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FRONT COVER: A rare scenic view of the Sawtooth Range of the Rocky Mountains, reachable only by air. (John Plummer photo)

BACK COVER: The Idaho Wilderness Area in its picture postcard splendor. (Judy Guryan photo)
After many years of flying in Idaho, Montana, Wyoming, and Colorado, I can honestly say that each harbors an infinite variety of sporting and recreational opportunities. The Rocky Mountains, stretching for 2,000 miles through the Northwest United States, provides us with the Rocky Mountain National Park in Colorado, which has the highest and most rugged terrain in the mountain range at 14,255 feet. Colorado also gives us the Mesa Verde National Park with Indian cliff dwellings built under sandstone uprisings. In Montana, Glacier National Park gives us about a million acres of mountain scenery with 50 glaciers and 200 lakes. Wyoming is our host when we visit Yellowstone National Park, offering wildlife viewing and the geyser eruptions of Old Faithful. A few miles to the south of Yellowstone National Park in Wyoming, Jackson Hole is home to The Grand Tetons. Rising abruptly from the mountain’s floor, Mt. Moran on the north end of the chain climbs to 12,605 feet, and The Grand Teton reaches upward to 13,772 feet. Now folks, those peaks represent a lot of solid granite molecules. The Idaho Wilderness Area is the ONLY place in North America where a pilot can have the thrill of real canyon flying! The Main Salmon and Middle Fork Salmon rivers, along with their tributaries, comprise the second and third deepest canyon networks in North Amer-
ica. Hell's Canyon just to the west is the deepest. There are dozens of airstrips in the bottoms of canyons or on ridges and mountain basins in the Frank Church River of No Return Wilderness and surrounding areas. Any of these areas will offer visitors a once in a lifetime flying experience, but, because of the vastness of these Northwestern states, this article will concentrate on Idaho.

Nestled in the state of Idaho you can find the greatest expanse of wilderness area in the lower 48. It encompasses 2,361,767 acres of Federal land and more than 52 airstrips that provide recreation and emergency access to remote areas for general aviation users. Twenty-four of those strips are located within the Frank Church Wilderness Area, and nine serve as public trailheads, a starting point for backpacking or hiking in the Wilderness Area. Those who visit Idaho and its Wilderness Area fall in love with the beauty and opportunities that the state provides. This is beauty beyond description with whitewater rafting, photography, wildlife viewing, backpacking, hunting, fishing, camping, “getting away from it all peace and quiet,” skiing, no freeways—gosh, much of the area doesn’t even have a gravel road, let alone a freeway! Want to know how to get there to enjoy these scenic wonders? You can jet boat in on one of the rivers, a few places you can drive by way of a gravel road, but for a great part, the only way in or out is by way of—what else—THE AIRPLANE!

Now that you are ready to pack those bags and head for the great Northwest, there are some things that you need to be prepared for before you embark on this adventure of a lifetime. How long since you have really calculated density altitude? How long since you have really studied winds and wind flow patterns as they travel over the changing contours of a mountain range? Are you knowledgeable on how to “read” those wind patterns? Can you recognize when a rapidly building weather system may put you and your airplane in an inherently dangerous situation? Weather reporting stations are far apart and can’t sample the weather between canyons with small runways or between mountain peaks. Pilot reports are the only good sources, and it behooves everyone to participate in reporting and to pay attention.

WEATHER

The Idaho Wilderness Area offers smaller windows of flying opportunities than most areas. For anyone wishing to fly into or out of it you should have a flexible time schedule in order to accommodate those windows of opportunity. We are defining an opportunity as a safe time to fly. Those windows are somewhat predictable, and it is highly advised to choose those times that will offer the greatest degree of opportunity and safety. Simply put, early morning offers the most consistent opportunity. As the day moves on, any wind that is blowing on the tops of the mountains will begin to descend down the canyons. The higher the winds aloft the sooner they will descend. Evenings, when the mosquitoes begin to bite, may offer some degree of consistent opportunity at some airstrips. Very high pressure with forecast winds aloft at mountain top level of light and variable, temperatures below 70°, and no addition of moisture in the area will usually afford the most stable air and the best flying into and out of the Idaho Wilderness Area. When pressure starts to drop, temperatures begin to rise, moist and unstable air is added, and the wind starts to blow, the movement of air begins, and you, Mr./Ms. Pilot, have a more difficult time controlling the aircraft. At some point it becomes unsafe, and at another it becomes impossible.

AIRPORTS

Now, we mentioned there are very few roads to lead you into this vast wonderland of beauty. Did we mention that NAVAIDS for flight are mostly non-existent? GPS may be used when appropriate. But remember, point to point, airport to airport, straight-line tracks frequently do not work safely in the mountains. VOR will be largely unusable because of line of sight limitations. Hmmm, it looks like there are some serious considerations
before starting out on this adventure.

There are no words strong enough to emphasize the importance of including adequate training when making your plans to turn your dreams of flying into the Wilderness Area a reality. We have all had the proverbial scenario presented to us, “you have 50 foot tall trees on the approach end of the runway or on the departure end of the runway or both,” then you go through the procedures of how to clear those obstructions. Now, let’s look at Simonds Runway, with a “field elevation of 5,243 feet, 900 foot gravel runway, located on 6% uphill slope, with 23% side slope above and below runway. Tall trees on approach end, runway surface conditions subject to ongoing deterioration. Special consideration should be given to density altitude, turbulence, and mountain flying proficiency. Caution: When grass is wet, side slope will cause plane to slide during turnaround.” (From FLY IDAHO by Galen L. Hanselman, pages A-112 and A-113)

Or are you ready for: “Mile Hi Runway, Field elevation 5,831 feet, 560’ X 30’ runway, and first 540’ of runway unusable for landing with an 18% to 22% upslope on usable end of runway. Caution: On takeoff the runway is not fully visible. Careful alignment is critical. Runway surface conditions subject to ongoing deterioration. Special consideration should be given to density altitude, turbulence, and mountain flying proficiency.” (FLY IDAHO, pages A-92 and A-93.)

MOUNTAIN FLYING TRAINING

Serious preflight preparation is an absolute necessity, and that doesn’t mean just the walk-around you do before taking that pilot seat and starting the engine. IT MEANS PREFLIGHTING YOU—THE PILOT—to fly in some very serious mountain conditions.

Well in advance of beginning your trip into the Wilderness Area, avail yourself of the training that is available...
At Johnson Creek airstrip, land Runway 17 or take off Runway 35—when runway conditions permit. Special consideration needs to be given to density altitude, turbulence, and mountain flying proficiency. (Thelma Bullinger photo)

to help make your trip a grand experience. Many books, guides, and mountain flying clinics are available to you. Flying the Idaho Wilderness Area can be a challenge. However, flying there can also be both fun and safe. Mountain flying seminars are conducted in McCall and Challis, Idaho, during the spring and summer months. Backcountry/Wilderness Area pilots, flight instructors, and the FAA offer a fun and educational introduction to the special type of flying knowledge required to operate safely in this unique environment.

It is the objective of these Wilderness Area pilots and flight instructors to help pilots continue to learn skills and safety concepts that they can use to fly the backcountry, as well as apply to all of their flying.

A mountain flying seminar or personal instruction from a local mountain flying instructor is the “cheapest insur-
ance” you can get to ensure the safety of you, your family, and your airplane. When you are looking for a seminar to attend before your anticipated adventure, be sure that it offers general meteorology, canyon meteorology, aircraft performance versus density altitude, loading the aircraft, navigation to include maps and charts, mountain water run off drainages, ridges and passes, canyons, routes, mountain winds, position reporting, traffic patterns, runway conditions, communications, time of day, take-off and landings, winter flying, survival gear, as well as etiquette and courtesies.

Etiquette and courtesies? That’s right. Many of these airports are public use, but many are private strips available only by prior permission or for emergency use. You will win far more friends by adhering to the prior permission policy than to drop in un-expectedly and expect a warm handshake from the owner/manager of this pristine wilderness airport—unless, of course, you are using the facility because of an actual emergency.

**OPERATORS’ EXPERIENCE**

Air taxi operators serve the airstrips, homes, and lodges in the Wilderness Area flying in from various departure points from around the country with most of them coming from points in Idaho. The visitors, who come to share what Idaho has to offer in the way of the recreation, are advised by Scott Patrick of SP Aircraft in Boise that, until you are well acquainted with the Wilderness Area, you should limit your flying to staying over the main river canyons. Avoid the side canyons that quickly begin to all look alike to the inexperienced eye.

Ray Arnold of Arnold Aviation in Cascade, Idaho, delivers the mail in the Wilderness Area. Ray has two mail routes and each route receives mail delivery once a week. Through the radio network the families living in the Wilderness Area call their orders for groceries or other household needs for the coming week to Ray. His company will shop and deliver the ordered items with the mail on the weekly mail run. Ray has held the mail contract with the U.S. Postal Service more than 25 years. When the snow flies, then the skis are put on the Cessna C185, one of three single-engine airplanes Ray operates, and the mail still goes through as long as flight conditions permit. During the peak season of the year, about April to December, it isn’t uncommon for Ray to make upwards of 20 landings and takeoffs a day on these remote
airstrips. The mail delivery is not without its hazards either. In December of 2000 while on a mail delivery, two deer ran across the runway as Ray was about to touchdown. One deer made it across in front of the airplane, but the second one didn’t. Damage to the airplane consisted of a broken propeller hub and a bent blade and the deer was killed. (See photo on page 10) Ray had to make use of the Wilderness Area radio network to call in to his office in Cascade and have another airplane come pick him up so the mail delivery could continue.

