or take mood-altering drugs before, during or after shooting a bow.

Conclusion
Even if you are an experienced archery hunter, review your states requirements for certainty and consider taking or attending a Bowhunter-ed.com™ or an IBEP course yourself, even if your state does not require it, prior to archery hunting. There is an abundance of archery information for all skill levels presented in the online course. Hunting is a privilege; doing it safely is choice. Hunting legally, however, is a law. Be safe and know your state’s requirements and hopefully you will have a safe and successful archery hunt.
Get the tools before the road gets rough.

Driver’s Training Toolbox

https://safety.army.mil
The U.S. Army Combat Readiness Center has investigated mishaps that occurred over water. The lessons learned from these investigations provide an overview of the unusual issues related to underwater location and recovery operations as well as the expertise, procedures and equipment needed to mount an effective response to such an accident. It is intended for use by all who might find it helpful — in particular air accident investigation authorities who might find themselves faced with the task of investigating the loss of an aircraft in these challenging circumstances.

Fatal aircraft mishaps with an underwater dimension, whether at sea or in a lake or river, occur regularly. Locating and recovering these aircraft can be extremely challenging, requiring a well-planned and timely response coordinated amongst many parties. Inadequate preparation or poor management of the initial investigative response has the potential to degenerate into a crisis and can threaten crucial evidence. Agencies undertaking an underwater location and recovery operation must be prepared for the onsite challenges of operations at sea such as the working environment, decisions on what to recover, issues specific to location and recovery, and the management of human remains.

Outside assistance and partnerships

Typically, safety investigation authorities will not be able to conduct an underwater location and recovery operation without outside assistance. Therefore, relationships need to be established in advance with potential partners and sources of assistance. These partners should include agencies with responsibilities for matters relating to the sea, the naval service and the diplomatic service.

Partnerships should also be established with colleagues in other safety investigation authorities. Those that have recent experience of mounting similar operations may be able to provide useful assistance. Additionally, advice should be taken from agencies such as the police, U.S. Navy and Coast Guard, but overall control of the operation should always be retained by the safety investigation authority.

Equipment and working environment

The key factor when selecting a vessel and its onboard equipment is the nature of the accident site: the sea-state conditions, probable depth of the aircraft and seabed environment. Other important factors include proximity of the nearest useful port and the availability of suitable vessels. Safety investigation authorities unfamiliar with underwater operations often underestimate the time it can take to get the necessary maritime assets into position to start work.

When considering the suitability of available vessels, take account of their capability to perform the required task in the time available as well as whether they are outrigged with specialized equipment such as acoustic devices for detecting 37.5 kHz signals and, when necessary, a hull-mounted multi-beam sonar for bathymetry of the seabed. Other considerations include the vessel’s present location and availability, transit time to the accident site and the entire charter cost, including provision for equipment and mobilization/demobilization.

Relatively small craft, for use in operations on lakes, rivers and close to shore, likely won’t be difficult to secure. For operations at sea, however, it is necessary to know where to find the appropriate type of larger vessel. If no suitable state vessels are available, it may become necessary to reach out to the chartering market and issue a call for tenders. Ancillary issues to consider may include the need for a helo deck and any auditing or certification requirements.

Mobilization of large vessels with deep-water recovery capabilities can take time. Therefore, a two-stage approach may prove advantageous — first employing a smaller vessel able to reach the location quickly and begin the task of finding the underwater locator beacons (ULB) until a recovery vessel arrives. The decision to dispatch the recovery vessel should only be made once the wreckage is located, and the delay between the discovering its location and the
departure of the vessel should be kept to a minimum. If the wreckage is not found during the period in which the ULBs can be assumed to be transmitting, it will be necessary to proceed to another phase of location using sonar equipment, which will normally result in different vessel requirements.

The depth the aircraft wreckage and flight recorders are believed to be located will be the primary determinant of the recovery options. Air diving is feasible at depths up to 131 feet (40 meters), and saturation diving up to 1,640 feet (500 meters). However, for deep-water and sustained operations, the use of a remotely operated vehicle (ROV) is generally the best option. These vehicles are connected to the parent vessel by an umbilical that carries power and navigational and imagery capabilities. They come in many forms and sizes and may be equipped with one or more “manipulators” for working at the accident site.

Use of an ROV permits the whole investigation team to view and exploit in real time the images transmitted to the parent vessel. It also facilitates the mapping of the accident site. A range of ROVs can be deployed in operations up to 19,685 feet (6,000 meters), and certain specialized — and scarce — ROVs can be used below that depth.

Another type of unmanned vessel available for underwater operations is the autonomous underwater vehicle (AUV), which is a search (rather than grapple-and-recover) tool. AUVs are not tethered to a parent vessel. Rather, they are battery powered and programmed to follow a defined search program. At the conclusion of the search, the AUVs surface and upload their findings to the control center, which may be aboard a vessel or in a road vehicle parked at the lake or river side.

