AIRBORNE PUBLIC SAFETY ASSOCIATION

The Safety Wire

December 2019

UNDER OUR WINGS NO HERO WILL FALL.

It is the holiday season and I usually write something lighthearted for this newsletter. Forgive me, but I want to end the year with the same message I started it with. Too many of our brothers and sisters on the ground have been lost this year. Some were injured by criminals or the various risks of the job, too many were murdered. As I write this, I am furious that five officers have been killed by gunfire in the US in five days. I am especially troubled by the thought of the eleven children that have lost a hero parent during the holidays. According to the Officer Down Memorial Page, 117 officers have died in the line of duty in the US in 2019. Fifty-five firefighters have also died in the line of duty. We cannot forget about 24 of our faithful K9s who were lost while serving. These upsetting numbers are only for the US. If we were able to compile the total for losses worldwide, the results would be unbearable.

Every day we come to work we must remember that the lives of public safety officers may be put in our hands during our shift. If they go home to their loved ones today, if their children see their mother or father again, is very likely to depend on how professional we are.

Being a public safety aviation professional means providing the best service available. It means understanding that the safest practice is also the most effective practice. The safest mission profile is also the most likely profile to locate a risk to officer safety, such as a hiding bad guy. The hoist or firefighting technique with the lowest risk is also the one with the highest probability of successfully completing the mission. The most safety conscientious aircraft technician is also the one who will have your aircraft best prepared to complete our important work. The most effective safety program will produce the highest successful mission statistics. And, in my personal opinion, the unit member who is most often in the books, seeking out training or reading the equipment manuals, is the one who will get the most cops home safely.

This month, children all over the world look to the sky for someone they have never met riding a magic sleigh to bring them presents. The children of our world's heroes may be more correct than they know with these dreams. As they look skyward, it will be us and not Santa working to bring them the greatest gift a child can ask for. We will make sure that their parents, uncles and aunts or grandparents can go back home to them at the end of their shift.

And now, for some holiday memories from an exclusive interview I was granted several years ago…

This month, one of the greatest achievements in aviation will again go unobserved despite its global importance. The sheer scale of planning that is required, incredible flight performance involved and risk management challenges to overcome make an SR-71 flight look like a hop around the patch in a Piper Cub. Yes, I'm talking about Santa's worldwide package delivery mission on 24-Dec starting at approximately dark-o-clock Zulu time. I wrote Santa (call sign: *Big Red*) a letter asking to interview him on how such a mission can be conducted safely year after year.

In a phone interview, Santa informed me that he did not always have a safety program. Many years ago, there was a tense IIMC encounter over the Alps. The aggressive maneuvering caused some gifts to fall overboard. He asked me to pass on my apologies to a certain Justin Poirot of the Gainesville Police Air Unit for losing his gifts that year. (*To be honest, I have trouble believing the story, I think we all know why you didn't get anything from Santa that year, Justin.*)

Santa also mentioned that there was an unfortunate accident during landing when he lost two 'engines' on short final to a cabin rooftop in northern Minnesota. Apparently, an inebriated deer hunter mistook Santa's reindeer for whitetail and took out Bobby and Jimbo, two of Santa's reindeer that have been since replaced by Donner and Blitzen. It was interesting to note that this was the reason for changing Santa's suit, sleigh and reindeer tack to red (I guess blaze orange didn't look festive enough). I'd always heard it was because of Coca-Cola marketing.

It was obvious Santa needed something new to meet the risks involved with his services. He created the Safety Management System for Santa - Mark 1 (SMSs mk1). It immediately spurred several changes. The previously mentioned red flight suit Santa wears is now made of Nomex. The material not only protects Santa in case of a crash, but it helps minimize injury during tactical chimney insertions (a tactic he teaches to SWAT teams during the off season). Santa now uses NVGs, which required installation of a green filter over Rudolph's nose. The lighting

upgrade to the lead reindeer also included installation of a full IFR, WAAS capable avionics package so Santa is not just relying on light to "guide his sleigh tonight".

He has been working with the FAA to develop numerous GPS approaches for this new system. He said that while that has been going well, the many Temporary Flight Restrictions dotting the US over the last ten years have made navigation difficult. Fortunately, many law enforcement pilots have volunteered to work as local liaisons with Air Traffic Control to clear Santa's flight path. I'm told this is mutually beneficial because there are a number of law enforcement pilots who would otherwise have no prayer of making it off the 'naughty' list.
Big Red has been taking the lead from our association as well. He started using a TFE (Tactical Flight Elf). He said that the use of CRM has dramatically lowered his workload and increased safety. At first, there was a learning curve that made for a few uncomfortable moments. Apparently the first TFE consumed a considerable amount of eggnog before one long flight, only to admit later that he was lactose intolerant. Initially, the foul air in the cockpit was blamed on the team of reindeer in front of them, but Santa had included an analysis on the food given to the deer as part of his new SMSs driven preflight risk assessment to avoid unpleasant "engine exhaust" scenarios, so he knew the TFE was lying. I nodded in sympathy and told him he should try the same unfortunate combination of factors in an enclosed JetRanger cockpit orbiting a call for an hour.

