**Alaskan Aviation Safety Foundation Newsletter Winter 2023**

# *POSITION REPORT*


**Contents:**



## Chairman's Letter, December 2022

We held our first in-person seminar in nearly 3 years on December 3rd. It felt like a family reunion seeing so many familiar faces and a few new ones, too. We are happy to be back in the "live" business and we're looking forward to our spring (seaplane) seminar. Toward that end if there is a particular topic you would like addressed for our spring seminar, email us at aasfonline@gmail.com and let us know your thoughts. We'd also like to hear from you if you would like to help us organize or execute one of our seminars. Have you had a "teachable incident" you are willing

to share with your fellow pilots? If so, we encourage you to contribute to one of our monthly "Safety Spots." We'll be happy to help you write up your story and, if you'd like to remain anonymous, that isn't a problem.

We took a stab at recording the presentations for the fall seminar. We've got some work to do before we are ready for prime time as far as posting our work to the AASF YouTube channel, but we are going to continue pursuing this initiative. We know it simply isn't practical for our all our members to come to Anchorage for our live seminars and we want to give the presentations the widest possible distribution. After all, our primary mission is "To improve aviation safety through education…" So, if you think you might have the technical ability or equipment to help us in this area, please send us an email.

Anchorage experienced a major snow event a few days after our seminar so Greg Fischer's presentation on winter operations was particularly timely. I hustled out to Merrill Field the day after the first snowstorm and found virtually every single-engine, tricycle gear airplane was sitting on its tail and the tail was completely submerged in the snow. Getting to Merrill I drove in on the Glenn Highway and gave thanks that the average pilot is far more safety conscious than the average driver. We show more respect for physics: friction, acceleration, conservation of momentum, stuff like that. I'm pretty sure the accident rate among GA pilots would be 10 times what it is today if we flew our airplanes the way many people drive their cars. Keep up the good work.

Before I sign off, I want to mention that the Alaskan Aviation Safety Foundation is one of the non-profits listed on Alaska's Pick.Click.Give. website. AASF's Alaskan members can choose to donate through Pick.Click.Give. when they file for their PFD. I can almost see some of you scratching your heads. Yes, we do have members living in other states. Aviation safety is for everyone!

Stay safe and stay warm,

Rocky

#######

## Risk Management…Into the Misty Darkness

***by Rocky Capozzi***

One of my favorite aviation writers, Paul Bertorelli, recently published an article in AvWeb, Is Accident Reporting Making Us All Crazy? . At one point, Paul opines, "**For pilots who have been in the game for a while, I see limited benefit in accident reports, frankly. Do you really need to be reminded—perhaps hammered—with rehashing the same causality you've known about for 20 years?... By now, you could probably write the accident report just from the photo.**"

I understand Paul's frustration. I've been flying regularly for 47 years, and it's tough for me to find something new to say about pilots crashing airplanes the same old ways. Nevertheless, I don't think what is said needs to be "new" to have a positive impact on safety. I maintain that thoughtful review of the circumstances surrounding accidents heightens our vigilance and encourages more careful pre-flight preparation. It may even encourage us to practice our stick and rudder skills on a more regular basis – spend some time on slow flight, stalls and falls, steep turns, recovery from unusual attitudes, etc.

No matter how long we've been flying, every now and then it's possible to pick up a nugget of information we didn't know or learned so long ago that we'd forgotten. In that case, we've added to or refreshed our knowledge. As pilots, we don't want to put ourselves in novel situations. Our goal is to stay with the learned, the routine, the rehearsed. However, when we are faced with a novel situation, there's no such thing as too much knowledge. I think we can all agree the more recently we've refreshed our knowledge and thought through a problem, the easier it is to recall the solution. Our goal in reviewing accidents is to reduce our universe of novel situations through studying what's happened to others and considering how we can avoid the same situation, or if we end up in a similar situation, how we might successfully conclude the flight.

Accident reports on the evening news are seldom accurate. They often get the details wrong if there are any. It's best not to jump to conclusions based on a photograph or news interviews with random people in the vicinity of the crash. Statements from official (FAA, NTSB) sources and professional interviews with

witnesses begin to paint a more reliable picture. Captured video, audio recordings of communications, and radar or ADS-B tracks increase confidence that we understand the sequence of events. The gold standard in unraveling an accident is all the above plus an interview with the mishap pilot. Unfortunately, the gold standard is seldom achieved, leaving the NTSB and the FAA to follow the evidence and "read between the lines" to make a causal determination. Such is the case with the accident I review below, and it offers a good opportunity to refresh our knowledge.

