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RUDDER FLUTTER

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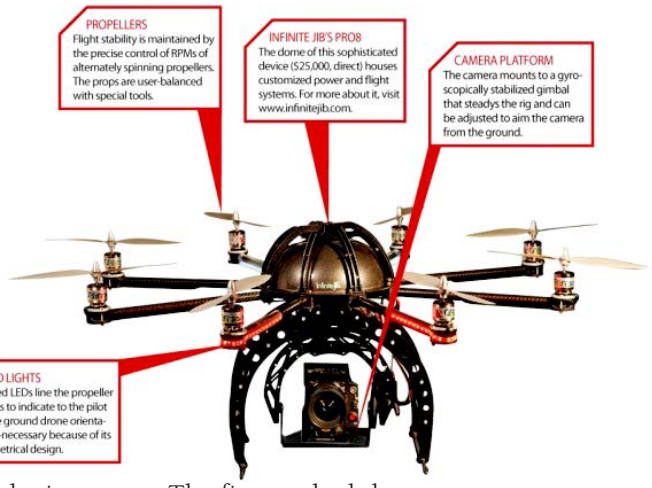
Hollywood Blazes a Trail for UAS Use

Source: faa.gov

In a press release dated September 25, 2014, U.S. Transportation Secretary Anthony Foxx announced that the Federal Aviation Administration (FAA) has granted regulatory exemptions to six aerial photo and video production companies, the first step to allowing the film and television industry the use of unmanned aircraft systems (UAS) in the National Airspace System. Secretary Foxx made the announcement on a conference call with FAA Administrator Michael Huerta and Chris Dodd, chairman and chief executive officer of the Motion Picture Association of America, Inc.

Secretary Anthony Foxx also determined that the UAS to be used in the proposed operations do not need an FAA-issued certificate of airworthiness based on a finding they do not pose a threat to national airspace users or national security. Those findings are permitted under Section 333 of the FAA Modernization and Reform Act of 2012.



"Today's announcement is a significant milestone in broadening commercial UAS use while ensuring we maintain our world-class safety record in all forms of flight," said Secretary Foxx. "These companies are blazing a trail that others are already following, offering the promise of new advances in agriculture and utility safety and maintenance."

The firms asked the agency to grant exemptions from regulations that address general flight rules, pilot certificate requirements, manuals, maintenance and equipment mandates. To receive the exemptions, the firms had to show their UAS operations would not adversely affect safety, or would provide at least an equal level of safety to the rules from which they seek the exemptions.

In their applications, the firms said the operators will hold private pilot certificates, keep the UAS within line of sight at all times and restrict flights to the "sterile area" on the set. In granting the exemption, FAA accepted these safety conditions, adding an inspection of the aircraft before each flight, and prohibiting operations at night. The agency also will issue

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Myth Busters - FAA and Unmanned Aircraft

Myth #1: **The FAA doesn't control airspace below 400 feet.**
Fact–The FAA is responsible for the safety of U.S. airspace from the ground up. This misperception may originate with the idea that manned aircraft generally must stay at least 500 feet above the ground.

Myth #2: **Commercial UAS flights are OK if I'm over private property and stay below 400 feet.**
Fact–The FAA published a Federal Register notice in 2007 that clarified the agency's policy: You may not fly

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INSIDE

From the Administrator:

Flying at over 100 kts at 15 feet AGL certainly defies the common profile for the typical Idaho pilot. But for the men and women of the Idaho Agricultural Aviation Association (IAAA), it's just another day at work.

Last month I visited the IAAA at their annual spray clinic in Gooding. The spray clinic is an opportunity for operators to fly a low pass while dispensing color-coded water to check spray patterns for uniform application. My job was to interview the videographer as each aircraft passed over. Even at over 50' above my head, my instinct was to dive for the ditch every time an air tractor zoomed by.

Idaho's aerial applicators provide a valuable service to our farmers. They are responsible for applying fungicides, herbicides and insecticides. These powerful fixed-wing aircraft can apply chemicals more quickly than ground-based systems and do so without damaging existing crops.

The aerial applicators I met (we don't call them crop dusters anymore) are a close-knit group. They thoroughly enjoy their work, which requires hands-on flying and razor-sharp skills. They like the freedom to be their own boss and operate in uncontrolled airspace. Most ag pilots I met were perfectly content to let someone else fly passengers and program autopilots. They also recognize that their unique skill is in high demand these days.

What really got my attention is the economic contribution this group of aviators makes to Idaho's aviation and agricultural industries. Idaho ag pilots will treat between 900,000 to 1.3 million acres of commercial farmland in a typical year. Idaho has a $4 billion Agriculture industry and aerial applicators contribute 5-10 percent of the total value of the state's crops.

While in Gooding, I had the chance to visit with the President of the National Agricultural Aviation Association, Leif Isaacson, of Mud Lake, ID. Leif says ag piloting is not for the faint of heart, and while it can be stressful, those like him thrive on the pressure and do their best work when situations are demanding. With over 40 years as an aerial applicator, Leif looks to be leading NAAA on a straight course.

Aerial application can be one of a community airport's greatest assets and Idaho aerial applicators are certainly one of our statewide general aviation gems. Be sure to wave your wing at the next yellow air tractor you share an airport with.

Tailwinds-

Mike Pape

ITD Aeronautics Administrator

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MONITOR GUARD FREQUENCY 121.5!

If you hear a distress signal or radio call:
Note your altitude, location and time
and
PASS IT ON . . . IMMEDIATELY!!

- **ATC or FSS**
- **FSS: 800-WXBRIEF (800-992-7433)**
- **Idaho State Communications (800-632-8000)**
- **Local FBO**
- **Local County Sheriff**

Icarus' Legacy: Paragliding to the Sun

By Christina Tindle, M.A. and Idaho Backcountry Pilot

Many would say Icarus was a fool for flying too close to the sun. Actually, he showed how close we can really get. This positive perspective helped me sort out huge grief, which ultimately led me to paragliding after my American Champion Scout was stolen three years ago, gone forever. From beneath a smothering blanket of despair, I figured I'd never fly again, forced to give up my greatest passion, against my will. I believe in positive reframing of life's difficulties, so after significant grieving time, my Irish side rallied. Quitting is not why we face darkness in life. Cruelty and

disappointment can be harnessed to overcome emotional bombs rather than remain defeated. What I didn't know then was how my life would explode into an adventure of unusual aerodynamic breath starting with rentals of the usual suspects and culminated with paragliding. This come-back into aviation taught me how close to the sun I could fly. There was no way to predict that, after I bounced back from my grief, I would launch a huge flying wing and dangle over a world-class paragliding site.

First, I tried anything: a Turbo Kit Fox taildragger, TU206 with sim-time check-out for its G-1000, TU182, IO-470 and IO-550 Cessna 185s, Piper Meridian, gyro, helicopter lessons, soaring, ballooning, seaplane training, a Citabria for Rich Stowell's spin instruction, and a surprising favorite, a Piper PA-22 taildragger with a twitchy attitude. Yet, I really wanted to touch the sun, so I had to reach further out of the box. That's when I called Chuck Smith, owner/instructor of the world-class, high-altitude paragliding flight and training center, FLY SUN VALLEY, (208-726-4055) located in my own backyard.

Photos courtesy of Christina Tindle

Paragliding is a gravity sport that flirts with wind to remain aloft as long as possible. The wing wants to fly; pilots want to play. The terrain marks the flight boundaries, gravity times the descent, and only lift can prolong the clock. On the way down to the landing zone, gentle descents or mild-to-wild aerobatics win fun points on the delight-meter. No flight is the same. Anticipation begins the moment pilots run as strong as possible, dragging wings down a slope, let it "whomp" open from wind, and jump into open space, suspended, exposed…and grinning…over the topography.