Many families live in these mountains. When I visited the area in October 2000, I met the youngest resident of the Idaho Wilderness area. Kayanna Mae Zamora, three-months old, with her mom and dad, Jennifer and John Zamora, met our airplane when we landed. They were there to meet us and to receive their weekly mail delivery and groceries from town. The Zamora family live at Whitewater Ranch, which is a private airstrip. From May through November the family is able to drive to Grangeville, Idaho, two to three hours away or Elk City, Idaho, one hour away. From December to April the first 19 miles are covered by snowmobile, then they travel by automobile the rest of the journey. The Zamora’s told me the main disadvantage to living in the Wilderness Area is that it is not easily accessible for family or friends to visit. The advantages? They are so many that FAA Aviation News doesn’t have room for me to list them all. However, the peace and quiet and the mountain beauty are usually listed as top reasons for the love the people feel for this being their choice of places to live. There are usually no roads into many of these areas, no electricity, and no telephones. The individual homes and lodges provide their own generators for electrical power. Those living in the Wilderness Area have their own radio system and have contact points in Salmon, Challis, Stanley, Cascade, or McCall, Idaho. Their means of survival here depend on the air taxi operators who service the Wilderness Area from these small towns and from Boise, Idaho.

Mike Dorris at McCall Air Taxi in McCall, Idaho, also has a mail delivery route that he operates throughout the year using a Cessna 185 or Cessna 170. During the winter months retractable skis are put on the airplanes so the mail can continue to be delivered on his routes as weather permits. In addition McCall Air Taxi, through the use of telemetry, tracks wolf recovery as well as bear, wild game, and even small birds and trout from implants or collared radios. McCall Air Taxi operates an Islander and a variety of Cessna single engine aircraft.

**TIPS ON MOUNTAIN FLYING**

Before flying into the Wilderness Area, consider the following information on mountain flying provided by the Idaho Division of Aeronautics. This information is based on years of successful mountain flying by experienced mountain pilots and may be found in various books and publications.

1. Do not consider flying the mountain country until you are proficient in slow flight. A checkout by an experienced mountain-flying instructor is highly recommended.
2. Before flying into mountainous areas, practice short field landings power on, upwind, downwind, and crosswind. Be sure you can land on a fifty-foot spot every time.
3. Carry enough fuel to make a complete round trip plus fifty percent.
4. Know your aircraft. Do not take an aircraft that will not takeoff and land in a minimum distance into mountain terrain. Most airports in this area are substandard in length and width and have associated high-density altitudes. It takes considerable experience to
Chamberlain Airstrip, field elevation 5,765 feet. These runways may be soft in the Spring. You can anticipate downdrafts over Chamberlain Creek in the early morning and late afternoon. (John Plummer photo)

Upper Loon Creek airstrip is recommended for experienced mountain pilots only. At 5,500 feet field elevation, the downwind leg needs to be made to the left of the large outcropping of rock. Then a descent around the rock for a final approach. (John Plummer photo)
This is a “true” Mile Hi airstrip at 5,831 feet. Would you be able to find the airstrip without the help of navigational aids or charts? Hint, the airstrip is on the far left, but is definitely not a straight line. (John Plummer photo)
handle a high performance aircraft in the mountain environment.

5. Keep your aircraft weight as light as possible.

6. Know your planned destination airport. Know the altitude, length, condition, and approach/departure procedure at the airport. Many of these fields are one-way, and on some, a go-around is not possible once you have committed to land.

7. Check the weather frequently and stay out of doubtful or bad weather. Mountain weather rapidly changes and unexpectedly.

8. Plan your flight to arrive in the early morning hours. As a rule, the air begins to deteriorate around 10:00 a.m., grows steadily worse until about 4:00 p.m., then gradually improves until dark.

9. Stay out of the mountains if the wind is over 25 knots.

10. Route your trip over valleys whenever possible and study your charts thoroughly. Watch your compass heading to avoid getting lost.

11. Maintain a minimum of 2,000’ AGL when overflying the backcountry. Remember: others are in the mountains to enjoy a wilderness experience.

12. Approach all ridges at an angle so you can turn away if you encounter a downdraft. After crossing the ridge, head directly away from it.

13. Expect the wind to be changing constantly in the mountains. Do not rely on cloud shadows for wind direction. If you are unable to gain altitude on one side of a canyon, try the other side. **BUT DO NOT, UNDER ANY CIRCUMSTANCE, FLY UP A CANYON OR VALLEY WITHOUT SUFFICIENT ALTITUDE AND ROOM TO TURN AROUND.**

Yes! Airplanes really do fly into Mile Hi and land. It is only the first 540 feet that are unusable. The remaining 560 feet are usable with a field elevation of 5,831 feet. (John Plummer photo)

The grade of the canyon may climb faster than your aircraft.


15. Remember, you will not have a horizon to check your air-
craft attitude once you begin a let down in the mountains. Watch your airspeed and cross check your instruments.

16. Caution: traffic pattern terrain clearance is not standard at many mountain airports.

17. Above all, fly the aircraft every second; don’t let it “fly you.” You cannot make mistakes.

IN CASE OF EMERGENCY

Pilots flying into Wilderness Area airstrips must keep in mind that most of these locations have few, if any, support facilities. Typical resources such as fuel, aircraft maintenance, courtesy cars, telephones, lodging and dining, rest rooms, or even tiedown chains are not available. Because of the fact that these sites are unattended and receive limited maintenance, they are subject to deterioration caused by the weather, wild game, and other aircraft operations. Consider this NOTAM which was issued for an airstrip near the entrance to Yellowstone Park at Gardner, Montana a few years ago, “CAUTION, FROZEN BUFFALO CHIPS MAY BE ON THE RUNWAY.” WOW, that could damage your landing gear! Therefore, the airstrip may be rough enough to pose the problem of aircraft damage caused during landing.

“Well, it finally happened. You have just landed at Soldier Bar and blown a tire and you’re all alone... now what? Flight Service is almost impossible to reach on the ground anywhere in the Wilderness Area. But don’t give up on the radio. Stay on 122.9 and try to get a message to a passing airplane. Also try 122.95 and 122.75 as they are often used for aircraft to aircraft conversations and chit chat. It is an unwritten rule of the Wilderness Area—you help someone in need.

“But no one seems to be flying today and you haven’t been able to reach anyone on 122.9, what now? It’s a good idea to carry IFR enroute charts and try the appropriate Center Frequency for your sector. You won’t reach Center, but may contact an airliner flying overhead. How about 121.5? Absolutely! Use it. You may not be in a dire emergency now, but what happens if no one comes to rescue you for several days? What if the battery goes dead and the radios are out of service? This is a great opportunity to use the portable handheld stuffed in the jockey box. You say you opted for the leather bomber jacket instead of the handheld radio? Well, there is still hope. The ELT has its own self-contained battery pack. This may be the time to manually trigger the ELT. But remember that most
ELT’s are transmitters only and do not receive.” (FLY IDAHO, pages I-14 and I-15.)

CAMPING ETIQUETTE AND COURTESIES

It’s a strange human phenomenon that leads us from our warm shelters with electricity, cooking facilities, hot showers, comfortable beds, refrigeration, satellite TV, and hot tubs to move outdoors and leave all these wonderful conveniences behind. But it happens. Camping is one of America’s favorite pastimes. And the airplane is the magic carpet that can lead to the country’s finest camping opportunities. People airplane camp for different reasons. While some consider it a challenge to make their camp as comfortable as their home with the use of generators, portable TV’s, king size air mattresses, and fully stocked bars complete with blenders, others prefer the simplicity of primitive camping where creature comforts are limited to one’s ingenuity.

A frequent pet peeve, while airplane camping, is “Windski” who gets up before sunrise (while frost is still on the wings) and fires up “old wonder bird.” He insists on idling his engine until the defroster clears the windshield and then taxis to the departure end where he faithfully runs the engine up and cycles the prop and then waits for the engine oil temperature to come up to normal before takeoff. The early morning air is so nice, “Windski” decides it is a great time to practice takeoffs and landings. Meanwhile, every other camper is now wide-awake. Two tents were blown over by the prop wash, a cloud of dust hangs over the camp from “Windski” cycling his prop (which now looks like it came off a tug boat going through a gravel bar), and watch out because here he comes to do it all again!

Plan an early morning flight the night before by parking your airplane where the early morning sun will hit it first. So while you are catching a few extra z-z-z’s, you are using free solar energy to preheat and deice “old wonder bird.” What about a few takeoffs and landings? Don’t even consider it! The Wilderness Area is not the place to practice takeoffs and landings. There are some excellent airstrips in the desert where one can practice takeoffs and landings to his or her heart’s content without disturbing anyone.

OTHER AIRPORTS AND OPERATORS

There are many old stories that seep out through the bark of the forests in the Wilderness Area. Years ago, so the story is told, Mr. Mackay
came into what is now “Mackay Bar” and stayed in a government cabin. When he built a fire in the stove, it blew up because of blasting caps that had been left in the stove. The explosion left Mr. Mackay with two broken legs and he was unable to return to Dixie, Idaho, on schedule. His friend in Dixie became worried and rode his horse down to Mackay Bar to check on Mr. Mackay. Mr. Mackay then had to ride horseback for two days to reach Grangeville, Idaho, the nearest hospital, for treatment. He swore he didn’t want anyone else to go through what he had, so after healing from his injuries, he returned to Mackay Bar and started the process of clearing the ground to build an airstrip there. Mackay Bar is a beautiful grass strip runway on a bend of the Main Salmon River. A lodge and cabins are as picture postcard as the mountains surrounding the area. Mackay Bar Ranch is a private strip, so do get prior permission before flying in there. They may be contacted at (208) 382-4336 which is Arnold Aviation in Cascade and they can make contact with Alita Arendell, Mackay Bar Ranch Manager, by way of Wilderness Area radio network. Alita says, “Advantages to living here? I love the privacy of the backcountry and the beauty of the river. Disadvantages? No Mall!”