Operation-specific challenges
Some challenges in operations at sea derive from the length of time which the investigation team may need to be out of physical contact with the shore.
There is a need to give careful thought in advance to all of the types of equipment which may be required and to the specialist personnel needed aboard.

Working vessels present particular health and safety issues for those unfamiliar with them. The investigation team should consult with the vessel’s health and safety officer to complete a risk assessment of the working environment. The planning process should include the configuration of accommodation and work spaces. The noise and movement of the vessel, the confined and less-than-perfectly-clean spaces likely available to the investigation team, and the presence of seawater and damp conditions all make for a hostile working environment for individuals and sensitive electronic equipment such as cameras and computers.

A particular problem in operations at sea is the moment when a large piece of debris is lifted out of the water. This can lead to a sudden and dangerous increase in load, with potential to damage the wreckage and lose evidence. There may be a need to counter this risk by providing additional tethering to the wreckage (to take any additional loads at key points), and the use of netting is particularly useful. Additionally, an active heave-compensated crane can help alleviate load variations on the lift line. The condition of the wreckage should be recorded before any recovery attempt is made as well as any damage sustained during the lift.

A ULB fitted to an aircraft flight recorder is triggered by immersion in water and emits an ultrasonic pulse of 10 milliseconds at 37.5 kHz and at one-second intervals. The present ICAO requirement is for ULBs (“pingers”) to transmit for at least 30 days and new Federal Aviation Administration requirements have increased to 90 days. They have a nominal audible range of 2-5 kilometers, depending on parameters such as depth, water temperature and sea conditions. It’s beneficial to begin recovery as soon as possible, using a small vessel to find the pinger(s), on the basis of a preliminary review of the loss data such as radar and the Aircraft Communications Addressing and Reporting System (ACARS). The search area may be refined later as more data becomes available.

The sonar search will begin only after the end of the pinger transmission period. The 37.5 kHz frequency is outside the audible spectrum for the human ear. Acoustic hydrophones translate the signal into the audible spectrum, a process that does not exactly reproduce the original emission, which can be polluted by the water environment and thus misprocessed. The ULB signals can be picked up using an acoustic hydrophone deployed by itself as a handheld unit, or with other units in an array.

Digitalization of the ULB signal by onboard software enables the listening for the ULB to be done by a computer rather than a human. Such an array may be deployed to good effect even in difficult sea conditions. However, in shallow waters, the amount of background noise may lead to the signal spike, experienced when the ping is detected, not being prominent and perhaps missed. With such faint signals, difficulties may also be experienced when sounds emitted by the biological environment confuse the acoustic devices. Cetacean sound emissions typically take the form of swift chirps over a wide spectrum of frequencies, which at times could be perceived as a short regular pinger signal after being sampled and processed by acoustic devices.

Towing a hydrophone array at a speed of 4 knots on a search grid of parallel tracks 1 nautical mile apart will enable 40 square miles of sea to be searched in a period of about 10 hours. Use of the vessel’s autopilot (if fitted) while following the search grid is valuable in countering the effects of strong crosswinds and crosscurrents. Strong currents may also cause wreckage and recorders to drift from their original location.

Other systems for picking up and locating ULB signals may involve the repeated “dipping” of a detector below the seasonal thermocline (which separates the noisy mixed surface layer of water from the calm, relatively quiet, deeper water below) at different locations to generate a triangulated homing point, or the deployment of acoustic listening buoys equipped with GPS and UHF radio. For searches in very shallow waters with poor visibility, such as a river or lake, grapple dragging by surface vessels and the use of metal detectors mounted on inflatable craft are options.

What to recover
The priority targets for the investigation team during the recovery phase should be flight recorders, aircraft debris/parts (including avionics components that may contain non-volatile memory), any human remains and personal effects. Wreckage observation and mapping are also important. When available, a photographic survey of the mishap site enables its original state to be recorded before it is altered by diver or ROV interventions. It is necessary to carefully select, with opinions from all investigation parties considered, the aircraft debris and parts to be recovered and to prioritize them with a view to the overall investigation. The initial analysis of the FDR and CVR may assist in this selection process.

There is a case for recovering only those parts of the aircraft judged to be relevant to the investigation, especially if the wreckage is large or fragmented. Divers or ROV operators might be given a shopping list of parts most desirable to recover, based on preliminary information gathered from recorders, sea bed images.
and aircraft data such as manufacturers’ drawings, parts catalogues, wiring diagrams and manuals. It is sometimes more straightforward to recover as much as possible, avoiding the difficulty of finding again particular items which may have been disturbed by underwater currents. The full wreckage may then be examined for its key elements in a more suitable environment. Storing wreckage on land can, however, pose a challenge, as hangar space is often scarce and in some jurisdictions a long-term storage area may not be available.

The recovery of aircraft wreckage is generally accomplished by the parts being rigged to a hoist and lifted by crane out of the water and onto the recovery vessel. In some cases, divers might attach small “parachutes” to wreckage, which are then inflated with compressed air and rise to the surface for recovery. Care is needed to avoid inflatable items being punctured by sharp metallic edges on the wreckage.