Chuck flew tandem with me on my second flight and I heard his impressive resume. In 1987, he began a paragliding career in Switzerland, initially utilizing "parapentes" as a descent tool for mountaineering activities in the Alps and later for climbs in the Rockies, Andes and Himalayas. He helped form the American Paragliding Association, the original governing body of paragliding prior to its merger with the US Hang Gliding and Paragliding Association (USHPA). He worked as a test pilot for UP International and was a US National Champion. He holds many flying records and awards, is a USHPA Advanced Instructor, USHPA Tandem Administrator, and has personally flown over 4500 tandem flights. No wonder when I asked him to demonstrate flight parameters, he smiled. I had no idea of the top performance maneuvers in store with this world-class pro.

The Mt. Baldy launch peaks at 9150 ft. MSL and drops to a landing zone approximately 3400 ft. below, at 5700ft MSL. Paragliding here requires advanced skills due to the alpine landscape where weather changes quickly. It's recommended for P3 pilots who have mastered advanced maneuvering skills. That's why Sun Valley is revered by Europeans and Americans alike and they fly Sun Valley every season, often setting records. The current Idaho state distance record of 149.5 miles was flown in August 2010 by local pilot Nate Scales, who launched from "Baldy." The 2006 US National Paragliding Championships were held in Sun Valley with a total of five tasks and 290 miles flown –the farthest distance ever flown in a US paragliding competition. Day two of the competition set another record for the longest task ever called and

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Safety Standdown 2014

By Dan Etter, ITD Division of Aeronautics

The first ever Idaho Aviation Safety Standdown took place in Boise on Friday, October 17th. Nearly 150 pilots gathered to hear from national and local aviation safety experts on topics pertaining to human factors, aerodynamics, single pilot resource management, operational challenges in mountain and canyon areas, self-certification (use of prescription and non-prescription drugs), how to prepare for an unexpected night in the field, VFR into IMC, and the intimate relationship between ethics and aviation safety.

The morning began at 7:30 with a continental breakfast and meet and greet among pilots from all around the Northwest. Many arrived early to secure a front and center seat.

Our theme for this year's event was "Learn+ Apply+ Share." Expert Tony Kern said it perfectly:

"Continuous improvement is not about being right or wrong. It is about the rigorous reflection that leads us to that place where we know more than we used to so we do better today and get better tomorrow."

Out of the three components in this equation, I think we would all agree that SHARE is the least utilized. I look at get better tomorrow as the overall aviation community becoming more knowledgeable. It's that place where we know more than we used to so that we do better today and get better in the days to follow.

This year, today even, I challenge you to share what you've most recently learned. I genuinely believe this could have an astounding impact. Think about your neighbors or coworkers who weren't at the Aviation Safety Standdown and make a point to connect with them over the next couple of weeks to share your "take-aways" from this seminar.

Our rigorous reflection to learn, apply, and share, will lead us to a better tomorrow and ultimately a safer flying community. Thank you for making a difference one conversation at a time.

FOD

From Wikipedia, the free encyclopedia:

Internal FOD is damage or hazards caused by foreign objects inside the aircraft. For example, cockpit FOD is a situation where an item gets loose in the cockpit and jams or restricts the operation of the controls. Tool FOD is a serious hazard caused by tools left inside the aircraft after manufacturing or servicing. Tools or other items can get tangled in control cables, jam moving parts, short out electrical connections, or otherwise interfere with safe flight. Aircraft maintenance teams usually have strict tool control procedures, including toolbox inventories, to ensure all tools have been removed from an aircraft before it is released for flight. Tools used during manufacturing are tagged with a serial number so if they are found they can be traced.

The "Damage" term was prevalent in military circles, but has since been pre-empted by a definition of FOD that looks at the "debris." This shift was made "official" in the latest FAA Advisory Circulars FAA A/C 150/5220-24 'Airport Foreign Object Debris (FOD) Detection Equipment' (2009) and FAA A/C 150/5210-24 'Airport Foreign Object Debris (FOD) Management.' Eurocontrol, ECAC, and the ICAO have all rallied behind this new definition. As Iain McCreary of Insight SRI put it in a presentation to NAPFI (August 2010), "You can have debris present without damage, but never damage without debris." Likewise, FOD prevention systems work by sensing and detecting not the damage but the actual debris. Thus FOD is now taken to mean the debris itself, and the resulting damage is referred to as "FOD damage."

Internationally, FOD costs the aviation industry $13 billion per year. The indirect costs are as much as ten times the direct cost value, representing delays, aircraft changes, incurred fuel costs and unscheduled maintenance, and causes expensive, significant damage to aircraft and parts and death and injury to workers, pilots and passengers.

It is estimated that FOD costs major airlines in the United States $26 per flight in aircraft repairs, plus $312 in such additional indirect costs as flight delays, plane changes and fuel inefficiencies.

Here's a scary picture of what I've personally accumulated or what other pilots at State Aeronautics have accumulated while traveling around Idaho's paved surface airports. Please be sure to check your ramp area, taxiways, runways and even your route to and from your aircraft. Bet you'll find something! Pick it up and dispose of it properly before it ends up in a tire, engine, or flight controls.

VFR Flight into IMC: It Won't Happen to Me!

By Dale Wilson, Professor of Aviation at CWU

Why does a qualified pilot flying a perfectly good Cessna crash into a wooded swamp in Florida, killing himself and his two passengers? The NTSB says it was because of his "improper decision to continue visual flight rules (VFR) flight into instrument meteorological conditions (IMC) and his subsequent spatial disorientation."

These types of accidents occur less than twice a month within the United States and Canada – a big improvement since the 1980s when they averaged more than twice a week. However, they are still one of the deadliest, with a fatality rate of almost 90 percent! This is why a recent NTSB Safety Alert warns GA pilots of the dangers of flying in conditions of reduced visual references, and why they added "hazardous weather" in GA operations to this year's Most Wanted List.

VFR-into-IMC results in controlled flight into terrain (CFIT) or, in the case of the Cessna 310 pilot in Florida, spatial disorientation (SD) and uncontrolled flight into terrain. Most involve relatively low-time private

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SAFETY ALERT

Statistics – 2014 to date

30 Accidents

6 Fatalities

Don't Underestimate Rain

By Crista V. Worthy

Icing is a well-known and serious risk to flight safety. But what about rain? Most pilots, me included, are perfectly comfortable flying in the rain. None of us, hopefully, are crazy enough to fly into a convective cloud. We know the FAA recommends all pilots give thunderstorms at least a 20-nm-wide berth. It is common to be VFR and still fly in the rain. So what's the risk?

If your plane has been sitting out in the rain, take extra care when you sump the fuel to be sure water hasn't leaked in around the fuel caps. Sump, then walk to the end of one wing and give the aircraft a good rocking, then sump again. If you get water, keep rocking and sumping until your sample is pure, as fuel contamination can make your engine run rough or even quit. If you have leaking problems with your fuel caps, have your mechanic examine them. Perhaps new caps, or at least replacing the seals, will solve the problem. Unfortunately, with leaky fuel caps, there is not much you can do about it once you're up and flying in a downpour; a potential problem compounded by the length of time you continue to fly through the rain. If you have significant leaking problems, and find yourself worrying about contamination after flying for an extended period of time in heavy rain, you could always land and sump your tanks.

Other things to check after your aircraft has been sitting in the rain are the control surfaces. Some aircraft collect water in their ailerons, so move them up and down, allowing the water to drain out. Centurions are notorious for their foam-filled elevators that become waterlogged, increasing weight and eventually corroding. It's best to cover them. If you take off with collected water and climb above the freezing level, you could end up with serious problems, such as stuck control surfaces, if the water freezes solid. Interestingly, rain produces many of the same effects on your aircraft's performance that ice does. Water will "contaminate" a wing by disrupting air flow over the airfoil. It also slows the air down, which reduces your lift. The heavier the downpour, the greater the effect, as water piling up will also increase drag. Research recognized by the National Research Council's Transportation Research Board has shown that at high angles of attack, and with flaps deployed, lift can be reduced by up to 18 percent with drag increased by up to 40 percent, leading to an increase in stall speed of as much as 17 percent. This means the wing will stall at a much lower angle of attack, so it's a good idea to keep a little extra airspeed, particularly if you are flying with a laminar flow wing.

