



# The Color of Aviation: We Fly the Back Country

By Laura Adams

The name Ray Arnold should be at least vaguely familiar to most Idaho backcountry pilots. If you've spent any time flying in our backcountry, undoubtedly you have heard his distinctive voice over the airwaves. Arnold, founder of the Cascade FBO Arnold Aviation, has been Idaho's legendary airmail carrier for residents of the Frank Church Wilderness and Salmon River drainage for 40 years. He holds the only wilderness air-mail route in the lower 48 states, delivering mail directly to ranches and homes. However, this accounts for less than 10 percent of his job description.

With a heart of gold, Ray has dedicated his life to caring for Idaho's rural population in more ways than

most know. Riding with him on his regular Wednesday route along the main Salmon River last October was a bucket-list experience. It has been an even greater honor to befriend Ray, but then, who isn't a friend of Ray's?

Over the past few months, Ray has indulged me with countless details about his remarkable career in aviation. A career that is easy to glamorize, yet truthfully, I believe it would be the ultimate dream job for most Idaho pilots. I'd venture to say, most just don't have the guts for it. Total dedication to his passion, plain-old hard work, ongoing sacrifice, and unwavering support from his team allows Ray to spend his life on both passions: serving people and flying. In the beginning, flying was the lure, but now, at 78 years

old, he admits he could give up the flying, but he is not quite ready to give up on the people who depend on him.

Ray moved to Idaho from Minnesota in 1955 and married his college sweetheart, Carol, in 1959. The newlywed teachers obtained



Carol and Ray Arnold

jobs at Cascade High School where Ray taught math, physics and chemistry for 13 years and Carol was a home economics instructor. As DINKS (double income no kids), Ray said, they felt like they were living large, each pulling in \$4,000 as a first year's salary. Even after purchasing a lot for \$750 and building a brand new house on it for \$16,000, there was "fun" money left over. Ray decided to try flying lessons.

He flew the first two hours with Bob Fogg, continued his primary instruction under Bill Dorris, and soloed in the spring of 1963. The new addiction led to the purchase of a PA-12, and in order to support his habit, Ray concluded that forming a

*See Color of Aviation*

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Mike, Carol and Ray Arnold

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# From the Administrator:



## A Year in Review

At the Division of Aeronautics, we focus on helping to develop, foster and promote aviation within the state. The following is a

review of last year's activities, as well as our goals for 2015.

High on the Division's to-do list is ensuring Idaho's public airports meet the needs of the state. In 2014, Aeronautics invested \$475,000 of state funds in 15 public airports. The projects included runway rehabilitations, land acquisitions, environmental studies and airport master plans. Our investment is an important link to ensure Idaho airports receive more than \$25 million in federal matching funds.

Our 31 backcountry airports remain as popular as ever. In 2014, we promoted Todd Glass to the airport maintenance manager position. Although we were sad to see Gary McElheney retire, Todd brings 32 years of airport maintenance experience to the job, and we are fortunate to have him leading this unit.

We hosted a large number of visiting pilots at our state airports last year. The four most popular airstrips now exceed 5,000 operations a season. Providing pilots with a first-rate

backcountry experience begins with prioritizing safe airport operations. With that goal in mind, we have now published recommended standard operating procedures (SOPs) for Johnson Creek, Big Creek, Cavanaugh Bay, Garden Valley and Smiley Creek airstrips. These procedures highlight important considerations and encourage pilots unfamiliar with these airstrips to seek formal backcountry flight training. All five state airport SOPs can be downloaded from the Aeronautics website or the Idaho Airports App via your mobile device.

Our Safety/Education unit, led by Dan Etter, was very active in 2014. We held our first Aviation Art Contest in February and winners Sierra Lafrenz and Gage Thorton were awarded a meeting with Governor Otter, a flight with one of our volunteers, and lunch at Moon's Kitchen. In addition, Aeronautics' staff members attended the major fly-ins last year to speak with visiting pilots on safety, search and rescue, and flying opportunities in Idaho.

In the Safety Wire column, you will find information on our first Idaho Aviation Accident Scorecard (IAASC). Our goal with the scorecard is to report statistics regarding accidents that occurred during the previous year and accumulate data compiled from the NTSB database.

We were excited to offer our first-ever Safety Standdown last fall. Nationally renowned speakers were brought to

Boise to provide more than 150 local pilots with an entire day of safety-related topics. Safety Standdown 2015 will be even bigger and better, with the goal to decrease Idaho's GA accident rate by one-half over the next five years.

In June, we held our 22nd annual ACE Academy. Organizer Tammy Schoen again thrilled 21 high-school students during three days of aviation career discussion, rocket launches, simulator rides and backcountry flights.

Idaho pilots can expect another full slate of programs and events from Aeronautics in 2015. Airport funding will continue at the highest level possible. The backcountry airstrips will be in ship-shape condition. Dates for our art contest, ACE Academy and Safety Standdown have already been selected. We are also honored to host the National Association of State Aviation Officials (NASAO) convention for the first time. This will be a great opportunity to showcase Idaho aviation to other states.

Few of these programs would be possible without the support of our pilot-volunteers. We genuinely appreciate the many airport work-party volunteers, ACE Academy and Art Contest pilots, and especially the 40-plus search-and-rescue volunteers who continue to offer assistance when needed. Thanks for your support from all of us at State Aeronautics. We look forward to another year of safe flying.

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**Mike Pape**

ITD Aeronautics Administrator



## Airport Update

# Mountain Home Municipal (U76)



**By Melissa Kaplan, ITD Division of Aeronautics**

Mountain Home completed a major project in 2014 that

was four years in the making. Planning for this project began with inclusion in their five year Capital Improvement Program (CIP) submitted to the Division of Aeronautics for the first time in 2012, the first year of the Idaho State Capital Improvement Program (ISCIP).

With a \$2.6 million grant from the FAA, a grant from the Idaho Airport Aid program of about \$126,000, a local match of about \$166,000, and multi-year Non-Primary Entitlement Transfer agreements with Priest River airport and Arco-Butte County airport, this project was completed.

Without all stakeholders' cooperation and support, this could not have been accomplished. The project consisted of:

- Full-depth reconstruction of the runway pavement,
- Grading of the existing infield areas to help promote drainage compliance with FAA grading requirements and allowance for installation for a new surface and subsurface stormwater system,
- Mill and overlay of the parallel taxiway, and
- New pavement markings on both the runway and taxiway.

When in the area, stop by and check out the improvements and meet the new airport manager, Ted Thompson.



**Mill and overlay of the parallel taxiway.**  
Photos courtesy of Toby Epler, JUB



**Grading of infield and taxiway work**



**Full-depth reconstruction and new pavement markings on Runway.**

The **Rudder Flutter** is published by the Idaho Division of Aeronautics. Articles appearing in this publication are the opinion of the writer and do not necessarily represent the views of the Staff, the Administrator, or the Department. All reasonable attempts are made to ensure the accuracy of the articles contained herein. The **Rudder Flutter** is published quarterly. All articles must be submitted to this office for review.



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# EAA Chapter 407

# This Gift Idea is a Shoe In!



**By Dan Etter,  
ITD Division of  
Aeronautics**

Blackfoot—  
Saturday, Nov.  
22, 2014.  
I'd like to believe  
pilots made it

their priority this Saturday morning to travel to the Blackfoot Airport (U02) to hear a two-hour presentation on aviation safety, and search and rescue, but who am I fooling? On this particular day the weather was far from cooperative. There were no birds flying that day, literally! I arrived at 8 a.m. and, to my amazement, there were dozens of vehicles already parked at the FBO, or "Office" as it is called in the Facility Directory. The wind was howling, the rain was coming down sideways--how could this be? As a young lad, my father used to have a saying about large gatherings of folks in small confined locations. It went something like "must be givin' away free peanuts!"

The smell of hotcakes and sausages soon filled the air, and it was then I understood the motivation.