The internal components of flight recorders recovered from underwater are vulnerable to corrosion and should be kept in fresh water (deionized water) for transit and until they are opened. All wreckage recovered should be rinsed to remove salt water. Further anticorrosion application of specialized products can also help in preserving evidence.

**Human remains**

When recovering an aircraft underwater, there is frequently a need to deal with human remains. This poses special technical and psychological challenges beyond those associated with an accident site on land. This highlights the need to be prepared. There may be important legal reasons, such as passenger identification, for the recovery of bodies. This is an operation that should not be improvised; material preparation, ample space and good conditions are crucial. It is important to have the necessary specialized equipment available, such as refrigerated containers and body bags, and any special expertise. Medical-psychological support may also be needed to manage the psychological risks related to the recovery of human remains.

Investigators can be faced with handling large amounts of data in various formats and locations. Confidentiality issues should be considered, especially for data related to human remains. Strict procedures need to be developed and a means of secure transmission implemented between the various entities involved in the search. In most cases, a database containing, at a minimum, pictures, coordinates and descriptions of debris will be needed.

The loss of an aircraft in water may also result in fuel, oil and other noxious fluid leakage. It may be possible to contain and recover these in order to avoid ecological harm. In shallow waters, it may be feasible to surround the wreckage with special protective curtains or booms during an operation to recover the liquids. These curtains or booms may then be towed to land. Specialized assistance should be considered.

An investigation involving underwater recovery should document the operations so other investigation authorities may benefit from the lessons learned. A short report could accompany the safety investigation final report. A decision to halt an underwater recovery operation should be the prerogative of the safety investigation authority, made after careful assessment of the possible safety benefits of continuing the operation, set against the expenditure of additional resources.

**Conclusion**

The need to conduct an investigation into the loss of an aircraft in water is a real possibility for any agency that has a coastline or an internal body of water, or has aircraft on its register which fly over international waters. Given the number of parties that may become involved, the need to select the right equipment and expertise, the potential for spiraling costs and the challenges posed by operations at sea, any such investigation will require a well-planned and timely response.

This information provides advice on planning and preparing for such an investigation. It emphasizes the importance of establishing in advance useful partnerships and contacts, the value of checklists, the need to identify and source the necessary funding and expertise, and for the investigation authority to have a good understanding of the tools and assets required for successful search and recovery operations.

The cost of these operations can be considerable and it is important that decision-makers who control emergency funds are given realistic cost and time estimates. The challenges involved in conducting operations at sea should not be underestimated. There is often a thin line between success and failure, so anything that can be done beforehand, in preparation and planning, will increase the chances of a favorable outcome.
While in the Boy Scouts at a young age, I remember our scoutmaster telling us to always be prepared. “For what,” I would ask. “For anything,” he’d respond.

As I grew older and a little wiser, I began to see the logic in the Boy Scout motto. Years ago, I had moved to Florida for work and had my first experience with hurricanes. Yes, plural hurricanes. Three hurricanes passed through the area I was living over the summer. The first time, I was totally unprepared and learned a great lesson the hard way. Being raised in Ohio, I had experienced tornados, but nothing like this. We had no electricity for nine days, the roadways were blocked and homes were destroyed. Instead of the mile-wide path of destruction you might see from a tornado, this destruction was miles across. There was no driving to a nearby town to get supplies because adjacent municipalities were also destroyed.

When I bring up the topic of disaster preparation, many people call me a survivalist and doomsday prepper, to name just a few. To me, it makes good sense to take some basic precautions and ensure your family is protected and prepared in the event of an emergency. My approach to preparing for a natural disaster is broken into categories so I can ensure I address all my possible needs. Some of the most important human reactions, and hardest to control, are panic and fear. When all methods of communication are lost — no television, radio or cellphone coverage — your emergency action plan must kick in so you can focus on survival.

Safe haven

The remainder of the precautions will matter little if you do not have a safe room, basement or other location strong enough to resist the forces of nature. An interior room in the home may work for an EF1 or EF2 tornado, but if the twister makes a direct hit on the structure, your safety may be in jeopardy. Tornadoes EF3 and higher will destroy homes even if they do not directly hit them. The winds generated by these storms can leave nothing behind but debris and bare concrete slabs.

Your first order of business should be to find your safe haven — a space or building that is structurally sound. This structure must be able to endure the forces of wind and strong enough to protect individuals inside from windblown debris traveling at high speeds. Storm bunkers can be installed under your garage and offer very good protection when there is a need to get below ground level.

You may have a basement under your home, which can offer good protection against flying debris. The key to safety when hunkering in a basement is to stay away from chimneys and try to find something structurally sound to get under in the event debris falls into the basement.

As a child, my parents always told me to go to the southwestern side of the basement and get under something. It’s a good idea to take a sleeping bag or blanket with you just in case you end up staying the night down there.

The third type of shelter is a storm bunker not attached to the home. A downside to this type of shelter is they are constructed at a distance away from the home. This requires the users to be exposed to inclement weather as they move from the home to the shelter. This shelter offers the maximum level of protection because, in addition to getting the occupants below ground, it also reduces the potential for home debris to fall and block safe operation of the door.

