



The Safety Beacon is for informational purposes. Simply reading the Beacon does not satisfy your monthly safety education requirements, but unit safety officers are encouraged to use the articles in the Beacon as topics for their monthly safety briefings and discussions.

January 2015

Winter Driving Hazards

A CAP Member Lives to Talk About It

By: 2Lt Brett Kollar, CAP



It was mid-November and I had been participating in Operation “America’s Shield” in Port Clinton, Ohio as part of an aircrew. I was not scheduled to be flying on Sunday and had a personal commitment to take care of on Monday so I headed home for a couple of days off from the mission.

On Tuesday, I wasn’t scheduled to be flying until around 1800 local that evening and had plenty of time to get to mission base without being rushed. I decided to leave at 1300 for the two-hour drive. This would give me plenty of time to get there and be able to prepare for the sortie that evening.

Looking outside, it appeared to be a beautiful clear sunny day with about a quarter inch of snow on the ground from the previous day. The weather however, was unseasonably cold for that time of year, 18 degrees, and I was

not looking forward to being in a cold plane that evening. “Better bundle up,” I thought to myself. It was not only cold but the wind was gusting up in the thirties.

I drive a 2005 Jeep Wrangler. While it doesn’t drive like a sports car or have the luxuries of a modern SUV (it has roll up windows), it has served me well and has never left me stranded. My travels on this day would be about 100 miles on rural roads. Based on the weather forecast before I left, I was expecting patches of snow showers, blowing snow, and wind along the route.

The first hour of the drive was pretty uneventful; I encountered a couple of light snow showers as was expected. The pavement was dry and the traffic was fairly light, most likely due to the cold. The winds however, were a bit challenging and I was thinking how nice it would be if cars had rudders.

I got off at my exit and continued down a country road toward my destination. The road was a typical Midwestern rural road surrounded by nothing but flat cornfields that had been plowed under for the winter. Ahead I could see the snow blowing across the road, drowning out the bright sun that filled the blue sky. “Better slow down,” I thought.

I reduced my speed to about 10 miles under the posted speed limit. I was now in the blowing snow; the street was covered with white and nearly indistinguishable from the surrounding areas. I was following the car in front of me to maintain orientation when I realized that I was closing the gap between the two vehicles. I looked at the speed, 37 MPH, and took my foot off the gas. That is when it happened...

The back end of the jeep broke and started sliding to the left. Steer into the slide I thought. The back end straightened out but kept sliding to the right. Steer into the slide. It swung round to the left again. This time I was sliding out to a point where I didn't think I could recover. I was now headed straight for an open cornfield.

In that brief moment, I figured my safest action would be to get the vehicle into the open field where I should be able to gain control without the ice. I was about half right. Into the field I went. No trees, poles, or mailboxes to worry about. The vehicle continued to slide sideways until the wheels must have caught a rut in the plowed field because now, instead of moving sideways, I was watching the corn get closer to my passenger side window.



When I finally stopped moving, I was hanging inverted from the driver seat, supported only by my seatbelt.

I had my cell phone on the car charger and was able to pull the phone in like some fisherman trying to keep his fish on the hook, hoping it wouldn't fall off. When it was retrieved, I called 911 and reported my location and that I was uninjured (other than my pride) but would need to make a police report.

Looking back at this day, there are some things that I learned that I felt should be shared with others.

Respect the weather and look for unusual conditions.

I took the clear sunny day for granted. I didn't even consider that the warm sun on the black pavement covered with snow might have melted and formed ice. I didn't think until afterwards that salt, if it was even down on the road, doesn't melt ice at temperatures below 22 degrees. It didn't make me feel any better, but the Sheriff who responded to my accident stated that I wasn't the first rollover of the day. There was one earlier that day; the only difference was that their car came to rest on its wheels.

Seat belts work!

I was impressed with how well the seat belt restraint system actually worked. While this wasn't a frontal impact where the seat belts are designed to keep you from going through the windshield, the seat belt kept me firmly in my seat, up to and including an inverted position. I was able to walk away from the accident with nothing more than hurt pride. The seat belt worked so good, that it was a bit of a challenge to get it to release under tension. I had to pull myself into the seat while inverted and push the seat belt release button at the same time.

