



RUDDER FLUTTER

Spring 2020

Serving Idaho's Aviation Community for over 70 Years

Vol 65, Issue I

Shakin' up the Backcountry

*By: Ross Engle, Tammy Schoen,
Tim Steffen, Claudio Berti*

As the Idaho Transportation Department (ITD) watched the snow accumulate in the Central Mountains of Idaho, they wondered if this would be the storm to shut down Highway 21. Sure enough, the snow subsided around 27" of beautiful new white fluff. As is done every year, that much snow brings the strong possibility of avalanches onto the roadway along the Canyon Creek section of Idaho Highway 21 from Grandjean to Banner Summit. That section of the highway was closed at 2:00 p.m. that day.



Rockslide on roadway

As if there wasn't enough going on in the world, having been sent home the week before due to Covid-19, March 31 also brought a little 'shake-up' to the central portion of Idaho with a 6.5 magnitude earthquake!

It was a pretty good shake up as was evidenced by numerous rock slides on Idaho's roads, including Idaho Highway 75 (ID-75) near Stanley, ID-21 north and south of Lowman, ID-55 between Horseshoe Bend and Cascade, and ID-52 east of Emmett. Crews from ITD attempted to respond immediately, only to find that, due to hundreds of aftershocks, they were forced to leave the slides where they were until it was safe enough to assess damage and begin to move rock.

Data collected that night indicated a big fluctuation in the flow of the Middle Fork of the Salmon River. Information from the Middle Fork Lodge confirmed the need to check for avalanche damage upstream. ITD would need to explore damage on Highway 21, check for damage around Bull Trout Lake, check the epicenter on Shake Creek and the surrounding area, patrol around Seafoam Mine, and, finally head up to the Middle Fork of the Salmon.

Since rock slides had roads blocked, the areas were inaccessible. With the perfect assets at the ready (aircraft and pilot), on April 2, Tim Steffen flew ITD over the affected areas giving them a much better understanding of the initial earthquake damage, hazardous areas of the river, and gave ITD's D3 Engineers an idea of what lay



Aerial view of two rockslides

between the rock slides on Highway 21 so the ITD crews could start their clean up. The USFS issued a notice that day:

The U.S. Forest Service - Salmon-Challis National Forest received an update from the Idaho Geological Survey this afternoon. There are avalanches and debris slides on Marsh Creek. Marsh Creek may be impassable via boat. There are several avalanches and slides that have blocked or partially

Shakin Up

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INSIDE

From the Administrator:



Welcome back to the Rudder Flutter. It has been a while since the Division of Aeronautics published an edition, so we want to get back

to providing information to Idaho's aviation community. We certainly picked an interesting time to do so with the current COVID-19 situation, and I hope you, your families, and your friends are well and staying safe.

While this pandemic may change some of our cultural norms, one thing is certain, aviation will continue. It is our job in the Division of Aeronautics to make it thrive. With that, as the new guy to the Division, let me tell you a little about my background. I was born and raised in Boise, attended the University of Idaho and then joined the Air Force. While in college, I spent a few years enlisted in the Idaho Air National Guard before going to officer training on active duty. While in the Air Force, I was a Weapon Systems Officer (right/back seater) in several fighters to include the F/EF-111, F-4G and F-15E. I was fortunate enough to be a squadron commander at Mt. Home and eventually retired as Commander of the Air and Space Operations Center in Germany. The Air Force provided many great opportunities, but it was time for my lovely wife, Lisa, and I to come home and be near family. At that point, I joined the Idaho Transportation Department and, after about four years, I was fortunate enough to be selected for the Aeronautics Administrator job. What a great job...what a great team!

My background leads me to have a few fundamental beliefs about state

work and aviation. First, our job in Aeronautics is to protect and advance aviation in Idaho. That ranges from ensuring the safety and development of community and commercial airports through our grant programs to ensuring the long-term operations at Idaho's backcountry airstrips. Idaho's aviation system is truly incredible, and we are here to ensure it stays that way.

With that understanding, our team developed revised vision and mission statements to guide our work. The Aeronautics vision is to **"forge a nationally renowned, progressive aviation system."** We want to be recognized nationwide as an innovative, forward-thinking organization dedicated to preserving the incredible opportunities our aviation network provides. To achieve that vision, we collectively agreed our mission is to **"innovatively develop an adaptable, foresighted, and safe air transportation system promoting economic opportunity and opening gateways to adventure."**

At first I was hesitant about the "gateways to adventure" wording. However, the Staff, being more creative and insightful, convinced me it is actually a perfect way forward. Our job is to ensure the aviation community has access to all of the great things Idaho has to offer...camping, fishing, hunting, hiking, rafting...the list goes on. When you work with a group of people thinking in those terms, work is fun. It is more fun when we think of our efforts toward developing economic opportunities for Idaho and our residents. We are about to

complete our Idaho Airport System Plan, and a part of that planning process is to develop an economic impact analysis. That analysis shows Idaho's seven commercial service airports accounted for over 26,000 jobs and contributed \$1.8B to Idaho's gross domestic product (GDP). Our community airports accounted for nearly 5,000 jobs and \$425M toward our GDP. That is impressive, and we are dedicated to doing everything within our power to increase those numbers.

You now know a little about me and my thoughts for the future, but rest assured I am not alone. We have an incredible team at Aero, and they are doing everything in their power to drag me up to their level of understanding of Idaho's aviation network. I look forward to working with them every day, and I am even more excited about the opportunity to meet and work with Idaho's aviation community. I wish you the very best during these trying times, but it will get better and aviation in Idaho will thrive.

Jeff Marker
ITD Aeronautics Administrator

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Contact the Division of Aeronautics at

208-334-8775 or email

tammy.schoen@itd.idaho.gov



The Real Reason

When Rick Holloway joined Angel Flight West in 2014, it wasn't his first foray into the volunteer arena. He regularly devoted time to the Shriners, Make-A-Wish Foundation, and his local Masonic Lodge.

In only three years, Rick has flown 65 missions for Angel Flight West and here's what he says about the experience.

“Angel Flight West is an incredible opportunity to make a huge impact on the lives of people who did not choose to be in their situation. We can make their lives a little easier by providing them with transportation to and from medical appointments and other events. I truly believe that, although I didn't realize it at the time I got my pilot's license, this is the real reason I am a pilot.”

Angel Flight West (AFW) bridges the gulf between home and health, and gives hope for a better future to patients and their families, while giving pilots a way to use their passion for flying to help others.