Last year the owner of the Stanley, Idaho, airport property notified the U.S. Forest Service and the State of Idaho that they were now in the position to dispose of that land. The Stanharrah Corporation owned 73 acres at the airport, which included nearly 70% of the landing strip. It was very possible that this property could have been bought by a private developer, homes built, and the airport eliminated. Thanks to the cooperation of Stanharrah Corporation and some very good work by the U.S. Forest Service and the State of Idaho, the property was purchased by the State and will remain as an airport. Whenever you can achieve something that meets local as well as state and federal needs, you truly have a win/win situation. The cutting of the ribbon on October 17, 2000, with the WACO biplane owned by Bob Danner and Dia Terese of Stanley Air Taxi and flown by Bob, the current operator at the Stanley Airport, signaled the guarantee that the land would remain as an airport and not be developed. Idaho Governor Dirk Kempthorne, along with representatives from the Idaho Congressional delegation, the City of Stanley, stu-

Indian Creek at 4,701 feet elevation shares this canyon with another airstrip, Pistol Creek, two and a half miles away. Caution, watch out for other traffic confined in the same area (John Plummer photo)
dents from the Stanley school, and many others celebrated the preservation of the Stanley Airport. The grass-covered landing strip is 4,300 feet long and is 6,403 feet above sea level. It is shadowed to the west by the 10,750-foot mountains of the Sawtooth Range of the Rockies. The primary purpose for air travel to Stanley, (population about 100) is for tourism—whitewater rafting, fishing and hunting, cross country skiing, and snowmobiling. LifeFlight helicopters and fixed winged aircraft also use the landing strip to evacuate seriously ill and injured patients.

Bob and Dia’s N2269V is a 1989 replica of the original WACO from the 1920’s. Bob and Dia’s WACO has a 275 HP engine and just may be your answer to the thrill of a lifetime. You may not be interested in doing your own flying into this wonderland; however, Bob flies sightseeing tours of the Sawtooth Range in this open cockpit biplane. Take a step back in time and don leather helmets, goggles, a flight jacket and fly into a by-gone era in Bob and Dia’s two passenger open cockpit, WACO biplane. Enjoy an adventure of a lifetime taking a 15, 30, or 60-minute flight over the Sawtooth Valley or the jagged wind-swept spires of the Sawtooth Mountains (often called the American Alps). Sawtooth Aviation, owned by Bob and Dia, also operates a Cessna 182 and a Cessna 206 which are used for transporting passengers into the Wilderness area for the already mentioned outdoor joys.

At Challis, Idaho stop and get acquainted with Middle Fork Aviation owned by Pete and Shiley Nelson. Pete operates an air taxi service out of Challis and carries passengers into any of these Wilderness area strips for all of the previous mentioned recreational and sporting activities. Now, let’s just suppose that you are flying your own airplane in that Wilderness Area but now, doggone it, you have a mechanical problem on your airplane. Pete also holds an A&P and IA authorizations for piston-engine aircraft. You can take the airplane to his maintenance shop at the Challis airport, (Hey folks, LOOK, this airport is paved!) and have maintenance completed. Or if by chance you get stuck in the Wilderness Area and need maintenance, Pete can fly parts in and fix your airplane while you enjoy the mountain or river.

At Salmon, Idaho, Salmon Air Taxi operated by Joanne Wolters and Dan Schroeder is a major access carrier into the whitewater rafting river areas of the Wilderness Area. Perhaps a Salmon Air Taxi pilot has picked you up in one of the PA-31 twin engine air-
planes they operate when you arrived by commercial air carrier in Boise about 235 miles away and have brought you to Salmon. Now you transfer into one of Salmon Air Taxi's Cessna 206's or an Islander and you are flown into the Wilderness Area where you will meet your outfitter for your beginning river run. The outfitter guides you through the one of many scenic river canyons and Salmon Air will pick you up down river and fly you back to Salmon or the destination of your choice. Dan is a walking encyclopedia of procedures for flying in the Wilderness Area and contributed a great amount of information to help in the preparation of this article. I believe Dan knows exactly where he is at all times when flying in the Wilderness Area by recognizing each individual tree. He knows every drainage, peak, and valley.

CONCLUSIONS

We see the beautiful pictures of the snow-packed mountain peaks, a gleaming airplane silhouetted against the mountain, a clear blue sky with maybe a pretty, white poofy cloud in the distance. There are certainly many days that are just like that. But all those beautiful green forested mountains have become that way because of a lot of moisture. It will come in the form of spring and summer rains or winter snow pack. That moisture comes out of thick overcast, mountaintop hugging clouds that may move in and set in an area for several days. Don't be lured into giving it a "try." Either you can or you can't safely make the flight, and any question wondering about it becomes an automatic—NO! WHEN IN DOUBT, WAIT IT OUT.

Perhaps Sparky Imesen stated it best in his book, MOUNTAIN FLYING BIBLE and Flight Operations Handbook. "Flying the mountains demands an attentive pilot, one who is aware of the special conditions that can create hazards. Knowledge and experience, where the pilot develops a wariness that keeps him from becoming trapped, enhance recognition of the potential hazards. At times the pilot will experience apprehension. This is normal; fear is not normal. "A wariness of mountain flying is good. A true fear of mountain flying means you should not be flying in the mountains. A concern for where you
TOP PHOTO: Middlefork Aviation at Challis, ID, loading a Cessna 206 with supplies for a trip into the Wilderness Area. PHOTO BELOW: Cabin Creek airstrip in the Fall. The black stripes across this airstrip are flexible waterbars for water diversion and prevention of erosion. This airstrip is at 4,200 feet elevation and is 1,700 feet by 40 feet turf with a decided curve in the strip. (Thelma Bullinger photos)
are and what you are doing is healthy; and, as all veteran mountain pilots will expound, you must maintain a constant vigilance of your surroundings and have an escape route in mind should one be needed. Do not fear flying in the mountains. Learning of the dangers that might exist and knowing how to minimize or avoid them replaces fear with knowledge.

“During mountain flying an inexperienced pilot will find himself in situations he has never before encountered. As good as this book is, it is impossible to cover every situation, so employ CAUTION while exercising the privilege of mountain flying.”

I could recount many bits of experienced wisdom that I have gathered from the people who live in this haven, those who have been flying the Wilderness Area for years, and from my own mountain flying experience. I spent many years flying the mountains of Montana, Wyoming, Idaho, and the other states of the Great Northwest as a flight instructor, an air taxi pilot, and a corporate pilot based in Billings, Montana. After joining the FAA as an inspector I eventually got to spend a few years in the Boise FSDO and was able to get back into the mountains again. Now I am assigned FAA responsibilities in Washington, DC, and I wanted to share the vast greatness of the Northwest with all of you. There are “mountains” of information available for you, but the Editor of the FAA Aviation News, said this is all the space I get for this article. Instead of reading more of my diatribe, check out those
For more information on Mountain Flying contact:

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- Pete Nelson, MIDDLEFORK AVIATION, Challis, Idaho  
  Phone: (208) 879-5728
- Bob Danner and Dia Terese  
  STANLEY AIR TAXI, Stanley, Idaho  
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- Scott Patrick, SP AIRCRAFT, Boise, Idaho  
  Phone: (208) 383-3323
- Mike Dorris, McCALL AIR TAXI, McCall, Idaho  
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**Mountain Flying Clinics:**

- Lori K. MacNichol, MCCALL MOUNTAIN CANYON FLYING SEMINARS,  
  website: <www.mountaincanyonflying.com>
- Bob’s Airmotive, Inc.  
  “River of No Return” MOUNTAIN FLYING CLINIC  
  Phone: (208) 879-5900 or e-mail: bobsair@custerl.net

**Publications:**

- Galen L. Hanselman, Fly Idaho! A guide to Adventure in the Idaho Backcountry (1-800-574-9702)
- Sparky Imeson, Mountain Flying Bible and Flight Operations Handbook (1-480-855-7444 or E-mail to www.mountainflying.com)
- Galen L. Hanselman, Fly the Big Sky, A Pilot’s Guide to Montana’s Prairie Towns and Mountain Hideaways (1-800-574-9702)
Mountain flying seminars and clinics and avail yourself of some of the good common sense books that will help you “go see for yourself.” So until another time—

“REMEMBER CUTTING IT CLOSE COULD BE A WAY OF LIFE FOR THE BARBER, BUT SHOULD NOT BE FOR THOSE IN AVIATION.”
(Dan Schroeder, Director of Operations, Salmon Air Taxi, Salmon, Idaho)

Thanks to the people listed on page 17, who generously shared their time and expertise while I was researching this article and who are valuable resources for anyone planning to fly in these areas.

Pictured on the right are some of the publications that might be helpful in planning your Northwest adventure.
MOUNTAIN FLYING CHECKLIST

IMPORTANT NOTE: Take the FIRST Step: Attend a comprehensive Mountain Flying Ground School before attempting a Mountain Cross-Country Flight!

PREFLIGHT PLANNING

➤ General • Make sure both you and your aircraft are mountain flight candidates.
   1. Plan for DAY-ONLY VFR flying.
   2. Plan for ETA’s NO LATER than 1300L to mountain destinations.

➤ Preflight Weather Briefing
   -Cloud Height and Ceilings must be known for mountain top conditions: 15 miles flight visibility as a minimum.
   -Winds aloft: Maximum of 30 knots at 6,000/9,000/12,000 MSL.
   -Temperatures: surface temps for density altitude calculation; temps aloft for route performance.

➤ Route Planning
   -Plan accurate routes with magnetic course and wind correction angle calculated.
   -Know elevations and plan for at least 1000 AGL.

➤ Weight and Balance
   Preflight weight and balance with takeoff weight no more than 90% of FAA max. gross weight in the pilot’s operating handbook (POH).

➤ Fuel on Board
   Fuel on board = planned burn out plus 1 hour or more reserve.

➤ File a VFR Flight Plan
   -Only AFTER all limitations are met. If not, cancel, select an alternate route or rent a car.
   -This is your “Insurance Policy.” Keep it up to date, with position reports.