I met many wonderful folks that day, like pilots Mike Hart, Joel Milloway, Gary Bills, Jim Wolper, Mike Marquette and Ryan Leaviti. Chapter President Natalie Bergevin invited me

to attend their meeting and offered the opportunity later that morning to present on recent Idaho aviation accident statistics, and search and rescue. Audience participation that morning was amazing. I handed out multiple copies of our most recent operating-procedure guides, density-altitude cards, T-shirts and hats, and, of course, the favorite amongst pilots everywhere--stickers.

I returned that evening to Boise with some very fond memories of EAA Chapter 407.

Their website reads, "We are a group of aviation enthusiasts, aircraft builders, and pilots who get together with like-minded people to share ideas, exchange information, encourage safety, serve the local aviation community and have a lot of fun doing so." I believe this statement wholeheartedly. For more information about EAA Chapter 407, contact Natalie at 208-681-1411.

Thanks for the invite!

**SAFETY ALERT**

**Statistics – 2015 to date**

**0 Accidents**

**0 Fatalities**

**By Nola Orr**

Did you know that EAA President, Natalie Bergevin makes airplane chocks out of shoes and boots filled with cement?

Natalie had been contemplating what she might do in the way of an appreciation gift that would be different and fun. When Natalie first told her husband Terry and son Matthew about the idea, they said she was nuts. Natalie persevered and the idea worked.

Her husband Terry's father was a pilot at the Blackfoot airport and quite a few of the shoes are his. In a way it is being done in his memory.

The first year, 2013, she did pairs for Leigh Orr, Miles Del Ray, Pete Stewart, Jim Wolper and Rob Wray. The second year she did pairs for Paul Tremblay, Jim Tibbits, Hal Johansen, Bill Smith, Richard Neves, Austin Moses, and Bob Hoff.

Anyone lucky enough to own a pair is delighted with this unique and very useful gift!

SAVE THE DATE!

Aviation Safety Standdown

September 10-11, 2015

(time and location to be announced)

Keynote Speaker:  
NTSB Board Member  
Earl Weener



**Photo by Nola Orr**



# *Bound for the Backcountry II*

By Mark Lessor

## *A History of Airstrips in the Wallowas, Hells Canyon, and the Lower Salmon River*

By Richard H. Holm Jr,  
published by Cold Mountain Press  
in 2015, 251 pages.

A companion volume to “Bound for the Backcountry” by Richard Holm, “Bound for the Backcountry II” explores the history of the homesteads and subsequent airstrips of the lesser known, more geographically confined, west-central Idaho and northeast Oregon. The Hell’s Canyon section of the Snake River, the last 35 miles of the Salmon River prior to its merging with the Snake and the Minam River drainage of Oregon’s Eagle Cap Wilderness, are

areas as equally rich in history and natural beauty as the central portions of Idaho explored in Holm’s first effort.

Aircraft have been used throughout Idaho since the early 1900s, but this form of transportation gradually assumed special importance for those who lived, worked and played in areas of the state that, to this day, may have little other means of access any quicker than the pace of a healthy packhorse. Mr. Holm again provides historic insight on the relationship between small aircraft and remote, often forgotten Idaho homesteads and Forest Service airfields. This meticulously researched and footnoted book has hundreds of black-and-white photographs, many



**Author Richard H. Holm Jr.**

of which have been hidden in family photo albums since developed. This review takes a brief look at Mr. Holm’s second work that reveals another chapter in Idaho and northeast Oregon’s aviation history.

**See Bookworm**

**Continued on page 20**

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## Cockpit Conversation

# Ground Operations and ATC



**By Cade Preston,**  
**Director of**  
**Flight**  
**Operations, with**  
**contributions**  
**from Casey Allen**  
**and Terry**  
**Scheuffele, FAA**  
**Tower**  
**Controllers**

The Boise Airport is a relatively easy airport to operate in and out of, however, in a recent discussion with a Boise Air Traffic Controller, I was informed of two areas of operation in which the tower controllers are seeing consistent deviations.

### Hold Short

Controllers continue to hear incorrect pilot read backs of hold-short instructions. The FAA's *Air Traffic Control Manual* requires controllers to obtain the following three items in a single read back transmission, for all hold-short instructions

1. The words "Hold Short"
2. Runway/Taxiway instructed to hold short of.
3. Aircraft call sign.

If any of these items are omitted from the pilot read back, the controller is required to query the pilot for a read back which includes all mandatory items.

Let's take a look at two examples of taxi instructions one might receive in Boise.

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Each example will contain a sample of a correct and incorrect read back.

### Example 1:

When the pilot calls tower ready for takeoff:

**Pilot:** Boise tower N12345 ready to go runway 10R

**Tower:** N12345, Boise Tower roger, hold short of runway 10R, landing traffic.

**Correct Pilot Read Back:** *Roger, HOLD SHORT OF RUNWAY 10R, N12345*

This read back contains the three required items.

### **Incorrect Pilot Read Back 1:** *Roger N12345*

This read back lacks the runway instructed to hold short of and the words "hold short." The tower controller is required to issue the instructions again in order to obtain the proper read back.

### **Incorrect Pilot Read Back 2:** *Hold Short, N12345*

This read back contains the words "hold short," but is missing the runway instructed to hold short of. The tower controller is required to issue the instructions again in order to obtain the proper read back.

### **Incorrect Pilot Read Back 3:** *Hold short 10R*

This read back is missing the aircraft call-sign. The tower controller is required to issue the instructions again in order to obtain the proper read back.

### Example 2:

**Tower:** N12345, runway 28R, taxi via alpha, hold short of taxiway echo.

**Correct Pilot Read Back:** *28R via alpha, hold short of echo N12345.*

This read back contains the three required items.

### **Incorrect Pilot Read Back:** *28R via alpha, hold short on alpha, N12345*

This read back contains the runway instructed to taxi to, but is missing the taxiway instructed to hold short of. The pilot indicates that he will hold on "A" but not where on "A." The read back of the hold-short point must be specified with the words "hold short." In other words, in this example, the controller must hear the words "hold short of taxiway echo."

### Runway 10L Approach

At BOI, taxiway J crosses the runway 10L Approach. The entrance to this area is marked as if it were a runway, including holding position markings,

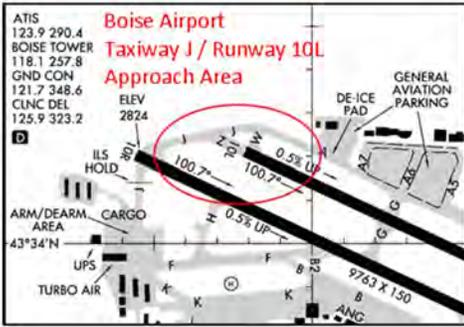


and holding position signs.



These markings are used to hold aircraft on taxiway J, so they do not interfere with approaches and departures on runway 10L/28R. A clearance is not required to taxi within the runway 10L Approach area. The pilot only needs a clearance to taxi on taxiway J. For example, if the tower controller instructs, "N12345, runway 10R, taxi via alpha, Juliet," the pilot is permitted to cross the runway 10L Approach area.





However, consider a tower controller instruction of, "N12345, runway 10R, taxi via alpha, Juliet, hold short of runway 10L approach." In this case, the pilot must hold short of the runway 10L Approach holding position markings, until instructed to cross. Also, if the pilot responds "holding short of runway 10L," the controller will ask again until he hears "holding short of runway 10L Approach." This is because taxiway J does not cross 10L, only 10L Approach.

Personally, I always treat the runway 10L Approach area as if it is a runway. Although not required, I do not enter any approach area without a

clearance to do so -- even if that means querying the tower controller for a clearance. For example, "Boise Ground, confirm clear to cross runway 10L Approach, N12345." It has been my experience that controllers appreciate this extra level of awareness from pilots and are happy to give you the clearance.

### Stop and Clarify

If ATC instructions are confusing, ambiguous, or if you just did not understand them, NEVER be afraid to ask for clarification. As a private pilot and inexperienced commercial pilot, I was often timid to stop and ask for clarification when confused. Years of experience in the industry have taught me that even the most experienced pilots and air crews get confused, or turned around. But more often than not, they stop and get clarification from ATC.