L to R: Mom Candi B., passenger two-year-old Kenasyn B., Pilot Rick Holloway, and Mission Assistant Jackie Holloway

With branches (called “Wings”) in Idaho and 12 other Western states, AFW's network of volunteer pilots and commercial airline partners provides more than 4,000 free flights each year. The Idaho Wing has 70 members, including 52 pilots. And these pilots mean the world to patients like Dominick.

Dominick wasn't even a year old when he took his first Angel flight after he'd been diagnosed with retinoblastoma, a rare cancerous tumor of the eye. He lives in Mountain Home with his parents Daniel and Marian. Both are legally blind and the family subsists on modest SSI payments. With Angel Flight West as their airline, little

Dominick was able to access the life-saving care he needed.

Besides flights to medical appointments, AFW can arrange transportation for other needs as well -- individuals and families escaping domestic violence; injured military personnel taking part in therapeutic programs; prospective parents hoping to adopt a child; and youngsters and teens traveling to specialty camps like those for burn survivors or kids with cancer.

Steve Laflin is AFW's Volunteer Wing Leader in Idaho. He says, “I knew I wanted to fly for Angel Flight West even before I finished my private pilot lessons because it seemed such a great opportunity to help people in a unique way. I've found my participation in AFW to be one of the most rewarding experiences in my life. Our passengers are going through very



Dominick on his way to treatment

The Real Reason
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Who CARES?



By Jeff Marker & Jennifer Schildgen

This is definitely an interesting time with a pandemic, an earthquake over 300 aftershocks, working from home and a challenging economic situation. Like many industries around the world, aviation faces monumental economic challenges and those challenges will face us in Idaho for the foreseeable future.

Like many of you and your businesses, the Division of Aeronautics will face economic hurdles. We fund our operations and grant programs through a number of revenue sources, but the largest, by a wide margin, is jet fuel taxes. Nationwide, airlines are reducing operations in excess of 40%, with Idaho being no exception. Ultimately, that will affect our funding through the remainder of this year and into the next. We are planning for revenue reductions of up to 30%, and we are not alone. Aeronautics Divisions across the country face similar situations, not to mention the impact on the airline industry, charter operations and airports in general. As a result, the federal government passed the Coronavirus Aid, Relief, and Economic Security (CARES) Act. This act provides a number of opportunities for aviation. The CARES Act provides \$10B in

economic relief funds to eligible U.S. airports affected by the pandemic. That funding covers a number of different areas. For typical federal grants, local communities

must pay a portion of a projects cost, or more appropriately, matching funds. Typical matching fund requirements for aviation-related projects is 10% with the Division of Aeronautics providing 3%-5% through the Airport Aid Program. Of the CARES Act funding, \$500M is designated to cover the match requirements for fiscal year 2020 grants, meaning the grants are 100% federally funded. This will allow critical safety and capacity projects to continue and is good news for our state airports and the Division of Aeronautics.

The CARES Act goes further. According to the Federal Aviation Administration, “At least \$7.4 billion is available to commercial service airports for any purpose for which airport revenues may lawfully be used.” The federal government established a formula process for determining airport eligibility and amounts available. Similarly, “up to \$2 billion is available to large, medium, and small hub airports and non-hub primary airports for any purpose for which airport revenues may be lawfully used.” Finally, \$100M is available for general aviation airports. We in Aeronautics will work with Idaho airports on the CARES Act details.

The economic impact of this pandemic will last well into the future with the CARES Act providing significant relief. While we do not have all of the details for Idaho’s airports, we will continue to pass along information on funding opportunities and processes.

We hope all is well for you and your families and we remain ready to advance aviation in our great state.

Note: For the FAQ page on the CARES Act, go to the following page and scroll all the way to the bottom bullet:

www.faa.gov/airports/cares_act/

COMMUNITY AIRPORT	REQUESTED PROJECTS	PROJECT TOTAL
American Falls	Rehab RW - A rehab was done in 2018	\$41,032
Emmett Municipal	RW, TW, Apron fog and slurry seal rehab	\$160,930
Craigmont Municipal	RW & Apron Rehab	\$625,500
Hazelton Municipal	RW, TW, & Apron Rehab	\$205,100
Soda Springs	Crack seal and slurry coat RW	\$40,000
Rigby Airport	Land Acquisition for RPZ control	\$96,500
Glenns Ferry	Amendment for 2018 grant - RW & Apron Recon	\$155,100
Murphy Airport	RW & Apron Recon	\$30,719
Oneida County	DESIGN - RW & Apron Pavement Recon	\$10,000
Oneida County	CONSTRUCT - RW & Apron Pavement Recon	\$2,263,026
Nezperce	Lighted windsock	\$2,814
Nezperce	RW widening	\$131,592
Carey Airport	Restroom and pilot lounge	\$40,000
Nezperce	50 X 50 Helipad	\$19,873
TOTAL		\$3,435,431