Landing in heavy rain brings to mind a flight we took into Flagstaff, Ariz. on a summer afternoon. Clouds were parked high over our destination and it began to rain about 10 miles out from the airport. The ATIS reported rain but VFR conditions, and we continued in. The tower had cleared us to land, and we were on the downwind when the rain suddenly became so heavy you literally could see nothing straight ahead. I could see straight down so my husband switched to instruments, I called the turn, and somehow he found the runway. That got me thinking. Just because rain is light or moderate doesn't mean it will stay that way, and once you're in it, flying under the cloud bases, you can't always tell, although heavier rain usually does appear darker ahead.

Although the rainy end to our flight wasn't bumpy, most flights through rain do bring the added joy of turbulence for you and your passengers. While your plane is getting its free wash, you may experience downdrafts. Sometimes they just keep coming and now you're adding power, pitching up (watch that increased angle of attack) and exposing the air intakes to even more rain. If you're worried about sucking up too much water, you can select alternate air or carb heat, both of which take air from inside the cowling.

On approach, rain can distort your perception of the runway. Heavy rain on the windshield can make you think you're high on final, leading you to dive below your intended glidepath. Rain generally makes edges look fuzzy and indistinct, producing errors in judgment as you approach the ground. Daytime rain makes runway lights appear to be fainter, so you might think the runway is farther away than it really is and overshoot. On the other hand, nighttime rain dials up lighting intensity. Use extra caution, because if you think the runway is closer than it actually is, you could land short. Make sure your aim point is stationary against a point on the windshield, and use the VASI or other approach lights as a glideslope guide.

Touchdown brings other potential problems. Water on the runway reduces the friction between the ground and your tires–just check your POH to see the difference in landing on a contaminated runway. It also reduces braking effectiveness. If you hydroplane, your brakes will be useless because there will be a layer of water between the tires and the ground, and your directional control will be determined primarily by inertia and the wind. Larger airports can have grooved runways to help drain the water, but most airports do not.

If you know your tires' psi (you did check your tire pressure, didn't you?), you can actually calculate the speed above which you will be susceptible to dynamic hydroplaning. Your minimum hydroplaning speed is the square root of the main gear tire pressure multiplied by nine–wow–that was easy. So if the mains of my 210 are at 50 psi, the aircraft could begin hydroplaning at 63.6 knots. What amazes me is how that number generally parallels an aircraft's landing speed. Jets have higher tire pressures and have to land faster, while a Piper Cub with big tires at low psi will land slowly. At any rate, try to land slower than that magic number, if safe, so you don't slide off the end. Small aircraft may not even need brakes on a longer runway if you just land as slow as possible and roll out.

OK, you're down in one piece. Hopefully you brought your umbrella so you can avoid that final indignity: walking into the FBO soaking wet.

Crista Worthy is Managing Editor of *Pilot Getaways* magazine, a travel magazine for private pilots, and Editor of *The Flyline*, the monthly publication of the Idaho Aviation Association.

Safety Wire

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pilots – our accident pilot fits the profile – but an AOPA study also found that more than a third involved pilots with more than 1,000 hours of flight time.

At least four of the accidents since 2010 have occurred in Idaho, all of them leaving no survivors. Unlike the Florida accident, all occurred in mountainous terrain – a treacherous combination when mixed with weather. Moisture-laden Pacific air arriving over the Western mountains reduces ceilings and visibilities, severely limiting options for VFR pilots. Too many have met their fate while scud running at low altitudes below the clouds. Several have ventured into box canyons with terrain that rises steeper than their aircraft can climb, or into narrow canyons with insufficient room to conduct a 180-degree turn.

The fact remains that these pilots made a choice – either by active deliberation or by passive default –

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Aviation Medical Matters

Getting used to the cold

By: Paul Collins, MD, AME and Mike Weiss, MD, MPH, AME, CFII

It can be cold out there, even when the temperatures are not "that cold." Adapting to the climate is something we all have to do no matter where we are, especially when flying in the cold. Being warm-blooded creatures, we make up for this in a variety of ways but we cannot completely isolate ourselves from the cold. This is especially true for those of us that enjoy winter sports and winter flying. We have to acclimate to the weather and that means to the cold.

Research has shown that though we have little or no hair and don't hibernate, humans have evolved ways of dealing with cold weather to expand our "comfort zone." The indigenous people of the African Kalahari and Tierra del Fuego have been noted to sleep almost naked in freezing temperatures. Lewis and Clark marveled at how the Mandan Indians were able to hunt bison during the dead of winter with only meager clothing. Going from heated houses to heated offices in heated cars means we don't get much chance to allow our natural adaptive abilities to help us. Still, they are there and, given half a chance, we can use them to make outdoor activities more comfortable.

First of all, let's talk about heat - specifically, the heat you generate. We all have to lose body heat to survive. The process of converting the food we eat into energy produces extra heat that we must get rid of, or else we would literally cook from the inside. This is why whales that beach themselves are in such danger. They are not like fish that need water to breathe. They need the water to cool off. What our bodies strive to do is keep a balance between heat production and loss. We can then be active without spending extra energy to stay warm. In children, who have a relatively large skin-surface area relative to their weight, it is more difficult to stay warm because they can lose heat so quickly. An adult, who has a relatively small skin surface area relative to their weight, has an easier time keeping warm. It is

always a balance between inner warmth and loss of heat. So, losing body heat alone does not mean you are chilled. As with many things, it is a matter of degree.

The influence of body size and climate has been observed and studied resulting in two rules of cold exposure and body type. Bergmann's Rule stated that within the same species of warm-blooded animals, populations with less massive individuals were more often found in warm climates near the equator. Conversely, the farther one moved from the equator into colder climates, the larger and bulkier individuals in that species became. Polar bears are an excellent example, compared to brown bears. Joel Allen took this rule further in 1877, observing that individuals living in warmer climates near the equator tended to have longer limbs than those living in colder climates. A body with longer limbs is less compact and has more surface area, resulting in more rapid loss of body heat. This is called Allen's Rule, which states a more compact body is better at retaining heat.

Men and women differ with respect to ability to adapt to cold. Studies show that women are less susceptible to hypothermia and have a better ability to limit heat loss. Men seem to lose more total heat from higher skin temperatures than women do on average. This higher skin temperature seems related to a reduced tendency to constrict skin blood vessels in men relative to women. This may partially explain why women are more likely to have circulation problems such as Raynaud's Disease than men. Since men tend to have a larger skin surface area, they need to maintain a higher metabolic rate than women to stay warm. This means men burn energy faster than women. Overall, evidence shows that women can protect their core temperatures in the cold better than men. This makes extreme survival situations more problematic for men.

There are many other factors that influence susceptibility to cold, such as;

- Body composition
- Body size
- Fatigue
- Hydration
- Nutritional status
- Medications taken
- Very young and very old age
- Skin temperature
- Duration of exposure
- Water and air temperature
- Cooling rate (wind chill factor)
- Clothing
- Physical work load

You should consider these factors when you decide how quickly you will be exposed to cold temperatures and what protection, such as clothes, you will wear. On a given day, a well hydrated and well fed individual will withstand colder temperatures better than one who is thirsty and hungry. The first individual will be better able to create internal heat. This is also why it is so important to keep from getting dehydrated. Some medications, such as alcohol, will cause flushing of the skin and increase heat loss, increasing the risk of hypothermia.

Cold acclimatization is the result of gradually increasing your resistance to cold injury through regular cold exposure. As the season progresses, you adapt to the cold and can tolerate cool times longer with greater comfort. Most of us wear fewer layers as the season goes on, even at the same or colder temperatures. In nature, true cold acclimatization involves at least three adaptations. First, it takes ever-colder temperatures to induce shivering as your ability to generate and store internal heat becomes more efficient. Second, your ability to sleep in the cold increases. As the season progresses, you might notice a need for fewer blankets at night. Third, your skin temperature will tend to be lower. This results in lower heat loss. This process takes time and repeated exposure to cold. In my experience with snow camping, it took several days before I could begin to notice an increased tolerance to cold. Those first days were not pleasant. Still, once the body started to become used to the cold, exposure became more comfortable. It just takes time. Proceed gradually and avoid rapid exposure to the cold. If you are tired, hungry and thirsty, you will feel much colder than otherwise, so avoid being out in the cold in those situations. Start with short exposures and build up. Perhaps set the thermometer a bit lower in the house to help you acclimate and save you money. If you end up shivering, you are probably overexposing yourself to the cold, so perhaps put on a hat or another core layer such as a vest. Over time, and you will see that you can better tolerate the cool. Your body has the tools to adapt if you give it a chance. When spring comes and the air temperature warms up, you will lose the adaptation to cold. Your body will start to protect itself from overheating by increasing your ability to lose heat through sweating and other mechanisms.