## The Accident Final Report

The 59-year-old mishap pilot is a moderately experienced private pilot holding an instrument rating. Investigator's review of the pilot's logbook showed he had 1612 hours total time, 93 hours in make and model, 8 hours in the last 90 days, 1.3 in the last 30 days. He had logged a single instrument approach in the previous 6 months, far fewer than the 6 required for currency in accordance with 14 CFR 61.57(c) The report does not provide information on total instrument time or night currency. The mishap pilot filed and activated an IFR flight plan that would take him from Windom, Minnesota (MWM) to McMinnville, North Carolina (RNC). He departed in the dark (0621 local), on December 6, 2020, into a 400-foot overcast with mist. Temperature and dewpoint were both -2° C. He never made contact ATC after taking off. Radar track data showed a series of erratic turns beginning about 2 – 2 1/2 minutes after departure. He crashed 2.5 miles north of the departure runway about 2 minutes after the erratic turns began. Post-crash evidence found the gyros were operating at impact and there was no evidence of other preimpact anomalies that would have precluded normal operation. The NTSB found the probable cause to be spatial disorientation.

I think there's a few points worth highlighting. The meteorological conditions at departure time included mist. Temperature and dewpoint were both -2°C. It was dark out, a little after 6:00 a.m. on a December morning in Minnesota. If you review the report in its entirety, you'll see the NTSB created a rough ground track plot from an ATC radar that sweeps every 12 seconds. They overlay the radar hits on a Google Earth picture connecting the 12 second dots beginning at 12:23:24 (Z) and ending 108 seconds later at 12:25:12. For your reference, the departure

runway is about 1 – 1 ½ miles south of the first radar hit depicted at 12:22:48 (off the bottom on the picture). Although the flight path looks like a series of straight-line segments, it's continuously curved once the turns begin at approximately 12:23:24. The estimated takeoff time is about 12:21:00. Therefore, the pilot appears to have maintained runway 35 heading for about 2 ½ minutes before beginning the terminal sequence of turns at about 12:23:24.

We can make some observations about the connected dots and time stamps. A standard rate turn is conducted at 3° per second, and it takes 2 minutes (120 seconds) to complete a 360-degree turn. The mishap pilot turned right through at least 360 degrees in approximately 48 seconds before briefly reversing his turn to the left at around 12:24:24 and about 12 seconds later appears to be turning right again through at least 270° in about 24 seconds. There are marked differences between the spaces on the 12 second radar hits. This is likely due to rapid changes in turn rate (bank angle) and or airspeed. Although, the picture looks like the final aircraft heading was southerly, the report states the aircraft was on an easterly heading at impact.

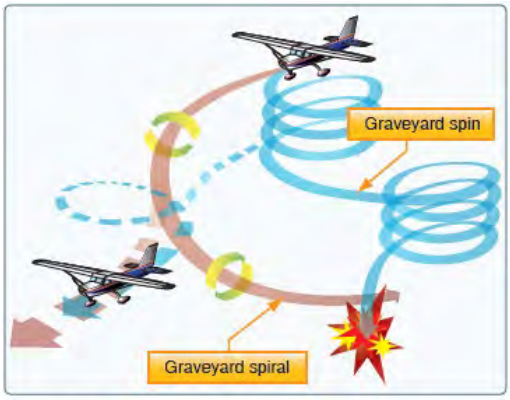


**Figure 17-5.** *Graveyard spiral.*

The Pilots Handbook of Aeronautical Knowledge (FAA-H-8083-25B), Chapter 17 , page 17-7 contains a good review of vestibular illusions and Figure 17-5 contains an image of a "typical" graveyard spiral. There's a marked similarity between our mishap pilot's flight path and Figure 17-5, except that our mishap pilot made his initial turn to the right rather than the left.

## What Preceded Spatial Disorientation

The Airplane Flying Handbook (FAA-H-8083-3C) , Chapter 6, Takeoff and Departure Climbs states,

**"Though it may seem relatively simple, the takeoff often presents the most hazard of any part of a flight."** Figure 2-1, of The Pilot's Handbook of Aeronautical

Knowledge **(FAA-H-8083-25B)**, Chapter 2 shows that 23.2% of all accidents occur in the takeoff and initial climb despite the fact that it represents only 2% of the total flight time.