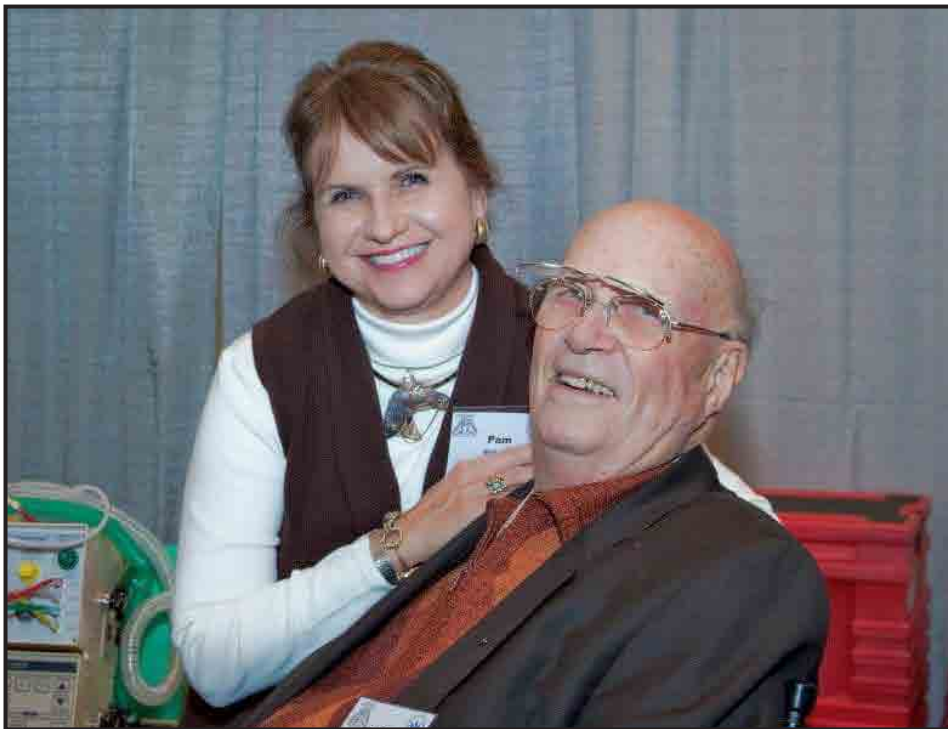


The Pilot Who Saved Millions

By Crista Worthy

With all the talk about ventilators these days, it occurred to me that I should introduce you to the amazing pilot who invented them. In October of 2013, I had the good fortune of meeting Forrest Bird, M.D., PhD, ScD, recipient of the 2013 “Breathe Easy” Award from the American Lung Association. Dr. Bird and his wife, Dr. Pamela Bird, attended the ceremony, held at Boise State. An aviator through and through, he was still doing aerobatics at age 92, enjoying his collection of aircraft, and piloting his 12-passenger Bell helicopter. Dr. Bird’s inventions have

a World War I pilot, introduced his son to both Orville Wright and Henry Ford. Mr. Ford was impressed by the 12-year-old boy who built homemade tractors out of Model T Ford car parts. Forrest graduated from high school at the age of 14 and soloed his father’s biplane the same year. By 16, he was a certified pilot. On May 6, 1937, while flying over Massachusetts, he happened to see a massive airship. “I flew up alongside of it,” he told Morley Safer for a 60 Minutes profile of him on CBS in 2007. “And I first saw the swastika on the end.” It was the German zeppelin Hindenburg, which disastrously burst into flames just a few hours later in New Jersey.



Dr. Forrest Bird and Dr. Pamela Bird

saved millions of lives. Right now, in the midst of the COVID-19 pandemic, in ICUs around the world, they are vital. Forrest Morton Bird was born on June 9, 1921 to Morton and Jane Bird in Stoughton, Massachusetts. Morton,

Bird enlisted with the U.S. Army Air Corps a week after the Japanese bombed Pearl Harbor. His numerous pilot certifications allowed him to enter active duty as a technical air training officer. Bird soon piloted almost every aircraft in service,

including early jets and helicopters. He served as General Patton’s pilot and eventually retired as a Colonel.

During WWII, some aircraft regularly exceeded altitudes at which pilots could breathe unaided. This provided Bird his first opportunity to develop technology to aid breathing. Inside a crashed



Bird Mark 8 Medical Respirator

German aircraft that he was ferrying back to the U.S. for study, Bird discovered an oxygen regulator, which he modified. With the device, U.S. pilots were able to fly at altitudes approaching 40,000 feet, (as opposed to 28,000 feet), helping the U.S. achieve air superiority.

Bird studied medicine “... to understand the human body and its stress in flight.” In 1946, he invented the first Positive Pressure Inhalation Device, followed in 1950 by the first prototype of the Bird Respirator with advanced positive pressure. This device was made from strawberry shortcake tins and a doorknob. Most of these first units were sold to the Army.

By 1955, Bird developed the prototype Bird Mark 7 Respirator, a small green box. He tested the device by traveling in his own airplanes to medical schools, visiting the most ill patients. These relatively small devices soon made primitive and expensive mechanisms like the iron lung virtually obsolete.

Saving Millions
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Position Reporting

Dear Editor,

Position reporting is critical to safe flying, and the negligence of it in recent years has been weighing heavily on me. As a charter pilot with over 25 years in Idaho's backcountry, I believe I've heard it all, and sometimes not anything at all. I want to take the opportunity to remind my Idaho friends, and all the "tourists" that it is up to each one of us to communicate in the most consistent, and efficient manner, following the same standards.

In Central Idaho the IFR altitude is generally above 11,000 MSL. Anybody below that is VFR, and has the legal obligation to see and avoid other air traffic.

While some of the experimental aircraft have some pretty nifty uncertified TCAS systems, most of us regulars out here operate on the Mk1 eyeball. A position report helps us search and locate other conflicting traffic. Additionally, it provides a situational awareness about when other traffic may become a collision hazard.

The position report should simply include: identification, position, general direction of flight and next position or destination. That's it. For example "Islander 19V, Thunderbolt Look Out, 9,000, northeast bound Taylor."

- Identification is officially an airplane type and N number. There are possibly hundreds of "Blue and white skywagons," but there is only one "Skywagon N1234V ("34V for brevity"). As it pertains to a potential mid-air, the color of an airplane cannot be determined until you are much closer that you want to be.

As it pertains to search and rescue, "Skywagon 34V" is pretty definitive as opposed to "blue and white Skywagon."

On several occasions, I have been able to help the Idaho Division of Aeronautics look for an aircraft such as, "Skywagon 1234V," because as I was flying in the area I heard that aircraft properly report its position. When aircraft are properly reported, it will often help limit the search to a smaller area, saving time when time really counts.

- Position is your location over the earth including altitude, and "climbing," or "descending," if appropriate. A position report without an altitude is relatively useless. Altitude separation is probably the best solution to any possible mid-air, and once established, there is a much better opportunity for the two aircraft to pass safely. Airplanes operate in three dimensions, so remember to use all three to your benefit. Also, altitude separation guarantees a

relative motion between the two aircraft. Aircraft on a collision course will have no relative motion between them. Without relative motion, our eyes may not perceive the other airplane until it is probably too late to avoid the mid-air.

- General direction of flight. Though not a required item in a VFR report, if you expect somebody to see and avoid, and they don't know where your stated position or destination is relative to them, they can't draw a mental line and determine if you and they have a current or future conflict. General direction of flight at least allows them to determine what quadrant you may be in.
- Next position or destination: When you are changing direction of flight after overflying a point, use that as your "next position/destination." Draw a line in space for any listening aircraft, so the other pilots can determine if you are a possible collision hazard.

Backcountry Courtesy

- Fly to the right side of the canyon
- If you have a 406 MHz ELT, REGISTER it!
- Turn on your landing lights
- Monitor 122.9 and make position reports
- Announce your intentions while in the traffic pattern and on the ground
- Avoid multiple takeoffs and landings
- Stay as high as possible except during takeoff and landing (2000 feet AGL recommended)
- Reduce power and RPMs when safety permits
- Above all, BE SAFE!



As a rule of thumb, I listen more than I talk. Flying out here is a great adventure, but as pilots, we are legally bound to see and avoid. If I am showing a visiting pilot to a new airstrip, I do all the teaching on the ground before we take-off. The Idaho Aeronautics Facility Directory and aeronautical chart are all you generally need. I realize the other traffic does not want to hear my “How to find Cabin Creek” lesson over 122.9, and I do not want to be distracted from collision avoidance while carrying on an extraneous conversation.