For now, think about cold tolerance. Gradually increase daily exposure to the cold. Maybe take a walk around the block during lunch and feel the zing of the winter day. All this will make you more tolerant to the cold and will make a winter day in the air much more fun.

Radio Chatter

By: Tammy Schoen, Editor

Henry's Lake

A Fly-in was held at Henry's Lake August 1-2 in less than cooperative weather. Nola Orr reports that the only attendees were the four couples who came in via ground transport and one intrepid motorcyclist. Entertainment was provided by the grand and glorious storm that repeatedly threw lightning at Sawtelle Peak. The barbecue, attended in the rain and wind, was none-the-less, delicious.

Saturday morning brought cleared skies and a number of folks from southeastern Idaho flew in just in time for breakfast, prepared by Natalie Bergevin, President of the EAA Chapter 407 and her husband, chef extraordinaire, Terry.

Henry's Lake airstrip, at an altitude of 6596 feet, is cared for by the CAP Eagle Rock SQD of Eastern ID 99's and Chapter 407.

Join us next year! For information on this and other activities, see www.407.eaachapter.org.

Nice Work Orofino!

As you drive by the Orofino airport, you'll notice a new building. A 500 square foot terminal building may seem small, but it will make a big difference to the pilots and public who fly into Orofino. Amenities include a restroom, telephone, place to rest and internet access for flight planning. Completion is expected by mid December. Rick Laam, City Administrator said, "We haven't had a lot of money to put into the airport because airport improvements are expensive, even for a small airport. Yet, the airport is being used more and more often. We have received two requests for additional hangars in the past two months."

In a rare move, the FAA covered 90 percent of the funding necessary to build the much-needed terminal building. The other 10 percent was shared between the community and Aeronautics.

To get this type of funding, the community must show that all other airside needs have been addressed and show there would be no other needs for several years after project completion. There are very few general aviation airports, even outside of Idaho, who can say they have truly met all other needs for their airport.

If you are in Orofino, stop in and see the new building and support this smaller, community airport.

Caldwell Gets New Business

Cascade Aircraft Management Company has recently moved into the old Kitfox hangar in Caldwell. Cascade Aircraft Management assists in building experimental aircraft and also offers traditional maintenance services such as paint, interior and avionics support. See their website for more information: www.cam-aero.com

Scholarships Available

The Idaho Aviation Association has scholarships available worth $3,000 each. Go to www.idahoaviation.com/scholarships.php for more information.

Unmanned Aircraft Systems (UAS)

The UAS industry is rapidly expanding and expected to be one of the largest growth industries within the next decade. North Idaho College Training Center is offering three courses. Students can participate through NIC or Idaho State University (ISU).

This three-part seminar covers the history of the UAS, how it works and real world applications. Each three-hour session is taught by a former military-trained UAS pilot.
1. Course 1 - Introduction to Unmanned Aircraft Systems (UAS) (2 open Sections)
2. Course 2 - Command, Control & Communication Links (UAS) (2 open sections)
3. Course 3 - Sensor & Payloads Applications (UAS) (2 open sections)
For NIC – 208-769-3333 or search unmanned on their website: www.nic.edu
For ISU – 208-282-1059 or search unmanned on their website: www.isu.edu

Cool Sites!

We will be sharing a few cool websites or apps that we've found under this heading. We would love to hear from you if you find something that could be helpful to other pilots.

www.ipadpilotnews.com/2014
- Tips and tricks, news and cool apps for your iPad.

www.1800wxbrief.com
- Offers easy-open easy-close flight plan features
- Flight plan close reminders sent to cell, cockpit GPS device, and email.
- Surveillance- Enhanced Search and Rescue

YOUR AIRPORT . . . the most important Main Street in the city.

Safety Wire

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to initiate or continue VFR flight into adverse weather. I, and other safety specialists, have spent most of our careers trying to figure out why. What we've learned is that it's not just the adverse weather that traps us – it's our own fallible human condition. The following are some strategies to help you overcome some of these human limitations.

Get a weather briefing. The more you get, the more knowledgeable you will become about weather. Learn to recognize the signs of deteriorating weather by accurately interpreting METARs, TAFs and FAs. Obtain advisories on a regular basis from Flight Watch to ascertain any changes in the weather ahead. Of course, briefings and updates are pointless if you don't heed their warnings. The pilot-rated passenger in the Cessna 310 obtained them several times – he was even told "VFR not recommended" from Flight Service Station – but, despite low ceiling and visibility reports, they continued anyway.

Never stop learning about weather. Take a weather course and practice what you've learned by making rule-of-thumb predictions based on existing weather conditions to become what every successful pilot is – an amateur weather forecaster. You will then get better at recognizing the signs of deteriorating weather, both by out-the-window observations and by accurately interpreting aviation weather reports and forecasts.

Comply with your personal weather limits. VFR-into-IMC accidents have occurred in weather conditions that were higher than legal VFR minimums. Yours, therefore, should be well above FAA regulatory minimums – especially if you are an inexperienced pilot. A multi-national study confirmed that VFR pilots with the most liberal personal weather minimums were more likely to fly into IMC. Also, can you tell when the weather is approaching minimums? Researchers discovered that many pilots fly into IMC because of their inability to determine when they are in or nearing it.

Your personal minimums, however, are only as good as your resolve to adhere to them. The pilot-rated-passenger in the Cessna 310 contacted the Vero Beach Airport tower and advised that they were "scud running up the coast" at 500 feet to Sebastian Municipal Airport.

Don't get caught in the dark. At least one of the Idaho accidents occurred at night. You've heard the old adage: flying in the day is no different than flying at night, except you can't see anything! That's why your personal weather minimums must be

See Safety Wire

Continued on page 22

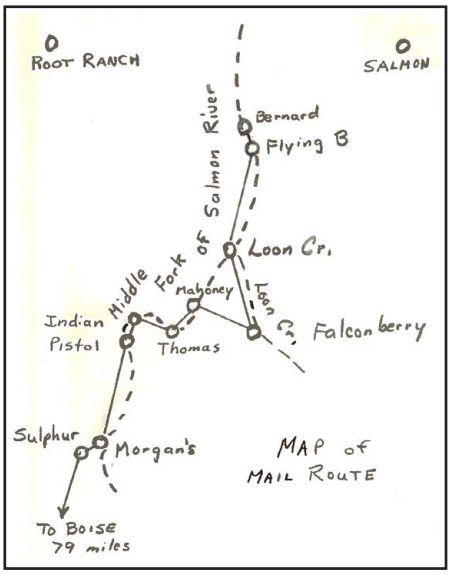
The Color of Aviation:

Pioneers of Idaho's Aerial Mail Routes

By Laura Adams

In the early 1900s in Idaho, establishment of mining towns in remote locations created a demand that aircraft could fulfill with greater speed and efficiency than slower dog-sled, horse-, and foot-powered transportation. The first major contracted aerial mail carriers in the 1930s were Bennett Air Transport Company and Johnson Flying Service. The skill level of the backcountry pilots who pioneered these routes, and those who continue to fly them, requires extensive knowledge and experience maneuvering in and out of high-altitude strips, tight canyons, soft snow, and a fair amount of cross-country traffic.

In his book, "Bound for the Backcountry," Richard Holm provides the history of the three mail routes established during the 1950s to service isolated ranches, hunting camps, and US Forest Service (USFS) stations. The bones of these original routes still exist today.