Also, if a controller gives you instructions which you cannot comply with, tell the controller you

are "unable" and ask for different instructions. The controller expects the pilot to follow the issued instructions, unless the pilot states he is unable to comply. If a controller is unable to get an acknowledgment from the pilot, the instruction is considered "not issued."

Only two items are required to be read back by a pilot, Runway Assignment and Hold-Short instructions. While everything else can be accepted by a simple acknowledgment, it is not good practice. If the pilot does read back additional information, ATC must ensure that what is read back is correct.

If you have any questions about operations at the Boise Airport, the controllers are very helpful and willing to answer your questions. Feel free to call the tower at 208-364-5800.

Photos by Cade Preston

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## Aviation Medical Matters

# Take a Deep Breath—every pilot needs lungs

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



Winter is almost over. In spring, pilots' thoughts turn to getting the old bugmasher into the sky, so make sure the bird's annual is current and the pilot's currency and medical are OK. Then take a deep breath of fresh spring air.

Cough, wheeze—maybe there is a problem.

The respiratory system consists of the lungs, a collection of tiny air sacs

whose walls are lined with blood vessels where oxygen can be taken up and carbon dioxide be given up by the red blood cells. The area of the normal lung is huge. If spread out flat, it is larger than a tennis court.

A network of tubes route air from outside the body, through the nose and mouth, to the pharynx, which connects to the trachea, a firm tube made up of rings of cartilage. It then connects to the bronchi and bronchioles, where the tubes become more muscular and less cartilaginous as they divide and become smaller, and finally to the air sacs where the exchange occurs. The lungs are quite elastic in quality. They sit inside the rib cage where the bellows action of the diaphragm, the flat muscle between the bottom of the rib cage and in the intestinal cavity, creates a negative pressure by contracting,

pulling air through the passages and into the lungs. The muscle then relaxes and the elastic lungs expel the air. Accessory muscles of the abdomen, rib cage and neck help with this process, both by increasing the force of the negative pressure through inhalation and creating a positive force to exhale.

There is also a filtering system made up of nasal hair and bony plates (called turbinates in the nose) and mucous along the bronchi and bronchioles which trap particles in the air and small hair cells that beat the mucous layer up and out to where it is either swallowed or coughed out. Normally this system works automatically and with little effort.

Every pilot knows that when all systems are working well, with seemingly little thought or effort, it is

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occasionally a prelude for what is about to go wrong.

About one in five people are subject to seasonal allergies. Pollen released by trees, shrubs, grasses or other plants trigger an immune response in the respiratory tract and eyes, characterized by irritation of the eyes and throat, excess mucous production, and sneezing and coughing. People vary in how and to which pollens they are sensitive.

Response can even vary over time in the same person. Allergies can make it hard to see, hard to sleep and hard to pilot a plane. There are over-the-counter medicines to treat the symptoms. Some, like loratadine (Claritin), fexofenadine (Allegra), and desloratadine (Clarinex) are considered non-sedating in the recommended dosages and the FAA permits pilots to use them. However, individual response to the medication can vary and higher doses are sedating.

Avoiding pollen can be helped by using air conditioning or an N95 mask (inexpensive and readily available from any hardware department) to filter out 95 percent of all dusts and particles, including pollen. If you are significantly affected by seasonal allergies, you may have to limit your flying. An allergist can administer desensitizing shots to block or decrease the immune response. Some people swear by eating locally produced honey, although scientific studies have not confirmed this folk remedy (full disclosure alert: Dr. Collins keeps bees).

Asthma is a more severe allergic response. In asthma, the reaction includes constriction of the muscles in the smaller air passages, making it hard to breathe in and out, creating the wheezing sound heard during an asthma attack. Asthma can be serious, sending the victim to the hospital for emergency treatment. It usually responds to treatment and can be controlled with inhaled or oral medicines.

It is also one of the CACI diagnoses (Conditions for which the AME Can Issue). That means the local AME can fill out the required worksheet and issue a medical certificate, of any class, on the spot if a pilot has asthma that is controlled with long-acting inhalers and only has intermittent symptoms that do not require hospitalization. Lung function must have been tested within the past three months and shown to be functioning to at least 80 percent.

Chronic obstructive lung disease (COPD) is the lung condition most commonly related to a smoking habit. Carbon monoxide in cigarette smoke kills the hair cells lining the respiratory tract and the mucous-trapping particles in the smoke cannot be forced up and out. It thickens and accumulates, blocking the passage, and has to be coughed out (smoker's hack). This pressure against the blocked tubes damages the air sacs behind the blockage, making larger, but less functional sacs, so the exchange of oxygen and carbon dioxide is impaired. Nicotine causes constriction of the muscles lining the smaller air tubes making it harder to breath with asthma-like symptoms, although anti-asthma medicines do not work as well with COPD. Also, the carcinogenic substances contained in cigarette smoke are not cleared very well, staying in contact with the respiratory tract to trigger a variety of cancers associated with smoking.

COPD is among the diagnoses listed for AME Assisted Special Issuance. It must be deferred to the regional flight surgeon or Oklahoma City the first time it comes up during a medical. For subsequent determinations, the local AME can issue certificates for any class if symptoms are stable, there is no associated illness, the airman is stable on medicines and has had an evaluation from a pulmonary specialist in the last three months,

including tests showing pulmonary function of at least 70 percent of normal and use of steroid medicine is relatively low.

It is a lot easier just to quit smoking. Lungs have excess capacity, and the hair cells lining the respiratory tract begin to grow back within a few days. Recovery is better and faster the sooner one quits, so it is better to not begin smoking in the first place (does the military still give out cigarettes in the ration kits and sell cheap smokes at the base exchange?).

Lung disease increases susceptibility to hypoxia and carbon monoxide. You might want to use oxygen for flights above 10,000 feet, or even lower. Blood oxygen can be monitored with an inexpensive battery-operated device clipped on your finger tip or ear lobe. As with most aspects of flying, you need to know your personal limits. Carbon monoxide testers can be as simple as a small colored disk mounted on the panel that should be replaced with each oil change. An electronic version is not expensive and can plug into a cigarette lighter.

One final suggestion, for the sake of your lungs, is to get a flu shot every fall. Influenza kills approximately 20,000 Americans during an average flu season. Even if you do not die, the symptoms can ground you for six to eight weeks. Also, if you are over age 65, get the pneumovax to prevent common types of pneumonia. As all pilots know--preventive maintenance is best.

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# Radio Chatter

By: Tammy Schoen, Editor

## Planning A Fly-in?

If you or someone you know is planning to coordinate a fly-in at any of our backcountry airstrips, please contact Todd Glass (208-334-8893) at the Division of Aeronautics well in advance of the date. This helps us ensure that there are not more people at any one airport than it can handle, which makes a nicer experience for everyone.

For some of our airports, there are recommended standard operating procedures that help those who have never been in Idaho to determine if an airport is appropriate for them. You can get those procedures at [www.itd.idaho/aero](http://www.itd.idaho/aero) then click on publications.

## New President For NASAO

The National Association of State Aviation Officials (NASAO) named Greg Principato president and CEO of the 83-year-old organization in November, 2014. Since its founding in 1931 NASAO has represented the men and women, in state government aviation agencies, who serve the public interest in the states, Guam and Puerto Rico.



“Aviation needs a strong NASAO, and its members and I share that vision,” said Principato. “I am excited to be joining the NASAO team as its president and CEO. From my time working for an innovative, transportation-oriented governor through my career in aviation, I have

become convinced that the states are ‘where it’s at’ when promoting aviation as a force for building modern communities connected to the national and global economy.”

Aeronautics is excited to work with Greg and his staff to host the 84<sup>th</sup> Annual Convention and Tradeshow on September 20-22, 2015 in Boise.