When cruising at 10,000 feet, I can hear almost everybody; and I’m careful not to walk on somebody else’s position report. Conversely, I don’t expect many people to hear my position report from down in a canyon.

Finally, formation flight lead responsibilities are critical to collision avoidance. Even though GA formation flying is discouraged; many pilots seem to think it is a cool thing to do in our class E airspace. Formation flight is defined as two or more aircraft operating in such close proximity that they essentially constitute one aircraft.

Hence, a formation is treated as one aircraft by air traffic control. Under VFR, we are the air traffic control. The formation flight lead is required to see and avoid, as well as navigate. This requires more than one radio. The flight lead must remain on 122.9 or they cannot report the flight’s position, and monitor other air traffic’s position to fulfill their duties to the rest of us out there. Doing follow-the-leader on “fingers” takes every airplane involved in the formation out of the see and avoid loop. It also denies every other aircraft in the vicinity of critical traffic information.

None of us want to come with 200-feet of another aircraft because

they are not on frequency or making position reports. Committing to the same communication standards will benefit everyone out there, reducing the number of close calls and accidents.

*Fly Safe,
George W. Dorris, G&S Aviation*



POSITION REPORTING PHRASEOLOGY

Identification: The aircraft type and N-number
 Position: Geographical Position
 Altitude: Report current altitude
 Intentions: e.g. Direction of flight; maneuvering in area; landing
 Destination: Next reporting point or final destination

EXAMPLE: Skylane N1234, over the Needles, niner thousand five hundred, northeast bound, for Big Creek.

Pilots - Remember to keep these transmissions simple and brief.

I FLY SAFE

All drones are aircraft—even the ones at the toy store.
 So when I fly a drone I am a pilot.
 Before I fly I always go through my pre-flight check list.
 I regularly check the safety guidelines at faa.gov/uas

FLY SMART, FLY SAFE, AND HAVE FUN!

knowbeforeyoufly.org | faa.gov/uas

PRE-FLIGHT CHECKLIST

- ▶ I fly below 400 feet
- ▶ I always fly within visual line of sight
- ▶ I'm aware of FAA airspace requirements: faa.gov/go/uastfr
- ▶ I never fly over groups of people
- ▶ I never fly over stadiums and sports events
- ▶ I never fly within 5 miles of an airport without first contacting air traffic control and airport authorities
- ▶ I never fly near emergency response efforts such as fires
- ▶ I never fly near other aircraft
- ▶ I never fly under the influence



Idahoans Helping Idaho

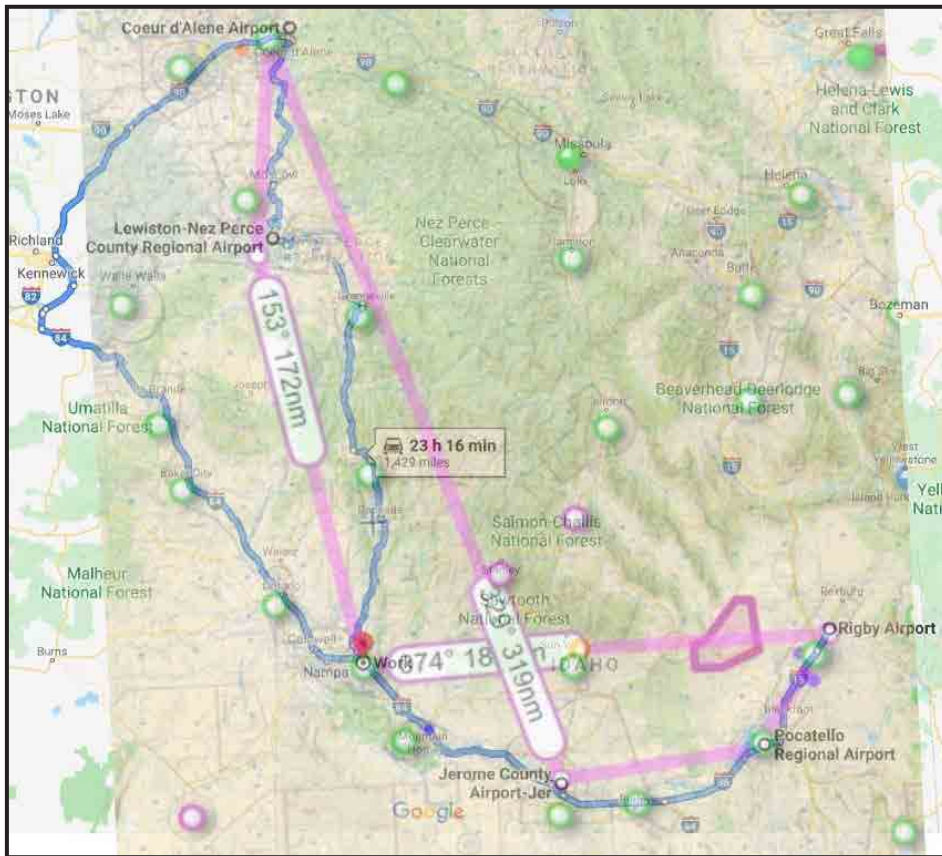
By Tim Steffen

Like many here in Idaho, the Division of Aeronautics has faced a lot of disruption and change due to Covid-19. Our flying schedule completely cancelled, along with most of the educational events we planned to support. We are blessed

our ability to move people or supplies rapidly throughout the state. When called to help, we were prepared. Idaho Transportation Department (ITD) personnel worked side-by-side with the Idaho Office of Emergency Management (OEM) to assist with managing and providing much needed resources. ITD staff



Tim Steffen ready to make deliveries



Mission comparison - Flying vs. Driving

with strong infrastructure and a good plan to enable many of us to transition to working from home. We poured over evolving industry and CDC standards for preparing, flying and cleaning aircraft to allow safe flight operations during the pandemic. In advance of the virus, we had already completed a review of our emergency plans and were closely coordinating with the Emergency Operations Center (EOC), in case they needed to capitalize on

across the state began transporting medical supplies to the areas that most needed them. From keeping the roads open and safe, to coordinating at mission central, ITD is doing everything they can to ensure PPE is distributed and emergency operations can go on.

In addition, several Idaho businesses have shifted their entire purpose to producing much needed medical and cleaning supplies.