Things look different upside down.

It is your vehicle and you get in and out of it every day but when was the last time you tried to get in and out of your vehicle when it was upside down? Things are different. Way different. Like that upside down house at the amusement park different. The doors seem to open backwards. Things fall the wrong direction when you let go of them. Know where your exits are and how to get them open without having to look at what you are doing. The inverted image picture can disorient you.

Anything that isn't secured is a projectile.

I never realized how many things in the vehicle were not secured until it went upside down and everything loose fell into the roof. Fortunately for me, I had a cargo net behind the back seat that I would throw loose items into and it acted as a barrier between the front seats and the cargo area in the back.

The coffee mug in the cup holder, the loose change, the cell phone placed on the seat, the hat and gloves, they all became airborne once I was upside down. Had this been a frontal impact, the same items had the potential to keep moving and do damage to the occupant. Secure as much of your belongings as you can. This includes your passengers with seat belts.

Dress for the weather.

My mother used to always tell me to make sure I had clean underwear on in case I was ever in an accident. I would like to take that wise advice a step further and say always dress for the weather or have clothing available for the conditions. The feel like the temperature that day with the wind was right around zero. I was pretty well layered because I had prepared to be in an airplane later that evening, but even with my layers it was cold outside. Had this happened in an area where the vehicle couldn't be seen, on a road not well traveled, or during severe weather when no one was out it could be the difference between life and death.

Be prepared for anything.

I know this is easier said than done, but there are some things you can do. Remain calm, think before you act, talk about "what if" scenarios and how you would handle them, and if you are like me, share your real life experiences so that others can learn at your expense.

About the author: 2Lt Brett Kohler joined Civil Air Patrol in September 2012. He is an active pilot and a squadron Emergency Services Officer in the Ohio Wing.



“Hangar Rash”

Those Preventable Mishaps That Always Seem to Happen to Someone Else

By: *An Anonymous CAP Member*

“Hangar Rash”, the term for damage to aircraft that occurs when moving an aircraft on the ground, accounts for far too many preventable mishaps in aviation. We’ve all heard the story of someone else’s misfortune, and have been at the receiving end of numerous training lectures/videos that cover ground mishap prevention. So why do these mishaps keep occurring?

As a Naval Aviator, I understand the importance of the “Ready Room Stand Up” where an unlucky or unfortunate pilot gets the “opportunity” to stand up in front of a group of their peers to brief them on his/her flying related incident in the hopes that their mistakes will translate to lessons learned for other aviators, in turn hopefully preventing future mishaps. So please take a moment to allow me to share my misfortune with my fellow CAP aviators.

I was wrapping up a pretty long day at work, and wanted to get in some last minute CAP proficiency flying before the aircraft was rotated out of the local area. After the aircraft was moved to an unfamiliar small field for a static display during a fly-in, it was placed in a shared hangar tightly packed in with two other aircraft. The field was unfamiliar to me, but still within driving distance so I figured I could shoot a few approaches and still have time to spend an evening with my wife and son before going to the aircraft carrier for a week.

Before joining the Navy, I was a regional airline pilot and CFI who got his start as a CAP cadet, so even as a fighter pilot, I was no stranger to general aviation or Civil Air Patrol. When I joined our local CAP unit after being assigned as a Navy instructor pilot nearby, I was eager to start recruiting and make the case for basing a CAP aircraft in the local area.

In addition to being unfamiliar to me, the airfield was also not heavily staffed or very active. The only person on the field when I arrived to fly was a very nice lady who managed the airfield and seemed otherwise occupied, and I felt a little bad for having to trouble her to unlock the hangar door. When she asked if I needed fuel or anything else, I replied no, trying to be nice and fully confident in my ability to safely get the aircraft pulled out of the hangar. This would turn out to be a big mistake, and one I would later end up regretting – Mistake #1.

They say accidents in aviation are a series in a chain of events, or holes in Swiss cheese lining up. My overconfidence and politeness led to my lack of recognition of this error, and a missed opportunity to break that chain.

As I struggled to open the difficult and sticky hangar doors, I caught my breath and hooked up the tow bar. I couldn’t help but notice how close the CAP Cessna 182 was parked to the hangar wall on the right and a pristine PT-19 Warbird on the left. “I should have asked for help when I had the chance,”

I thought, but the airport manager was nowhere in sight, nor was any other pilot that time of day during the week.