## Flight Training Excellence

Congratulations to Glass Cockpit Aviation who, for the second year in a row, has earned the AOPA 2014 Flight Training Excellence Award for their high standard of accomplishment and commitment to a positive training experience.

Brittney Miculka, director of pilot community development for AOPA said, “We created these awards to recognize those who instill a lifelong passion for aviation among their students and it was clear from the customer reviews that these professionals are providing a quality flight instruction experience.”

To select the award winners, AOPA invited those who have taken flight training within the last 24 months to complete the Flight Training Poll. Each individual could nominate up to one flight school and one flight instructor. The online poll was conducted from June 3 to August 23, using a process that contains several safeguards designed to ensure fair competition. AOPA’s poll had more than 3,600 respondents.

Glass Cockpit owner Cammie Patch said “We are honored to receive this award and to have been only one of two schools chosen in the northwest. It’s also exciting that one of our CFIs, Blake Spry, received one of ten distinctions as an Outstanding Flight Instructor.”



## New Flight School at Coeur d’Alene Airport

If you are in the northern part of Idaho, you’ll be happy to know that Latitude Aviation is a new flight school that has opened at Pappy Boyington Field (COE). On January 24 they began offering a Private Ground School through North Idaho College’s Workforce Training Center and they offer primary and advanced flight instruction at their hangar across from Aerostar on the Coeur d’Alene airport. They hope to move to an office and hangar space in the future.

## Once-in-a-Lifetime Experience

Administrator Mike Pape received an email that included a great video highlighting the beauty of our backcountry and reminding us how fortunate we are to fly in this ‘gem’ of a state. Here is the email received:

*Hello Mike,  
I met you last July at Johnson Creek when you came to present to the SuperCub crew. I frequently reminisce about the experience I had this summer, traveling from Austin, Texas, up to the mountains and backcountry strips of Idaho. It was a once in a lifetime experience, and I’m thankful to you and the Idaho DOT crew for providing such great GA resources for us.*

*If you’re interested, I’ve put together a short video of my summer flying in Idaho. <http://vimeo.com/103573294>*

*Kind regards,  
Chris*

## Oh What A Night!

Dinner, dancing, friends and fun highlighted the Idaho Aviation Foundation’s 1940’s themed gala held at the Warhawk Museum on November 1, 2014. With auction items ranging from dessert to a





The winner of the 1945 Willy's Jeep was also announced that evening. Lucky James McKintrick's name was pulled from a pot of 400 raffle tickets. James is from Minot, ND and he purchased the winning ticket at one of the Big Creek site breakfasts last summer. The raffle raised \$8,000 toward the lodge project.

shotgun to an opportunity to bid on the first two nights stay at the Big Creek Lodge on opening weekend, nearly \$14,000 was raised above event costs to go toward rebuilding the lodge. Everyone dug deep during the auction. The most spirited bidding was for a huckleberry pie!



Photos by Nadine Burak

If you weren't in attendance, you certainly missed a fun time!

For information on future fun planned by the IAF, go to [www.idahoaviationfoundation.org](http://www.idahoaviationfoundation.org).

### Cool Stuff

Free ForeFlight download: Pilot Workshops now offers a free, downloadable version of their pilot-friendly, simple, well-written little manual. The manual shares tips and techniques for getting the most from the app, with a special emphasis on flight plan operations. While many pilots utilize the popular app, even experienced users can discover better and more efficient ways to make use of

its many functions with this publication, according to Pilot Workshops officials. [www.pilotworkshops.com](http://www.pilotworkshops.com)

Pilot Tool Kit: CruzTOOLS out of Sonora, California, manufactures a tool kit aimed at pilots and aircraft owners. With limited space in an airplane, this kit was developed to keep everything together and

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provides the most commonly needed tools and components. The tools



carry a lifetime warranty and organized into a roll-up pouch that weighs 3.5 pounds. [www.cruztools.com](http://www.cruztools.com)

### January at Stanley Airport

Beautiful day at Smiley Creek with Matt Conklin flying by. Photo by George J. Parker III



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# Color of Aviation

Continued from page 1

legitimate business would provide a welcomed tax break. In 1972, he founded Arnold Aviation, obtained a Part 135 certificate, and won a bid with the Bureau of Reclamation for an air-mail contract to Deadwood Dam. An air-mail contract with the U.S. Postal Service on the Main Salmon and Middle Fork routes was up for bid in 1975. This was the fork in the road: flying or teaching? Instead of renewing his teaching contract, Arnold pursued and won the mail bid and also obtained a three-year grant from Idaho Wilderness Medical Service, a local service that was the precursor to Life Flight. Both of these contracts provided a steady income and means to expand the charter business. Construction began on the existing Arnold Aviation hangar in 1976.

With a heavy sigh, Carol recalled it being a great relief to give up the air-ambulance contract after being on standby for three solid years with the radio parked beside the bed every night and the demand of a 15-minute response time. Of course, the rescues did not end with this contract. Ray has continued to fly health professionals, patients and, luckily, less than eleven deceased individuals out of the wilderness. In their office, an entire door is covered in Christmas cards. Nonchalantly, Ray pointed to a picture of an Ohio

couple, explaining that they wrecked in Wilson Bar a few years ago with no idea how they'd get out until they heard the buzz of Ray's plane overhead. After flying them out and driving them to the Boise airport for their return to Ohio, he continues to receive a Christmas card from them every year. This is just one of many similar stories. To the survivors, some of his rescues are viewed as miracles. To Ray it is simply what he does.

As I flew with Ray, I was impressed by how physically demanding it is to take off and land so many times in one day at these remote, postage-stamp-sized airstrips, not to mention loading and unloading all the cargo. On Wednesdays, he makes stops at Shepp Ranch, Mackay Bar Ranch, Badley Ranch, Campbell's Ferry, Whitewater, Allison Ranch, Yellow Pine Bar, Chamberlain, Stonebraker, Cold Meadows, Cabin Creek, Taylor Ranch, and Monumental Ranch; while the Thursday route includes Sulphur Creek, Pistol Creek, Indian Creek, Thomas Creek, Lower Loon, and occasionally the Flying B and Morgan

Ranch. His cargo is consistently made up of the orange USPS mail bags and the usual grocery orders, but can vary to include animals, hunting equipment, building supplies, and



**Arnold Aviation winter flight preparations.**

the occasional supermodel. Some of these ranches are only accessible by jetboat, raft, or horseback – and each has its drawbacks. Over the years, Ray has hauled pretty much anything you can imagine that a caretaker might need, within the weight limitations of his planes, of course.

This fall, Ray and fellow Arnold Aviation pilot, Walt Smith, made 14 trips into the Middle Fork in one day to evacuate some weary hunters before bad weather moved in.

In addition to running an FBO with aircraft maintenance and fuel services, chartering flights and maintaining both aerial and ground mail-delivery contracts, Ray is also the Cascade Airport manager. He is often spotted clearing snow from the runway, attending countless meetings and advocating for Idaho backcountry aviation.

It made quite the impression on my co-worker Mark Lessor when Ray walked into a community meeting with the FAA carrying an empty one-gallon, plastic ice cream bucket with a wire handle. Lessor said, "When I inquired about the bucket Ray muttered something about being under the weather, and the bucket was just-in-case. I'll never forget that kind of extraordinary dedication!"

Proud of his team, Ray assured me that Arnold Aviation is a success because of nine other employees who share his unwavering, service-minded



**Ray Arnold loading freight - 1990's**



vision. Not only is his ex-wife, Carol, the office manager, she is also the hub of the backcountry network and the “mother” they all love so dearly.

“Most of the grocery orders are sent by email nowadays, rather than by radio, which was often hard to understand,” Carol commented. “There is no phone service at most of these locations. We pay for everything upfront at the time of service and rebill customers a shopping and freight fee,” she explained. “I’m familiar with all the brand preferences, and we often stock-up if we run across a great sale.”