The first major postwar route was called the Cabin Creek Route, and it was later renamed the Salmon River Star Route (or the main Salmon). This route was managed by Johnson Flying Service out of McCall, and included 15 private airstrips and three USFS fields. Evergreen Aviation purchased Johnson Flying Service in 1975, but they did not hold the contract for the Salmon Star Route for long. Local Cascade resident, Ray Arnold, outbid the Oregon-based company and successfully won the bid for the second Middle Fork route as well.

Bob Fogg, Bill Dorris, & mechanic Wilbur Burkart in front of Johnson's Ford 4-AT Trimotor N7861.

For the first three years, the Middle Fork of the Salmon River route was contracted to Roberts Flying Service out of Boise, and it included five private, three USFS, and two state-owned airstrips. Pilot Norman Ashe flew this route for Roberts in a Piper Tri-pacer. In 1963, Roberts sold the business to Mike Loening, a Cessna dealer. Pilot Bill Scherer flew the route every Wednesday for six years until Loening sold his business to Boise Air Service, which held the contract from 1969-1975.

The contract for the third route, from McCall to Warren, was first held by pilot Bob Fogg. The route was expanded to include the South Fork of the Salmon River. In 1974, Jim Newcomb of McCall Flying Service inherited the South Fork portion, and shortly thereafter, Fogg's route as well. Mike Dorris of McCall acquired this contract in 1981, and he continues making aerial deliveries to Warren, as well as several South Fork airstrips. His contract allows mail delivery when the roads are closed due to snow.

Fogg, an Idaho native, is known as the first long-standing aerial pilot within Idaho to maintain a reliable, weekly mail delivery route. Raised by his single mother, a Cascade restaurant owner, Fogg did not believe he had the means to pursue a university education to become a doctor. Instead, he decided to pursue his second career choice – aviation.

After finishing high school, Fogg worked for a local sawmill to pay for his first flying lesson at the Cascade airport from Dick Johnson, of Johnson Flying Service. This relationship paved the way for his exciting career with a company known throughout the Northwest as one of the leading pioneers in aviation. Following his retirement in 1974, Fogg was formally interviewed by Joe Bennett and Doug Jones. He had nothing but the highest praise for company owners Dick and Bob Johnson, describing them as visionary entrepreneurs who "were unique in that if they could do something with an airplane, they didn't just pass it off." Even more so, Fogg was especially grateful to work for bosses who sincerely valued safety over financial gain.

Johnson Flying Service's McCall Operation in the late 50s.

Bob Fogg and Bob Johnson with The Ford at Red's Ranch in the Wallowa's.

In 1942, Fogg began working as a flight instructor for their Missoula (Mont.) operation and eventually helped in the development of other facets of the business, such as war-service pilot training programs, air patrol for fire scouting and firefighting, smoke jumping, aerial timber spraying, aerial agricultural spraying and mail service.

The first mail run Bob Johnson made out of Boise was in the winter of 1928 to drop mail at the mining town of Atlanta. Wooden skis with copper nailed to the bottoms were required to land there, as well as an early morning departure to ensure that the soaked grass was frozen solid for take-off. A couple of years later, the Johnson's hired pilot Gordon Moore to fly the Idaho Highline out of Cascade, which included mining stops such as Stibnite, Yellow Pine and Big Creek.

Previously, dog teams were used for deliveries into these mining towns, but Johnson felt an airplane could easily compete with the several-day journey through the mountainous terrain, and they developed ski flying with a Travel Air 6000 for most of this type of winter work. Fogg explained, "Even though there had been ski flying, and lots of it, done in Alaska, Johnson developed some of the principals that were used in making an airplane slide in the snow conditions specific to Idaho…. They finally wound up using a concoction of whale oil, bee's wax, and rosin to apply to the bottom of the skis. You would heat it up, while simultaneously using a blowtorch to heat up the ski, and then paintbrush it on while it was real hot. It would last an average day of flying, six or eight landings."

The skill level of the backcountry pilots who pioneered these routes, and those who continue to fly them, requires extensive knowledge and experience maneuvering in high-altitude strips, tougher canyons, sinking snow, and a fair amount of cross-country traffic.

Fogg permanently relocated to McCall in 1943 as the manager of that base where he pioneered the regular mail service route along the Salmon River. Flying more than three million miles and 22,000 hours in the backcountry over 36 years lends itself to a few close calls, and Fogg was not bashful about sharing his harrowing stories. One of his favorites is a tale about taking six hours to fly out of a snow pile in Big Creek after making a January hay delivery. His closest call happened while working on a fire at the mouth of the Middle Fork of the Salmon River, dropping cargo with a Travel Air.

Reminiscing he admitted, "I had perhaps become a little negligent, in thinking back…. That is what has killed a couple of other pilots as well, a downwind turn at low altitude. It's a no-no. I always watched it after that."

During the height of Fogg's career in the early 1960s, Bill Scherer began flying a regular Wednesday U.S. Postal Service contract to 10 isolated stations along the Middle Fork of the Salmon River. The list included Sulphur Creek, Morgan Ranch, Pistol Creek, Indian Creek, Thomas Creek, Mahoney, Falconberry Ranch, Lower Loon Creek, Bernard, and Flying B Ranch. A 1964 issue of The Cessna Pennant documented a story about Scherer entitled "Post Office with Wings" highlighting the details of his unique job description. Scherer got to fly an array of aircraft because Loening was a Cessna dealer, but he was most often seen in the Cessna twin-engine Skymaster. Flying out of Boise Municipal Airport, Scherer flew plenty of passengers along with deer and elk during hunting season.

Each of his mail runs included 330 miles and about two hours of flying time to transport fuel, grocery orders, tractor tires, and other necessities, in addition to the standard mail parcels. No day in this business is the same, and no one knows this better than the legendary Ray Arnold, who now holds the last official aerial mail route contract in the continental United States. Over the last 40 years, Ray and his staff at Arnold Aviation have taken customer service in Idaho's backcountry to a whole new level. In October, I had the pleasure of visiting Arnold Aviation and flying alongside Ray on his Wednesday route. Flying with a pilot whose plane is honestly an extension of himself, and who flies so naturally and steadily in and out of these remote airstrips, was the opportunity of a lifetime. I look forward to sharing a fascinating, in-depth and intimate account of Ray's stories with you in the next issue.

- Photos courtesy of Bill Fogg -

Happy Anniversary Ponderosa Aero Club!

By Greg Neu

Ponderosa Aero Club (PAC) is celebrating their fortieth year of providing aircraft rental and flight training in a club environment to Boise and the surrounding area. Since their humble beginning in 1974, hundreds of individuals, with the professional training provided by Ponderosa instructors, have earned the privilege to pilot a personal aircraft and enjoy the boundless freedom it brings. Several members have gone on to successful flying careers in the civilian or military realms. Many have taken this form of time travel and used it in their business or professional career. But, the majority are folks fulfilling a dream of flying - making that quick trip into the back country, a short hop to McCall for breakfast or sightseeing around the valley.

Debby and Myron

On Saturday, August 23, 2014, PAC celebrated their anniversary by hosting a barbeque for current and former members as well as prospective new members. Distinguished guests included Myron Gilbert, one of five founding members, and Debby Peterson, wife of Pat Peterson, another founding member and Idaho Aviation Hall of Fame honoree. Accompanying Debby was her daughter Sara. Myron shared stories on the impetus that led him and Pat Peterson, Patrick Ryan, James Scanlin and Ted Walters, to form what would become Ponderosa Aero Club. Sara reflected on her memories of growing up around PAC in the early years and her dad's lifelong passion with aviation.

Safety was Pat's foremost contribution and lasting legacy to Ponderosa. He laid the foundation that we continue to built upon. It is instilling a mindset of safety first in our pilots, which is the fundamental reason why PAC can proudly boast never having had a major accident. The event was a great opportunity for members to learn a little history and meet a founder of what has become one of the most successful flying clubs in the northwest.

Ponderosa Aero Club looks forward to carrying on its' time-honored commitment to providing affordable flying and promoting General Aviation as we fly headlong toward our 50th anniversary.

If you find yourself in Boise, flying or otherwise, feel free to drop by and say hello. We are located on the south side of BOI at 4888 W. Aeronca next to Lifeflight.

Bookworm

Amelia Was Right!