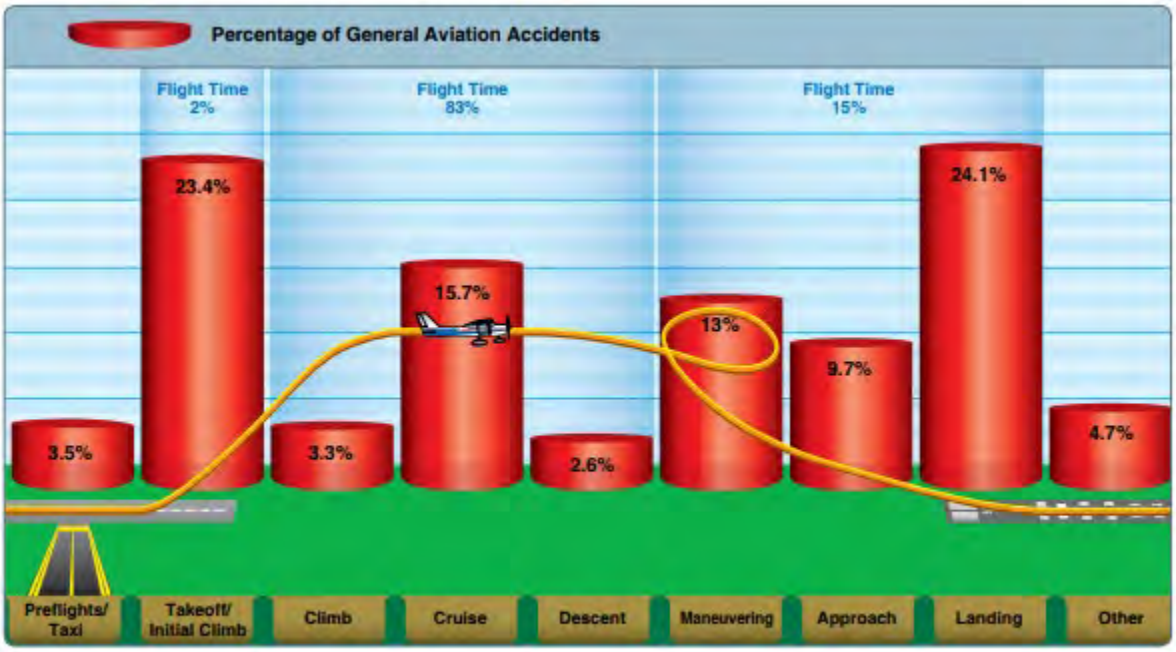
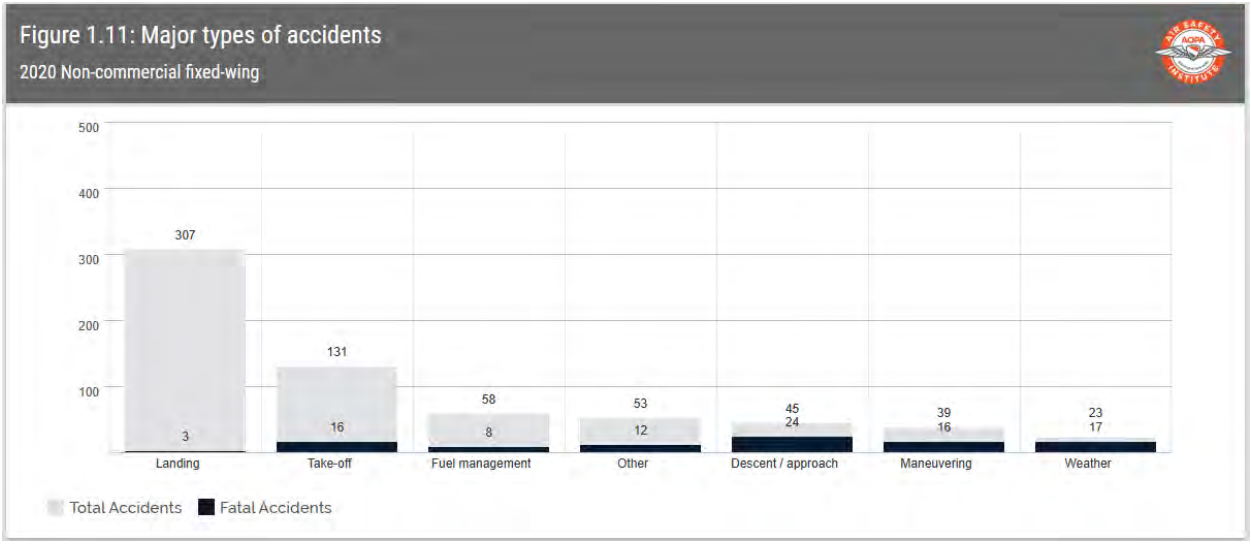



**Figure 2-1.** *The percentage of aviation accidents as they relate to the different phases of flight. Note that the greatest percentage of accidents take place during a minor percentage of the total flight.*

Figure 1.11 of the 2020 Joseph T. Nall Report , pictured below, shows takeoff phase crashes suffer a higher fatality rate than landing accidents by a wide margin.



A “simple” takeoff under the conditions faced by the mishap pilot isn’t so simple. The Pilots Handbook of Aeronautical Knowledge (FAA-H-8083-25B), Chapter 2 , page 2-4 lists the 4 fundamental principles of risk management.

The first principle of risk management states, **“Accept no unnecessary risk.”**

Our mishap pilot accepted the risk of a night takeoff with a 400-foot ceiling and mist to take a personal flight. It was his choice; he could have waited for daylight and or weather to improve.