Santa added one last note. His many years of having a 'jolly' physique have given him diabetes. Between his diabetes and the TFE's condition, the milk and cookies left for him significantly increase mission risk levels. He requested BBQ ribs for him and the fancy root beer in a glass bottle for the TFE (no alcohol please, Santa follows a strict 8 hours bottle-to-reigns policy). I will be sure to tell my kids that is what Santa wants this year.

'Twas the shift before Christmas,

and at the airport nothing stirred,
Except for the most junior crewmembers of the police ghetto bird.
Timecards had been filled out and reviewed with much care,
In hopes that a fat holiday pay check soon would be there.

In smelly old La-Z-Boys, we settled down for a long winter's nap,
Because visiting family kept us from sleeping all day and we both felt like cr…well, tired.
My TFO snored so loud it should be a crime,
So I watched *A Christmas Story*, for the twenty-second time.

When out from the radio there arose such a clatter,
Dispatch was calling, "Air 1!", I thought, *now what's the matter?*
Units were chasing a car on the interstate,
Woo Hoo! A pursuit…we didn't want to be late!

We rushed to the aircraft like our pants were on fire,
There hadn't been an authorized chase in, oh, quite a while.
Who was so bad to be pursued on this peaceful Eve?
Detectives had staked out the Grinch's momma's house, jumped him when he tried to leave.

Ten miles out, we easily had the pursuit in our sights,
There were so many cars, it looked like the Festival of Lights.
Three cars officially chasing, and 36 more, 'in the area'.
We arrived overhead the unfolding hysteria.

The Grinch bailed out and ran into a subdivision,
We could see his cold heart using our camera with thermal vision.
The TFO kept the camera on him 'like a boss', making me proud,
Then we realized ground units set up a tiny perimeter, and I cursed out loud.

The Grinch kept moving away from the cops,
It would take forever to get an officer to him, he'd run several blocks.
When what to my NVG-aided eyes should appear,
But a non-certificated flying sleigh and eight public use category reindeer.

He swooped down to the yard, cracking his whip,
A perfect confined area approach, with a bit of sideslip.
He jumped from his sleigh and shouted for all to hear,
"I'm cleaning up my naughty list, Grinch no free pass this year!"

St Nick unhooked reindeer and called them by name,
"Now Igor, now Jet, now Buck and Flame!"
"Find me that perp, you know what to do!"
Towards the shed where the Grinch hid, all four reindeer flew.

He resisted and the reindeer weren't in the mood to play,
They used a taser, hoofs and a shot of pepper…mint spray.
When it comes to naughty list enforcement, I'm not sure who'd regulate,
But what we saw sure wouldn't fly with P.O.S.T. in this state!

Santa cuffed him and threw him in the sleigh with such ease,
Then ate a cookie, sat back and appeared quite pleased.
He looked at us flying above and called on 123.02,
"You better not be recording, or you'll be on the wrong list too."

As we turned back home, a ground unit asked, "You still see him, right?"
"Negative, we lost him. Air 1's 10-8, Good Night."

ONLINE MEETINGS

APSA conducts regularly scheduled online meetings for safety officers, maintenance technicians, SAR personnel, and UAS operators via a conference call you can join using your computer, mobile device or phone. Online meetings are open to any APSA member. Contract maintenance providers to APSA members are welcome to participate in the maintenance meeting as well.

The schedule for upcoming APSA online meetings is as follows.
If you would like to join, send an email to: safety@publicsafetyaviation.org

SAR:
Tuesday, Jan 7, 2020
1:00 PM – 2:00 PM EST (1700 UTC)

Safety Officers:
Friday, January 10, 2020
1:00 PM - 2:00 PM EST (1700 UTC)

Maintenance:
Friday, January 17, 2020
12:00 PM - 1:00 PM EST (1600 UTC)

UAS:
Wednesday, February 19, 2020
1:00 PM - 2:00 PM EST (1700 UTC)

"Aviation is proof that given the will,
We have the capacity to achieve the impossible."

~Eddie Richenbacher

RESOURCES

Transport Canada Aviation Safety Alert:
https://wwwapps.tc.gc.ca/saf-sec-sur/2/awd-cn/documents/CASA-2019-07.PDF

FAA Safety Briefing:
https://www.faa.gov/news/safety_briefing/

NTSB Safety Recommendation A-18-012 on safety restraints:
https://www.ntsb.gov/investigations/_layouts/ntsb.recsearch/Recommendation.aspx?Rec=A-18-012

EMERGENCY PROCEDURE OF THE MONTH

In each monthly emergency situation, discuss what you would do, as a crew, to respond to the following emergency. If the EP does not apply to your specific aircraft, think of something similar.