By Gene Nora Jessen
Book Review by Laura Adams

A collection of short stories laid out chronologically titled "Amelia Was Right!" is an autobiography of renowned Idaho aviatrix, Gene Nora Jessen. In an entertaining, light-hearted fashion, Gene Nora candidly describes her journey in aviation over the last six decades.

As an aviator, this tenacious woman has experienced more adventures than most of us could possibly dream of. Gene Nora, like Amelia Earhart, attributes her fun times to aviation-related pursuits and hanging around with pilots. When asked, "Why do you fly?" Her usual response is "For the adventure, delving into the unknown, something new, for the fun of it, seeing 'the world,' curiosity and challenge."

The Civil Air Patrol proved to be the catalyst that initially ignited her passion for flying. After that, her life centered around flying - flight instructing, aircraft sales, air racing, and the 99s. Undeterred by a male-dominated industry, Gene Nora's life is a testament to equality in aviation. You would not believe the pilots and people she has met. Vivid descriptions mixed with choice photos embellish her stories in a way that keeps you chuckling as you read.

Honestly recounted, her tales of triumph and mishaps make this one of

Calendar of Events

ONGOING EVENTS

BOI CLOSURES: Beginning the middle of May there will be phased construction projects happening at the Boise Airport for up to four months. Be sure to check NOTAMs before flying in and out of BOI.

First Tuesday of every month: 10 am - Warhawk Air Museum hosts WWII conversation and friendship. All veterans welcome, 208-465-6446

NOVEMBER

22 **EAA Fly-in Breakfast**, Blackfoot (U02), paul@cityofblackfoot.org or 208-785-8600

DECEMBER

6 **EAA Chapter 407 Annual Christmas Party** Blackfoot (U02), paul@cityofblackfoot.org or 208-785-8600

9 **IAA Treasure Valley Chapter Christmas Party**, at the Warhawk Air Museum, Nampa. Guest speaker: Robert "Hoot" Gibson

For the most recent list of aviation events, please visit our website at www.itd.idaho.gov/aero. Email your calendar event information to tammy.schoen@itd.idaho.gov for inclusion in the ***Rudder Flutter*** *and the Aeronautics website.*

the most engaging aviation books I've read. And, it is an easy read, the kind of book you can set down and pick back up like the newspaper. While delivering fascinating aviation history personably, this book is sure to inspire want-to-be-pilots to have some fun and sign up for their first lesson.

"***Amelia Was Right!***" is available at the Warhawk Air Museum and the Boise Pilot Shop or by contacting the author directly at gnjflyer@aol.com.

It's that time of year to switch out survival kits, or add a few items to better prepare you and your passengers for an unexpected night in the field.

UAS

Continued from page 1

Certificates of Waiver or Authorization (COAs) that mandate flight rules and timely reports of any accident or incidents.

"The applicants submitted UAS flight manuals with detailed safety procedures that were a key factor in our approval of their requests," said FAA Administrator Michael Huerta. "We are thoroughly satisfied these operations will not pose a hazard to other aircraft or to people and property on the ground."

The Motion Picture Association of America facilitated the exemption requests on behalf of six members and has asked for additional information from a seventh.

The FAA encourages other industry associations to work with interested parties to develop safety manuals and standard operating procedures that will help facilitate similar petitions. As of today, the agency is considering 40 requests for exemptions from other commercial entities.

You can view the FAA's exemption grants at www.faa.gov/uas/legislative_programs/section_333/ For more information on the FAA and UAS, go to www.faa.gov/about/initiatives/uas/

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Contact the Division of Aeronautics at 208-334-8775 or email laura.adams@itd.idaho.gov

Paragliding

Continued from page 3

completed in US paragliding history of 78 miles. Baldy's accolades are continuous and justified.

Yet, as a veteran of fixed wings, the concept of engine-free flying, hanging in a harness and helmet, exposed to elements, seemed intimidating. The glide proved to be an instruction in concentrated aerodynamics with 360s, spins, unlimited banks, and being direct linkage to the flight controls. We chased lift in order to maintain aerobatic dance or gentle glides.

With no cockpit, we were exposed to all aerodynamics and employed direct feel of the cables. Pilots are buffeted by winds, eddies, thermals, shadows/sun effects, and Venturi, all which enhances one's flight skills through aerodynamic experience, not theory. It's both seat-of-the-pants and hands-on flying, all at once.

Highlights during the flight included when Chuck pitted his proficiency against the wing's performance with six contiguous wingovers, a maneuver in which the wing turns at the top of a steep climb and flies back along its original path as the pilot swings over the wing. My grin burst into laughter as he next performed a death-spiral descent of several 110-degree+ banks to the landing zone which exceeded red-line on my aerodynamic fun-meter.

Besides high intensity joy, it's a convenient sport too. Paragliders pack their portable rigs to Mexico, across the USA, or to Europe to meet others who share common passion for flying, travel, and people. Paragliding is convenient, challenging, technical, and exhilarating. Depending on conditions, or the pilot's desires, it can be relaxing too. Any way the wing is flown, it's a way to fly closer to your own sun.

Paragliding invigorates any flight proficiency because you are one with a wing and breeze. Hang-time over mountains, banking, swinging wingovers, or catching lift to remain aloft, flyers must interact with the wind in ways that most fixed-wing aircraft pilots don't experience within closed cockpits. This type of alternate flight yields a positive transfer of learning that scrubs off aerodynamic skill decay, buffs out complacency, redefines confidence, and for me, slammed-dunked any residual self-pity for the theft of my airplane. In fact, I'm grateful for that theft because my world never would have hit an all-time aviation high today or introduced me to the amazing people, places, and new forms of flight.

There's no scarcity for ways to remain aloft. A pilot's legacy should reflect that the reason to reach further is simply to reach further, not necessarily just for a rating or new endorsement, lest we fall for the hollowness of success. We reach further because we can, and in the end, with our last breath, it's about knowing we reached as far as we, individually, were capable of for a life well lived. That makes the difference between an ordinary life and an extraordinary one. Call Chuck at FLY SUN VALLEY and go as close to your own sun as you dare.

Myth Busters

Continued from page 1

a UAS for commercial purposes by claiming that you're operating according to the Model Aircraft guidelines (below 400 feet, 3 miles from an airport, away from populated areas.) Commercial operations are only authorized on a case-by-case basis. A commercial flight requires a certified aircraft, a licensed pilot and operating approval.

Myth #3: **Commercial UAS operations are a "gray area" in FAA regulations.**

Fact–There are no shades of gray in FAA regulations. Anyone who wants to fly an aircraft–manned or unmanned–in U.S. airspace needs some level of FAA approval. Private sector (civil) users can obtain an experimental airworthiness certificate to conduct research and development, training and flight demonstrations. Commercial UAS operations are limited and require the operator to have certified aircraft and pilots, as well as operating approval. To date, only two UAS models (the Scan Eagle and Aerovironment's Puma) have been certified, and they can only fly in the Arctic. Public entities (federal, state and local governments and public universities) may apply for a Certificate of Waiver or Authorization (COA)

The FAA reviews and approves UAS operations over densely-populated areas on a case-by-case basis.

Flying model aircraft solely for hobby or recreational reasons does not require FAA approval. However, hobbyists are advised to operate their aircraft in accordance with the agency's model aircraft guidelines (see Advisory Circular 91-57). In the FAA Modernization and Reform Act of 2012 (Public Law 112-95, Sec 336), Congress exempted model aircraft from new rules or regulations provided the aircraft are operated "in accordance with a community-based set of safety guidelines and within the programming of a nationwide community-based organization."

The FAA and the Academy of Model Aeronautics recently signed a first-ever agreement that formalizes a working relationship and establishes a partnership for advancing safe model UAS operations. This agreement also lays the ground work for enacting the model aircraft provisions of Public Law 112-95, Sec 336. Modelers operating under the provisions of P.L. 112-95, Sec 336 must comply with the safety guidelines of a nationwide community-based organization.

This ain't no Mamby Pamby Project!

By: Frank Lester, Happily Retired

Do you know what Orlando Bloom, Steven Spielberg, Cher and Richard Branson all have in common? They were all seen in the crowd at Jenna Nelson's fly-in in Challis.