Having flown single-pilot IFR in fighters, turboprops and piston airplanes throughout my 29-year Air Force career, taught me you need exclusive focus on your instruments once you release brakes for takeoff into low ceilings with reduced visibility – especially at night. That means 100% certainty that flight instruments are working and adjusted as necessary, comm and nav frequencies are tuned and set, navigation courses and modes properly set, cockpit lighting adjusted, airplane properly configured, engine run-up complete, clearance received and written down with the first couple segments memorized. This frees you to focus exclusively on your flight instruments. There isn’t time read clearance details or search for a frequency once you release brakes.

## Troubling Indicators

The NTSB Report contains information that suggest the mishap pilot wasn’t ready for takeoff given the meteorological conditions he faced. Page 3 of the report, Factual Information, History of Flight states,

**“The pilot entered the runway, then exited and taxied back to the runway hold short line. According to air traffic control (ATC) recordings, the pilot activated his previously filed instrument flight rules (IFR) flight plan and obtained an IFR clearance that included a climb to 7,000 ft mean sea level (msl) and a right turn direct to Warren County Memorial Airport (RNC), McMinnville, North Carolina.”**

An airport camera captured the taxi onto and back off the runway. The fact that the pilot taxied onto and then back off the runway to activate a previously filed flight plan, leads me to believe he may have been rushing, nervous, or both. He’d only logged one instrument approach in the last 6 months and that was over five

months ago – reason enough to cause plenty of stress when faced with a takeoff off into the dark light with mist and a 400'-ceiling, in December, in Minnesota. If he forgot to activate his clearance before taking the runway the first time, what other pre-takeoff routines might have been missed?

Page 6 of The NTSB Report, Wreckage and Impact Information states,

**"The stabilator trim screw was in a position that corresponded to a full nose-up trim setting. The main landing gear remained attached to the wing and appeared to be in the extended position."**

I'm not familiar with the PA32 301T but I looked through the POH and a rigging guide for the airplane. I could find no reason why the trim screw would be in the position it was found in. To be fair, strange things happen in high energy impacts, but the position of this screw makes me wonder if the flight controls and trim were checked before takeoff. If the pilot was struggling with pitch control from the time he took off, focus on the flight instruments would have been very difficult. On the other hand, it appears he was able to fly straight ahead for almost 2 ½ minutes before beginning his turn sequence to the right, the direction that corresponded to his clearance.

Once again, from page 6, Wreckage and Impact Information,

**"The main landing gear remained attached to the wing and appeared to be in the extended position."**

Raising the landing gear after confirming the airplane is climbing and at a safe altitude is basic. The fact that it was left down suggests circumstances began to overwhelm the mishap pilot shortly after liftoff.

The mishap pilot never contacted ATC. Maybe he hadn't set the frequency or set the wrong frequency before takeoff and was trying to find and set it as he began his turn. That might help explain the gross heading overshoot. He needed a turn of about 140 degrees to proceed on course but continued his turn through 360 degrees. Maybe the turn took long enough that the fluid in his inner ear stabilized giving him the sensation of level flight and setting him up for the graveyard spiral sequence.

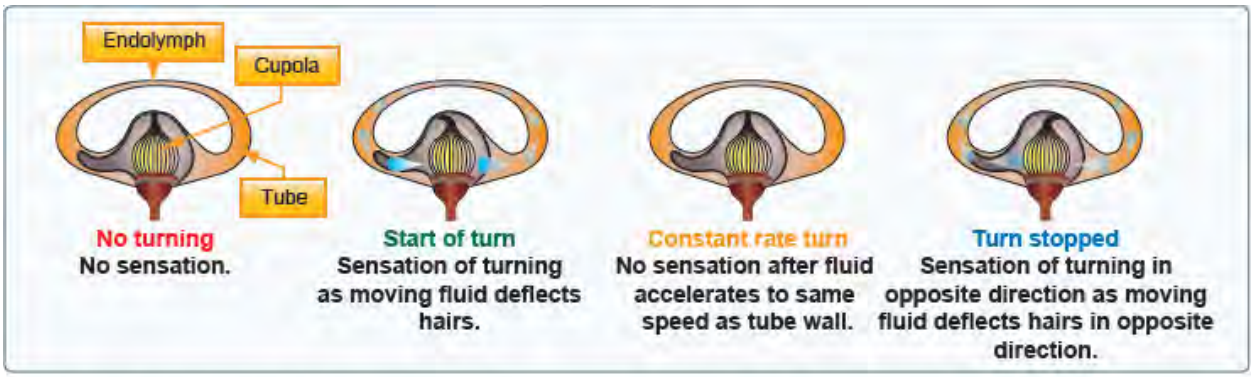



**Figure 17-4.** *Human sensation of angular acceleration.*

Figure 17-4 above appears on page 17-7 of the Pilots Handbook of Aeronautical Knowledge.