➤ Survival Kit: Have a survival kit and warm clothing for all occupants.

PERFORMANCE PLANNING

➤ Lean Mixture, as appropriate (EGT~Fuel Flow)
   1. Set for taxi/run-up 2. Set for takeoff power
   3. Set for Cruise 4. Set for approach

➤ Takeoff Ground Roll / Rate of Climb
   -Calculated for existing temperature. (See POH & Density altitude chart)
   -Expect excessive ground roll and sub-standard Rate of Climb.
   -Monitor VSI and airspeed during all climbs and descents.
   -Know the ground track, for a safe departure. Check with FBO/CFI/other pilots.

ENROUTE PROCEDURES

➤ Communications Plan
   -ACTIVATE THE VFR FLIGHT PLAN, make frequent position reports and PIREPS.
   -Know FSS and other comm. frequencies for the entire route.

➤ Navigation
   On all Route Segments:
   -Fly planned altitude.
   -Maintain magnetic headings, corrected for drift, for each route segment.
Mountain Technique

1. Canyon & Drainage Routes
   - Fly the windward side, never up the middle of a canyon.
   - Scan for Opposite Direction Traffic.

2. Ridge / Pass Crossing
   - Terrain Clearance: at least 1,000 feet AGL.
   - Always identify your “escape” paths as early as possible.
   - Approach at 45 degrees; exit at 90 degrees.

DESCENT AND LANDING PROCEDURES
1. Know the pattern or approach track for the destination field.
2. Determine a safe go-around track for the destination. Remember, a go-around may not be possible!
3. Fly a stabilized approach at appropriate IAS.
4. Plan the touchdown at 1,000 feet from the start of useable runway.
5. CLOSE YOUR FLIGHT PLAN (& give a final PIREP when you do!)

CALCULATING DENSITY ALTITUDE

Step 1—Find the pressure altitude by locating the altimeter setting of 29.70 in. Hg. and noting the pressure altitude conversion factor. The conversion factor is either added or subtracted from the airport elevation as indicated. In this case, the factor is 205 and should be added. The pressure altitude is 2,750 feet (2,545 + 205 = 2,750).

Step 2—Locate the outside air temperature of 70°F at the bottom of the chart and draw a vertical line until it intersects with the pressure altitude of 2,750 feet. (The pressure altitude of 2,750 feet is located about three-fourths up between the 2,000 and 3,000-foot lines.)

Step 3—From where the temperature and pressure altitude lines intersect, draw a straight line to the left to determine the density altitude. The density altitude is 4,000 feet.

If at any time the conditions for continued flight appear doubtful—land at a suitable alternate airport—which may well be your departure point.
THE VIEW FROM THE RIGHT SEAT: A COMMENTARY

by H. Dean Chamberlain

It is Friday, November 17, 2000. As I write this article, I am thinking about two things. One is if I will fly again on Sunday in the search for a missing pilot who has been missing for more than a week. I have flown as an observer one day already. Now, if needed, I have volunteered to fly again. As a member of the Congressional Squadron, Civil Air Patrol (CAP), I expect to fly unless the pilot is located before then or the search is terminated.

I think hope is rapidly fading for the survival of the pilot. Temperatures in the search area have been near or below freezing on some of the nights since the pilot was reported missing, and it has rained in parts of the search area. Both factors make it difficult for anyone unprepared to survive. Under such conditions, hypothermia becomes the greatest risk for anyone who survives the initial crash.

The second thought is about something an FAA Aviation Safety Inspector said at a safety meeting two nights ago. Safety has to be personal, he said. As I thought about his comment at the time, I realized that just about every certificated pilot has heard at one time or another many of the ways pilots can minimize their accident risks and increase their chances of survival if they are involved in a crash. As one who has probably spent more hours attending safety meetings than flying, I realized the importance of his comments.

They had special meaning since I had just spent the day before searching for the missing pilot. The view from the right seat of a search plane on an actual search makes safety very personal. But as an FAA aviation safety writer, commercial pilot, and certificated flight instructor, I also know that most of us think an accident will never happen to us. If we thought we were going to have an accident, we wouldn't take off. Right? Since we do take off on every flight, we don't worry about having an accident. Accidents only happen to the other person—right? Wrong! From the right seat of a search plane, "You" are the other person.

Since I started this article, I have been notified that I will be needed to fly search on Sunday—unless the search is terminated or the pilot is found. As a pilot, you hate to hear that a search has been terminated without finding the missing aircraft, but there are limits that any organization can continue a search and rescue mission. At some point, time, resources, and lives run out. Then the mission becomes a search and recovery. In a few cases, the aircraft and its occupants may never be found, or if found, they are found months or years later by some hunter or hiker walking in the area.

THE CHALLENGE TO MAKE SAFETY PERSONAL

Accidents are real. Although the general aviation accident rate has been reduced over the last 20 years by a lot of hard work on the part of everyone involved in general aviation, the fact remains there are accidents that probably could have been prevented.

In my opinion—and I stress in my opinion—I think this accident could have been prevented. The reason I am giving a good, professional, government waffle answer is that I don't have all of the facts in the accident or even if there has been an accident as this article is being written. I also want to stress that the National Transportation Safety Board (NTSB) has the sole legal responsibility to determine the cause in aviation accidents.

The reason for my waffle answer is this. In the search brief I received before my first flight, the briefer told how little anyone knew about the missing flight. According to the briefer, the pilot, a man in his fifties, was planning to fly from College Park Airport, Maryland, and fly to Greenville, South Carolina, on family business. Apparently, the man's father was terminally ill, and the pilot was flying to South Carolina to take care of some family affairs. We were told that, although the father had a terminal illness, he was not in any immediate danger of dying. But I think the fact the father was ill may have contributed to the pilot's decision to take off that night. I wondered if the pilot's stress level was up because of the family situation.

Another possible stress factor could have been the weather. Although the pilot was familiar with the route, having flown it before, we were told there was deteriorating weather along the route. According to the search brief, a front was approaching and the pilot supposedly took off into a 400-foot overcast.

Supposedly, the pilot was instrument rated, but no flight plan had been filed although a weather briefing had been obtained.

We were told the pilot had a hand-held GPS unit onboard the Cherokee 140.

The pilot took off at about 5:30 p.m. In this area at this time of the year, that is dark.

Let's add up the factors to this point: possible personal stress; a night takeoff in weather; IFR en route conditions; no flight plan of any kind filed; and a flight path paralleling a line of mountains running southwest of Manassas, Virginia.

The pilot takes off from College Park Airport, a non-towered airport located in a suburb of Washington, DC. The airport is located under the Washington area Class B airspace.

According to our search brief, the pilot makes no radio contact with anyone. In defense of the pilot, no communications are required. Finally, the family misses the pilot and contacts authorities. A search is started on the next morning, November 10.

Air Traffic Control tapes indicate a
The possible radar skin paint return at about the approximate time the aircraft took off near College Park Airport. A second possible radar skin paint return of an aircraft is found near the Manassas airport. There is no way to confirm that these radar skin paint returns are from the missing aircraft. No transponder replies were detected near College Park at the time the missing aircraft is believed to have taken off nor were there any transponder returns along the proposed route of flight.

No emergency locator transmitter (ELT) signal was ever received.

A quick review of the available facts shows that there are no solid radar tracks of the flight or any transponder hits received or any ELT signals received from the missing aircraft. The mystery deepens. Did the pilot take off? If so, where did he go? The only way that question will be answered for sure is to find the missing aircraft.

At first searches hoped that maybe the pilot diverted somewhere or just opted not to go. But when life or death hangs in the balance, the only prudent course to follow is to assume the pilot did in fact launch and to start searching the route the pilot had taken in the past after all the airports and air traffic control facilities had been contacted with negative results.

A route search was first flown by Civil Air Patrol aircraft along the route the pilot was believed to have taken. The initial route search found nothing. Following that, detailed searches are being flown along an expanding corridor along a direct route from near the Manassas airport to Greenville, South Carolina.

Because of the expanding scope of the search, a call went out for more search aircraft and crews.

When I woke up the morning of the day I had volunteered to search on, I knew it was not going to be a great day. It was pouring down rain. As I drove in the rain to the Congressional Squadron’s hangar at Andrews Air Force Base, I wondered if we would be able to take off. Visual searches are done in VFR conditions. As expected, we did not have VFR conditions to launch to fly to the CAP mission base at the Manassas airport. We waited about four hours before we could launch. As we waited, the CAP pilot in command for the flight and I wondered what the missing pilot was going through in the rain—if he was still alive.

We waited to launch at VFR minimums, knowing that in the current conditions and with a cold front approaching that the missing pilot’s chances of survival were decreasing hour by hour.

At all times was the lingering question if the pilot was still alive or had he died in the crash.

On one hand, we wanted to save the pilot, but we also didn’t want to risk crashing ourselves just to recover a body. There are certain risks one is willing to take to save a life. But that willingness decreases if a mission stops being a search and rescue and becomes a recovery mission. Such are one’s thoughts when waiting to take off on a search in marginal conditions. The fact is no search is without some risk.

Finally, conditions improved enough to fly to the Manassas airport where our segment of the search was being coordinated. Other CAP units were conducting searches in their respective areas along the flight route from northern Virginia to South Carolina.

At the Manassas mission base, we received our very basic briefing before departing for our assigned search area. We were assigned to search an area south of the Gordonville VOR in Virginia.

The most striking thought I had during our briefing was the lack of information about the flight. We were shown a photo of the missing aircraft and given the limited information discussed above. We were searching for a needle in a haystack. The problem was we didn’t know where the haystack was located or even if there was a haystack.

Another CAP member from the Virginia Wing joined the two of us from Congressional, and we departed for our assigned search area knowing that another aircraft was searching near our area. Add in the possibility of local and transient aircraft flying through the search area, and it rapidly becomes obvious that all three of us onboard the C-182 had to be alert not only for the missing plane but also for other aircraft.