Nah, just kidding, but each, like Jenna, had to overcome the challenge of dyslexia.

Dyslexia, also known as Developmental Reading Disorder or DRD, is a condition that affects areas of the brain that help interpret language. It doesn't interfere with the ability to think or to understand complex ideas, only with the ability to process the information. Most faced with this challenge have normal intelligence; many have above-average intelligence.

I must admit, and I believe I am not alone; I was in the dark about DRD. I assumed it to be an untreatable condition similar to autism. However, a little research quickly enlightened me. The list of those who overcame dyslexia, including the four I mentioned earlier, was eye opening: George Patton, Albert Einstein, F. Scott Fitzgerald, Richard Engle, Agatha Christie, Walt Disney, George Washington, Jackie Stewart, Nolan Ryan, Muhammad Ali, Leonardo da Vinci, Tommy Hilfiger, and the list goes on. It is obviously not an obstacle to success and, with early detection, individual education, and a boatload of support and positive reinforcement, the effects of dyslexia can be minimized.

So what does all this have to do with aviation you ask? Well, as I mentioned previously, Jenna Nelson, the eldest daughter of Pete and Shiley Nelson of Middlefork Aviation, held a fly-in.

Jenna invited me to Challis to help judge two of the events she planned to include. While there, sitting with Jenna and her parents after dinner, we discussed the fly-in, which was scheduled to take place the following morning. I had a small digital recorder with me I use to log ideas for stories. I laid it on the table, thinking it would be fun to interview Jenna about her project and hear about it in her own words. What resulted was a conversation with a smart, confident young woman, undaunted by a disability.

Pete and Jenna Nelson measuring a flour drop - photo by Shiley Nelson

"What is Senior Project and why did you choose a fly-in?" I began.

"It is a new graduation requirement for Idaho seniors." Jenna explained. (Under the new Common Core education standards, Idaho high school seniors are required to complete a Senior Project in order to graduate. This ain't no push over, mamby pamby project either.) "You must complete a six-page paper on a topic related to your project, a 15-minute presentation about your project-how you did it-the good things and the bad things you dealt with, and you must get the project done. If you get a zero on any one section, you cannot graduate because each is so heavily weighted, you couldn't recover. I picked a fly-in because I wanted to do something about aviation. I was going to get my private license but couldn't do that and school, so I decided to do the fly-in."

"I'm sure not many kids have done that. What are some of the other projects they are doing?" I asked.

"Fly tying, saddle making, wood working, camps, dance lessons, picnic tables, grill guards, horse training."

"Do faculty members evaluate your progress and do you have to make periodic reports?"

"You have a portfolio you have to make and you have a monthly review with your adviser. There will be some staff members of the school

Bob Hoff's Staggerwing on low approach - photo by Shiley Nelson

coming out to the fly-in but they don't need to be there. Most were so intrigued by my project that they wanted to be there."

"Has it been difficult?"

"Yes. Some of it has been difficult-I had to do two copies of the flyers to send out and getting ahold of people was a challenge. The most challenging part will be the six-page paper. I am going to do my paper on backcountry flying. I have to give a 15-minute presentation summarizing how the event went and what happened. The paper has to be something related to the event."

"Are you feeling any butterflies about the fly-in?"

"No."

Justin Lamb, flour drop winner with Jenna Nelson - photo by Shiley Nelson

With Pete's and Shiley's back-ground in running a flying business, holding a fly-in made perfect sense to Jenna. She spent the summer organizing volunteers, finding donations for prizes and activities, securing discounts and donations of food, tables and chairs. There was no shortage of those willing to help. I asked her to tell me about the most difficult problem she encountered.

"Asking for donations," she answered. "I don't like asking for donations."

"Was dealing with strangers difficult?"

Spot Landing winners Justin Lamb (L) and Richard Lee (R) with Jenna Nelson - photo by Shiley Nelson

"No. I had to call them up to confirm if they were coming and to answer questions."

With the enormous support she received from Pete, Shi, her younger sister Courtney and the people of Challis, Jenna never worried about the success of the event. She knew there was one factor, though, she had no control over–the weather. Like any aviator, she'd deal with it.

Well, the event was a rousing success. Weather did play a small part but about 20 planes made it in.

The spot landing and the flour drop were well supported. Something I had never seen before was a tie in the spot landing. But on this day, two aircraft hit the mark. Bob Hoff of Idaho Falls brought his Staggerwing for a static display. John Gregory had his float plane right next to it. The breakfast went off without a hitch. Many visitors from the town and the school attended, interested as much in supporting Jenna as in seeing just what the heck went on at a fly-in.

The highpoint of the morning were the prizes: plastic drinking cups from a local business for the participants; AvFuel donated books; Mike Hartz representing the Idaho Aviation Association donated a year's subscription of ForeFlight for iPad; Middlefork Aviation donated two, $250 Visa gift cards for the winners of the spot landing and the flour drop. The grand prize drawing was a $1,000 fuel credit with Middlefork Aviation, donated by John Gregory. Not only fun, but rewarding for three very lucky winners.

Grand prize winner: (L to R) Richard Lee, Grand Prize Winner, Jenna Nelson, John Gregory Grand Prize donor - photo by Chris Matson

Without question, a great fly-in. An unusual fly-in, for a senior project, yes. Planned, organized and executed by one very smart and confident young lady. I was totally impressed by her dedication and her courage, especially in light of the challenges she faced. Pete and Shiley couldn't say enough about her accomplishments when I asked them. Their pride radiated from the smiles on their faces.

Flying a New Generation Gyroplane

By: Cammie Patch, Glass Cockpit Aviation

I recently have developed a passion for flying gyroplanes. I have been flying for 16 years, and flight instructing for the past 14. However, it was not until the past year, and after considerable research, would I have been willing to fly a gyroplane, let alone become an instructor in one. I previously considered them much more dangerous than conventional flying, something reserved for thrill-seekers. My image of them resembled a lawn chair/go cart apparatus, hanging below a rotor blade.

Photos courtesy of Chuck Strough

Current generation gyroplanes are a whole new breed. European manufacturers are producing high-end, sleek, modern, safe, and powerful machines that demand new consideration. In fact, more gyros are being certificated in Europe and Australia than any other aircraft category, including fixed-wing. These aircraft are offered in the US as kit-built models, which meet the 51 percent rule, even though they only take a week or two to assemble.

To understand these aircraft, one must understand the journey they have made in regards to design and certification. Invented by the Spanish engineer Juan de la Cierva, whose goal was to create an aircraft that would be safer than an airplane by eliminating the stall. The gyroplane was first flown in January 1923, 15 years before the helicopter was invented. Ironically, the inventor of gyroplanes died in a commercial airplane accident in 1936.

Because it cannot stall, a gyroplane can fly slower than an airplane. Gyroplanes fly faster than many helicopters but cannot truly hover while holding altitude. The rotor blades on a gyroplane are in constant autorotation. There is no power source turning the rotor, only the air flowing through the blades turns them as the propeller pushes or pulls the aircraft through the air. Since the rotor is not powered, the need for a tail rotor to counter the torque is eliminated. If the engine fails, the autorotation continues and the landing procedure is the same as it is for a normal landing. Helicopters are less stable because they pull air down through engine-powered rotor blades making it possible to hover, but also making the aircraft more complicated and much more expensive to fly. Due to this inherent simplicity, gyroplanes are easier to fly, more stable and much more economical to maintain.

Wind and turbulence have less of an effect on gyroplanes than on airplanes. The model I fly is approved to fly in up to 40 knots of wind and 20 knots of crosswind. The high wing (rotor) loading allows for smooth flight even in moderate turbulence. Very little runway is required for takeoff (300 - 1000 feet) and with touchdown at a walking pace, the landing roll is less than 20 feet.