Needless to say, Carol doesn’t charge for her concierge services, such as making health-related appointments, hotel reservations, scheduling a pig butchering or making gallons of soup for the hungry crew. Recently, someone asked her when she was planning to retire. She replied, “When we got divorced, I said I would keep working as long as Ray continues flying. And he is still flying.”

In a TIME magazine article from 1985, journalist Gregory Janes comically described the high level of dependency and trust between the Arnolds and the backcountry residents with the following example: “So intimate is this bush network, Carol can calculate the state of marital relations in the mountains by the quantity of condom orders, though she chooses to push this intelligence out-of-mind.”

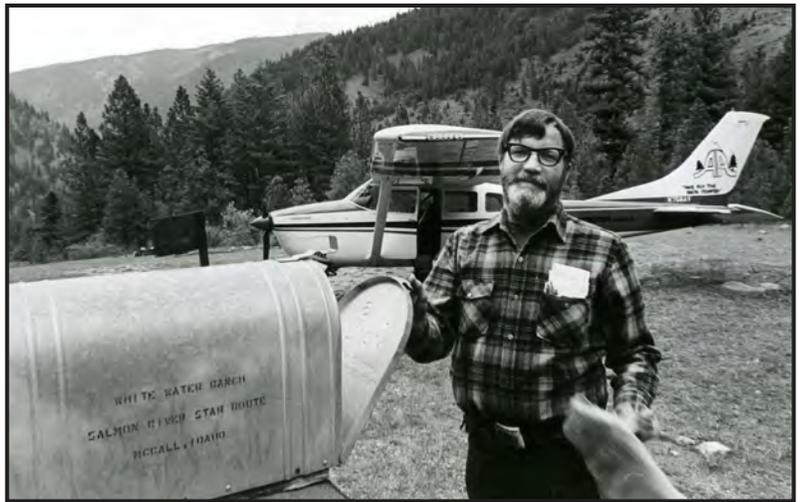
Ray and Carol both agree that the best part of their work is definitely people. A 2014 photo calendar of the whole gang hangs in their office. It includes a family tree photo of the entire river family with Carol at the trunk, labeled “Mom to us all.” Yellow Pine Bar Caretaker Sue Anderson, the party planner of the bunch, creates this annual gem with everyone’s birthdays and anniversaries. Last year, the surprise party she threw was a combo affair for Greg, from Yellow Pine Bar, and Cathy, from Whitewater. She pulled it off by convincing each of them that

the party was for the other. Cathy got her back by arranging Sue’s surprise birthday party at Whitewater. Four boat loads of guests arrived. Sue thought she had come to help

prepare cabins for a large group of hunters’ wives and was completely caught off guard.

It goes without saying that the backbone of every successful aircraft business is the faithful mechanic. The Arnold’s children, Mike and Ronda, grew up at the airport and both soloed at 16 years old. Neither is current, however, and Mike chose aviation mechanics as a career. The frequency of landings in rough fields lends to more on-going maintenance requirements for Ray’s fleet, a 1977 Cessna 206 and a 1979 Cessna 185, than typical aircraft operations. Mike has been the director of maintenance at Arnold Aviation for the last 29 years, in addition to holding the same position for Salmon River Helicopters and Sawtooth Aviation. Lately, the buzz in the hangar is excitement over the brand-new engine just installed in the Cessna 206.

Even with a proactive maintenance program, malfunctions and even accidents cannot be entirely prevented when you are in the air as often as Ray. He’s hit a couple of deer that darted out in front of him and has been struck by birds a handful of times. One time, he landed in four feet of packed, heavy snow in Warren, and the bracket holding the ski broke off. Luckily, neither the prop nor spinner was damaged. Another time, he had to fly into Cascade cross-controlled due to a jammed rudder. His worst accident happened



**Ray delivering mail on the Salmon River Star Route.  
Used with permission ©Glenn Oakley Photo**

early on, in 1977, resulting in a back injury and six-day stay in the hospital.

“God was watching out, I should’ve died in that one,” Ray admitted. “That proved to be a valuable lesson,” he said, pointing out the carbon monoxide gauge in his aircraft. “I’ve learned a few things over the years, but patience and flexibility are one and two on the list.”

“I do not fly on-demand,” Ray said, “meaning I don’t push the weather. If it turns on me suddenly and there is any doubt at all, I turn around and go home or just wait it out on the ground where I have landed. I’ve had to wait as long as three days in the backcountry.” I’m still chuckling over Ray’s story about an overnight campout at Stibnite with a female engineer from a Boise firm. Being the gentleman, Ray gave her the warmer sleeping bag.

“There are three good reasons not to risk trying to make it home today,” he assured her. “First, accidents hurt your body. Second, they are expensive. Third, it tarnishes my reputation.”

Ray is not afraid to defer to his own intuition and expertise, even if an impatient traveler seems aggravated by it. Personally, if I was flying anywhere in the backcountry where adverse circumstances required an emergency landing, my first choice in a pilot

**See Color of Aviation**

**Continued on page 16**



# Lucky Number 13



By Tammy  
Schoen, Editor

On January 5, 2015, a small startup in Idaho, ADAVSO, was awarded an FAA exemption for commercial Unmanned Aircraft System (UAS) operations, making them lucky number 13, and the first agriculture-based company in the country to receive the exemption.



President and CEO Steve Edgar said, "This lead time will allow us to launch our services for farmers in North Idaho in time for the 2015 growing season, and ahead of competitors whose UAS services haven't been approved yet. It's going to be incumbent upon us to act quickly and capitalize on our six-month lead time."

Edgar is partnered with Empire Aerospace, which operates in Hayden, Idaho and with Robert Blair of Blair Farms, who has flown drones since 2006 over his farm near Kendrick Idaho. The partners formed an all-Idaho agricultural aerospace team named Empire Unmanned (EU) LLC. EU plans to have teams ready to fly

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Money raised by the sale of the plates goes to the Idaho Aviation Foundation and they use it to provide grants to fund maintenance, upgrades and development of airstrips and for improving access and promoting safety at backcountry and recreational airstrips throughout Idaho.

The plates initially hit the streets in 2012 with the understanding that

for farming and ranching customers in March this year. They are expanding into to the eastern part of the state early in the growing season. Customers are also lining up in Eastern WA, Eastern OR and Montana. EU is deep in the process of coordinating the airspace with the FAA, talking with Ag fliers and briefing local airport managers where their flight operations will occur.

Empire Unmanned plans to use its 1.5-pound, fixed-wing "eBee" drone to conduct crop analysis in the form of imagery data obtained by a number of on board sensors. These measurements aid farmers in determining stress points caused by water, pests, weeds and soil issues to name a few. The goal is to save farmers from walking through fields conducting time-consuming manual analysis. EU can cover 200 acres in twenty minutes under optimum conditions. The UAS also employ thermal sensors that pick up information invisible to the naked eye. All of this results in time and money savings in the growth cycle and improving yield per acre.

The exemption requires that UAS operations include both a ground

there is a three year probationary period within which 1,000 plates needed to be sold. We are over halfway to the necessary number to keep these plates. Please consider purchasing them the next time you receive your notice from the Transportation Department and help keep our backcountry airstrips safe and beautiful.

"pilot" and an observer and that the pilot have at least an FAA private pilot certificate and at least a current class III medical certificate. The drone must remain within line of sight of the operator at all times. EU will train all pilots and is seeking those pilots who meet the minimum requirements as well as those with RC experience. EU plans to hire five pilots in the near future with plans to add more this year.

The exemption allows the company to only use drones for the specified purpose until the FAA can draft rules governing the operation of drones in commercial use. Other companies who have received drone exemptions are in the film, surveying, and construction, energy and real estate fields.

Congratulations to Steve Edgar and his team for being the forerunner in this industry. This is great news for Idaho aviation!