All searches require full compliance with all appropriate FAA regulations and procedures.

We entered our search area at our assigned search altitude of 700 feet AGL. A strong wind from the west made for an interesting search as we flew half-mile tracks at 90 knots with 10-degree flaps. For those who have flown hours in such conditions, you know the effort it takes to stay alert while searching for any sign of an aircraft or any unusual type of damage that might indicate an aircraft may have crashed in the area.

You are afraid to look away for fear of missing something. Your stress level keeps going up the longer you search. Add in the physical factors of flying low for extended periods of time and your fatigue level starts becoming a factor. That is why at least two observers are normally onboard each search aircraft. The observers look while the pilot is dedicated to safely flying the aircraft and navigating. You want to find the missing aircraft, but if you don’t find it during your search segment, you hope that if the missing aircraft is found, it is found outside of your search area. You don’t want to think you missed it.

THE SEARCHER’S PROBLEM

The problem with small general aviation (GA) aircraft is that they can cause so little damage if they crash, say, from a stall/spin type of accident vertically into a forest or while in cruise straight into a mountain side. Small GA aircraft also normally do not make big smoking holes like a large passenger aircraft. Being relatively small, a typical four-place GA aircraft can break up into such small pieces of debris that they can be easily hidden by foliage or leaves on the ground or snow or some
other type of surface cover. Evergreen trees are particularly bad because their branches tend to part and then move back into position after something passes through them, which effectively hides anything beneath them.

Add in the limited number of daylight hours to visually search in during the late fall or winter months, and you can begin to understand the odds facing searchers looking for a missing aircraft without much help or flight data.

So what can be done? I am glad you asked.

Let's make this personal. I believe the following can save lives. Maybe some of the ideas and thoughts might save your life. I think they might also help another pilot or observer find you in case you have an accident. How you use the information is your call. The choice is yours to make.

**HOW TO HELP YOURSELF**

First, put yourself in the right seat of a Cessna 182 flying about 700-800 feet above the ground (AGL). Your speed is 90 knots. You are flying a specific type of search pattern. You need to add in some turbulence. It could be from weather, or if you are searching in the summer, the turbulence may be from hot thermals rising from the ground. Add in a pinch of summer sun or winter cold just to add to your discomfort. If you are flying over water, heavy forest, or mountainous terrain, you know that at 700 or 800 feet AGL, if your aircraft develops a serious engine problem or the engine quits, you are probably going to crash into whatever you are flying over at the moment. All of which adds to your personal stress and discomfort as you start your search.

Because there is a very real risk to all searchers, standard operating procedures for CAP aircraft are to check into the controlling mission base using CAP radio equipment when entering an assigned search grid, then giving a radio report every 30 minutes to verify the search aircraft is okay, and a final report when departing the assigned search grid. The final report includes an expected arrival time back to the mission base. All of these reports are designed to ensure if a search aircraft goes down, the mission coordinator can rapidly respond to the situation and know where to start searching for the down search plane.

Now spend an hour or two looking out the right window trying to find any evidence of a crash site. Did you bring your sunglasses? Did you bring water? How comfortable are you? How well trained are you at searching through trees and into fields looking for any sign of a crumbled aircraft or some type of debris field? How well do you feel staring below you as the aircraft bounces around? How sure are you that you have looked into every place you need to checkout during this pass?

Now was that a junk car in that field or was it an aircraft. If you are not sure, you go back and check. (I think there ought to be a law requiring all the old junk cars and refrigerators to be properly disposed of instead of being left out in the woods across America to confuse observers.) These are only some of the thoughts you have to think about while searching. Add in the fact that a life may depend upon how well you are searching your assigned area, and you can begin to understand some of the thoughts and fears that the search crews face. So, what can you do to help yourself? There are three things I think you can do.

**THE OBVIOUS**

First, let's state the obvious. If conditions are bad...don't fly. Take a train, bus, car, or read a good book. Period.

There are some conditions small aircraft are not designed or equipped to fly in. If your aircraft is not equipped for the current or expected conditions, stay on the ground. If you are not trained, qualified, and current to fly the proposed flight safely, stay on the ground. And remember both the aircraft and pilot must be equipped, current, and capable of flying the proposed trip safely. If the aircraft is okay to fly, is the pilot? Is the pilot rested and capable of conducting the flight safely? How good are the pilot's decision-making capabilities? Is the pilot safe to fly?

Included in the aircraft equipment should be a fully functioning transponder and ELT. Yes, the rules permit certain operations with inoperative equipment, but we are not going there. An operating transponder and ELT are important to your safety. They make it
easier for searchers to find a missing aircraft.

**FLIGHT PLAN**

It goes without saying every pilot should file a flight plan. This is especially important for VFR operations when conditions are marginal. If below VFR conditions, an IFR flight plan must be filed if the pilot and aircraft are qualified and current. One of the most reported reasons for GA accidents is the familiar “continued VFR flight into IFR conditions.” More commonly known as scud running, this is one of the most dangerous things a pilot can do. One of the strangest facts is the number of instrument-rated pilots who die scud running while operating VFR. Go figure.

Without an activated flight plan, aircraft have been missing for days before someone misses the pilot and contacts search authorities. But without an activated flight plan or without someone waiting for the aircraft, search authorities have no way of knowing an aircraft is missing until someone finally reports it. This can take hours or days. But with a proper flight plan, FAA can initiate a search for a missing aircraft very quickly. Depending upon the type of flight plan, this action can often be started in minutes.

A functioning ELT, preferably a 406 MHz ELT, is extremely important in helping someone locate your aircraft after an incident or accident. The faster air traffic is aware of a problem or the international Cospas-Sarsat satellite monitoring system detects an ELT distress beacon the faster help can be mobilized to help or rescue you. The key to a fast rescue is to take the search out of search and rescue. The smaller the search area and the less time the search and rescue forces have to search for you, the faster you can be rescued. Some of the newer 406 MHz ELT’s can actually transmit your last known position data to SAR authorities. It doesn’t get much better than that.

Please note that because of the large numbers of false alerts on the 121.5 MHz frequency, SAR authorities may not respond to an activated 121.5 MHz ELT unless a missing aircraft notice has been issued by FAA or multiple satellites have received the 121.5 MHz distress alert. This delay to confirm a valid 121.5 MHz distress alert may take several hours or more.

**POSITION REPORTS**

Pilots should also make periodic position reports to air traffic control (ATC) or to their designated flight service station (FSS) if operating VFR. If operating on an IFR flight plan under radar control, this is not as important as when not under radar surveillance or when operating on a VFR flight plan. If you have been out of contact with ATC for a while during a flight, you might want to check in with ATC or a FSS just to see if your “radio” is still working. But more importantly, it gives someone a current position report on you. Sometimes it is also nice to hear another human voice on a long flight.

**DECLARING AN EMERGENCY**

Pilots should also know and follow the emergency information contained in the FAA’s Aeronautical Information Manual (AIM). In reading accident and incident reports over the years, one basic fact stands out in many accident reports. That fact is that one of the best things any pilot can do is declare an emergency when in trouble or if you think trouble is imminent. As pilot in command (PIC) with all of the responsibilities those words entail, it is important that PIC’s use all available help and resources the aviation system has to offer before it becomes too late for anyone to help the pilot. FAR §91.3, Responsibility and authority of the pilot in command, applies. Like instrument-rated pilots who continue to crash scud running VFR, it is always amazing how few pilots are willing to declare an emergency until it is too late. It is better to be asked to explain a certain pilot action later on the ground than risk a fatal accident on your own. The rule should be to declare an emergency and ask for help whenever there is any doubt about a flight safety issue or the successful outcome of any flight is in doubt.

**HELPING YOURSELF**

There are things you can do to help make yourself and your aircraft more visible after a crash. First, if possible, confirm that a surviving ELT is activated. If it has a manual activation switch, turn the unit on or confirm it is transmitting by checking its activation light is on or by tuning your radio to 121.5 MHz and listen for the distinctive distress sweep tone.

You can also try calling any station on your aircraft’s radio. You should use the last assigned frequency or the nearest airport or unicom frequency, if known, and if no one responds on one of those frequencies, then you should use 121.5 MHz.

Remember, if your ELT or radio fails after a crash, and SAR authorities did not obtain good position data either from a last position report, ELT signal, radio call, or transponder signal; then you will have to depend upon a visual search to locate you. Hopefully by following the suggestions in this article, you will have provided search authorities with a smaller area to search because of an activated flight plan, accurate position reports, and a good radar and transponder track.

Then the question is, how can you help that person sitting in the right seat of the search plane see you on the ground. Assuming you have some mobility and are not trapped in the wreckage, there are several things you can do.

First, you have to make sure that nothing you do will cause a post-crash fire or explosion from spilled fuel or other dangerous material that can kill you or destroy needed survival items.

Some items that can make you more visible include a flashing strobe that can be seen for miles, a lighted flashlight, a signal mirror reflecting the sun, a brightly colored signal panel displayed on the ground.

Anything that makes you more easily seen increases your chances of being found quickly. The key to visual
Post Accident Survival

The third area to think about is survival after the crash. Although we have discussed things every pilot and even those going into the back woods can do to help others find them in the event of an emergency, the most important rule is to be able to provide for your own safety until help arrives.

Help may take days or longer to reach you, or, in extreme cases, you just might have to self-rescue yourself. Again, assuming you survive the crash, you don’t want to die waiting for help to arrive. It has happened.

First, you need to wear appropriate clothing for the conditions you are traveling in or over. A basic survival kit and first aid kit and the knowledge to use them may mean the difference between life or death. Carrying a small tent is not a ridiculous idea under adverse weather conditions. Hypothermia can kill in subzero conditions. Hypothermia can kill at 80 degrees Fahrenheit. What matters is how your body responds to the wind and temperature conditions you are in. The wrong combination can be deadly if you are not prepared to survive.