On April 9th we were privileged to work with ITD and two companies whose new products are helping throughout Idaho:

- Buck's Bags, a manufacturer of custom sporting goods in Boise, pivoted their operation to make re-useable masks and gowns. They finished their first batch of 500 masks for ITD on the 8th.
- Distilled Resources, a private label custom distillery in Rigby, was working on a bulk order of hand-sanitizer, also for ITD.

The resources were needed at all districts and they called us to move the masks and buckets of sanitizer to all six districts in one day.

It turned out to be a beautiful day to fly, with sunshine and light winds. We loaded masks in Boise, then flew to Rigby to pick up the hand sanitizer. Once the sanitizer was secure, our first stop was Pocatello, then Jerome, Coeur D'Alene and Lewiston, dropping masks and





D3 Staff use the masks to conduct their weekly safety meeting

sanitizer at each location. ITD staff were on site to accept the PPE and ensured distribution.

This whirlwind tour of the state took just under eight hours flying 900 nautical miles. As a comparison, had this job been done in a vehicle, it would have taken just under 24 straight hours and 1429 driving miles!

Aeronautics is excited to have the opportunity, and the appropriate assets, to assist effectively. We stand ready to respond again when needed. At the end of the day, all six districts had received an initial set of supplies. The real work was done by the people at Buck's Bags and Distilled Resources, and by the essential ITD personnel keeping our transportation system running.

It was a pleasure to be part of Idahoans helping Idaho.

Masks Delivered	
D1	125
D2	100
D3	125
D4	125
D5	125
D6	115
Aero	5

Hand Sanitizer: ITD purchased 16 six gallon buckets of hand sanitizer that was delivered.

Later, ITD purchased 10,800 1.7 oz. bottles and are filling them with turkey basters!

Now THAT is dedication!



Socially distanced lunch



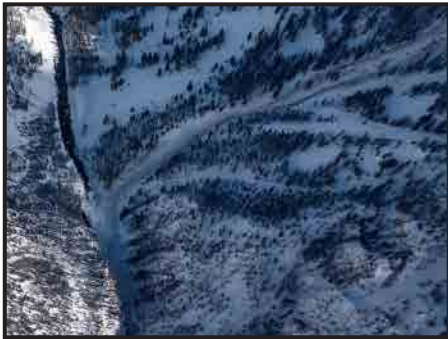
Hand sanitizer loaded at Rigby and ready for delivery



Shakin Up

Continued from Cover

blocked the Middle Fork of the Salmon River above Boundary Creek, particularly in the area where Marsh Creek and Bear Valley Creeks converge to form the Middle Fork of the Salmon River. The water appears to be finding its way around and through these avalanches and slides. The river is currently closed to boating from Dagger Falls to the confluence with the main Salmon River.



*Middle Fork of the Salmon River
blocked by an avalanche*

On Thursday, April 9th, 2020, Aeronautics pilot Ross Engle transported Claudio Berti and Zach Lifton, geologists from the Idaho Geological Survey (IGS), and Thomas Otheim, technician from Boise State University, to Upper Loon and Thomas Creek airstrips in the state's Kodiak Aircraft. The purpose of the flight was to install seismographs in areas near the epicenter of the earthquake.

Monitoring the aftershock sequence and accurately locating each earthquake allows us to define the geometry of the fault plane activated by the earthquake and provide fundamental information to both the scientific and the hazard community. Being able to "surround" the seismic area is very important for resolution and geometry. The geologist had set up many seismographs south of the epicenter, which is accessible by road, however, the northern sectors were lacking adequate coverage. Due to the wilderness area and time of

year, the airplane proved to be the most viable and efficient mode of transportation as the roads that skirt the wilderness area to Upper Loon are closed because of snow over the passes, and there are no roads to Thomas Creek.

Once we arrived at the airstrips, the geologists began setting up the stations, which consist of a Trillium sensor (buried in the ground), a data logger, a power box, a GPS receiver, and a small, photovoltaic array and battery as a power source, most of which is contained in a waterproof enclosure.

The seismograph instrument is extremely sensitive. The geologists said if someone were walking around the airstrip, their footsteps would be detected. So PLEASE be gentle with your landings so as not to send a false earthquake indication! Big game roaming the airstrips would have a similar effect, too. And as such, while at Thomas Creek, the party observed both mule deer and elk in the vicinity of the airstrip. Elk were observed near Upper Loon that day as well, with evidence of their presence on the airstrip. So, finally, if a tree falls in the woods and nobody is there to hear it, the seismograph will detect it!

The team of geologists plan to have the seismograph stations in place for an extended amount of time to help monitor the aftershock sequence initiated by the March 31st earthquake. If you visit these airstrips and

see the stations, please respect the equipment and the mission by observing from a distance. The team will periodically revisit these stations to check on their status and to retrieve data for analysis, as the remoteness of the locations doesn't allow for real time telemetry.

Field Pilot Report:

The airstrips themselves were in great shape. No damage was observed by animals at either airstrip and the windsocks were in good condition. The airstrips were also completely free of snow.

At the Upper Loon airstrip, with an elevation of 5,500', the nearby webcam at the Diamond D Ranch showed large areas of patchy snow. During the planning process for the excursion to Upper Loon, the pilot made contact with the ranch owner for a status report of the airstrip, since the ranch is three miles away. The foreman reported the airstrip to be clear of snow. When we flew over the ranch, it appeared their large trees (less direct sun) and slightly higher elevation were the reason for the lingering snow at the ranch.

For up-to-date information regarding the earthquake, see the IGS 'Stanley Earthquake' website link: www.idahogeology.org/stanley-earthquake



Kodiak at Upper Loon airstrip to install seismic equipment

Cell Phone Forensics



By Civil Air Patrol

The use of historical cell phone data to support Civil Air Patrol search and rescue (SAR) missions originated in April 2006 when Maj. Justin Ogden, CAP, first used software he developed to help predict the most likely area to search for a missing airplane. Ogden was joined by Col. Brian Ready and Maj. Jerad Hoff, and the three became the core of the National Cell Phone Forensics Team, which was designated a national CAP asset in 2009. As the number of missions has grown, the team now includes eight members, all of whom are members of Arizona Wing. All team members are volunteer professionals.

In 2019, the team completed 341 missions and was credited by the Air Force Rescue Coordination Center with 212 finds and 99 saves. From its inception in 2006 through 2019, the team been assigned 2091 missions, and has been credited with 947 finds and 627 saves.

Our mission: Collect, Analyze, Present

- We **collect** raw data from a variety of sources. Our experience helps us recognize what data sources need to be checked for information.
- We **analyze** the raw data - we remove the misleading information and focus the attention on important clues.
- We **present** the data in a manner that is immediately actionable.