I didn't want to miss this last minute opportunity for some CAP flying before the airplane was moved out of the area, so I decided that my experience level offset the increased risk of moving the aircraft alone – Mistake #2. What I failed to take into account was the tight unfamiliar hangar, and stripes painted on the hangar floor which I later found out did not guarantee wingtip clearance on a Cessna 182.

As I carefully and slowly maneuvered the heavy aircraft forward, I struggled to maintain situational awareness to both wingtips and the tail, which seemed fairly close to the wing of that PT-19. After a few corrections with the tow bar, I breathed a sigh of relief as I calculated the CAP Cessna was safely clear of the other aircraft. As I was sweating and struggling to maintain the appropriate level of awareness of clearance of both wingtips and the tail, I should have recognized I was in over my head – Mistake #3.

I kept inching the aircraft forward, and noticed the left wingtip of the 182 was coming close to the partially open hangar door on the opposite side. Just as I decided to stop the aircraft and assess the wingtip position, the right main tire rolled onto a declining slope at the door threshold, quickly accelerating the aircraft forward. Before I knew it, the left leading edge contacted the hangar door with a gut-wrenching thud.

At that moment, I became instantly humbled, and a victim of yet another preventable ground handling mishap. After collecting my thoughts, I pushed the aircraft back into the hangar and began the CAP mishap notification procedure, notifying my chain of command. As I looked at the fairly sizeable dent in the left leading edge with disbelief, I knew that I just become that “someone else” who had a ground handling mishap.

What I learned from this mishap, first and foremost – no matter what the experience level, confidence, or comfort with the local surroundings, **NEVER move an aircraft alone**. There is no CAP mission that justifies the increased risk level of moving an aircraft solo. Using ORM principles, the risk level increases exponentially when moving an aircraft by yourself. As they say in aviation, rules are written in blood, and just as we wouldn't send an aircraft up on an actual SAR mission solo, don't move one on the ground solo either.

Second lesson learned: Never be too proud to ask for help. If no help is available, maybe it would be best to cancel the flight and get the mission accomplished another day.

Third and final lesson learned: No matter what the experience level, it CAN happen to you! Even a CAP Check Pilot, a US Navy Fighter Pilot who instructs new pilots on carrier landings, and a seasoned professional aviator with over 3,300 flight hours can have a ground mishap. So can you!

About the author: This CAP member is an experienced Navy and General Aviation pilot who graciously consented to have his story published here. His identity was withheld at the request of his Commander.

Everyday Risk Management

'Don't Forget to Be Afraid'

By: George C. Vogt, CAP Chief of Safety

Last month we talked about looking both ways before you cross the street. That's a lesson we all learned as children, and it's a perfect example of how Risk Management is, and should be, a part of our daily lives.

This month I'd like to talk about a trait that comes naturally to children but we sometimes forget, or refuse, to use it as adults. Whenever small children face a new challenge, their first reaction is to be scared. A toddler is afraid to walk up and pet the big dog in the park. A young child clings to his parent when he sees a stranger. A small boy won't go close to the fire. A little girl won't jump in the pool unless daddy is there to catch her.

In each of these cases, it appears that the child has recognized that something could go wrong if they approached the "danger." As adults, we should teach children that recognizing dangers is good, and we should help them think about whether or not that challenge they're facing is really as scary as they think, or if it can be made less scary.

All of this behavior, quite simply, is what we are teaching in Risk Management.



Let's look at the toddler who is scared to jump in the pool. There are very real dangers there. But what if her parents give her water wings or a life preserver, and show her that she can float in the water. Maybe they can get her comfortable splashing around. And maybe, just maybe, if daddy goes in the pool to catch her then jumping won't be so scary and she'll do it with a smile on her face.

You don't have to use your imagination to see a great example of risk management there. The water presents some very real hazards, and if she were to fall in, there would be a very real risk of drowning.

Before the child jumps in the water, that risk needs to be mitigated. Becoming acclimated to the water, wearing water wings, and having daddy in the pool to catch her, are the risk mitigation measures that reduce the risk to an acceptable level. Now she's ready to jump!