For more information contact Steve at: [steve@adavso.com](mailto:steve@adavso.com) or [BradW@empireunmanned.com](mailto:BradW@empireunmanned.com)

**Photos from ADAVSO.COM with  
permission from Steve Edgar**



# Calendar of Events

## ONGOING EVENTS

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

## MARCH

- 5 **IA Renewal** at Mission Aviation Fellowship, Nampa Airport (KMAN) in Nampa. Registration required. Check-in 7:00 am, start 8:00 am. Register online [www.maf.org/iarenewal](http://www.maf.org/iarenewal). 208-498-0622 or [hangarfrontdesk@maf.org](mailto:hangarfrontdesk@maf.org)
- 5-6 **Safety Day** at Moody Aviation, Felts Field (KSFF) in Spokane. No charge to pilots. Seminars offered provide FAA Wings credit. [www.faasafety.gov](http://www.faasafety.gov)
- 7 **IA Renewal** at Moody Aviation, Felts Field (KSFF) in Spokane. No charge for the course, but pre-registration preferred at [www.faasafety.gov](http://www.faasafety.gov). Course begins at 7:30 am.
- 14 **Fly it Forward**. Sponsored by Ponderosa Aero Club, held at Jackson Jet Center in Boise. Free flights over the Treasure Valley for 100 women, teenagers and girls who have never flown in a small airplane. [www.ponderosaaero.org](http://www.ponderosaaero.org)
- 28 **IAA Work Party** – Pittsburgh Landing, Greg Bales, 541-263-0250
- 28-29 **Pilot's Spring Break**, Friedman Memorial (SUN) Joe Grubiak, 208-514-9258

## APRIL

- 11 **IAA Work Party**, Graham (U45) Aaron Hassemer, 208-869-8093
- 14 **IAA Treasure Valley Chapter** general meeting, Division of Aeronautics building. Speaker: Galen Hanselman
- 14 **After the Crash: Surviving an aircraft accident**. Free seminar. 7:00 pm, Hilton Garden Inn – Boise Spectrum, 7699 W Spectrum St, Boise, Robin Sharitz, 301-695-2175 or [robin.sharitz@aopa.org](mailto:robin.sharitz@aopa.org)
- 18 **Wings & Wheels** Breakfast and Fly-in (S78). Spot landing and other contests, classic car displays. Steve Burak, 208-861-9055

## MAY

- 2 **IAA Work Party** – Dug Bar, Hells Canyon, Oregon Side. Greg Bales, 541-263-0250
- 9 **IAA Work Party** – Big Bar, Across the river from Dug Bar. Remove seasonal outhouse, etc. Greg Bales, 541-263-0250
- 9 **Flying Companion Seminar** - For non-pilots who want to know more about helping the pilot. Lunch and snacks included. Hosted by the Ninety-Nines. Jan Peterson – [janpeterson08@gmail.com](mailto:janpeterson08@gmail.com) or Lois Chatten – [loischatten@msn.com](mailto:loischatten@msn.com)

15-16 **Idaho Aviation Expo**, Idaho Falls (IDA). Aircraft displays, booths, seminars. Saturday IAA General member meeting and luncheon. Aeromark. [www.aeromark.com](http://www.aeromark.com), 208-524-1202

16 **Carey Fly-in & Breakfast** (U65), 7:30 am. Carey-er spot landing contest w/trophies. Awards for oldest pilot, farthest flown and more. Paul Olsen, 208-309-2181

23 **IAA Work Party** – Lord Flat, Greg Bales, 541-263-0250

## JUNE

- 6 **IAA Work Party** – Big Creek (U60), Jerry Terlisner, 208-859-7959
- 13 **IAA Work Party** – Moose Creek (1U1) Mike Vanderpas, 208-983-9583
- 18-21 **Super Cub Fly-in**, Johnson Creek (3U2), 100 aircraft/160 people, Dave Kirsten, 209-333-1100
- 20-21 **IAA Father's Day Fly-in** Breakfast & BBQ, Garden Valley (U88). Potluck BBQ Saturday evening, bring your own main dish, griddles and grills provided, bring side dish to share. Breakfast Sunday morning 7-10a.m. \$10. 30 aircraft/60 people. Jerry Terlisner, 208-859-7959 or [jtflys@q.com](mailto:jtflys@q.com)
- 25-26 **Round Engine Roundup**, Smiley Creek (U87), 15 aircraft/20 people, Bob Hoff, 208-524-1202
- 25-28 **8th Annual GlaStar/Sportsman Fly-in**, Smiley Creek (U87), 25 aircraft/50 people. Dave Hulse, [646dg@sbcglobal.net](mailto:646dg@sbcglobal.net)
- 26-28 **180/185 Club Fly-in**, Garden Valley (U88), 40 aircraft/70 people, Jim Davies, 208-859-5537
- 27 **IAA Work Party** – Wilson Bar (ID76), Mike Vanderpas, 208-983-9583

## JULY

- 10-12 **QBs of California Fly-in**, Johnson Creek (3U2), 15 aircraft, 30 people. Jack Roberts, [jacroberts@aol.com](mailto:jacroberts@aol.com)
- 11 **IAA Work Party** – Red's Horse Ranch (OR06), Greg Bales, 541-263-0250
- 16-19 **Women Wise Airmanship Adventure**, Smiley Creek (U87), Christina Tindle, 208-315-3075 or [backcountryflygirl@gmail.com](mailto:backcountryflygirl@gmail.com)
- 7/31 to 8/2 **180/185 Fly-in, Johnson Creek** (3U2), 40 aircraft, 100 people, Mike Perkins

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



# Color of Aviation

Continued from page 13

would undoubtedly be Ray. Steady, confident, and experienced in every type of challenge backcountry flying presents, flying is second nature for Ray. He is so in touch with the aircraft, it seems to be an extension of his body.

As we descended, approaching Yellow Pine Bar, one of the last stops on that day's route, Ray mentioned something about an odd sound he heard earlier. My untrained ears didn't detect anything unusual, but as soon as the wheels made contact with the ground, Ray made a comment about something wrong with the front gear. He hopped out of the plane in the blink of an eye, and after a few minutes of investigation announced that a brake torque plate replacement was in order. Immediately, Ray contacted Carol at the office and his pilot/mechanic, Walt Smith, was called upon to come

to our rescue with the necessary parts.

In the meantime, caretaker Greg Metz offered us each a slice of fresh-baked chocolate cake. He also gave me the tour of the property, including a museum with historical photos of the population and wildlife along the Salmon River. On the chicken coop, the irony of the quote written in chalk on a decorative blackboard hit home. It read: "An inconvenience is merely an adventure wrongly considered. –Anonymous."

I pondered this while savoring the serene river view and magical aura of Yellow Pine Bar. At the same time, I desperately tried to reach several friends in Boise by email to make arrangements for



Ray Arnold delivering mail to Dianna Bryant at Wapiti Meadows.



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  - June 30th - July 3rd
  - July 7th-10th
- All-Inclusive 5-day Middle Fork Lodge Excursion:**
  - June 22nd-26th
  - July 13th -17th
- Canyonlands Safari**
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Photo: George A. Kounis/[www.pilotgetaways.com](http://www.pilotgetaways.com)





someone to pick my daughter up from school in my place. On the one hand, living without a phone line felt like sheer freedom, but on the other hand, I don't think I'd be able to live off the grid for an extended period of time. In that moment, I understood how valuable Ray is to these folks.

A couple hours later, Walt arrived, and the quick repair was made. This was not the first time he has been the hero during 12 years of service with the Arnolds. Good natured as can be, Walt chuckled about flying an airplane built before he was born. And on the flight back to Boise, Ray reiterated that he is exceedingly grateful to have such quality people to work alongside every day. He can count on Ray Cooper, better known as "Coop," to fuel, load, weigh, clean the planes and hangar, and mow during the summer months.

As it goes in a small town like Cascade, Coop was one of Ray's high school students long ago. Carolyn, who also works at the local grocery

store, does the shopping, runs errands and prepares the cargo for loading, in addition to cleaning and keeping the office organized. Between Connie Cunningham and Bob Peterson, the ground mail is regularly delivered to Warm Lake and Yellow Pine. Like a large family, each team member is willing to pitch in with any needed task.