If having a storm shelter put in, plan to use only licensed companies with experience installing
them. Ensure your shelter door has a locking device on the inside to prevent an accidental opening during high-wind situations. We’ve all seen the beginning of the movie “Twister” when the door was sucked open. Once inside the shelter, lock the door and move away from the entrance.

Water
After you’ve worked out your safe shelter, water needs to be No. 2 on your survival list. Anticipate a need to store a minimum of three to five days of drinking water per person in the shelter. Add an additional 5 gallons for meal preparation and sanitation. Many survivalists use bottled water or large plastic containers to store drinking water in the safe haven. The type of container is a personal choice. However, after my adventure in Florida with no electricity, I’ve taken some additional precautions in the event it becomes evident it will be a long time before drinking water becomes available from the tap. At little cost, I built a water filtration system by using stones, sand and activated filtration charcoal to purify collected water and convert it to drinking water. These units can purify hundreds of gallons of water taken from the rain, streams or ponds.

If interested, there are good instructional videos available on building water filtration systems on YouTube. The Mayo Clinic recommends 15.5 cups of water a day for a male and 11.5 cups for a female. Temperature, activity, your gender and body structure are just a few of the factors used when calculating your needed water intake. The easiest way to plan for a drinking water storage is to place at least 1 gallon per day for each individual in the safe haven.

Weather radio/radio
After water, it is imperative you make connection...
to the outside world to determine what is going on in your area. Have at least one radio with several extra packs of batteries. You will have no outside communication during the time when electrical systems are down, and alerts and advisories from the local radio stations could be essential to your survival.

Try to purchase a survival radio that has the hand-charging feature in the event your battery supply becomes exhausted. The American Red Cross offers an emergency radio system that can recharge by either solar cells or hand cranking. The radio costs about $60 and also provides a port to recharge a cellphone. For more information, see the American Red Cross website.

**Food**

When stocking your shelter, in addition to items such as power bars and granola-type snacks, take into consideration the food group categories when planning. Three to five days of eating these products can provide sufficient nutrition to keep you alive but offer little additional extra calories. Unheated cans of soup, pasta products and dried meat can help fill in the gaps. Attempt to stay away from canned food products containing high levels of sodium.

Canned fruit and vegetables will also help ensure you’re receiving a stable diet during the event. My emergency food supply not only includes items in the meat, vegetable and fruit categories, but also some purchased packaged food items from survival food suppliers. Many of these products do require that water be added, but the meal offers nutrients and vitamins needed to keep the body functioning.

**Sanitation**

This is one area where I am currently researching to upgrade in my shelter. One person I know has a 5-gallon bucket in his shelter and just inserts a plastic trash bag in it for his sanitation needs. Another option is a marine chemical type of toilet that is commonly used on a boat. During my research, I even found a disposable cardboard type of toilet device that uses disposable bags. When the emergency event is over, you properly dispose of the toilet and used bags. The internet offers several options to address your shelter’s sanitation needs. Take the time to review them all and select what best fits your situation and the number of individuals staying in your save haven.

**Emergency lighting**

Some safe havens have windows or skylights that will offer some illumination during the daylight hours, but planning needs to be in place for evening hours. Small LED lanterns powered by batteries are a better choice over petroleum-based powered lanterns, which produce carbon monoxide and could present a fire hazard. Ensure your safe haven has at least two handheld flashlights along with several packs of new batteries. If kerosene lamps and petroleum-based lanterns are used, make sure there is adequate air movement in the safe haven space. An incoming fresh air duct, along with a strategically located exhaust duct, is very important when these carbon monoxide-producing devices are used in enclosed spaces. Included are propane or petroleum-based cook stoves, which also put off carbon monoxide. No matter what device is used, ensure the air within the space remains safe.

**Conclusion**

People survive disasters by putting forth the effort to plan for and prepare before the event strikes. As demonstrated in other national disasters, until resources can be mobilized and assembled in your area, you are on your own to care for your family and neighbors. Will you be prepared when it strikes?
Disasters don’t plan ahead. **YOU CAN.**
Make an emergency plan today.
#PlanAhead #NatlPrep

**YOUR LIFE, OUR LOSS**

When a Soldier dies in a preventable accident, it has a detrimental effect on the morale and welfare of the unit. That Soldier’s absence, however, extends far beyond the Army because often they also leave behind a heartbroken family, friends and colleagues. Remember, **IT’S YOUR LIFE, BUT OUR LOSS.**

[Visit](https://safety.army.mil)
Each year, thousands of workers are injured in slip, trip and fall mishaps. By improving hazard awareness and correcting unsafe workplace conditions, workers can protect themselves from becoming an injury statistic.

