



The

Safety

Wire

July 2016

Watch it! Sometimes, all it takes is a verbal slap in the face to avert a quickly

unfolding disaster. Anyone who has been through flight training has been subjected to numerous of these wake up calls. It is one of the main functions of a flight instructor. Instead of correcting a problem themselves, instructors allow students the opportunity to do so by simply calling out things like, “watch your bank”, “slow down”, “does it look like we’re going to make the runway?”



In most cases, the student has lost situational awareness (SA). Though SA can be snatched away in a moment, it can also occur slowly, eroding away without notice. However it is lost, we can often regain SA in an instant if the correct remedy is applied. The correct remedy is simply a piece of critical information that helps snap the picture around us back into focus.

Crew resource management (CRM) is a powerful means of correcting loss of SA. A TFO, second pilot or other crew member can make the same call outs to the pilot that an instructor does. Think of inadvertent entry into instrumental meteorological conditions (IIMC). A TFO

calling out a loss of airspeed, or increasing bank, could be the key to helping the pilot maintain aircraft control. To use this resource, however, the crew must be trained on what to look for and what to say when the times comes to help out.



Education and training are critical to obtaining and maintaining situational awareness. Often, we work in the same place, with the same aircraft, doing the same mission for a long period of time. Problems creep in unnoticed. It is only when we take the time to read a magazine, watch an online training video, attend a conference, sit in a class or swap war stories

with others that our eyes are opened up to things we didn't even know were happening around us. Our situational awareness is shoved back in place sometimes without us even realizing it was out of place to begin with.

To make sure your SA is properly maintained, take the time to tap into one of the many free resources of information available, such as the classes on the ALEA website. Just five minutes a day could save your life.

*"It is foolish to mourn the men who died.
Rather, we should thank God that such men existed"*

~ General George S. Patton

Resources

Free online resources:

ALEA Online Training: <https://www.pathlms.com/alea/>

IHST Reel Safety Videos: <http://ihst.org/Default.aspx?tabid=3210>

FAA FAASafety: <https://www.faasafety.gov>

SKYbrary: http://www.skybrary.aero/index.php/Main_Page

AOPA: <https://www.aopa.org/training-and-safety/online-learning/online-courses>

NASA Callback: <http://asrs.arc.nasa.gov/publications/callback.html>

ALEA Online Meetings

The schedule for upcoming ALEA online meetings is below. Please email me if you would like to be added to the participant list. Meetings are conducted through an online conference call you can join using your computer or phone. They are open to any ALEA member.



Maintenance:

Monday, Aug 1, 2016

1:00 PM - 2:00 PM EDT (1700 UTC)

Safety Officers:

Tues, August 16, 2016

1:00 PM - 2:00 PM EDT (1700 UTC)

UAS:

Thurs, August 25, 2016

1:00 PM - 2:00 PM EDT (1700 UTC)

To receive meeting information and be added to the mailing list, send an email to:

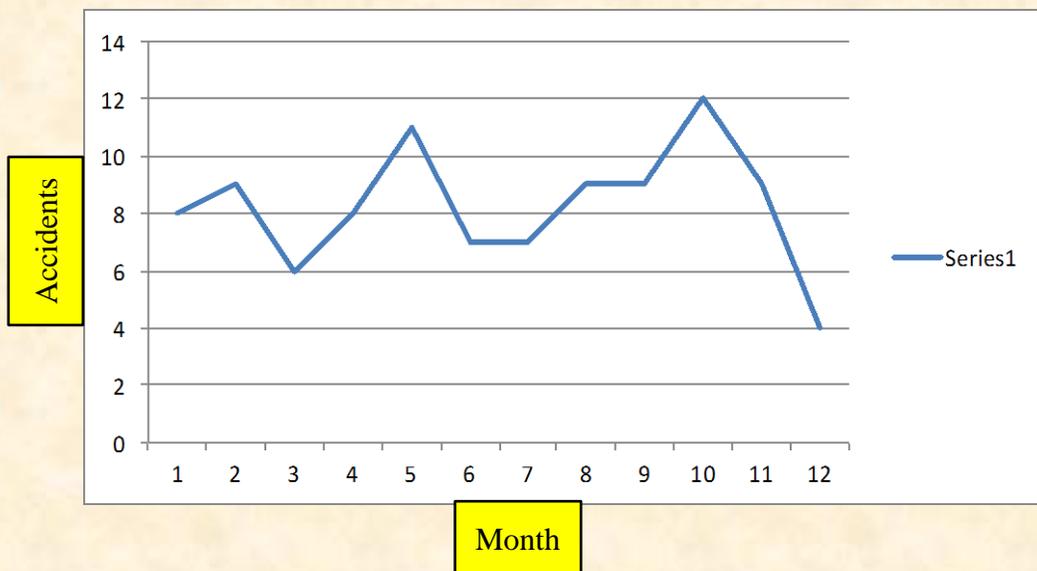
safety@alea.org

Practical SMS

Safety training and stand-down days are important aspects of your safety management system. The information you focus on during those training days, however, should be in line with hazards you have identified and are addressing within your SMS. This addresses the actual risk of the topics instead of having a random, “sky is falling” agenda.



Traditionally, public safety aviation accidents see an increase twice a year, in the late spring and around October. If you are responsible for setting up training and/or safety stand-down days, now is a good time to schedule some safety training for your unit in the next couple months.



“Every once in a while the genie of luck takes a leak on the pillar of science.”

~ Ernest Gann

Reality Check...

Note: The following reports are taken directly from the reporting source and edited for length. The grammatical format and writing style of the reporting source has been retained. My comments are added in red where appropriate. The goal of publishing these reports is to learn from these tragic events and not to pass judgment on the persons involved.

Just one report this month. It is important enough to spend some more time looking at this one in detail...

Aircraft: Sikorsky S-76A

Injuries: 4 Fatal

NTSB#: A13H0001

<http://tsb.gc.ca/eng/rapports-reports/aviation/2013/a13h0001/a13h0001.asp>

<https://www.thestar.com/news/canada/2016/06/15/faulty-oversight-organizational-woes-faulted-in-orng-air-ambulance-crash.html>

On 31 May 2013, at approximately 0011 Eastern Daylight Time, the Sikorsky S-76A helicopter, operated as Lifeflight 8, departed at night on a visual flight rules flight with 2 pilots and 2 paramedics on board. As the helicopter climbed through 300 feet above the ground toward its planned cruising altitude of 1000 feet above sea level, the pilot flying commenced a left-hand turn toward the Attawapiskat Airport. Twenty-three seconds later, the helicopter impacted trees and then struck the ground in an area of dense bush and swampy terrain. The aircraft was destroyed by impact forces and the ensuing post-crash fire. The helicopter's satellite tracking system reported a takeoff message and then went inactive. The search-and-rescue satellite system did not detect a signal from the emergency locator transmitter. At approximately 0543, a search-and-rescue aircraft located the crash site approximately 1 nautical mile northeast of Runway 06, and deployed search-and-rescue technicians. However, there were no survivors.



Some instrument-rated pilots are able to maintain a higher level of currency through operational flights or training flights. However, Ornge RW operates almost exclusively in VFR conditions, and its pilots rarely carry out any instrument flying between annual recurrent simulator training sessions. The investigation determined that there is widespread sentiment among line pilots and regional inspectors, that the current instrument currency requirements do not provide an adequate level of safety due to the amount of time that could lapse since

a pilot's last instrument flight. Despite these concerns, pilots would likely be reluctant to refuse an instrument flight, due to the anticipated perception of the refusal, if they were still current as per the regulations. Hence, the current regulations create a situation that would make it very difficult for pilots who are not comfortable with their instrument flight

proficiency to refuse a flight for fear of potential repercussions from an employer that expects a pilot to be able to operate within the regulations.

