

FEBRUARY 2019

# PROPWASH

A NEWSLETTER OF EAA CHAPTER 517, INC.



*Five Valleys Flyers*



*EAA Chapter 517, Inc.*

Words from a Safety Dog

# Consider “what if” scenarios

By Steve Rossiter

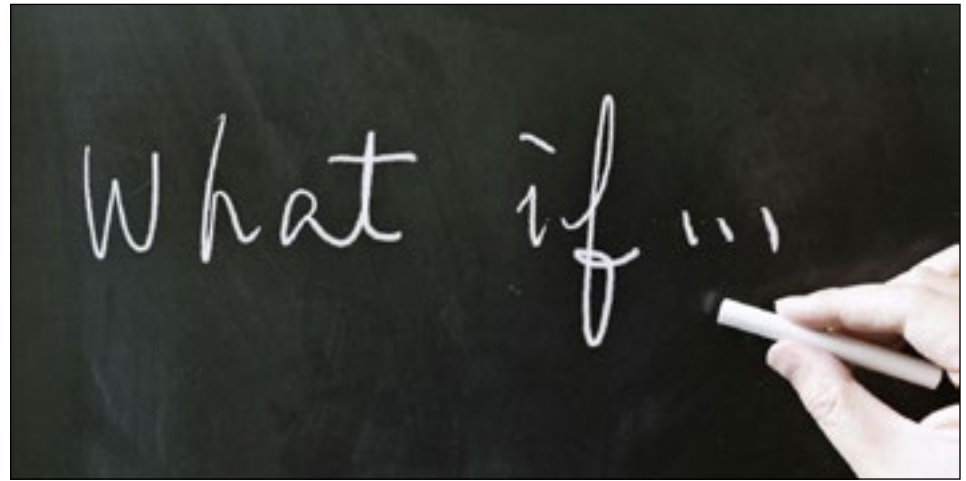
Words and training make a difference when it comes to aviation safety. What we learn first, we learn best. What we learn most recently usually makes a big impression. What we consider and formulate as a plan can save our lives and those of our passengers. The following true stories will illustrate these axioms.

## First Learned

In Army aviation flight training for helicopter pilots, one of the things we were taught was how to properly ditch a helicopter in order to minimize the risks to the cabin occupant and crew. In deep water the technique taught is when the helicopter's landing gear touches the water, the pilot rolls the helicopter to the right so that the right side main rotor blades strike the water first. Because of torque, if the main transmission of the helicopter breaks free, it will rotate toward the rear of the helicopter instead of into the cabin.

While in Vietnam, where there were many, many relatively low time pilots, a young man one day had an engine failure where landing in a river seemed like the best option. This pilot reverted back to his early training and executed a perfect deep water ditching in the river. No one was injured in this event.

However, there was one flaw in the thinking process of this pilot which demonstrates that relying totally on your training might not be the best solution in all situations. The particular location of this landing was an area where many helicopter units landed in the river to wash their



aircraft. This perfectly executed deep water ditching took place in about 18 inches of water. Ooops!

the trees rather than the situation that actually existed. Ooops, buy another airplane.

## Recently Learned

A few years later, while I was a flight instructor at Ft. Stewart, Georgia, a primary fixed wing training class had just been trained in forced landings after an engine failure. This training included how to best land in trees. Specifically, when doing a tree landing try to find a place where you can put the fuselage between two trees to allow the wings to dissipate as much energy as possible, thus minimizing damage to the cabin and the cabin occupants.

The next day a solo student in a Cessna T-41B, in fact, had a total engine failure. He then set up and executed a text book approach and tree landing, which worked exactly as he was taught. He very nicely slipped between two trees and removed the airplane's wings simultaneously.

As in the previous example, there was a significant flaw in the planning of this landing. The trees he selected were in the middle of a 100 acre level pasture. This student focused on

## Have a Plan

While in Vietnam in 1967, I was flying a Bell OH-13S. I dropped a passenger off on the end of an airstrip and departed down the airstrip, when I hit a wire strung across the runway. What a surprise. A few months later, I was the pilot in command of a Bell UH-1H Huey helicopter. My crew and I had just finished washing our helicopter, in the aforementioned river and, as was the case, there was a bridge that had been blown up and two spans formed a “V” where they laid in the river. I thought it would be cool to fly through the “V” of the bridge on my departure. If it hadn't been for the wires crossing the middle of the “V” it would have been very cool. I then experienced the second wire strike in my short aviation career. Fortunately, in both of these incidents there was no damage to the aircraft.