Slips, trips and falls were the second-leading cause of nonfatal occupational injuries or illnesses involving days away from work in 2013, according to data from the Bureau of Labor Statistics. The Occupational Safety and Health Administration's Walking-Working Surfaces Standard (1910.22(a)) states that all workplaces should be “kept clean and orderly and in a sanitary condition.” The rule includes passageways, storerooms and service rooms. Floors should be clean and dry, and drainage should be present where “wet processes are used.”

The Canadian Centre for Occupational Health and Safety (CCOHS) states that slips occur when there is not enough friction or traction between people’s feet and the walking surface. Common reasons for slips include wet or oily floors, spills, loose or unanchored mats, and flooring that lacks the same degree of traction in all areas.

Trips happen when a foot strikes an object, causing a person to lose his or her balance. Workers trip for various reasons, including untidiness in walkways, poor lighting, exposed cables, drawers being left open, and wrinkled carpeting or rugs.

The Centers for Disease Control and Prevention states that falls can happen in all occupational settings, and “circumstances associated with fall incidents in the work environment frequently involve slippery, cluttered or unstable walking/working surfaces; unprotected edges; floor holes and wall openings; unsafely positioned ladders; and misused fall protection.”

To reduce the risk of falling at work, CCOHS recommends workers pay attention to their surroundings...
SLIPS, TRIPS AND FALLS WERE THE SECOND-LEADING CAUSE OF NONFATAL OCCUPATIONAL INJURIES OR ILLNESSES INVOLVING DAYS AWAY FROM WORK IN 2013, ACCORDING TO DATA FROM THE BUREAU OF LABOR STATISTICS.

and walk at a pace that’s suitable for the surface being walked on and the task being performed. Slips, trips and falls can result in sprains and strains, cuts and bruises, broken bones, and sometimes disability or death.

To avoid slips, trips and falls, CCOHS recommends focusing on three main prevention methods:

- **Housekeeping:** Clean up spills as soon as they occur and mark slippery floors and surfaces with warning signs. Mop or sweep up debris from floors. Remove obstacles from walkways and secure mats and carpets with tape to ensure they remain flat. Close cabinets or drawers when not in use. Keep workplaces and walkways well-lit and replace burned-out light bulbs and faulty switches.

- **Flooring:** Walking surfaces can be made safer by replacing dangerous or unsecure floors, installing mats or adding abrasive strips.

- **Proper footwear:** In workplaces with oily or wet floors, or where workers spend a lot of time outdoors, proper footwear is important to prevent slipping and tripping. Because of the multiple hazardous conditions that exist, employers should consult with safety professionals to determine the best shoe for any particular job.

I was just four months out of flight school when I found myself deployed to Iraq. For the most part, progression was uneventful, except for those dust landings under night vision goggles. There was a lot to learn and a short period of time to do it.

About halfway through my tour, my pilot in command and I, a pilot at the time, were tasked to be flight lead for a five-ship mission. We had to escort Ambassador Paul Bremer from Baghdad to Irbil for an important conference. Irbil is located in northern Iraq, which mostly consists of mountainous terrain.

Before the crews launched our flight, we received our weather briefing, which forecasted clear blue skies the entire flight. As we neared Irbil, it started to snow and sleet, and visibility decreased to about one mile and then to about one-half mile with fog. Looking at the Doppler/GPS, we were about three miles from our destination. As we approached the landing zone, weather and visibility began to worsen and we, as a crew, decided to reduce our airspeed and announce the speed reduction to the other crews.

I was on the controls at the time and before I knew it, we were in instrument meteorological conditions. I announced to my crew, “I am IMC at this time, with no reference to the ground.” My PC still had reference to the ground, so he took the controls. It was only a minute or two later until the PC also lost reference to the ground.

Looking out my window, I could see the mountains, which were about 20 feet away from my right door. I announced it to the crew. At about the same time, my crew chief also announced mountains. The PC made a conscious decision to climb to avoid the mountains. We climbed almost straight up to about 10,000 feet and cleared all obstacles, but, since there was snow, we turned on our anti-ice and blade deice equipment, only to find out that the blade deice was inoperable. The PC was aware of the blade deice situation, but we didn’t anticipate snow and ice. We were able to contact Kirkuk control for radar vectors, which safely brought us into the airfield. After we went IMC, the other crews were able to remain visual meteorological conditions, and they returned to Kirkuk airfield as well.

After landing, we refueled, shut down, received a new weather brief and waited until the weather cleared before returning to Irbil. Flying that particular mission was a great learning lesson for me. It’s an experience that I revert back to whenever I fly any mission or find myself in a bad weather situation.

On another mission two years later in Afghanistan, I found myself
on a flight with the same unit, and, believe it or not, the same PC. We had a two-ship mission from Bagram to Forward Operating Base Orgun-E to deliver troops. For our return to Bagram, our weather briefing stated the weather was supposed to be clear skies and legal visibility our entire route of flight. About 30 minutes after takeoff, we hit a wall of dust with about a quarter-mile visibility. At that moment, we really had to weigh our options. Did we want to push on a bit farther and try to skirt around the dust, or do we turn around and bed down for the night because duty day was going to be an issue for us as well?