In this occurrence, both pilots had met the minimum instrument currency requirements as per the regulations, but were unprepared for the conditions they encountered during the flight. The PF had experienced difficulties in instrument procedures during his initial simulator training 9 months before the occurrence, and had required extra training hours. Following the training, he passed an IFR PPC with 3 major deviations. There is no evidence that the PF had carried out any IFR flight between his initial training and the occurrence flight. Indeed, the PF had no actual IFR time logged in helicopters at the time of the occurrence, and had only flown on instruments in a simulator. The captain had conducted no IFR flights, other than training, between 2011 and his date of hire by Ornge RW. Other than the IFR portion of his recurrent S-76 course in March, he had not conducted any IFR flights or received any IFR training while at Ornge RW before the accident.

The decision by Ornge RW not to equip the AW139 fleet with NVG-compatible lighting or to convert the S-76 fleet to NVG use was partly due to its policy of not conducting scene calls at night. However, the company routinely conducts night VFR flights over large areas with little or no cultural lighting. In weather that is technically suitable for VFR but provides little ambient lighting, it is not always possible to conduct these flights with visual reference to the surface. Even if such flights are commenced with reference to the surface, there is a risk—especially in remote areas with limited weather forecasting—that conditions along the route will change and the required visual reference to the surface will be lost. If, during night VFR operations, pilots continue flight in conditions where no cultural or ambient lighting exists without an alternate means of maintaining visual reference to the surface, there is an increased risk of CFIT and loss-of-control accidents.

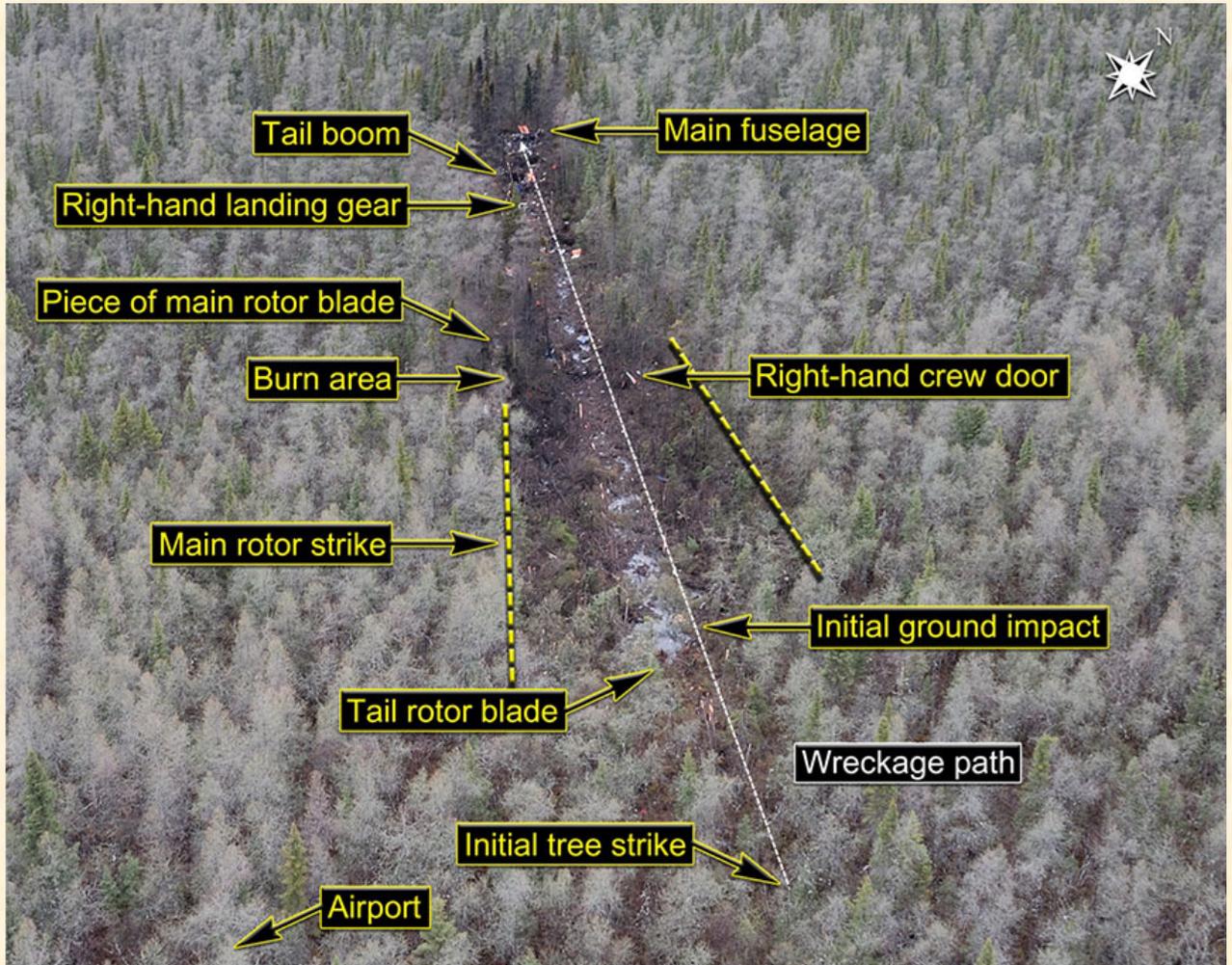
The goal of safety management is to identify hazards and mitigate risks. A benefit of formal safety management processes is that safety information is documented and can be acted upon by the organization. Ornge RW had a number of safety management processes in place under the parent company's safety management system (SMS), but **these processes were not yet adequately resourced or being used effectively by line pilots and managers**. Operational safety issues were predominantly managed informally rather than through the company's safety reporting system. The following examples were relevant to the unsafe conditions present on the day of the accident:

1. Although experienced S-76A pilots at Ornge RW were employing strategies to manage night hazards, these best practices had not been included in company SOPs.
2. Pilots had raised concerns that new hires were being scheduled to start immediately on night shift, and that augmentee pilots from other bases were being paired, creating "green on green" situations. This issue was also the subject of an aviation safety report in the week following the occurrence, when 3 newly hired pilots, including 1 captain, were scheduled to start immediately on night shifts for their first block of shifts.

These safety concerns were not entered in the company's safety reporting system; therefore, no risk assessments were conducted, and no mitigations were implemented. As a result, no changes to the company's procedures or scheduling practices were made, and the informally identified risks were allowed to persist.

Ornge RW contracted an external auditor to prepare for TC's January 2013 PVI. The audit found no instances of non-compliance with regulations, despite the deficiencies existing at

the time that were later identified by the investigation into this occurrence. Ornge RW itself was unaware of non-conformances in its training program and in its process of tracking and checking pilot qualifications and currencies. The fact that Ornge RW was not aware of these significant regulatory non-compliances and unsafe conditions constitutes a breakdown in the management of safety. Informal approaches to managing safety concerns in flight operations are not always effective in reducing risk. Safety issues at Ornge RW were managed informally rather than through the safety reporting system. **If safety issues are not reported formally through a company's safety reporting system, there is a risk that hazards will not be managed effectively.**



Findings as to causes and contributing factors:

1. The crew conducted a flight under night visual flight rules regulations without sufficient ambient or cultural lighting needed to maintain visual reference to the surface.
2. When the pilot flying encountered a lack of visual cues off the departure end of Runway 06, necessitating transition to flight by reference to instruments, an excessive bank angle and rate of descent developed, which were not recognized by the crew at an altitude that permitted recovery.
3. The crew were not operationally ready to safely conduct a night visual flight rules departure that brought the flight into an area of total darkness.
4. Ornge Rotor-Wing was not using the company's currency tracking program (i.e., AvAIO) as intended to ensure that pilots were qualified in accordance with both company and regulatory night-flight currency requirements. As a result, the central

- scheduling department did not identify that, according to inaccurate data in AvAIO, the first officer was not qualified for the flight.
5. Transport Canada's approach to surveillance activities did not lead to the timely rectification of non-conformances that were identified, allowing unsafe practices to continue.

There are no new ways to crash an aircraft...

...but there are new ways to keep them from crashing.

Safe hunting,

Bryan 'MuGu' Smith

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