Some of the questions I ask myself when reviewing an accident are: What was the sequence of events? Where did things start to go off the rails? Once the accident sequence began, what actions could the pilot have taken to change the outcome? The investigators had enough information that we understand the sequence with a reasonable level of certainty. We know the pilot filed an IFR flight plan, but we don't know how much actual planning was accomplished as he filed direct. That the mishap pilot was non-current and in violation of the regulations is a given. He was a private pilot with modest experience in this airplane and stale instrument currency.

While it's relatively easy for a Part 121, 135, or military pilots to maintain instrument currency, it's not so easy for a private pilot. I believe things began to "go off the rail" when the mishap pilot accepted the risk associated with taking off given the meteorological conditions he faced. He overestimated his competency and underestimated his risk. He could have interrupted the chain of events when he listened to the AWOS -- there was a 400' ceiling. His next opportunity to reevaluate and taxi back to the ramp came when he realized he had taxied onto the runway without his clearance. No doubt that added to his level of anxiety and stress. We've all had bad days. If we find ourselves making mistakes we don't usually make, treat it as a red flag. If we're on the ground, maybe we should stay there. If we're in the air, maybe we should land.

Because we aren't sure of the airplane's trim condition or what was going on in the cockpit after the airplane broke ground, it's tough to say what the pilot might

have done after brake release to prevent the eventual crash. Vestibular illusions can be extremely powerful. If you've never experienced one, particularly in flight, it's difficult to understand just how powerful they can be. If you have access to a Barany chair Aerospace Physiology Part II: Barany Chair - YouTube , it's worth the ride. Otherwise, there are a series of demonstrations you can do with a flight instructor or another pilot to induce various illusions. See pages 7-8, 7-9 in the Pilots Handbook of Aeronautical Knowledge PHAK Chapter 17 (faa.gov). Taking the time to work through the demos will provide more value than knocking out a couple of quick unusual attitudes to fill a square.

About 20 years ago, I worked for the FAA as a contractor in the safety business. Our office would create educational materials for pilots and controllers nationwide as well as do public presentations within the state of Alaska. I started one of my briefings with a slide that proclaimed, "There are no new mistakes. There are no new solutions. Preparation, proficiency, and vigilance are your defenses against accidents and incidents." It's still true! Fly Safe.

#######

**We're Baaaaaaaack! The Safety Foundation Holds the Fall Safety Seminar**

The Alaskan Aviation Safety Foundation was pleased to hold an in-person fall safety seminar, with FAA Wings Credit, which featured updates on the Foundation's activities, airport operations, and accident investigations, and a briefing on winter flight operations. The day started with an opportunity to meet the new Federal Aviation Administration's Regional Administrator for Alaska, Michael O'Hare. It was great to put a face to a name and hear he has an open-door policy, and a sense of humor. Two Safety Foundation board members, Marshall Severson (also former Flight Service Guy) and Tom George (also Aircraft Owners and Pilots Association Alaska Representative) gave an overview of the work they have been involved with, from improving the user-friendliness of the Alaska Chart Supplement, pilot preflight briefings and Advisory Circular 91-92, two-way texting with Flight Service and masterplan requirements, and new T-

routes that snake through mountain passes. Adam White from the Alaska Airmen's Association was also present to provide updates on a new PIREP project using automated ground stations and automated technology.

We heard from Clint Blaszak, an air traffic controller supervisor from Lake Hood Tower, who gave an update on happenings at Lake Hood. Rex Gray, currently an instructor flying out of the busy Palmer airport, provided a refresher on operations at non-towered airports. After a break to catch up with fellow aviators and aviation enthusiasts, Clint Johnson, Chief of the National Transportation Safety Board's Alaska Regional Office, updated us on staffing changes in his office and some highlights from recent aviation accident investigations in Alaska and Hawaii. To end the day on a positive note, Greg Fischer had tips and advice for pilots and friends of pilots braving winter operations and ski flying. This information was very well received, you can look forward to seeing Greg again with more sage and helpful advice for keeping pilots safe.

The Alaskan Aviation Safety Foundation would like to thank the presenters and the members of the Alaskan Aviation Safety Foundation whose support made this seminar a success. If you would like to support the Foundation and help us, make these seminars possible, please consider becoming a member or renewing your membership. And thanks to all who attended, it is great to be back, and we look forward to seeing you at the 2023 Spring Seaplane Safety Seminar!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## AASF Scholarship Fund

Thanks to our members and the generous donors who contribute to the Alaskan Aviation Safety Foundation's scholarship fund, this year we were able to provide three scholarships in the amount of $2,000 each in memory of Tom Wardleigh, Ginny Hyatt, and Ellen Paneok. These scholarships are available for people working toward careers in Alaska as maintainers, pilots, air traffic controllers, or aviation management. This year all three winners are pilots. We wish them safe, happy, and rewarding careers in Alaska.