This may include maps, Google Earth KML files, pictures, and other info that allows a search planner to immediately apply the cell phone clues to their search.

How Does It Work?

- Requests for assistance are made to the Air Force Rescue Coordination Center at Tyndall Air Force Base, the single agency responsible for coordinating on-land federal SAR activities in the United States, including Puerto Rico and U.S. Virgin Islands.
- Assignments support typical CAP missions such as missing/overdue aircraft, but the Cell Phone Forensics Team also works on appropriate missions from federal, state, and local law enforcement and other agencies, e.g., U.S. Coast Guard and National Park Service. These missions may include missing boaters, overdue hikers, etc.
- Analysis and presentation skills are where the team excels – extracting the most accurate information and presenting it in a way that is actionable. Team members also know places to check for data that are sometimes overlooked.
- Maj. Ogden developed a proprietary tool that allows text message contact with missing persons. A team member can send a link to the missing person which, if they click on it, will relay their position (without the team member needing to contact a cell phone provider). This tool is helpful in cases where the missing person is willing and able to participate (they will click the link you ask them to) as that allows rapid determination of their location. This has to be done before the phone battery

dies, and again, only works if the missing person is cooperative.

- The team also has a tool that can monitor a phone to see when it turns back on. This helps resolve many overdue/non-distress situations, if a team member can simply keep tabs on when the phone turns back on.

Frequently Asked Questions

Can you find a phone that is turned off?

We can often provide historical analysis to show where a phone was before the battery died, or before it was turned off or left a coverage area. This is usually a helpful clue in search and rescue missions. We can also monitor a phone for the duration of the search to see when/if it turns back on.

Can you track a prepaid phone?

Yes. A prepaid cell phone provides the same data as a post-paid cell phone.

Can you turn the phone on if it's currently powered off?

No.

What information can you provide to search and rescue teams?

The emphasis of the Cell Phone Forensics Team is to provide historical and real-time location information. The focus is on location clues. We can also provide supporting information such as call records if necessary for the search. Information is provided to the team by cell phone service providers only with documentation of exigent circumstances.

How do I (an authorized representative of a law enforcement or other agency) request mission support from the cell phone team?

Call the AFRCC 24/7 at (800) 851-3051

www.gocivilairpatrol.com
cell-questions@forensics.cap.gov



Aviation Fluids

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

As the days get longer, and warmer, airplanes and pilots are coming out of their caves – some snow caves actually! It is time to start thinking about feeding and ‘watering’ our airplanes. Since they drink something other than coffee and water, we need to pay attention to how we handle this stuff. I know you all “know” that these chemicals take special attention, but here are just a few reminders.

Let’s start with fuel. Here is a description of what aviation fuel is made of:

Blends of over two thousand chemicals, primarily hydrocarbons (paraffins, olefins, naphthene, and aromatics), additives such as antioxidants and metal deactivators, biocides, static reducers, icing inhibitors, corrosion inhibitors, and impurities. Principal components include n-heptane and isooctane.

Like other fuels, aviation fuel for spark-ignited piston engines are described by their octane rating. Is this the sort of thing you want to be inhaling? Of course not. Also, it is designed to burn, of course, so you also must be careful to avoid a fire! That means before you climb up with the hose, connect the ground wire! I have seen people “forget” to do this over and over. All it takes is one spark.

Next, how do you handle the fuel sample? Make sure you have no water in your sample tube – remember water will settle to the bottom if there is any. If the airplane is cold, you might be looking for ice crystals, which float down rather slowly. Also, depending on your airplane, sampling after things have

settled down is much more effective. Some pilots (me included) prefer to sample in the morning before they move the plane. However, in some airplanes, it is good to rock the wings, give some settle time (pre-flight bathroom time), and then sample. From the medical side, we don’t want your skin washed with this volatile stuff! Be careful how you dispose of the sample. If you decide to put the sample back in the tank, please use a filter to catch things like fuel-sampler parts, etc. If not, having a small “sample tank” to dump into is a great idea. If you just “throw it to the wind,” please be sure the wind blows it away from you! Breathing it in is like drinking it!

Aviation oil is amazingly effective at what it does, and that also makes it even more important to keep it off of your skin. I am sure you have touched aviation oil and tried to wash it off. Hard to do, right? Yes, it is absorbed into the skin very efficiently and this is not good for your skin or body. You don’t need that sort of lubrication! So, get some gloves, put a box in your hangar and some in the plane, and USE them! Buying extra large is a good idea as they always seem to be so hard to get on. Also, when you do change oil, it is a good idea to place an inexpensive tarp under your work area to catch the inevitable oil spills. I have seen quite a few “slips and falls” on oily hangar floors in the dim light while someone is carrying an armload of oil containers (I won’t say who!). Having a tarp keeps the floor clean and you will stay upright. Do your aerobatics in the plane, not the hangar! Finally, a few oil-rags should be used to clean up any spots that drip on the floor. It is amazing how such a small drop of oil can disconnect your feet from the floor.

What about greases and other lubricants? Same rules apply – don’t

touch. The best thing is to use those handy gloves! I know it takes a bit of time to get them on, but they pretty much remove the risks. If you happen to get grease or lubricants on your pant leg, which seems to always be the case, wipe that stuff off as you can and change clothes if needed. Aviation fluids are efficient at diffusing themselves into your pants and then act as a long-term local dosing machine. When you get the pants off you can see a red, inflamed patch of skin where the oil was exposed. Not good.

The good news is that most of these compounds are non-toxic – but in small doses. Since we, as pilots and aviators (and engine-feeders), are so frequently exposed to these materials, we must pay special attention to avoiding them. Take the extra time to use gloves, tarps, work clothes, and keep the oils, lubricants, and chemicals in the places they belong. Clean up spills and drops of oil and grease immediately, because if you leave it on the floor your feet will find it!

Simply a few reminders of what everyone already knows. Taking the time for a bit of safety is worth it – as the emergency rooms prove! We wish you a smooth, stable, and upright transition into spring and summer!



The Real Reason

Continued from page 3

tough times. Yet, without exception, their optimism, inner strength and courage are a continuous inspiration to me. I am proud to be a small part of an organization that plays such an important role in helping people."

Laflin adds, "Two things AFW is always in search of are willing pilots and additional outreach volunteers to make sure there is greater awareness of this wonderful humanitarian service. What we want to always avoid are the lost missions where AFW doesn't get a chance to fly simply because no one knew we were available and ready to help."