These incidents caused me to do some soul searching and consider potential actions during wire strike situations. The contemplation about



these saved my life a few years later when I was involved in a search and rescue operation along a river in Georgia in a Bell OH-58A Jet Ranger. My observer and I were hovering along a fairly wide river flanked by high trees on both sides. Ahead we saw a bridge crossing the river, and a decision needed to be made. There was plenty of height which would have allowed us to fly under the bridge. However, there were people watching our operation, so it seemed most prudent to pull up and fly over the bridge and the people. I accelerated the helicopter to climb out to safely transition beyond the bridge. What neither of us saw was the power lines short of the bridge, where the poles were hidden behind the trees along the river.

Because of my previous two wire strike events I had built into my memory a plan that if I found myself facing wires again, I would pull more power to fly through the wires. I felt it would have been a disaster to try to stop, so I followed my plan and successfully flew through and broke two of the three wires present. The only damage to the helicopter was a broken windshield where the free air temperature gauge was removed by one wire from the windshield.

I had a plan and it worked. I had done many “what if” exercises over the years and in this situation, it saved a helicopter. The best thing you can do for yourself is to play the “what if” game, considering as many possible scenarios as you can think of. I didn’t realize it at the time, but my first flight instructor, Ron Caruthers, taught me that process around the time of my first solo. He asked me where I would go if my engine failed right now. I presented him with the school solution, which would have worked just fine. Then he pointed out a farm house a short distance away and suggested if we landed there, we could get to a phone faster (years before cell phones) and the farm family might even offer us some lemonade while we waited. Good lesson.

# Butzel Hangar cleanup project complete

By Steve Rossiter

As you may recall, Marcia Butzel donated the contents of the hangar owned by our member Hank Butzel who died in 2008. Our job was to clean out the hangar, so it could ultimately be sold. I’m pleased to announce this project came to an end at 1300 hours on January 31, 2019. It took about 45 days longer than planned, but it did get done.

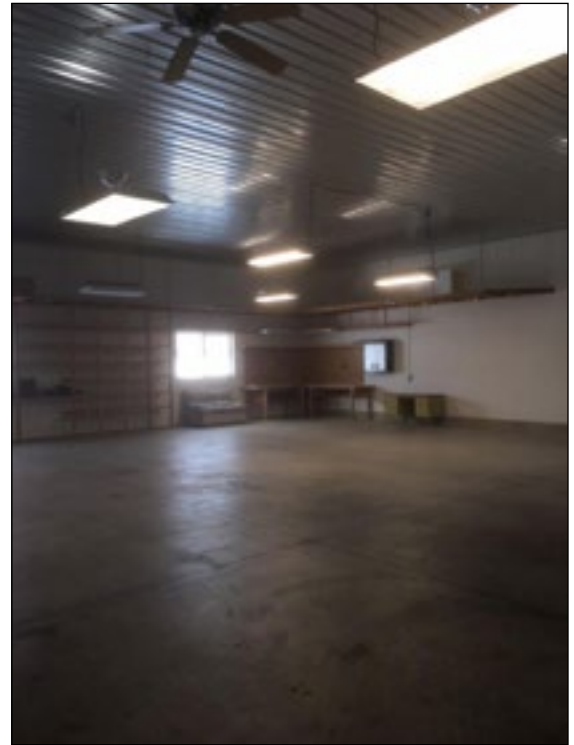
In the overall scheme of things, it was a good project to take on. The Chapter now has a very comprehensive set of tools and other equipment that will be available to Chapter members to use as needed. We also acquired many items that we are selling on our website, Craigslist, Barnstomers and through other means.

Ed Lovrien has taken on the project of selling the five hang gliders. This part of the project is on hold until the weather improves and these can be set up and adequate pictures can be taken. Don Whitehair is working on the sale of some Stearman ailerons and ailerons from some other airplanes.

Many other items have been sold and the cash added to the Chapter accounts. A certain amount of material was recycled as scrap and was sold accordingly. Other material was donated to Habitat for Humanity and Home Resources on behalf of Ms. Butzel. Over all, we have generated several thousand dollars worth of income for the Chapter and we are not done yet.

A lot of our members helped with this project providing professional opinions about the material and investing sweat equity into the completion of the project. Members help was invaluable in the completion of this project. A BIG thank you to all who helped.

Here’s what an empty hangar looks like.