I was very stern on the decision to turn around and stay at Orgun-E for the night. The PC, who was also the air mission commander of the flight, wanted to keep pushing on to Bagram, or at least a bit farther to see if the weather would clear up. The escort crew was pretty adamant about turning around as well because they, too, were uncomfortable with the weather situation.

After staying at Orgun-E for the night, we woke up the next morning to find that the weather had blown over, so we launched back to Bagram. After returning to Bagram, we learned that another crew had launched to Orgun-E the day prior on a different mission. Despite the weather conditions, four ships took off and got stuck in the middle of the desert. They had to land due to limited visibility and wait for a quick reaction force team to drive out to them and establish a perimeter of protection until the weather cleared. That same day, our sister company had a supply and transport mission from Kandahar to Bagram in which the crew went IMC, overcontrolled the aircraft and crashed into the side of a mountain, resulting in 18 fatalities.

As you can see, weather in any environment can be just as dangerous, or even more so, than the enemy we are fighting.
While in Afghanistan on my fourth deployment, I was stationed at Forward Operating Base Findlay-Shields, which was one of the safest locations I’d been over the past 10 years. The FOB was just across the street from Jalalabad, and nothing much happened there during my entire stay — except for that one day.

FOB Findlay-Shields was primarily a base for National Guard Soldiers who worked as provincial reconstructive teams (PRT) and agricultural development teams (ADT). Their missions were more related to civilian assistance rather than combat. Our job as an active-duty cavalry squadron was to serve as the PRT’s and ADT’s force protection, as well as route security for the surrounding area.

On April 15, 2012, we were surprised by an enemy assault in which a vehicle-borne improvised explosive device was driven up against our base’s back wall and detonated. Immediately following the explosion, several insurgents armed with assault rifles and hand grenades made their way onto our FOB.

In an effort to encounter the least amount of resistance while inflicting the greatest amount of damage, the insurgents intentionally targeted the area where the PRTs and ADTs were housed in barracks huts, which are plywood structures about the size of a cabin that house 8-10 individuals. During the gun battle that ensued, the insurgents traveled from B-hut to B-hut, opening the doors and tossing one or more hand grenades inside. Due to the dry conditions and climate of the area, this caused several of the B-huts to catch fire. Because the Soldiers were focused on engaging the enemy and/or evacuating the area, the fires spread quickly.

My containerized housing unit was located about 50 meters from the breach point in the wall. Just after the explosion, I had quickly donned my protective equipment, grabbed my weapon and ran to where I could be of most help. While assisting an individual with a gunshot wound, I heard another loud explosion. My first thought...
was a second VBIED had detonated and this attack had just become much more complex and serious. A passing PRT Soldier told me their B-huts were burning and that the explosions were due to the C-4 some Soldiers had stored underneath their bunks. From the initial four B-huts that caught fire from the insurgents attack, another 22 buildings were on fire as the result of more than a dozen secondary C-4 explosions.

Once the insurgents were defeated, the area was cordoned off. No one was allowed to get within 100 meters of the B-huts, and local national firefighters were called because there were no resident fire personnel on the FOB. The local Afghan firefighters arrived on the scene 20 minutes later, but with the blazes out of control and the constant detonation of ammunition and hand grenades from Soldiers’ personal caches, the decision was made to contain the fire and prevent it from spreading rather than fighting it directly. This involved intentionally burning several other B-huts to create a fire break.

As a result of this incident, the FOB’s leadership was put under the microscope. The investigation focused on the lack of inspections of Soldiers’ quarters, the failure to follow Army regulations and standard operating procedures regarding the storage of explosives, and explosives safety. There was one casualty, an Afghan security contractor, and a few severe injuries.

This incident could have been so much worse. Had these explosives been properly stored, a lot of damage to equipment could have been prevented that day. The enemy we face is dangerous enough. There’s no need to make it worse for ourselves. ■

**DID YOU KNOW?**

The Range & Weapons Safety Toolbox is a centralized collection of online resources for managing range operations and safe weapons handling. The toolbox hosts various references and materials, including publications, training support packages, multimedia products, ammunition and explosives information, and safety messages and alert. Check it out at https://safety.army.mil/ON-DUTY/Range-and-Weapons-Safety-Toolbox.

“**THE ENEMY WE FACE IS DANGEROUS ENOUGH. THERE’S NO NEED TO MAKE IT WORSE FOR OURSELVES.**”
M y friends and I were pumped for the upcoming bow-hunting season. For the past 11 years, Mike, Scott and I faithfully got together to hunt on a 600-plus-acre farm we signed a lease to use. For us, the property is sort of a retreat from the everyday grind because it’s very secluded and has few amenities. Therefore, our wives and kids have no desire to go. This particular trip was unique, with many factors that nearly culminated in a tragic outcome.