For information on how to become an Angel Flight West volunteer pilot, contact Ivan Martinez at the Santa Monica headquarters (ivanm@angelflightwest.org 310 - 390 - 2958) or AFW Idaho Wing Leader Steve Laflin (slaflin@intisoid.com 208 -589-1579) www.angelflightwest.org

Big Creek Lodge

*By Idaho Aviation Foundation
Board of Directors*

Spring has arrived in Idaho, amid many questions and uncertainty, but we hope this note finds you in good health and spirits. We want to update you on what you can expect at the Big Creek Lodge. We need to be mindful of each other to make this a safe and successful season.

OPENING DAY: The Lodge will open for meals and overnight guests on Friday May 22 with adherence to Idaho Central District Health Department (CDHD) guidelines. We will be monitoring state and federal guidelines and direction as changes occur. We intend to operate until October 9.

To keep everyone safe, we appreciate your support implementing the following:

- Meal service is available Wednesday-Monday (closed Tuesdays for meals except for overnight guests)
- Breakfast is available from 7:30am-10:00am (no reservations required) --\$20
- Lunch is by reservation 48 hours in advance and served between 11:30am-1:00pm -- \$20 email managers@bigcreeklodgeidaho.com
- Dinner is by reservation 48 hours in advance and seating for dinner is at 6pm --\$25-\$35 (email managers@bigcreeklodgeidaho.com for reservations)

- Overnight reservations include breakfast for 2 and can be made at www.bigcreeklodgeidaho.com/book

PRECAUTIONS/OPERATIONS:

- We will take temperature readings of each guest before entering the premises, and those with high temperatures will not be allowed to enter;
- Signage will ask guests to follow COVID-19 precautions and ask guests having COVID-19 symptoms to stay away;
- Tables will be 6' or more apart with maximum 6 to a table;
- Guests are encouraged to eat outdoors;
- Guests will be asked to only eat with those they are directly travelling with (this is especially hard, because many guests enjoy meeting others while in the backcountry);
- The Lodge will be thoroughly sanitized prior to opening and ongoing cleaning of door handles, bathrooms, common areas, guest rooms, etc. will be aligned with CDHD Guidelines;
- The Lodge will discontinue self-serve beverages and will pour beverages for guests;
- Guests will be provided sanitizer;
- Social distancing protocols will be in place.

CANCELLATION POLICY: We understand some overnight guests with reservations already may have concerns about staying this season. Here are our cancellation policies, which were previously announced:

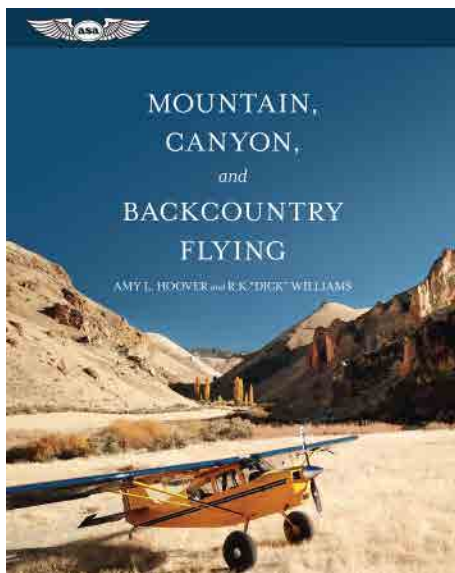
- Cancellations made more than 48 hours before arrival with a check-in date on or before June 30, 2020: we will refund your credit card for the amount charged less 6% which partially covers the credit card fees for the initial reservation plus the cancellation. As a non-profit institution, we hope you understand this policy.
- For cancellations made less than 48 hours before arrival with check-in dates on or before June 30, 2020: we will refund your credit card for the amount charged less 30%.
- For cancellations from July 1 - October 9 (closing date): We will provide a credit for future stay at Big Creek Lodge, usable for 24 months unless individual arrangements are made with management.
- Cancellations can be made via email to office@bigcreeklodgeidaho.com. Please provide the name the reservation is under, number of rooms, and dates.
- Should circumstances warrant later in the season, we will announce adjustments to this policy.

NEW INN KEEPERS: As you may recall, we will have three 3 Inn Keepers on staff this year. Mark and Sally are from Wisconsin (Sally will be our Head Cook), while Janie is from Illinois—and all 3 are eager to meet you and make your visit enjoyable despite the new circumstances!

We look forward to seeing you (safely) if your plans involve Idaho and the backcountry this season. Stay healthy and happy.



Mountain, Canyon & Backcountry Flying



Authors: Amy L. Hoover and R.K. "Dick" Williams
ISBN: 978-1-61954-741-4
SKU: ASA-MOUNTAIN
Price: \$39.95

Review by Rod Machado
San Clemente, California

A confession: I love books. Several thousand of them rest on shelves throughout my home. Being intimately familiar with nearly all of them, I feel as if they are my children. At least that explains why I occasionally point to one and say, "Who's your daddy?" That's why I felt as if I had just adopted the brightest student on campus when I received a copy of Dr. Amy Hoover and R.K. "Dick" Williams's book, *Mountain, Canyon, and Backcountry Flying*.

In my opinion, all pilots should own a copy of this wonderful book, especially if they intend to fly anywhere beyond the borders of Florida. Think about it: If the highest terrain in the state is 345 feet MSL, you don't need to know about mountains, only molehills.

Unfortunately, more than a few flatlander pilots have run their ships aground on craggy mountain slopes while unintentionally installing authentic, life-size, pine cone air fresheners in their cockpits. This should be a warning to any pilot who believes that a subscription to *Field & Stream* is sufficient education to set off on a flying adventure into the backcountry. It's not. The honest truth is that the steepness of the terrain often reveals the shallowness of one's backcountry flying knowledge. While it's who you know that determines your success in business, it's what you know that ensures your safety in the mountains. Safety, however, shouldn't be the only reason to inspire deeper and practical knowledge in this area. The fact is that you won't have that much fun during your backcountry flying adventure unless you know how to behave properly in, near, and around that terrain. Herein lies the great value of *Mountain, Canyon, and Backcountry Flying*.

Packed with more general and specific knowledge than I've seen in most educational books, this volume can rightly be called the babushka doll of practical ideas on backcountry flying: It's like one practical idea reveals another useful tool, tip, and technique. Within these pages, you'll find valuable information on backcountry pre-flighting, flight planning, navigation, terrain-specific meteorology, emergency operations, approaches, landings, departures, and much more. Without a doubt, it will be the recognized source for backcountry operations for years to come.