The Ellen Paneok Memorial Scholarship was awarded to Victoria Belser, a flight student at Neacola Mountain Air in Wasilla. She is working on her commercial

helicopter rating; her goal is to fly helicopters to support wildland fire suppression in Alaska. Victoria works as a wildland firefighter during the fire season and is also a Safety Foundation member.

The Ginny Hyatt Memorial Scholarship was awarded to Lucy Hankins, from Seward, currently a student at Utah State studying aviation technology with a goal of becoming a medevac pilot in Alaska. Lucy is currently working on her instrument rating at Leading Edge Aviation in Logan, Utah and works summers as a commercial fisherman in Alaska.

The Tom Wardleigh Memorial Scholarship was awarded to Tia Kelliher, a professional piloting student at UAA and currently instructing at Angel Aviation. Her goal is to obtain her MEI and fly for a part 135 air taxi and charter operation in Alaska. Tia writes for two online magazines and teaches yoga when she's not in an airplane.

Thanks again to our members who help tomorrow's aviation leaders accomplish their goals. If you would like to contribute to the scholarship fund, please click here. If you or someone you know could use some help in the form of a scholarship, and are 1) Participating in an aviation related program with a qualified instructor or at an accredited college, university, trade school, or training center, 2) Intend to make aviation a career, 3) Has spent at least two of the past three years in continuous official residency in Alaska, and 4) Has completed at least two semesters, or 30% of the work towards their professional goal, please click here. The application deadline is July 31, 2023.

## Extract from thank you letter written by Victoria Belser winner of the Ellen Paneok Scholarship:

In these darkest days of the year, the things that bring light seem to shine more brilliantly. My solstice flight plan didn't go as expected, but the experience of preparing for a flight is never a waste and the cold, dark day was a good opportunity to study. And to add an even more unexpected event, I received a call from Mary with Alaska Aviation Safety Foundation awarding me with the Ellen Paneok Memorial flight scholarship!

In the spirit of aviation safety, I am a big advocate for doing everything I can to be present in the moment. For enjoying where I am at in my flight training and resisting the distraction that comes with the wish to be further "ahead." This is

easier said than done, especially with the financial burden that comes along on the civilian flight training path, so I really am so grateful to AASF for their support with this scholarship and the platform to share a part of my flight training journey with fellow aviators. A special thanks to Ellen Paneok – who made a name for herself in aviation as a tenacious Alaskan bush pilot and member in the Alaska aviation community.


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Alaskan Aviation Safety Foundation (AASF) Webinar: LiveATC.net - It's H...
QUESTIONS AND DISCUSSION
49:18 / 52:33

If you missed it during Covid, try this YouTube link to an AASF webinar:
https://www.youtube.com/watch?v=RVrpKOrn7oM
The Webinar is entitled LiveATC.net—It's here, how can we use it? Originally presented in January 2021, it features LiveATC.net founder Dave Pascoe. Joining him are Jamie Patterson-Simes from SkyTrek Alaska Flight Training to provide a CFI perspective on how the site can help improve pilot skills, and Tom Simes, a LiveATC.net volunteer. If you have ever wondered about how ATC recordings of newsworthy events appear on the internet, this session will answer that question. It will also address how you can benefit from hearing an unofficial recording of your own interactions with ATC or on a CTAF frequency.
The event was co-hosted by the AOPA Air Safety Institute.

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## Icing/Turbulence Weather Products Evaluation

FAA's Aviation Weather Demonstration and Evaluation (AWDE) Services team at the FAA Technical Center is conducting a user evaluation to understand how GA pilots use, interpret and make decisions when assessing icing and turbulence products. AWDE is recruiting General Aviation (GA) Pilots to participate in this evaluation which will begin on January 16, 2023, and continue through February 10, 2023. Interested pilots may contact Jill-F.Miller@faa.gov for further information.

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## Let's Not Say We Were Blindsided

by Marshall Severson

A lot has been happening recently in the Aeronautical Charting World. FAA has been diligently working on modernizing the Chart Supplement Alaska, among many efforts. Recently some changes were implemented that seem to have blindsided the GA community regarding private airport charting as well as changes to the depiction of foreign (yep, including Canadian) data. Let's not say we were blindsided about future actions, here is a link to the Aeronautical Information Services Safety Alerts and Charting Notices:

https://www.faa.gov/air_traffic/flight_info/aeronav/safety_alerts/

Really a glutton for info? Consider subscribing to FAA email updates on what specific interests you want to track, you will be ahead of the game!

https://public.govdelivery.com/accounts/USAFAA/subscriber/new?preferences=true#tab1

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## Flying Helicopters Down Under

The following interview was submitted by erin hall meade who is a former board member and treasurer of the Safety Foundation. The interview was conducted by email and has been edited for length. The pictures are provided by Shauna Wild.