For this trip, we decided to use Mike’s camper. The three of us planned to meet after work in a small town about 15 miles north of the property. As usual, we’d eat some world famous Taylor’s chili before heading to the farm to set up our campsite. After we set up camp, it was time for the festivities to begin. As it grew later, though, we knew our 3:30 a.m. wakeup would come quickly, so we decided to call it a night.
Sure enough, 3:30 a.m. rolled around and I was the first one up and dressed. I made coffee and took pleasure in waking up my foggy-headed cohorts. I stayed out of the heavy grog the night before because I didn’t want to be impaired or fall asleep in my treestand as I had done numerous times in the past. It was cool and drizzling that morning — an unexpected twist, but nowhere close to a showstopper — so everyone dressed accordingly. Once everyone was dressed, we headed off for our first big hunt of the season.

It was an unwritten rule that when we stayed in the camper, we’d hunt the back quarter of the property. This section happens to be the most inaccessible by vehicle because it has steep ravines and two creeks — which may or may not be raging — running through it. Before we left, we discussed where each of us would hunt and when and where we’d rendezvous. We also talked about what protocol we’d follow if a deer was taken and how we’d link up to help each other out if someone bagged the big one.

By 4:15 a.m., we had split up and were cautiously navigating our way through the pitch-black timber. To get to our stands, we used GPS routes and reflective tape on certain trees, spaced about every 100 meters. The tape was visible by the small LED headlamps we all wore. Lastly, we relied on our strong familiarization with the land we’d hunted on for more than a decade.

I got to my stand at about 4:45 a.m. The hike in was challenging, but as the season progressed, I knew it would become easier. I secured my gear to the tag line and I tied off my retractable fall protection (all of our stands had retractable fall protection installed to arrest our descent should we slip) before starting the 21-foot climb to my humble — yet comfortable — platform. About 10 a.m., I realized I’d been skunked, so I decided it was time to head back down for the rendezvous.

When I reached the rendezvous point, Scott was the only one I could see from a distance. By 10:30 a.m., Scott and I knew it would become easier. I secured my gear to the tag line and I tied off my retractable fall protection (all of our stands had retractable fall protection installed to arrest our descent should we slip) before starting the 21-foot climb to my humble — yet comfortable — platform. About 10 a.m., I realized I’d been skunked, so I decided it was time to head back down for the rendezvous.

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Although many years have passed, I distinctly recall the practical exercise on changing a tire as a young private just starting my military career. The reason why this memory stands out is due to a run-in with a particularly loud and brash drill instructor who happened to see me working without eye protection. The ensuing 15-minute PT session ensured I learned one thing — personal protective equipment is important.
About a decade later, just after flight school, I began to notice that I was now a bit more safety conscious about certain things than I had been in the past. I take flying seriously and have always incorporated safety into all of my duties. As I became more aware of the safety measures I was taking as a Soldier, I also started to incorporate those same measures at home. Those safety measures are what saved my vision. Here’s how.

My unit was about 30 days away from our next deployment to Iraq, and the list of fix-it chores around the house was growing. One of the issues I was tackling was a leaky basement window. The wooden frame around the window was rotten, and when it rained, water from the driveway poured into our finished basement. My plan was to remove the window, tear out the old frame and then put it back together with treated lumber. After spending the morning gathering the needed supplies and tools, I donned my eye protection and started the destruction process. One of the tools I was using that day was a 15-inch steel pry bar. It came in handy after I removed the window and started to pry loose the rotten wood around the frame. Most of the pieces came out without too much pressure, but, of course, there’s always that one stubborn piece that refuses to budge. In this case, that stubborn piece was the 36-inch-long block of wood seated (firmly, I might add) horizontally across the bottom of the frame and fastened to the cement with sinker bolts.

I’d tried to remove the bolts with a ratchet, but they were so old that the head of each one snapped off with any reasonable amount of force. I then moved on to Plan B, wedging the pry bar under the wood and forcing it free. Being that this was a basement window, the lowest point of the frame sat right at the six-foot mark from the floor. As I tried to get an angle that allowed me to use as much leverage as possible, I found myself directly under the tool with my foot braced against the wall. After a few minutes of applying steady pressure with no luck, I decided my next course of action was to yank on the pry bar in a bouncing motion to use my body weight. On the fourth or fifth bounce, it happened. The wood gave way right as I was applying the maximum amount of pressure on the bar. I came crashing down on the floor with pieces of wood landing around me. Stunned disbelief quickly turned to shock when I realized the pry bar was still in my hands and the claw end firmly embedded in my nose!

I took off my safety glasses, gently removed the pry bar from my nose and applied pressure to the wound. I then made my way upstairs — rather calmly, I must say — and went to the bathroom to assess the damage to my face. My fears were confirmed when I looked into the mirror and saw my nose had shifted considerably to the left side of my face. To make matters worse, there was also an almost three-inch gash where my nose had once been. I grabbed a clean hand towel and reapplied pressure as I pondered my next step. Obviously I needed medical aid, but since we lived in a fairly rural area, that meant I’d have to call 911 and then wait about 15 minutes for the volunteer fire department to arrive. Rather than wait for assistance, I just drove myself to an emergency room a short distance away. It took about an hour for the doctor to properly clean the wound and glue it shut. I was lucky. My nose was broken, but that and the large cut on my face was the extent of the damage.