That is how we need to approach everything we do in our daily lives, and everything we do in the Civil Air Patrol. Risk management means recognizing hazards and taking the time to mitigate the risks.

James Reason, Professor of Psychology Emeritus at University of Manchester in England, is one of the foremost scholars in the discipline of safety psychology and risk management. He summarizes safety down to its essence when he writes, "In short, it means not forgetting to be afraid."

I can tell you the best pilots I've ever known are a little afraid (or a lot, depending on the mission) every time they go out to fly. But they use that fear to stay alert to the hazards and mitigate the risks. They ask themselves, "what can go wrong and what can I do to fix it?"

Carry this same attitude with you every time you push an airplane into a hangar. Every time you lead a group of cadets. Every time you set out on a ground search. Every time you cross the street. What can go wrong and what am I doing to fix it?

Above all else, don't forget to be afraid.

CAP Tip of the Month: **Monthly Safety Education Training**

By: Col Bob Castle, CAP Assistant Chief of Safety

“You mean they knew this was a good idea way back when?”

The requirement to maintain monthly safety education was established by regulation several years ago, but the idea for monthly safety meetings goes back *much* further. We found a Safety Officer Manual from 1963 with a list of monthly ground and air safety topics. The thought was (and still is), that if members are educated about the risks associated with our operations, they'll be better prepared to detect hazards and avoid mishaps. So you see, the idea of keeping our members from getting hurt and protecting our equipment isn't new. The current 62-1 formalizes the tracking in eServices and requires that members be safety education current in order to participate at CAP activities.

“So, when does my currency expire?”

While you're encouraged to further your safety education throughout the month, only the first briefing or course completed will update a your currency. For example, let's say you receive a safety education briefing on 1 January at the regularly scheduled squadron meeting (your unit is so dedicated that they don't even take off for New Year's Day!). When uploaded into SMS, it will reflect your safety education currency through 28 February. Let's suppose you then take an online safety module on winter driving hazards on 14 January and complete an OSHA course at work on 21 January. Your currency will still expire on 28 February until you complete another safety education event after 1 February.

The Primary Means...

Most members accomplish this requirement by receiving a briefing on a safety topic during one of their regular unit meetings. This "in person" or "face to face" presentation is the most effective way to obtain meaningful training. You have the opportunity to ask questions about the topic and the briefer gets real time feedback on the effectiveness of the briefing. The presenter can tell right away if the audience is receiving the message or not. An enthusiastic group of members jumping up and down and engaging in a positive discussion is a sure sign that they're paying attention. Members dozing off during a boring lecture on some droll safety topic is indicative that the safety message is *not* getting through.

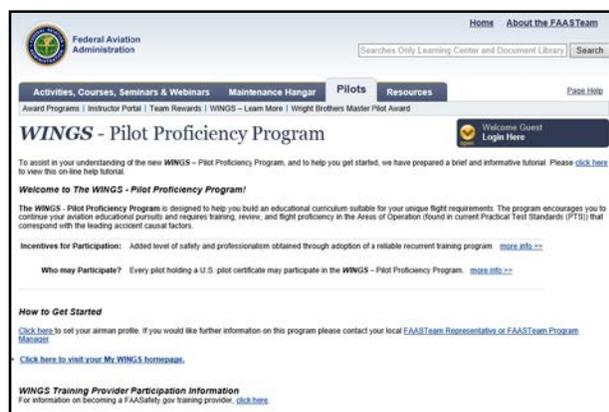
We'll cover how to make your presentations more effective in a future article, but right now, we want to discuss how members can keep their safety education current if they miss the monthly safety briefing at the unit.

“So, I missed the safety meeting...HELP!”

You can obtain a safety education briefing telephonically (considered an "in person" briefing) from a safety officer or commander. It's important that the education is recorded in eServices regardless of how the education is obtained. Make sure you check your eServices record to see that your safety currency was updated.

As an option, you can take one of the safety education modules available in eServices on the Safety Management System page. You may also complete online courses or seminars offered by the FAA Safety Team, the Aircraft Owners and Pilots Association and LearningZen websites. Safety education offered at school or work may also be used to satisfy your monthly requirement.