A flight with Ray is an educational experience like no other. Forty years of flying in the backcountry, along with his years of teaching experience, certainly give Ray an edge over any other tour guide in the area. His knowledge of the history, geography and personal relationships with the population we flew over made for the most fascinating conversation.

Upon inquiring about his reflections of Idaho, Ray noted that springtime is his favorite flying season, with white mountain tops amidst lush green and thawing lakes. "Yep, it doesn't take much to impress folks from back east with our Idaho mountains," he

commented. "And, the core population of Cascade actually hasn't grown much over the years." Ray also expressed gratitude about the Boise airport. "It's one of the few places we can obtain a gate pass and go into the terminal. Their management is the most accommodating, and because of that, we bring a lot of business into the airport," he said. Ray frequently visits Boise, but he admits feeling more comfortable flying the backcountry than driving the stretch from Cascade to Boise. "Flying feels a lot safer. At least in the air, we are talking to each other."

I wondered what kind of excitement a guy like Ray, who has experienced incredible daily adventure with more than 100,000 landings and 30,000 hours, could possibly be dreaming up for his retirement years. I mean, who else can boast about waving to a total stranger for three years while flying

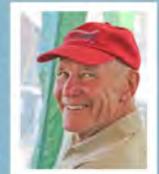
## See Color of Aviation

Continued on page 22

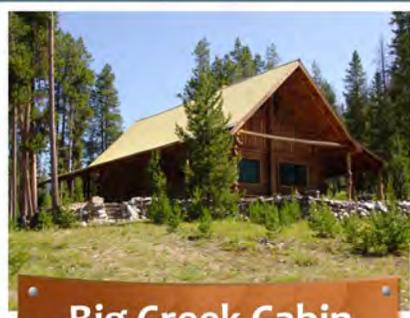
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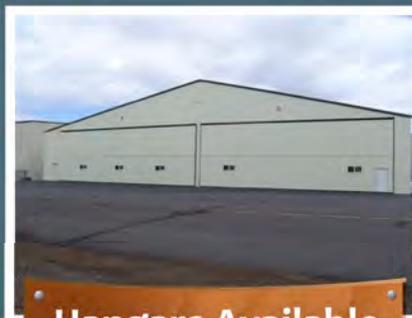
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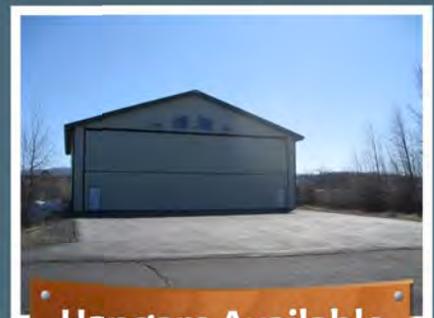
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# How to Clean an Airplane

By **Crista V. Worthy**

Before we moved to Idaho, we lived in southern California and based our Cessna 210 at SMO (Santa Monica Municipal Airport). At each annual, I “assisted” the mechanics, opening and closing inspection plates, removing and replacing seats, and other mundane tasks. You learn a lot about your plane just by hanging around for a week while they go over it; I even learned how to buck rivets.



**Author with her former aircraft at Hubbard Airstrip, CO.**

And while the mechanics worked, I also waxed our plane. Then I started getting called in to detail other owner’s aircraft during maintenance or annuals. I almost felt a little bad for the mechanics when the owner would walk in and just go on and on about how the paint looked almost brand new. Eventually it grew into a business and I had a loyal clientele at several local airports that trusted me to detail their airplanes. Having detailed more than 100 aircraft in various

environments to unanimous approval, I’d like to share some pointers and cautions. Keeping your plane clean and waxed helps preserve the paint and thus your aircraft’s value; some swear it even increases airspeed a few knots.

Many of my clients had their aircraft damaged by other detailers, especially those who used orbital buffers. I always work by hand. It’s obvious to a pilot,

but many non-pilots don’t get this: An airplane is not a car. A car is designed to withstand abuse; an airplane is as delicate as a bird. Door handles, antennas, and ailerons can easily be bent or broken by a careless hand. A careless foot will dent a plane’s thin skin in a heartbeat: you know that, but don’t forget to tell your passengers.

Before you apply wax or other compound, you must first clean the surface. How you do this depends on a number of variables. The best solution is to wash the plane with water to remove dust and dirt; certainly a requirement with new, shiny paint and a hangared plane. Drop the flaps and use a hose to wet the plane, but never use high pressure. Many airplanes have leaks around the windows or fuel caps and if you’re not careful, you’ll force water inside. You don’t want water in the static ports either, but especially do *not* spray your wheels. Water will remain inside and

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**Dirty Cessna fuselage**

corrode the bearings, creating brake problems. Quickly sponge the plane, rinse, and remove tape from the static ports if you taped them. For windows, gently remove dust with water via hose and dry with soft cloth; you'll finish them later.

Many aircraft I cared for were not hangared, had older paint jobs and busy owners who lacked the time to taxi their aircraft to the wash rack. Here's how to clean the surface without a hose: First go over the entire plane using the inside of an old rag sweatshirt or T-shirt, gently wiping dust off and shaking out the rag. Then turn it inside out and repeat, this time spraying the surface with a 10 percent solution of Simple Green and water. You'll now remove bug strikes, bird droppings, soot, and dirt—don't forget the prop, front and back. For a low-wing aircraft this might take 45 minutes; skip this step for the tops of a Cessna's wings. Remove smudges on your interior plastic with your 10 percent solution and a small rag. If you have an electrical outlet nearby, you can vacuum your carpets or even steam-clean them with the attachment if you have one; do this before waxing and leave the doors open, and the carpets will dry while you work.

Now you're ready to apply the finishing product. Unhangared aircraft will soon be dirty and should be detailed at least three times a year. In this case, I use a carnauba cleaner-wax like Mothers, a one-step process, about \$8 and available at auto parts stores like Pep Boys or AutoZone. Wear latex dish gloves and use an old sock to apply, and work in sections. How big a section depends

on temperature and whether you're in shade or sun (smaller sections when hot and/or in the sun—don't forget sunscreen, hat, and sunglasses). Of course, it's preferable to be in shade or indoors, but I often did not have that luxury. Owners simply asked me to detail the plane at the tiedown; it can be done.

Rub in the wax, which has cleaners to remove impurities from the paint, and then let dry and wipe off with another old T-shirt. Then go over it again with a micro-fiber towel to bring out the shine. If outdoors, and if you need a ladder to reach a high tail or the tops of high wings, do those early in the day before it gets windy. It's no fun to be up on a ladder in the wind. Regarding high wings, to reduce the number of times you climb up and down that ladder, bring along your dusting rags and 10 percent solution and do the wings in sections: dusting, cleaning, and waxing, then shift the ladder to the next section. A small low-wing like a Mooney M20 took me 3–4 hours, 4–5 hours for a Bonanza, 4–7 hours for a Cessna, and 7–9 hours for a twin. However, if your airplane sits outside and you just want to spruce it up before you take some friends up in it, you can do the fuselage quickly in half an hour. We once arrived at Hubbard airstrip in Gateway, Colo., after spending a week in southeastern Utah's red rock country. The plane was very dusty and we had a magazine photo shoot in 30 minutes but I managed to get it cleaned up in time. The more often you clean your airplane, the quicker it will be each time.

If the aircraft is hangared with a nicer paint job, you can use a polymer blend, two-step process. This will take twice as long, so you may spread the work over two or three days, but it will last a year. First, wash the plane as described above. Bring it back in the hangar and apply Voodoo Wax



**Although kept unhangared for years at an airport near the ocean, this Cessna Cardinal cleaned up beautifully.**

Cleaner Polish to remove soot and impurities in the paint, as well as small scratches. Apply it like wax and use some elbow grease, then remove as mentioned above. Follow with Voodoo Wax Racing Formula for shine, both sold at Aircraft Spruce (one bottle of each is enough for one plane), \$16.95 each, 877-477-7823, [www.AircraftSpruce.com](http://www.AircraftSpruce.com).