Later that evening, when I recreated the accident to explain to my wife what had happened, I noticed the safety glasses. Dead center on the right lens was a two-inch gash that started just above the eye and ran down to the bottom, toward the bridge of my nose. The glasses worked as advertised and deflected the blow away from my eye. That’s when it dawned on me that had it not been for the safety glasses, I probably would have lost my right eye — or worse.

I consider my incident a lesson learned. I did contribute to national accident statistics due to my fall, injury and hospital visit, but it could have been much worse. Next time you decide to work around the house, remember this: PPE has its place during all jobs, whether at home or the hangar, no matter how trivial the work may seem.
Many years have passed since my elementary school days, and I now find myself in a safety specialist position in a healthcare setting. As part of our duties in the safety office, we are responsible for scheduling and accomplishing fire drills throughout the year within our numerous healthcare facilities. I have learned that the saying “use it or lose it” rings true for how we react to fire drills as adults. Sadly, I have witnessed with my own eyes a vast majority of employees give the deer-in-headlights look when asked to respond to a fictional fire. They have no idea where fire extinguishers are, where fire pull handles are located (near the exits) or even where alternate exits are.
located. This is pretty unnerving and quite scary for a safety professional! All too often workers are killed or seriously injured by a fire or explosion in the workplace. Educating workers on fire safety and exit procedures during a fire drill allows them to practice and fully understand vital response activities.

Fire drills assist employees in awareness of the locations of important elements within their workplace, such as the location of fire pull handles and alternate exits. Activating a fire pull handle notifies co-workers and emergency responders of an emergency situation. Knowing where all exits and egress points are located is important in the event an evacuation is necessary or if an exit is blocked.

The National Fire Protection Association (NFPA) designates a week each October to remind us all of the importance of fire safety. Fire Prevention Week for 2019 is Oct. 6-12 and themed “Not Every Hero Wears a Cape. Plan and Practice Your Escape.” Information from this year’s Fire Prevention Week is geared toward empowering everyone to be aware of fire safety. Awareness of fire safety at home and in general enhances fire safety in our workplaces.

Employee engagement and ownership of safety within the workplace is essential to responding correctly to emergency situations. The next time you hear a fire alarm at work or at home, react as if it were a real-world incident. Never assume others will react for you. For more information on workplace fire safety, visit NFPA’s website at https://www.nfpa.org/Public-Education/Staying-safe/Preparedness/Fire-Prevention-Week.
ON-DUTY FATAL MISHAPS

AVIATION
- A 33-year-old Major assigned to Fort Polk, Louisiana, died in an aviation mishap on the installation. The crew was conducting a MEDEVAC mission when the aircraft crashed during landing.

TRAINING
- A Private First Class assigned to Fort Sill, Oklahoma, died following a training mishap in Oklahoma City, Oklahoma. The Soldier was digging a hasty fighting position when he began showing signs of dizziness. He was treated with ice sheets at the scene before being transported via ground ambulance to a community hospital. The Soldier was later air evacuated to an Oklahoma City hospital and placed in the intensive care unit, where he died.

OFF-DUTY FATAL MISHAPS

PMV-4
- A 26-year-old Specialist assigned to Fort Campbell, Kentucky, died in a PMV-4 mishap near Manchester, Tennessee. The Soldier was riding as a passenger in a vehicle when the driver lost control and crashed. He was ejected from the vehicle as it overturned and pronounced dead at the scene.
- A Specialist assigned to Fort Bliss, Texas, died in a PMV-4 mishap in Charlotte, North Carolina. The Soldier was riding in the back seat of a passenger vehicle when the driver attempted to make a U-turn. A motorcycle struck the vehicle, and the Soldier was pronounced dead at the scene.
- A 26-year-old Specialist assigned to Fort Stewart, Georgia, died in a PMV-4 mishap in Hinesville, Georgia. The Soldier was traveling on a highway when he was ejected from the vehicle, which landed on him. He was pronounced dead at the scene.

Sports and Recreation
- A Specialist assigned to Fort Sam Houston, Texas, died in a swimming mishap in Spice Wood, Texas. The Soldier was cliff diving with others from his unit when he slipped, fell into the water and failed to resurface. His body was later recovered by authorities.

4TH QUARTER FY19 ARMY MILITARY MISHAP FATALITIES

TOTAL YTD: 27

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<td>6</td>
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as of 30 Sep 2019
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• The right conditions can help set up anyone for failure when it comes to cold weather injuries, regardless their rank, age, fitness level or gender.

• Leaders must be present among their Soldiers and remain alert for the signs and symptoms of a cold weather injury.

• Cold weather injuries sideline Soldiers and impact a unit’s readiness. However, it’s just as important for Soldiers to take their cold weather training home and share what they’ve learned with their loved ones.

COLD WEATHER INJURY PREVENTION

Take advantage of the risk management process and tools the Army provides to help keep you safe. Remember, IT’S YOUR LIFE, BUT OUR LOSS.

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