The key to surviving is being able to adapt to your current situation while protecting yourself. As one military survival expert once said at a weekend FAA safety meeting, although you can survive with just basic equipment, doesn’t it make sense to carry more than the basics when space and weight limitations permit. Why be miserable when you don’t have to be. As he said, why carry a minimalist survival reflective “space” type blanket when you can carry a sleeping bag? Good point.

Remember water is important to survival at all times. Food is not important in the short term. This is especially true in the lower 48 states with all of the available search and rescue support available.

So, what does all of this mean to you? First, no one expects to be involved in an accident. If we knew we were going to have an accident, we wouldn’t go there. It’s that simple.

Since some of us will be involved in an accident this year, we all need to review our decision-making processes to ensure we minimize that risk. The FAA and other aviation groups have published many good books and current research on decision making. If you want more information on good decision making, you can contact your local FAA Flight Standards District Office Safety Program Manager.

Once an accident occurs, then the question becomes one of what can we do to help others find us while staying alive to await the rescue. This article has attempted to point out some of the things that all of us can do to minimize our flight risks and to help others locate and rescue us.

But all of this information is meaningless unless we survive the accident. One of the reasons scud running is so dangerous, besides the possibility of hitting a hill, mountain, tower, power-line, or some other equally dangerous object, is the fact many pilots become disoriented and lose control of their aircraft in marginal weather conditions. This is especially true of those times a VFR pilot enters instrument meteorological conditions (IMC). The chances of surviving an out of control aircraft accident has to be right up there with winning a fight with Superman or with your spouse or significant other on his or her birthday you just forgot. It just ain’t going to happen. I think the old adage that pilots must always fly their aircraft is still valid. Navigation and communi-
cation both come a distant second to always flying the aircraft. A precautionary off-airport landing is preferable to continuing in bad conditions and losing control and crashing.

So the next time you decide to take off into the wild blue, or haze gray, or nasty scud think about yourself sitting in the right seat of an aircraft searching for you. Think about what you can do to help someone find your crash site just in case you do have an accident. Think about what information you would like SAR authorities to have available about your route of flight or what flight data you think might help them find you faster. Then do your best to provide that critical data to the FAA or trusted others so that someone can rescue you. Once that has been done, if you are involved in a survivable accident, then your task is to remain alive until help arrives.

Are you prepared?

**UPDATE**

It is now November 20. The missing pilot and aircraft was found over the weekend. The pilot was killed and the aircraft destroyed when the aircraft crashed on Bull Mountain—not an area within my search grid. According to published reports, the pilot was an employee of the FAA's weather office. The accident occurred in Patrick County, VA, near the North Carolina border. The cause of the accident is still under investigation.

According to preliminary reports from the Virginia Wing, the search in Virginia which includes support from the Virginia Wing, Maryland Wing, National Capital Wing, West Virginia Wing, and the Congressional Squadron included 467-man days, 124 aircraft days, 307 aircraft sorties, and 635 flight hours. The 635 flight hours include 275 search flight hours and 360 transit flight hours getting to and from the search areas and mission bases.

Search data from the North Carolina and South Carolina Wings are pending.

This effort is an example of how the volunteers of the Civil Air Patrol support the national search and rescue effort by donating their time to help others. The official Auxiliary of the U.S. Air Force, the CAP receives funding from the Air Force, membership dues, and contributions. For those interested in donating their time and aviation skills to help others, they can contact their local CAP unit, state wing organization, or the national CAP headquarters at Maxwell Air Force base by calling 1-800-359-2338 or by logging onto the CAP Internet website at www.capnhq.gov.

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**CALENDAR OF EVENTS**

**April 26-27**  
Aviation Maintenance Technology Conference, Long Beach, CA  
MRO issues for aircraft operators, builders, and suppliers to be held at the Renaissance Long Beach Hotel. For more information, contact Meredith Arbus, Marketing Manager at marcus evans, at (416) 216-5481 or E-mail at <mereditha@marcusevansto.com>.

**April 27-30**  
2001 Annual Repair Symposium, Arlington, VA  
The aviation maintenance industry has an opportunity to exchange information on the regulatory and commercial forces influencing business relationships. For more information, contact the Aeronautical Repair Station Association at 121 North Henry Street, Alexandria, VA 22314 or phone (703) 739-9543.

**May 12**  
Safety Fest/Maintenance Fest 2001, East Hartford, CT  
To bring together all elements of the aviation community for a day of seminars, workshops, presentations, and displays intended for all pilots and mechanics in Southern New England. For more information, contact Bob Martens at (860) 654-1002 or Pete Lindberg (860) 654-1033.

**May 11-13**  
Springfield Air Rendezvous, Springfield, IL  
The 19th annual air show at Capital Airport, featuring the U.S. Navy Blue Angels Demonstration Team. For additional information, please contact the air show office at (217) 789-4400 or visit their website <http://www.springfield-il.com/airshow>.

**June 2**  
11th Annual AOPA Fly-In and Open House, Frederick, MD  
To be held at AOPA Headquarters, Frederick Municipal Airport, MD. For more information contact Warren Morningstar at (301) 695-2162 or E-mail at <warren.morningstar@aopa.org>.

**November 27-30**  
The Third International Aviation Security Technology Symposium, Atlantic City, NJ  
Will be sponsored by the FAA Aviation Security R&D Division and National Safe Skies Alliance at the Tropicana Resort & Casino in Atlantic City. Topics include: Trace Detection; Bulk Detection; Human Factors; Technical Integration; Operational Testing and Evaluation; Deployment; Aircraft Hardening; Emerging Technologies; and other related topics. For more information, see <http://www.safeskiesinternational.org/symposium_2001.htm>.
Runway Incursion, Pedestrian Version

The FAA and many pilot organizations have given much attention in recent months to prevention of runway incursions involving aircraft. However, these events may also involve pedestrians, as a general aviation pilot discovered after parking his aircraft at a new FBO.

I had flown into [airport] with a CFII for my instrument cross-country requirement, and the aircraft was secured with...a new FBO. Weather the following day prevented my departure, so we stayed over another day.... My brother-in-law drove me to the airport, but we were unable to locate the road to get to the new FBO location. Time was getting late to make my takeoff...and my brother-in-law was going to be late for work. We never did find the road that led to the FBO.

We noticed what appeared to be a ramp path from some hangers just south of the Tower area, where I could see the FBO across what appeared to be all ramp. Some new construction was also seen, a new taxiway to the new FBO area with cones blocking any vehicle movement on the taxiway. I elected to take what seemed to be a safe path across a construction zone. I did not see any runways when I exited my brother-in-law’s car....

As I approached the construction area, I noticed the Runway 10 threshold and realized the runway was there, but still thought it was part of the construction area as the runway’s surface condition was quite rough. To be safe, I looked for traffic and walked around the threshold end of Runway 10 in the mud. After I had passed, I noticed a Cessna 172 and a King Air enter the run-up area, then they took Runway 10 for takeoff a few minutes later. At that time I realized this runway was still active.

I continued to walk to the FBO across the newly constructed ramp area south of Runway 10 when the airport authority representative in a truck stopped me.... He informed me that what I had done was a runway incursion and, after quick reflection, I agreed with him....

The airport authority suggested I contact the FBO by phone, as it is part of their services to me as a pilot, to help me get around the airport in just such instances. While the runway incursion event with an airplane was clear to me through reading AOPA Air Safety Foundation literature, I did not comprehend at the time the same event could be triggered by a pedestrian. I now fully understand this and will avoid it under all circumstances in the future.

In 1999, the most recent complete year for which the FAA has collected runway incursion data, Vehicle-Pedestrian deviations accounted for 19% of all runway incursion events. Pilots who find themselves in our reporter’s situation should resist walking or driving across the airport surface. Help is usually just a phone call (or radio call) away.

This article originally appeared in the December 200 issue Callback from NASA’s Aviation Safety Reporting System (ASRS).

Normally, when you are walking, the shortest distance between two points is a straight line. But at an airport, a straight line might get you in trouble if you walk across a runway or taxiway.
Several years ago when I first came to the FAA I was tasked to do a series of “Ramp Checks.” The premise is that by doing ramp checks an inspector is able to recognize inadvertent problems before the problem becomes an accident. The inspector would spend some time out at airports greeting pilots at the gas pump or at the tie-down and request to see the pilot’s certificates and the airplane’s paperwork. Most of the time everything was in order and the pilot was sent on his/her way with a smile and “thanks” from the inspector.

Ramp checks are still being done today. However, the FAA has gone one step further. Several years ago, the FAA began to offer a program called the PACE Program to pilots and/or aircraft owners. PACE stands for Pilot Aircraft Courtesy Evaluation and is exactly that.

PACE is a courtesy evaluation by an airworthiness inspector, who is an airframe and power plant mechanic or an avionics specialist. He or she evaluates the aircraft mechanically and reviews the aircraft paperwork as well. At the same time, an operations inspector, who is a pilot and flight instructor, will review the pilot’s certificates and logbook to assure that all is in order. Then the pilot may take a ride with the operations inspector who will confirm his/her piloting skills.

The ride is not a lesson per-say, but rather a review of the standards that the pilot had to meet in order to receive his/her certificate in the first place. When the ride is over, if necessary, the inspector will suggest that the pilot see a flight instructor for training in areas that might need additional review. Just a good review of flight maneuvers that don’t get practiced much in the day to day flying most of us do. Any mechanical issues would be referred to a mechanic to satisfy any discrepancies that were found during the inspection.

The advantage of the PACE Program is that there is no pressure from the FAA. If an inspector finds that there is a problem, an attempt to fix the problem immediately is suggested. For instance, say that a pilot’s medical has accidentally expired. The pilot is asked not to fly until a medical is obtained and the pilot is directed to the nearest medical examiner (AME). If an aircraft is found to be unairworthy, the pilot may be issued a ferry permit to allow the aircraft to be flown home or to a place where repairs can be made.