I spent the month of November in Australia, where the weather ranged from late springtime in Cairns, FNQ (Far North Queensland) to early spring drizzle in far south Victoria in the city of Melbourne.

While in the resort town of Cairns I took a helicopter flight over the Great Barrier Reef. We were in a Bell 505 and the pilot, Ms. Shauna Wild, was competent and professional. When we landed, I asked her if she would be willing to be interviewed by me for the AASF newsletter and she agreed.

## INTERVIEW

How long have you been a commercial pilot?
2.5 years

Why did you decide to specialize in rotorcraft? Did you fly fixed wing first?
Helicopters appealed more due to the versatility of the machines, variety of work available and career paths, the ability to land almost anywhere, and the freedom.

My first Trial Flight was in a Cessna in fact! It felt amazing to be airborne but for me I wanted more control over where and how I could land and take-off.

What piqued your interest in flying?
My first taste of aviation was in a Blackhawk. My stepfather is a driver instructor in the Australian Army. When I was 14, the army base we were posted to coordinate a Family Day for families of its personnel, including 1-minute hot laps in the Blackhawk. As we lifted off the ground, I realized the freedom to move in 3-dimensional space that helicopters give. That was my first taste.

Was anyone else in your family a pilot before you?
No one in my family comes from Aviation. I was very ignorant to this world growing up. I thought pilots were especially intelligent people who got top scores in school and were scouted by secret important people for their sheer genius and sent to a special school for smart people.... Little did I know!

What's involved in getting a Private, then IFR, then Commercial Pilot Certificate in Australia?
In Australia, you can train for and attain a Commercial Pilots License (CPL) initially. Some people get an RPL (Recreational Pilots License) or a PPL (Private Pilot's License). At the time I trained for my CPL we were required to accumulate total 105 hours and including 40

hours dual, 25 hours PIC, 25 hours cross country, and 10 hours cross-country PIC. The Civil Aviation Safety Authority (CASA) is the governing body in Australia responsible for regulating all aspects of civil aviation including granting licenses. It's a very user-friendly website and you can find everything you need to know

from the site as well as the regulatory framework that governs civil aviation in Australia.

In addition to 105 hours flight time, we need to pass seven exams (six of which require a score of 70% to pass, and one of 80%). You can do the study and exams at your own pace, but the last exam must be completed within 2 years of passing the first exam.

It is competency-based so it is possible one will need to purchase additional hours of training in order to sit for a Flight Test.

How long did the entire process take you?
4.5 months – 3 months of ground theory and exams, and 6 weeks of flight training. Possibly one of the most expedited avenues. You can complete your license over a period of years. For example, those who work full time jobs and can't afford to be away for 6 months. There are pro's and con's to each avenue. The condensed 'live and breathe' aviation for 6 months route is beneficial in that you consolidate what you learn from each hour of training much faster and efficiently than if you did 1 hour of training a fortnight over the course of a year or more. But you need to be financially prepared.

Are there any other legal requirements for doing your particular job?
Since most of my flights are over water and in the category of Charter, every person on my aircraft needs to wear a lifejacket and the helicopter must be equipped with floats. I'm unsure if it is a legal requirement or just operational, but we also undergo a HUET (Helicopter Underwater Escape Training) course every three years. It's one of the most valuable skills you can gain! I know people who have had to use it and it saved their life.

I fly regularly in Class C airspace therefore every single flight requires a Flight Plan to be submitted. Some days I might have 10 flight plans submitted. We must also hold and display an ASIC (Aviation Security Identification Card) as we operate from a number of security-controlled aerodromes.

We must also undertake training courses and have refreshers at regular intervals. These include:

Dangerous Goods
Crew Management
Controlled Flight into Terrain
Fatigue Management
Check Flights

And the obvious things; a Biannual Flight Review and maintain a Class 1 Medical are a must to maintain the privileges of my Commercial Pilots License.

How did you pay for all your training?
The Australian Government provides access to a VET (Vocational Education and Training) loan scheme through its state-run tertiary education institutions, such as TAFE Qld. Here you can attain your Commercial Pilots License through a Diploma in Aviation (either Aeroplane or Helicopter). You can also choose which aircraft type you wish to include in your training, but there is a financial cap at which you have to pay the difference yourself. In my case it was an $85,000 course with a cap limit of $79,000 therefore I paid $6,000 upfront. This gave me 85 hours in a Robinson R22 and 20 hours in a Robinson R44 (105 all up). If you're too proud to fly the mighty Robinson, you could get all 105 hours of your training done in an AS350 (A-Star in Canada!) which will cost about $250,000 AUD.

The VET loan scheme allows us to pay the Government back for their kind support to our aviation endeavors at Tax time. Once we earn over a specific threshold for the financial year, we pay a percentage of our taxable income to the government until the loan is paid off in our lifetime, if ever.


Why did you choose to fly helicopters in Cairns?