There were two things, however, that took this book over the top for me. First, I love axioms and rules of thumb. Despite being general in nature, they are concentrated bits of

wisdom that help train our intuition and confirm our performance calculations. For example, one of Amy's Axioms (which are sprinkled throughout the book) is: If the rocks and trees are your enemies, keep them close! While your untrained intuition might suggest staying as far away from the terrain as possible, certain situations require snuggling up to the side of a mountain or canyon. While it's not possible to mention all the fantastic rules in this book, rest assured you won't be opposed to using these rules of thumb.

Then there is the other feature that allows this volume to pack a punch beyond the weight class of most educational books. I'm speaking of its many educational, entertaining, and sometimes "eyebrow-raising" first-hand stories about backcountry flying. What a wonderful treasure this is for any pilot who wants to identify the physical risks and psychological traps of mountain and canyon operations. Read even a few of Amy's and Dick's sidebar stories—some personal, some about others, some by others—and you'll profit as if you were flying an airplane with a slow-running Hobbs meter. Go? No go? Commit? Abort? Fail to plan properly? Didn't see that coming? These are just a few of the many themes covered by these educational stories.

Pilots with a thirst for practical adventure and a soft spot for the aesthetics of mountains and canyons will find immense pleasure in backcountry flying. But—flyer beware! You can do this safely only when the contours of your knowledge match the contours of the terrain. To obtain that knowledge, you need experience, and this is what Dr. Amy Hoover and R.K. "Dick" Williams bring to the table in *Mountain, Canyon, and Backcountry Flying*. Both of them have thousands of hours of flying in backcountry terrain that is so far back, you can almost see it coming around the other side. Feel confident in knowing that by studying this book and adding it to your collection, you'll have the tools to help you fly safer should you venture beyond the flatland.



Saving Millions

Continued from page 5

In 1967, Dr. Bird developed the Bird Innovator, a conversion of the Consolidated PBY Catalina amphibian aircraft. This was the only 4-engine PBY aircraft in the world. Using this aircraft, he traveled throughout the world to the various medical residencies, teaching doctors how to use the “little green machine.” He subsequently made a ventilator for infants, nicknamed the “Baby Bird” that helped reduce breathing-related infant mortality from 70% to 10%.

In addition to saving millions of lives, Bird’s respirators and anesthesia ventilators have been used during numerous pioneering procedures, including the first open heart surgery and the first liver transplant. Fidel Castro specifically requested Bird’s respirators in exchange for the U.S. soldiers captured during the Bay of Pigs invasion. Robert Kennedy personally called Bird to request the respirators for Cuba. During the Vietnam years, Bird developed modern Medivac procedures. Bird also devised and piloted one of the first flights to transport racehorses by air.

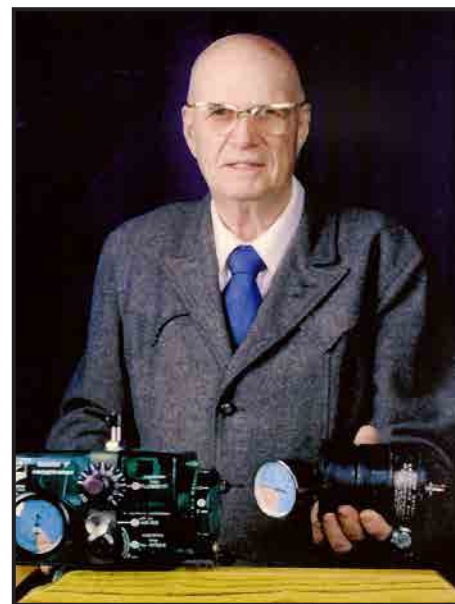
In the late 1970s, Bird earned his medical degree, a doctorate in aeronautics, and moved to a ranch in North Idaho, complete with a private airstrip. He then started the manufacturing company Percussionaire® Corporation which continues to operate in Sagle, Idaho, producing a variety of medical pulmonary devices. “I work as if I were going to be the next person to need a respirator,” Bird said in a 1981 interview. “I share in the benefits I bestow on others and my work has enriched my life.”

In 1995, Dr. Bird was inducted into the National Inventors Hall of Fame for his invention of the Baby Bird respirator. In 2007, Drs. Forrest and Pamela Bird opened the Bird

Aviation Museum and Invention Center, which displays his medical respirators, vintage aircraft, and automobiles. That year, he was inducted into the Living Legends of Aviation, followed in 2008 by the Idaho Aviation Hall of Fame. Also in 2008, Dr. Bird received the Presidential Citizens Medal from President George W. Bush. In 2009, Dr. Bird was awarded the National Medal of Technology and Innovation by President Barack Obama. The Charles Lindberg Award followed in 2012, along with the Idaho Technology Council’s Hall of Fame. In photos with each president, Bird is wearing unique double-framed glasses with two sets of lenses, one of them flipped up. His wife said he started wearing the glasses in his 30s to avoid wasting time searching for glasses by having one pair for seeing both close-up and far away. She also said he once bought 144 of the exact same style of shirt to avoid wasting time shopping. At night he filled a yellow pad with a list of items he planned to accomplish the next day.

Dr. Forrest Morton Bird died of natural causes on August 2, 2015, at age 94, at his home overlooking the airstrip on beautiful Lake Pend Oreille in Sagle, Idaho, and with his family by his side. His wife, Dr. Pamela Bird, was also a prolific inventor and pilot. Sadly, she and her two passengers were killed when her Cessna 206 crashed in the Cabinet Mountains, just two months after the passing of her husband. Dr. Forrest

Bird never stopped inventing and had patents pending at his death. He is missed by many but his legacy lives on and has never been more important than at this moment in world history, during the COVID-19 pandemic. Have you visited the Bird Aviation Museum & Invention Center? Dr. Bird’s amazing collection of aircraft, including a 1937 Beech Staggerwing, 1927 Waco, 1948 Republic Sea Bee, and North American AT-6 (and many more!) are on display, along with his many awards and memorabilia. The closest airport is at Sandpoint (SZT). Due to the pandemic, the museum has been temporarily closed, so log on to www.BirdAviationMuseum.com or call 208-255-4321 for information about when it will re-open.



Dr. Bird with a ventilator



Dr. Bird receives Presidential Citizen’s Medal from President Bush in 2008



Dr. Bird receives National Medal of Technology and Innovation from President Obama in 2009
Photo Credit: Luke Sharrett NYT



Idaho Division of Aeronautics
3483 Rickenbacker / PO Box 7129
Boise, ID 83707-1129



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**

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Division of Aeronautics

3483 Rickenbacker St., Boise, ID 83705
Website: itd.idaho.gov, Ph: 208.334.8775

Rudder Flutter Editor: Tammy Schoen
Email: tammy.schoen@itd.idaho.gov

Graphic Design: Jared Tuttle, Pauline Davis



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