In other words, no violation will come from the inspector because of what is found at a PACE inspection. If, however, the person, who just participated in the PACE Program, goes against the suggestion of the inspector and flies even though discrepancies are found, an enforcement could take place. Once you are may aware of a problem, ignorance is no longer an excuse.

By now I hope you are asking “How can I get this PACE Program on my schedule?” Easy. Just call your nearest Flight Standards District Office and find out when the next PACE program is scheduled and you can be set up with an operations inspector and an airworthiness inspector. If FAA inspectors are not available, qualified aviation safety counselors will be used.

It’s not too often that you can get something for free from the U.S. Government, so why not take advantage of it. And who knows, PACE might just make you a safer pilot all round.

Patricia Mattison is the Safety Program Manager at the Juneau Flight Standards District Office.
**Sometimes Aluminum and Steel Do Mix**

After reading Dean Chamberlain’s article, “Aluminum and Steel Don’t Mix,” in your November/December 2000 issue, I thought that I would share my adventures with this Airworthiness Directive (AD). I, too, have an antique airplane powered by a Lycoming engine and I just completed a year-long “annual” inspection on it. During that process the dreaded AD research gave me quite a challenge. To be specific, AD 96-09-10 seemed to require that I replace the engine oil pump impellers and housing just as Mr. Chamberlain describes in his article. But discussions with a local engine overhaul shop led to a possible exclusion of certain part number (P/N) impellers.

My Lycoming 0-360-A1A was built in 1959 and has only been overhauled once (in 1969) and the engine logbook did not indicate that the oil pump impellers/housing/shafts had ever been replaced. I called Lycoming and found out that the oil pump impellers in my engine at the time of manufacture were P/N 60747 aluminum impeller and P/N 60746 steel impeller. This P/N aluminum impeller has a hole in the middle for a fixed shaft to pass through. I was also informed that, if I could not determine through research of the engine maintenance records that these impellers were still installed, I could pull a magneto off the accessory case and I would be able to see the oil pump housing. The fixed shaft for the old style aluminum impeller protrudes out of the housing and is secured by a cotter pin and this can be seen through the opening for the magneto. All later style impellers/housing combinations do not have this feature, as the shafts are integral to the impellers and don’t protrude out of the housing.

After I knew which impellers were in my engine I could further research the AD applicability. The AD and the referenced Lycoming Service Bulletin (SB) No. 524 seemed clear that all aluminum impellers need to be replaced at 2,000 hours SOH or five years from the effective date of the AD. My 0-360-A1A falls under paragraph (C) of the AD which states: “...replace any aluminum oil pump impeller and shaft assembly...” In SB 524, Section II, Aluminum Oil Pump Impellers, it is stated: “Textron Lycoming requires replacement of all aluminum oil pump impellers at the next recommended overhaul not to exceed 2,000 hours of operation. The aluminum oil pump impellers being replaced are P/N 60747...” This seemed clear and irrevocable to me as it did to Mr. Chamberlain and his mechanic. I would be required to replace the aluminum impellers before 2,000 hours SOH or by July 15, 2001.

The only place to find more explanation about this AD would be the actual amendment to FAR Part 39 in the Federal Register. It was hard to locate the amendment until I went on the Internet and searched the Federal Register for “Amendment 39-9586” which was published in 1996. Reading that amendment gave me the long sought after statement that “The earlier configuration incorporates a fixed shaft and cotter pin with a different aluminum impeller. That configuration is not affected by this AD.” But this in conflict with what I read in the AD and the SB! So, which is correct?

The amendment also gave an FAA contact person for this AD and I decided that the next logical step was to talk to that person. I gave him all the facts that I had discovered and he agreed that my old style aluminum impeller with a fixed shaft was not affected by the requirements of this AD. I expressed concern that it was not possible to reach this conclusion without reading the complete amendment and calling him for verification. He explained that the same language in the amendment excluding the PN 60747 impeller should have been in the body of the AD itself, but “it was inadvertently left out.”

For my engine I have made a logbook entry stating that this AD does not apply because it has a P/N 60747 aluminum impeller with a fixed shaft; and per Amendment 39-9586, effective July 15, 1996, AD 96-09-10 does not apply to those parts. My engine passes all other airworthiness requirements, has good oil pressure, is not making metal, and has not reached TBO (2,000 hours).

I can only wonder why it is not possible to reach this conclusion through the normal process of reading the AD and the referenced manufacturer’s service documents. I also wonder if anyone else has actually reached the same conclusion that I did about the applicability of this AD to the old style aluminum impeller.

Leslie Sargent  
Oklahoma City, OK.

Thank you for your comments. As you pointed out in your letter, it is important for everyone dealing with a service bulletin or an airworthiness directive (AD) to thoroughly research the bulletin or AD. In many cases, the preamble, if there is one, published in the Federal Register announcing the AD provides important background material that may not be contained in the actual AD. In my case, since I was not absolutely certain of the type of oil pump in my aircraft, I decided to have the pump inspected. One of the important factors in my decision was the fact that my engine had to be removed for another reason so its removal was not a consideration in the oil pump inspection. You comment about how someone can inspect the pump on the engine may save someone the expense of having to remove an engine.

**Another View Point**

The article entitled “A Weighty Question” points out the importance of
using scales that are calibrated. In the article, the Flight Standards District Office (FSDO) inspector stated that: “...in order to insure the accuracy of the aircraft's weight and balance, the weight of the cargo must be accurate. “...and must be calibrated to a standard to insure this accuracy.”

Before a meaningful calibration can be performed, the required accuracy (acceptable limit) and precision (resolution) need to be defined. Who sets these important limits? Are they truly meaningful? I do not believe it would significantly improve safety by requiring the weight measurements, for example, to be five times more accurate than the accuracy and precision of the available weight and balance data, and the precision of the actual loading location.

I do agree that defined periodic calibration, traceable to the National Institute of Standards and Technology is needed to assure the scale is within the defined limits.

Richard Kadlec
Kokomo, IN

For those interested, the National Institute of Standards and Technology (NIST), an agency of the U.S. Commerce Department, has extensive information on weights and measures. For example, one of its websites contains the following definition about the traceability of a standard. “The ANSI/NCSLZ540-1-1994 defines traceability as: the property of a result of a measurement whereby it can be related to appropriate standards, generally national or international standards, through an unbroken chain of comparisons.” The website address is <http://ts.nist.gov/ts/htdocs/230/233/calibration/trace/trace.html>

According to NIST data, it works with federal, state, and local government agencies to establish an accurate standard for weighing from the NIST standard down to the local scales used to weigh produce in your local supermarket or, in the case of this Forum article, the scales of your local check hauler.

• Flight Plan Addendum

I have just read the article, “Those ‘Worthless’ VFR Flight Plans” in the January/February 2001 FAA Aviation News. This article does a good job getting the message across about the importance of VFR Flight Plans. However, there are also a few things that might be added to the article:

1. The article mentions the problem of forgetting to close a VFR flight plan. A CFI at one of my presentations said that he encourages his students to turn their wristwatches upside down when they activate their flight plans. He said that one of the first things he does when he gets on the ground is look to see what time it is. When he sees the watch upside down he remembers to close his flight plan.

VFR flight plans are not like IFR flight plans. If you land at an airport with an operating control tower your VFR flight plan is not automatically canceled. The flight plan will not be canceled unless you cancel it.

2. Don’t forget to activate your VFR flight plan. AFSS/FSS specialists get calls on a daily basis to cancel flight plans that were never activated. These pilots, though they filed a flight plan, did not have the search and rescue insurance that being on a flight plan provides because they forgot to activate them.

3. Pilots are encouraged to file an accurate route of flight. A pilot might file a VFR flight plan from New Orleans to Houston. If that pilot intends to fly along the coast instead of direct, that information needs to be in the route of flight. A search taking place along a direct route while the aircraft is 50 miles south results in a lengthy delay in the aircraft being located.

4. Avoid filing round-robin VFR flight plans. For example, I file a round-robin flight plan from Terre Haute, IN to Nashville, TN and back to Terre Haute. The time enroute is five hours. If I have problems and go down 15 minutes after departure from Terre Haute no one begins looking for me for five hours and 15 minutes after the crash. If I had filed one way to Nashville it would be two hours and 45 minutes or about half the time.

5. It was mentioned in the article that the ALNOT search area is within 50 miles of the proposed route of flight. The Rescue Coordination Center and/or the destination AFSS/FSS can expand the search area to the maximum range of the aircraft.

Terry A. Gambill,
Support Specialist
DeRidder AFSS, LA

Thanks for the reminders.
MINETA NEW SECRETARY OF TRANSPORTATION

On January 25, Norman Y. Mineta became the 14th U.S. Secretary of Transportation, overseeing air, maritime, and surface transportation administrations. According to Mineta, “Transportation is the key to both our economic success and to our quality of life.”

Before becoming Secretary of Transportation, Mineta served as U.S. Secretary of Commerce under President Clinton, becoming the first Asian-Pacific American to serve in the cabinet. He is the first Secretary of Transportation to have previously served in a cabinet position.

Before serving his cabinet positions, Mineta was a vice president at Lockheed Martin Corporation and chaired the National Civil Aviation Review Commission, which in 1997 issued recommendations on reducing traffic congestion and reducing the aviation accident rate. Many of the commission’s recommendations were adopted by the Clinton administration, including reform of the FAA to enable it to perform more like a business. He served as a member of the U.S. House of Representatives (CA) from 1975 to 1995. As a member of Congress, Mineta was known for his dedication to the people of his district, for consensus building among his colleagues and for forging public-private partnerships. His legislative and policy agenda was wide and varied, including major projects in the areas of economic development, science and technology policy, trade, transportation, the environment, intelligence, the budget and civil rights.