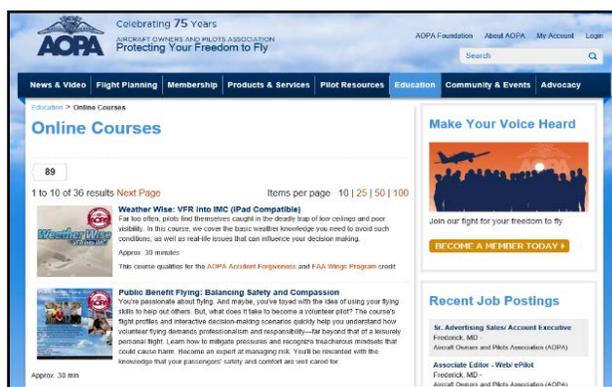
Courses taken in eServices automatically update your currency when complete. FAA, AOPA and LearningZen courses will also update your currency *IF* you have entered your CAPID on the FAA safety webpage. LearningZen will also update a member's currency provided they register for an account using the same email address used to establish their FAA account.



It's important to note that you don't have to be a pilot to register on these websites or take online courses. To register on the FAA Safety site go to <https://www.faasafety.gov> and complete the simple steps to register. Once the account is validated and active, go to the user profile tab and enter your CAPID in the field provided. You'll now receive automatic CAP safety education credit for any courses completed. This includes any of the courses, seminars and flight activities listed in the FAA catalog.

Remember that the FAA won't update your CAP safety currency until the day after you complete the online course. Seminars may take a little longer since the person hosting the event will have to input and validate all the attendees.

Online courses at the AOPA website are well illustrated and incorporate animations and audio. While most of the topics are geared towards pilots, there are a few that are of interest to the non-flyers such as weather, airport security and others that will improve everyone's aviation knowledge. The AOPA Air Safety Foundation offers quizzes, videos, mishap reports and lots of other information that, while not good for safety education credit are worth taking a look at to improve your aviation and safety understanding.





LearningZen is a website that offers aviation related courses as well as a host of other non-aviation topics. There are courses on everything from Architecture to Travel. They have 30 aviation related courses for credit and another 10 Emergency Preparedness courses which will all give you safety education credit.

“Well, what about The Safety Beacon?”

The Beacon, by itself is designed to be included as *part* of a unit’s monthly safety education presentation. There should be an accompanying presentation to supplement what’s in the Beacon, but Beacon articles can be a good source of topics and discussion starters.

We’re working hard to expand the Beacon and make it of more benefit for all our members. If you have a topic you’d like to see addressed in this space, or feel the urge to contribute and article, drop us a line at: [CAP Safety](#).

Social Media Smart Cards

Learn About Your Privacy Settings

Everyone has heard horror stories about identity theft, and we’ve all got concerns about who can see information on our social media accounts. Facebook, Twitter, and all the rest are a lot of fun and allow us to keep in touch with our friends but how many of us really know how to find and adjust all those privacy settings so we know that only our friends are seeing what we post?

Here are some great links that will walk you through the privacy settings, and provide other important security information about Facebook, Google, LinkedIn, and Twitter.

Click, read, learn, and keep you and your children safe....

- [Facebook Smart Card](#)

- [Twitter Smart Card](#)

- [Google Smart Card](#)

- [LinkedIn Smart Card](#)