Aircrew member is exhausted from trying to balance holiday events and work

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.*

Aircraft: **Airbus AS350B2**
Injuries: **5 Fatal, 1 Minor**
TSB#: **ERA18MA099**

https://app.ntsb.gov/pdfgenerator/ReportGeneratorFile.ashx?EventID=20180311X13013&AKey=1&RType=HTML&IType=MA

On March 11, 2018, about 1908 eastern daylight time, an AS350B2 was substantially damaged when it impacted the East River and subsequently rolled inverted after the pilot reported a loss of engine power near New York, New York. The pilot egressed from the helicopter and sustained minor injuries. The five passengers did not egress and were fatally injured. The scheduled 30-minute, doors-off aerial photography flight was operated by Liberty Helicopters.

The pilot checked his passengers' harnesses and put their life vests on. He pointed out where the cutting tool was located on their harness and explained how to use it. He then seated the passengers and secured their harness tethers to hard points on the helicopter.

As they were flying along the eastern side of Central Park, the front seat passenger turned sideways, slid across the double bench seat toward the pilot, leaned back, and extended his feet to take a photograph of his feet outside the helicopter. As the pilot initiated a right pedal turn to begin to head south, the nose of the helicopter began to turn right faster than he expected, and he heard a low rotor rpm alert in his headset. He then observed engine pressure and fuel pressure warning lights and believed he had experienced an engine failure. He lowered the collective pitch control to maintain rotor rpm and let the nose continue to turn to the right. Central Park came into view and he briefly considered landing there but thought there were "too many people." He continued the turn back toward the East River and made his first distress call to air traffic control. He yelled to the passengers to get back in their seats. Due to the helicopter's airspeed, he was not sure he could make it to the East River and reduced rotor rpm so he could "glide better." Once he was in an established autorotative glide, he attempted to restart the engine but was unsuccessful. He waited 1 or 2 seconds and tried the starter again, but there were no positive indications of a successful engine restart on the instrumentation. He checked the fuel control lever and found that it was still in its detent for normal operation. When he was sure he could clear the buildings and make it to the river, he activated the floats at an altitude of about 800 ft agl. At this point he was "committed to impact,"

and, when he reached down for the emergency fuel shutoff lever, he realized that it was in the off position. He also noted that a portion of the front seat passenger's tether was underneath the lever.
As the helicopter continued to descend through 600 ft agl, he positioned the fuel shutoff lever to the "on" position and attempted to restart the engine. He observed positive indications on the engine instruments immediately. As the helicopter descended through 300 ft, he realized that the engine "wasn't spooling up fast enough," and, given the helicopter's proximity to the surface, he had to continue the autorotation. He again reached for the fuel shutoff lever and positioned it back to "off." Passing through between 100 and 50 ft, he began the cyclic flare in an extended glide configuration, but he "did not get a lot of rpm back." He performed a flare reduction at 10 to 15 ft. He pulled the collective pitch control up "as far as it would go." The helicopter then impacted the water at 5° to 10° nose-up attitude.

After impacting the water, the chin bubble on the pilot's side began to fill with water, which quickly covered the floor. He kept his restraint on and reached down for the front seat passenger's carabiner attachment to the helicopter. He turned the knurled screw "two or three rotations"; by that time, the helicopter was "listing past a 45° roll." He then decided to egress the helicopter, and by the time he unbuckled his restraint, he was fully under water. He used two hands to grab the door frame and pull himself out. He surfaced about 4 ft away from the nose of the helicopter and crawled up onto the belly. He stood up and waved for help but could not see anything.

Additional resources related to this incident:
https://www.ntsb.gov/news/press-releases/Pages/NR20191210.aspx
https://www.youtube.com/watch?v=iD_5RDlpE5Y

Aircraft: Bell 206 L4
Injuries: 2 Fatal
NTSB#: WPR15FA072
http://www.ntsb.gov/_layouts/ntsb.aviation/brief.aspx?ev_id=20150101X15630&key=1

On December 31, 2014, at 1710 mountain standard time, a Bell 206 L4, collided with terrain 7 miles west of Benson, Arizona. The commercial pilot and pilot rated mechanic were fatally injured, and the helicopter was destroyed. The helicopter was operated by Airwest Helicopters as [a] Part 91 positioning flight [under contract to the Sheriff's Office]. Visual meteorological conditions prevailed for the flight, which operated on a company visual flight rules flight plan. The flight originated form Glendale, Arizona, at 1550, and was destined for Sierra Vista, Arizona.

The operator reported that the helicopter had not arrived at its destination and that the Sky Connect Tracking System indicated that the helicopter was at a stationary location between Tucson and Benson. The operator's flight data monitoring system indicated that the helicopter was flying along an interstate about 300 ft above ground level (AGL), which decreased to about 200 ft agl, likely as the visibility was reduced.

However, the last recorded points indicated that the helicopter had climbed to about 500 ft AGL and was no longer tracking the interstate. It is likely that the VFR flight encountered instrument meteorological conditions, and the pilot was trying to maneuver to an area with greater visibility when the helicopter collided with terrain.

The Cochise County Sheriff located the helicopter wreckage about 2030 at the location the Sky Connect system was reporting. The helicopter was fragmented into multiple pieces along a 174-foot-long debris path. Witnesses living in the local area reported hearing a low flying helicopter around the time of the accident, and that the visibility at ground level was very limited, with low clouds and fog.