Since the invention of the gyroplane, its development has been interesting. Economic factors, certification issues, and misunderstandings of the craft's aerodynamic characteristics, have all combined to create an uphill journey. When the FAA introduced the Light-Sport category in 2004, it created a home for Experimental LSAs and Special LSAs (factory-built) that included airplanes, gliders, weight-shift trikes, powered parachutes and balloons. However, gyroplanes were limited to the Experimental LSA category in the U.S., the only country to do so. Since an S-LSA must be produced before an E-LSA can be certificated, the only E-LSA gyroplanes were the "fat ultra-light" aircraft that were grandfathered in a few years ago. As a result, virtually all gyroplanes in the U.S. are in the experimental category. Despite this omission, the creation of the new Sport Pilot certificate has been beneficial for gyroplane pilots. Most meet all the requirements for the LSA aircraft, such as max weight, max speed, and two seats or less, allowing pilots to fly these aircraft as sport pilots. Students can train in a gyroplane for the sport-pilot certificate.

The transition from pilot (any type) to a gyroplane sport pilot is the real benefit. Current pilots can be certificated after receiving initial training in knowledge and operation areas of the gyroplane category. When the pilot attains proficiency, an endorsement is placed in their logbook. Another CFI (other than the one who gave the initial training) administers a proficiency check. Successful completion of this check results in a second logbook endorsement for new category/class, which also fulfills the requirements for a flight review. There is no minimum-hour requirement, no written test, no check ride and, of course, no medical examination required. A typical transition will take

anywhere from five to twenty-five flight hours, in addition to ground training. An existing CFI can add Sport Pilot CFI for gyroplane privileges in the same manner: a two-CFI signoff and logbook endorsement, which also will suffice for a CFI renewal.

How does someone receive this training? The owner of an experimental gyro can hire a flight instructor to provide training. Renting also is an option under certain conditions. An S-LSA can be rented for training as easily as a normally certificated aircraft. However, because there is no S-LSA category for gyroplanes, the FAA has allowed CFIs to obtain a "Letter of Deviation Authority" (LODA), providing a path for pilots to obtain the necessary training when it is not otherwise available. Gyroplanes are allowed even greater latitude within the LODA. A gyroplane LODA can be issued for training at all levels, or for a Sport Pilot Certificate or operating privileges. For other categories of aircraft, the training is limited to a make and model checkout, but for gyros it can be used to obtain any certificate available for that category.

There are a few manufacturers that produce very high quality gyroplane kits. The front-runner is AutoGyro GmbH in Germany. It offers three models: an open cockpit, tandem-seat MTO; the Calidus, a tandem-seat aircraft with an enclosed cockpit; and the Cavalon, an enclosed cockpit with side-by-side seating. These craft are powered by either the 100 HP Rotax 912 or the 115 HP turbo Rotax 914. Magni of Italy also produces a quality line of gyroplanes.

The numbers for new-generation gyros are impressive. Here are samples from the Calidus:

- VNE: 120 MPH
- Cruise: 95-115 MPH
- Take off distance: 150 - 500 feet
- Fuel Capacity: 19.8 gallons
- Fuel Burn: 3 - 5 gallons per hour
- Useful Load: 600 lbs.

It is interesting to note that Calidus can outperform an R-22 helicopter in useful load, speed, fuel burn, range and acquisition costs.

We have added an AutoGyro Calidus gyroplane to our line of training aircraft, and we look forward to training many Idaho pilots in the future. For additional information, check our website: www.glasscockpitaviation.com.

Safety Wire

Continued from page 11

significantly higher at night and why you should always fly over well-lighted areas and at or above minimum terrain and obstacle clearance altitudes.

Recognize you are biased to continue. We are sometimes our own worst enemy. For example, research conducted by me and my colleague confirmed that most pilots are unrealistically optimistic: Most VFR pilots believe they are less likely than their fellow pilots to experience a VFR-into-IMC accident and believe they're more capable at avoiding and successfully flying out of IMC.

We are sometimes biased in how we frame our go/no-go decisions. For example, given a choice between a sure win of $85 and an 85 percent chance to win a $100, most of us are risk averse and will take the sure gain of $85. However, when given a choice between a sure loss of $85 and an 85 percent chance of losing $100, most of us are risk seeking and will choose the chance of losing the $100. If we frame our decision in terms of the certain gain of landing safely over only a chance of successfully making it to our destination, we're more likely to divert to the nearest suitable airport and wait it out. If we frame it in terms of the certain losses of unwanted overnight motel expenses, missed appointments, and other inconveniences should we divert, we're more likely to continue.

While driving late one night on a country road, my student noticed his fuel was near-empty. He wasn't sure if he would reach a gas station before he ran out, and if he turned around he knew he would make it to the station he had recently passed. But he struggled with the decision to turn back because he had too much invested to quit. This entrapment bias makes it difficult for pilots to turn back in the face of deteriorating weather and is one of many complex and unconscious psychological factors that influence our decision to press on – a condition we call get-home-itis. Recent statistics confirm the existence of the last-leg syndrome: most of these accidents occur on the last leg of a return trip because the desire to get home overrides the pilot's ability to make a sound go/no-go decision.

Don't let someone else fly your aircraft. Compared to other GA accidents, a greater proportion of VFR-into-IMC accidents carry passengers aboard – three of the four Idaho accidents did. When other people influence our go/no-go decisions we are, in effect, no longer flying our airplane – they are! When they encountered deteriorating weather, it appears the less-experienced private pilot flying the Cessna 310 deferred to the judgment of his more experienced commercial pilot passenger in the right seat. To avoid the risk of an accident you must sometimes risk being

unpopular. It take assertiveness mixed with diplomacy to effectively communicate your intentions to others, but you have the responsibility and authority as PIC to do that – don't let a family member, a friend, a boss, or even a more experienced pilot make your decisions for you.

Get an instrument rating. Instrument-rated pilots find themselves in fewer VFR-into-IMC accidents than their non-instrument-rated peers. None of the four pilots in the Idaho accidents were instrument-rated. Keeping instrument-current and proficient, and filing IFR whenever the weather looks questionable, is a sure way to avoid the hazards of scud running – a practice responsible for countless VFR-into-IMC accidents. Shortly after reporting to approach that they had inadvertently entered IMC, the Cessna 310 crashed because of pilot spatial disorientation: He was not instrument-rated and had logged only 3.3 hours of instrument time.

Ask for help. The pilots of the Cessna asked Orlando ATC for help; unfortunately, it was too late. Pilots are reluctant to ask for help, but fessing up to ATC could save your life. They can vector you toward better weather, give minimum obstacle clearance altitudes, and provide an IFR clearance (assuming you're rated and current) if you elect to climb through the cloud to avoid a possible CFIT accident.

Consider a precautionary landing. If you have waited too late and the weather is closing in all around you, consider an off-airport landing. It's not without risk, so if you haven't practiced one in a while, obtain some refresher training from an instructor who has. Landing in a farmer's field could be your best option.

If you inadvertently find yourself in the soup, focus on maintaining control of your aircraft using your flight instruments and perform a 180-degree turn. If terrain clearance is a concern, climb and declare an emergency. ATC can help you get through this scenario, as long as you maintain aircraft control and your composure. Also, don't be more afraid of the possible repercussions of requiring emergency assistance than the hazardous weather itself. You will likely get a follow-up call from the FAA, but you need to ask yourself which is worse, a talk with the FAA or dying in an accident.

Dale Wilson teaches courses in human factors and risk management at Central Washington University in Ellensburg, Washington. You can learn more about this topic in his new book *Managing Risk: Best Practices for Pilots* (available at asa2fly.com), which describes many of the significant threats to safe flight operations, offers insights into how and why pilots make errors that exacerbate them, and provides strategies necessary to effectively manage them.

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ADDRESS SERVICE REQUESTED

Aviation Art Contest

Encouraging students who already love aviation to express it in art form.

Specifics:

- Idaho students, grades K-12
  - Category 1: K-4th grade
  - Category 2: 5-8th grade
  - Category 3: 9-12th grade
- Art must not exceed 11"x 14"
- Art must have an aviation theme
- Two dimensional color, black & white, technical drawing (schematics) or painting (watercolor, oil, etc.)
- First, second, and third place will be selected from each category

Entries now being accepted!
Deadline: February 27, 2015

Go to www.itd.idaho.gov/aero/safety_ed for details for submission and prizes or call Aeronautics, 208-334-8775