Mineta and his family were among the 120,000 Americans of Japanese ancestry forced from their homes and into internment camps during World War II. After graduating from the University of Berkeley, Mineta joined the Army in 1953 and served as an intelligence officer in Japan and Korea. He joined his father in the Mineta Insurance Agency before entering politics in San Jose, serving as a member of its city council from 1967 to 1971 and mayor from 1971 to 1974, becoming the first Asian-Pacific American mayor of a major U.S. city.

While in Congress, Mineta was the driving force behind passage of H.R. 442, the Civil Liberties Act of 1988, which officially apologized for and redressed the injustices endured by Japanese Americans during World War II. In 1995, George Washington University awarded the Martin Luther King, Jr., Commemorative Medal to Mineta for his contributions to the field of civil rights.

PEACOCK TO HEAD FAA AIR TRAFFIC SERVICE

FAA Administrator Jane F. Garvey has named Bill G. Peacock as the new director of the Air Traffic Service. He is responsible for managing the safe and efficient flow of air traffic—airline, private and military—throughout the United States. Peacock directs a workforce of 24,000 that includes 20,000 air traffic controllers who staff 352 airport control towers, 185 terminal radar control facilities, 21 enroute air traffic centers, and 75 flight service facilities.

Peacock succeeds Ronald E. Morgan, who has directed the Air Traffic Service since August 1996. Morgan is retiring after a 32-year career with the FAA.

“Bill Peacock will provide the leadership the Air Traffic Service needs as it faces continuous growth in air travel and growing congestion at some major airports,” FAA Administrator Jane F. Garvey said.

Peacock began his FAA career as a controller in the Lubbock, TX, control tower in 1973. Since last February, he served as program director for Air Traffic Tactical Operations, where he was responsible for the daily flight operations in the National Airspace System. The FAA’s Air Traffic Control System Command Center in Herndon, VA, reported to Peacock, and he had a major role in developing and implementing the Spring/Summer 2000 effort, in which the FAA and airlines work together to mitigate the effects of aviation delays. Earlier, he was the air traffic division manager in the FAA’s New England Region, where he led 1,000 employees and managed an annual budget of more than $90 million.

A graduate of Embry Riddle Aeronautical University, Peacock has also attended the Kellogg Executive Program and the Federal Executive Institute. He is a private pilot with an instrument rating.

LATE ISSUE

Two FAA Aviation News subscribers reported they received their copies of the January-February 2001 issue during the first week of February. We are asking anyone who received the magazine late to please contact us either in writing or by electronic mail.

The printer delivered FAA’s copies of the magazine on December 13. The Government Printing Office (GPO) should have received its copies on or about the same date. GPO uses its copies to sell through its sales offices and to mail out to those who subscribe to GPO for the magazine. We expect subscribers to receive their copies by the end of December or the first week of January.

FAA is not involved in the sale of FAA Aviation News through GPO, nor does FAA receive any of the funding the GPO derives from the sale of the magazine. Since FAA is not involved in the sale of the magazine, that is why when subscribers have a problem with their subscription and contact us, we refer them to the GPO customer service department listed on the inside front cover. The same is true for...
changes of addresses. However, when we become aware of a problem that may affect more than one person, we want to help resolve the matter as quickly as possible. The FAA Aviation News staff cares about all of our readers. You and your safety are the reason the magazine exists.

If anyone received his or her January-February issue in late January or the beginning of February, please contact Dean Chamberlain electronically at dean.chamberlain@faa.gov or by writing to him at Dean Chamberlain, AFS-805, Federal Aviation Administration, 800 Independence Ave. SW, Washington, DC 20591. Please include the date you received the issue and your city and state.

GOOD NEWS FOR FLIGHT INSTRUCTORS

The FAA has established an additional acceptable procedure for renewing flight instructor certificates on the basis of participation in the FAA’s Pilot Proficiency Awards Program (“WINGS”) as a flight instructor. In accordance with Federal Aviation Regulations, § 61.197(a)(2)(ii), a holder of a current flight instructor certificate may renew his/her flight instructor certificate if that flight instructor is “...in a position involving the regular evaluation of pilots...” Therefore, the FAA has determined that a holder of a current flight instructor certificate can renew his/her certificate by participating as a flight instructor in a phase of the FAA’s “WINGS” Program (i.e., Phase I through XX proficiency awards).

In order to renew his/her flight instructor certificate by participating as a flight instructor in the FAA’s WINGS Program, the flight instructor must:

1. Hold a flight instructor certificate that has not expired;
2. Have provided at least 15 hours of flight training in a phase of the “WINGS” Program;
3. Have provided flight training in a phase of the “WINGS” Program to at least five pilots and signed the logbooks of those pilots;
4. Be enrolled and actively participating in a phase of the “WINGS” Program, or have previously satisfactorily accomplished all phases (I through XX) of the program;
5. Present a record to an authorized FAA Flight Standards Aviation Safety Inspector (ASI) showing that the flight instructor has met the requirements within the preceding 24-calendar months before the month of application for renewal of his/her flight instructor certificate; and
6. Present a completed FAA Form 8710-1, Airman Certificate and/or Rating Application, to an authorized FAA Flight Standards’ Aviation Safety Inspector (ASI) or Aviation Safety Technician (AST) for renewal of his/her flight instructor certificate.

These procedures were developed by FAA’s Aviation Safety Program Office, AFS-803, and the Certification Branch, AFS-840, 800 Independence Avenue, SW, Washington, DC 20591.

FAA SAFETY FORUMS AT AMERICA ONLINE

The following is the 2001 proposed schedule of FAA aviation safety forums produced by FAA Aviation Safety Inspector and Safety Program Manager, Mr. Buz Massengale, from the Tampa Flight Standards District Office. Each Wednesday, Massengale holds his online safety meeting starting at 9:30 p.m. Eastern time. The meetings are held in the “Wright Hall” chatroom on America Online (AOL). For AOL members, use the keyword “FLY” then enter the Wright Hall chatroom. The online meeting qualifies as a safety seminar under the FAA’s “Wings” program. For more details about the online safety meeting, you can contact the Tampa FSDO’s website at <www.faa.gov/fsdo/tpa>.

2001 SCHEDULE

April 4 Turbulence
April 11 NO FORUM
April 18 The Instrument Rating
April 25 Aircraft Washing
May 2 A Good Preflight Inspection
May 9 NO FORUM
May 16 Surfing the Mountain Wave
May 23 Thunderstorms
May 30 AVIATION TRIVIA CONTEST!!
June 6 Bad Flights Gone Good
June 13 Mixing your Business and Flying
June 20 Engine Operation: Lean & Mean
June 27 Fueling Safety
Gift to the Air

Anne Morrow Lindbergh
1906 - 2001

Surely, when she met him, she must have thought that their lives would be the stuff of fairy tales and happily ever after. She once referred to him as her knight and she his devoted page. To modern women this may be a conundrum, that the woman who was the first American woman glider pilot, who co-piloted and navigated for her “knight” when he established transatlantic flying routes, could see herself in a subservient role. But Anne Morrow Lindbergh was far more complex than that post-feminist characterization. She and Charles Lindbergh were partners in life and in aviation. So long as she lived, some part of “Lucky Lindy” lived still, the symbol of the golden age of flight, of solo flights across distances said to be impossible to traverse, of daring pioneers of air mail and intercontinental travel.

At the age of 94, Anne Morrow Lindbergh, wife, mother, woman of letters, pilot, died February 7 of natural causes in Vermont. It was a quiet death, surrounded by family, not, in some ways, an aviator’s death, but Anne Morrow was a writer first, her talents first recognized while a student at Smith College. She herself wrote: “And since I think best with a pencil in my hand, I started naturally to write.”

She was 21, and Charles A. Lindbergh was 27, already “Lucky Lindy,” when they met, and, daughter of staid and solid New England, she was drawn to the aura of adventure around America’s foremost aviator. By the time they married two years after they met, he had taught her to fly. She wrote of him, “The man I was to marry believed in me and what I could do, and consequently I found I could do more than I realized.”

Though she was along as his navigator, co-pilot, and radio operator on most of his flights to establish commercial air routes, it was her writing that made her as famous as he. Most of her 11 published works were based on her diaries. North to the Orient traced her and Lindbergh’s journey to map commercial routes to the Far East. Gift from the Sea is a timeless book about men, women, and relationships. As central as writing was to her life’s balance, it took her more than 40 years to write about the seminal tragedy of her life, the kidnapping and murder of her young son. In Hour of Gold, Hour of Lead she writes poignantly of seeing her son’s face on others’ children and realizing she would do that forever. After the death of their first child and adverse publicity surrounding Charles Lindbergh’s pacifist activities before World War II, the Lindberghs preferred a reclusive life that shielded their five other children from publicity. After her husband’s death, she still coveted her privacy, rarely giving interviews, but according to her youngest child Reeve, remained active in her family’s life and alert to aviation history.

Her aviation accomplishments earned her places in the National Aviation Hall of Fame, the Women in Aviation Pioneer Hall of Fame, and the National Women’s Hall of Fame, but she eschewed success, preferring a quiet retirement with Lindbergh until his death in 1974. One year later when Gift from the Sea was re-published, aviation terminology still a part of her vocabulary, she added in an Afterword, “But when a mother is left, the lone hub of a wheel, with no other lives revolving about her, she faces a total re-orientation. It takes time to re-find the center of gravity.”

She is survived by Jon, Land, Scott, and Reeve Lindbergh. Her daughter, Anne, died in 1993.

To imagine where she has now gone, we need only reflect on her concluding words in Gift from the Sea:

“The waves echo behind me... But there are other beaches to explore. There are more shells to find. This is only a beginning.”
DO NOT DELAY -- CRITICAL TO FLIGHT SAFETY!