You're getting tuckered so it will feel nice to lie down on a creeper for the de-grease. Tie up long hair or it will tangle in the wheels (ask me how I know!). I've used expensive specialty products but found that \$4 full-strength Simple Green works just as well. I usually begin under the elevators and wings, looking for spots of dirt and smudges, and then move from back to front on the fuselage. Lie upwind of your spray or it will go into your eyes. Just spray and wipe with an old T-shirt. As you approach the front, the grease will get thicker and may require multiple passes. Even as the rag becomes saturated, it continues to work just fine. Your antennas will work better with that gunk off. Now you can gently wipe the gear and wheels, since you didn't wash them with the hose. Again, the more often you do this, the quicker it is each time. Your dusting and wax-removal rags can be washed and re-used, but this one goes in the trash.

For unpainted spinners, props, or other areas, it's always been: apply metal polish as directed and hope for the best. I was disappointed with every

**See Clean**

**Continued on page 21**



# Bookworm

Continued from page 5

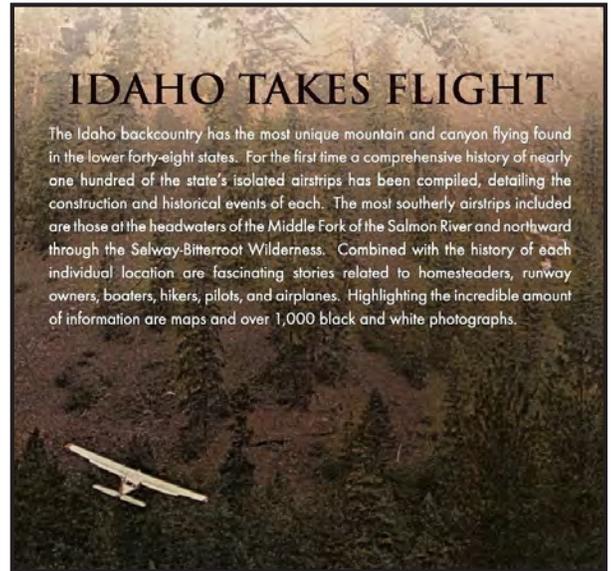
The book begins with two private airstrips in the Minam River drainage in Oregon's Eagle Cap Wilderness, Red's Horse Ranch and Minam Lodge. Of the two, Red's Horse Ranch has a more entertaining history. Beginning in 1946, Ralph "Red" Higgins carved out a successful outfitting and guide business that drew hunters, fishermen and a wide variety of celebrity types to the ranch for nearly a quarter century. The Minam Lodge was developed later and did not appear to experience the commercial success of Red's Horse Ranch, located just upstream.

In the next two chapters, the author chronicles the Hell's Canyon homestead/airstrip histories (Middle Snake River) and those on the Lower Salmon River. These sections make up the heart of the book and describe the origins, development and current status of 39 airstrips. Many are no longer distinguishable and only a few

are still open to the public. Several are located in the higher terrain between the Salmon and Snake rivers northeast of Riggins. Each has its own unique story to tell. Common to nearly all is the determined, self-reliant homesteader who chose a site to "prove up" then eked out a living in the nearly inaccessible canyons and along the rims, shortly after the turn of the last century. Many failed and moved on. Abandoned homesteads were usually either bought by adjacent landowners or settled by a new family willing to give the land a try. As the 20th century progressed, the light airplane first gained acceptance, then became a necessity for many ranchers, sheep men and river guides.

Most pilots in Idaho (and those from around the United States) who visit the "backcountry" in this state are

aware of the occasionally awkward, contentious (and perhaps more recently, workable) relationship aviation interests have had with the U.S. Forest Service regarding airstrips located in the Frank Church Wilderness. Many will not recall the controversy surrounding passage of legislation establishing the Hells Canyon National Recreation Area.



## IDAHO TAKES FLIGHT

The Idaho backcountry has the most unique mountain and canyon flying found in the lower forty-eight states. For the first time a comprehensive history of nearly one hundred of the state's isolated airstrips has been compiled, detailing the construction and historical events of each. The most southerly airstrips included are those at the headwaters of the Middle Fork of the Salmon River and northward through the Selway-Bitterroot Wilderness. Combined with the history of each individual location are fascinating stories related to homesteaders, runway owners, boaters, hikers, pilots, and airplanes. Highlighting the incredible amount of information are maps and over 1,000 black and white photographs.



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“From the 1940’s through the 1970’s, the middle Snake River became a battleground for debate over conservation, land-use, energy, and dozens of other controversial subjects,” he writes. Holm provides perspective on the issues leading to the creation of the National Recreation Area, and the resulting impacts to the airstrips and private property owners in the canyon.

Holm’s appreciation of the landscape goes beyond that of the pilot curiously noting the faint outlines of a forgotten airstrip. He views this region through the lens of history, which has included native-American presence, homesteaders and ranchers, natural cycles of fire and weather, economic upheaval, war, and the ongoing processes of public-land management. Using black-and-white photos, interviews with dozens of pilots and site visits, Mr. Holm has captured and condensed a comprehensive and interesting recent history of aviation activity that occurred in the area and

## Clean

Continued from page 19

metal polish I tried until a client showed me his, which is the best: California Custom Aluminum Deoxidizer and Purple Metal Polish (use both together) each \$14 at 800-457-1242 or [www.CaliforniaCustom.com](http://www.CaliforniaCustom.com).

Bruce’s Custom Covers can make a spinner cover for you; unhangared aircraft should have covers to protect windows and interiors from UV rays;

of those dependent on it. Interspersed with entertaining stories of the individuals (not all of whom were pilots) that lived in, worked on, or admired the area, this book did an excellent job of revealing parts of Idaho and Oregon that, prior to reading this book, I thought I knew fairly well.

Photos provided by author



Bottom of a Skywagon during a de-grease.

available through Sporty’s at 800-776-7897 or [www.Sportys.com](http://www.Sportys.com). Finish your windows with a micro-fiber towel and Plexus spray, about \$18 at Sporty’s or Aircraft Spruce.

Each time you detail your plane it gets easier and looks better. If you de-grease several times a year it won’t build up. It’s a point of personal pride to have a clean and shiny plane, and it gives confidence to otherwise hesitant first-time passengers. It’s great exercise, too.

Photos provided by Crista Worthy

**Precision Aviation Maintenance is located at the Magic Valley Regional Airport, KTWF, in Twin Falls, Idaho.**

## Precision Aviation Maintenance, Inc. Twin Falls, Idaho



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# Color of Aviation

Continued from page 17

over Pilot's and Minor's Peak Lookouts, followed by the discovery that she was caretaking at Burgdorf and finally meeting in-person? And, what could be better than literally being a flying Santa each Christmas?

Actually, Ray looks forward to the simple things and not being so tied down. He is hankering to accompany his four grandchildren on more road trips. Traveling by other modes of transportation, boat and car, and seeing more of the other 49 states is what he often daydreams about. And like most pilots, he has those project planes to restore, a J-3 and PA-12.

If you find yourself in Cascade this summer, I highly recommend dropping by Arnold Aviation. Ray admits his flying days are numbered; so don't pass up the opportunity to fly with him if there is an available seat on the plane. As Ray likes to



Santa Ray delivering gifts to Yellow Pine Bar - Christmas 2014.

Photo by Sue Anderson

remind his passengers, "In this outfit everyone gets a window seat, and the lucky one gets the seat next to the pilot." I promise that experiencing this firsthand will far surpass any episodes

you've seen about Ray on "Outdoor Idaho" or read about in "Newsweek," "People," or the "New York Times."

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  - 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

Go to [www.itd.idaho.gov/aero/safety-ed](http://www.itd.idaho.gov/aero/safety-ed) for details or call Aeronautics, 208-334-8775

**Entries now being accepted!**  
**Deadline: March 31, 2015**