It was a decision based on the political climate around COVID at the time.
I have a 4-year-old daughter who lived in Queensland while I worked in the Pilbara in Western Australia (opposite sides of the country). The Western Australian Government often had snap lockdowns of the entire state and it was difficult to travel. Sometimes I wouldn't see her for 3-5 months. I missed her so I sent an email to a reputable aviation company in Northern Australia, and they offered me a job!

What are some of the most challenging aspects of your job?
We takeoff, land and idle at a very public helipad where bystanders often take videos of aircraft. Every stage of our flight to/from that helipad can be scrutinized so having good airmanship and a clean professional flying practice is paramount. It forces you to be a good pilot working in these environments.

Can you describe an emergency where you had to rely on your previous training?
It's hard to pick but I will start with a simple one from when I was in Western Australia. The last pilot flying a Robinson R44 helicopter was suspicious of an oil leak which she advised myself and our in-house engineer of. He inspected it while undergoing a routine service and found no leaks so released the aircraft back onto the flight line. I departed from our hangar with the oil above-minimum. 45 minutes prior to landing at a jobsite, my Oil Pressure gauge needle begin to slowly drop while the Oil Temperature gauge remained in the green and unchanged. I monitored this for a couple more minutes to verify as it was very unusual to be losing oil so soon in the flight. After a couple more minutes the needle entered

the yellow on the Oil Pressure gauge, but again the Oil Temperature remained unchanged. I opted to make a precautionary landing to investigate the oil level. On the descent, the Oil Pressure gauge needle quickly entered the red just before touch down. I shut the machine down and checked the dipstick where I found only 2 quarts of oil marked (there was 8 quarts when I departed). I was very remote, so I had a satellite phone on me and carried in the helicopter about 36 quarts of oil as a precaution. The engineer now suspected the helicopter was BURNING oil due to a cracked piston ring. It is manageable to get you out of trouble by keeping the oil topped up. My helicopter was swapped out for another one so I could complete the remainder of the job which went for about a week.

Have you either faced or seen any discrimination along the way because you're a woman?

As a whole, no. But there have been instances early in my career where an employer claimed that me being a female was a 'limiting factor'. He felt uncomfortable sending me to a cattle station to pick up helicopters because he couldn't ensure my safety amongst the men, or that I wouldn't be able to position a 200L drum of AVGAS upright, or that I wouldn't be strong enough to lift a full jerry can onto my shoulder in order to refuel out bush. At no point did this employer ask or care to know about my background. He also believed the second a woman is pregnant; she has no place in the cockpit. Little did he know I was capable of undertaking all those tasks and could hold my own in a mustering environment.

Also being a female when starting out with small family-run operators can have its issues. Myself and two female pilot friends of mine have both experienced, from different operators, being bullied out or fired by an operator's insecure wife. Unfortunately, it seems especially common in outback Australia.

What was one of your worst days? Best days?

My worst days are always the ones when I hear a friend died while on the flight line, or when there is a near miss. Those things rock the industry and serves as a strong reminder to never be complacent, whether you are an engineer or a pilot.

Best days would be doing gravity work. They are big days in the seat and is an excellent opportunity to become good at landing in locations with varying difficulty in a short period of time (you might land over 200 times a day on average).

Gravity work is usually contracted by exploration companies or the Australian Government. We have a gravity measuring machine (made in Canada!), about the size of an adult torso. A technician flies with the device in the cockpit with me and we stop every 2.5 minutes (every 100m – 4km depending on the requirements) they get out, put the device on the ground and measure the local gravity, get back in the helicopter and then we fly to another location. We fly in a grid pattern and can have the machine running 10 hours a day for weeks completing these jobs. I really enjoy them, but they are tough on the helicopters.

What is your best safety tip for pilots?

I have many safety tips! Things I practice every flight because I've had some close calls.

First one is thorough on your daily inspection. Never skim over anything!!! Especially after your machine is released from maintenance.

Always do a walk around before you jump in the machine. Checking any ties are removed, latches and doors are closed, that you have all the documents to legally commence the flight etc.

A common saying here in aviation in Australia is ‘it’s better to be looking at it than looking for it’. Better to be overprepared than underprepared. For example, I carried extra oil on the flight as a precaution after hearing the oil consumption was higher than normal.

What advice would you give to any girls or women wanting to be commercial pilots?
Most male pilots and operators are supportive, indiscriminate and just good human beings. Don’t let the ones who aren’t grind you down. If you love flying and are prepared to make sacrifices, you will do really well. When first getting a job in aviation, it’s obviously not your skill that will get you your first job, it’s your character. Show good character such as enthusiasm, willingness to learn and get your hands dirty. Learn everything about your machine by spending time with engineers and learning from experienced pilots. No pilot should be too proud to clean their hangar, their own machine or that of a fellow pilot. We do it every day here and it gets all of us pilots out the door quicker at the end of the day.

Safe Flying!!