November 2014 Mishap Closeouts

Col Robert Castle, Assistant Chief of Safety

15 Bodily Injury, 2 Aircraft, 4 Aircraft – other, 1 Vehicle, 1 Vehicle - other

Bodily Injury

- Cadet collapsed during in-ranks inspection.
 - After resting, cadet felt better. No further treatment required.
- Cadet was doing jumping jacks in the parking area outside the CAP building. On his fifth repetition, he rolled his left ankle. The cadet continued to do twenty more jumping jacks before reporting that he had sustained an injury.
 - Cadet was assisted inside and did not participate in any additional activities that night. No further treatment required.
- Senior member fell and scraped knee and injured left wrist after catching heel against cement end of wheelchair ramp and asphalt pavement.
 - First aid administered. Member had injured wrist x-rayed the next day. Bruising, but no broken bones.
- Cadet was running the mile for PT and tripped on a roadway speed bump resulting in a small scrape on the left knee.
 - Treated with ointment – no further treatment required.
- A cadet sustained a twisted ankle during PT.
 - Wrapped with ace bandage and treated with ice. No further treatment required.
- Cadet in formation passed out.
 - Cadet examined by emergency room personnel and determined no injuries beyond contusions to side of face and small cut on ear. No further treatment required.
- Cadet in formation passed out.
 - After resting, cadet felt better. No further treatment required.
- Cadet slipped/tripped while conducting PT Test and skinned knee and palm on pavement.
 - First Aid administered. No further treatment required.
- Cadet tripped and skinned right knee.
 - No treatment required.
- Cadet was kicked in the outside part of the left knee while playing ultimate (non-contact) football.
 - Cadet rested with affected knee elevated. No further treatment required.

- Cadet suffered small cut on the palm of the hand while building robot.
 - First aid applied. No further treatment required.
- Cadet twisted ankle during the physical training portion of Activity Day.
 - The cadet sought follow up medical treatment and was diagnosed with a sprained ankle. No further treatment required.
- Mission Observer reported a sprained back after a hard landing.
 - Pre-existing condition. Member received treatment from a chiropractor. No further treatment required. Aircraft inspected and no damage noted.
- Cadet cut finger with pocket knife during aerospace activity.
 - First aid administered. No further treatment required.
- Cadet slipped while performing CPFT Shuttle Run and suffered abrasions to lower left leg and right knee.
 - First aid administered. No further treatment required.

Aircraft

- While taxiing, a corporate aircraft wing tip collided with a privately owned aircraft wing tip.
 - The privately owned aircraft suffered a cracked wing tip and broken strobe light. The wing tip of the corporate aircraft sustained scratches to the paint.

Aircraft-Other

- The right main tire went flat on roll out after landing.
 - Maintenance inspected the tire/tube assembly and discovered a failed point on the tube, which allowed the tire to deflate.
- While conducting glider orientation flights, the pilot recognized a potential conflict with another aircraft departing the opposite direction on the same runway he was approaching for landing. The CAP pilot elected to land on another runway and avoided a potential collision.
 - No injuries or damage. Well Done!
- Upon post flight inspection, the tow hook and tail cone were discovered damaged.
 - The cause of the damage could not be positively determined. The tow hook and tail cone were repaired and the aircraft returned to service.

- After maintenance for oil change and spark plug cleaning, a CAP Pilot taxied the corporate aircraft to the hangar located on the same airfield as the maintenance shop. On engine shutdown, the pilot heard a metallic 'clang'. After exiting the aircraft, the pilot discovered a 1" box/open end wrench approximately 12 to 14" long lying on the ground.
 - The aircraft was inspected the next day and no damage was found. The wrench was left in the engine compartment by the mechanic who serviced the aircraft.

- During flight, the ammeter indicated a discharge. Resetting the alternator was unsuccessful.
 - Reduced electrical load and returned to base uneventfully with no injuries or damage. Maintenance repaired a failed alternator field circuit.

Vehicle

- A privately owned vehicle struck a parked corporate owned vehicle.
 - Minor damage to COV and no injuries.

Comments on the November mishap report closeouts

First off, everybody is doing a great job of reporting! It's important to remember that the reason we report mishaps and why we're publishing them in The Beacon is to make people aware of the *hazards* we face in our various missions. Perhaps you can relate to one of the mishaps you just read above. If you're in charge of supervising the Cadet Physical Fitness Test, maybe you'll walk the running area before the next test and make sure there aren't holes or debris for cadets to trip on. You might check that the running area is well lit so people can see where they're running.

If you're picking up an aircraft after maintenance has been performed, make sure your preflight inspection is extra thorough. Look for missing screws on inspection panels, shop tools and rags that might have been left in the airplane. Post maintenance flights should always be scheduled for daytime, VFR conditions. Make sure everything is really put back correctly before launching at night or bad weather.

Things change over time and new hazards may have popped up since you last looked at an area. It's a good idea to have a fresh set of eyes look at your area to detect hidden hazards that you may have been overlooking because they've always been there.

The bottom line is that hazard identification and risk mitigation is an ongoing process and requires everyone's participation to be successful.

See you next month!