CFI CORNER

# The importance of pilot proficiency



## Sherry Rossiter, CFI-I

While winter weather may prevent you from flying as frequently as you'd like, there are many things general aviation (GA) pilots can do to keep up their knowledge and skills. One thing might be to take advantage of the weekly webinars EAA national produces. For example, the webinar entitled "Less Than Ideal: Short Field, Soft Field, and Obstacle Operations" discusses takeoffs and landings from less than perfect runways and/or under less than ideal conditions. This webinar serves as a good reminder of all the things a pilot must consider when

taking off from or landing on any runway, but especially under less than optimal circumstances. These archived webinars can be accessed by any EAA member at [www.eaavideo.org](http://www.eaavideo.org). A list of upcoming webinars can be found at <https://eaa.org/en/ea/news-and-publications/ea-webinars>, with instructions on how to sign up and receive reminders prior to the webinar.

When we were student pilots, emergency procedures were [hopefully] taught to us and then reinforced over the course of our flight training. However, once we earned our Private Pilot Certificate,

most of those procedures are no longer practiced and that is unfortunate. The reality is that unless you are a professional pilot, you probably do not regularly practice emergency flight procedures or engage in periodic pilot refresher training. Most GA pilots do not realize they have lost their "proficiency" until a situation arises where those specific skills are needed.

Many years ago a friend of mine experienced an electrical failure in his Cessna 152. After flying around for a few minutes trying to troubleshoot the problem, he finally realized he was going to have to

land with no flaps. He had not made a no-flap landing since his early days of training but he thought it should be no problem. However, he forgot that without flaps deployed, he would be landing at a faster airspeed, thus requiring a longer roll out than normal. Due to the increase in airspeed on final approach, he touched down much farther down the runway than normal. The result was that he ended up rolling off the end of the runway into a swampy area and the airplane nosed over. After he got over his initial embarrassment, he came to talk to me about what had happened. This incident caused him to hire a flight instructor to do some remedial training. My friend also became a believer in “armchair simulation,” which I’ve talked about in this column previously. From this point forward, my friend periodically sits in his armchair with his procedures checklist in hand and imagines going through various emergency procedures in order to remain proficient.

If webinars or armchair simulation are not appealing to you, there are many other online resources that can help you maintain your flying knowledge and proficiency. One very good website that I have a non-paid subscription to is BoldMethod. You can access the website at <https://www.boldmethod.com>. As a non-paying subscriber, I have access to weekly quizzes, podcasts and more. This website also offers a variety of training courses and videos for a fee.

Another website to check out is <https://www.flyaoamedia.com>. This website is owned and operated by Chris Palmer, who is a flight instructor and bush pilot in Alaska. He has created some fantastic flying videos and offers a weekly podcast. You can access the majority of the website for free.

A third online resource I urge



you to check out is operated by Mindstar Aviation. The URL is [www.mindstarprods.com/aviation/](http://www.mindstarprods.com/aviation/) Mindstar Aviation is a leading developer of flight simulation software and hardware. They specialize in avionics solutions for Microsoft Flight Simulator. Mindstar is also the creator of a new flight simulator network where the airspace is virtual, but the pilots are real and can see, hear and talk to each other on the network. The first “flight simulation community” Mindstar created is in the Washington, DC area, but they have plans to expand into other parts of the U.S. I personally know some of the people involved in this effort and they include top-notch flight instructors and other very creative techie-types. I think they are on to something new and useful to help pilots maintain proficiency.

I just learned that there is a free online flight simulator known as GeoFS. If you are looking for something to do from home on a cold, snowy, winter day, check out this flight simulator at <https://www.geo-fs.com/> GeoFS runs in your web browser, uses global scenery and provides the user with a choice of 20

different aircraft including a para-glider, Cessna 152, helicopter, fighter jet, glider and airliner.

Lastly, if you are looking for an approved flight simulator to maintain IFR currency, Chapter member Bruce Doering (owner of Montana Flying Service in the LZ Hangar complex) has a Redbird TD2 flight simulator, which he rents for \$35.00 per hour solo or \$95.00 per hour with an instrument instructor (CFII). Bruce’s phone number is 406-550-3680.

While flight simulators of all types can help us stay current (as well as have some fun), there really is no substitute for just getting out there and flying. In theory, the more you fly, the more proficient you will become. Unfortunately, many GA pilots never take any refresher training until after they have had a mishap or otherwise scared themselves. I believe every GA pilot needs to develop their own plan for staying proficient. Proficiency in the aircraft helps ensure safe flight operations. Proficiency in the aircraft also makes flying a whole lot more fun and far less stressful for any pilot.

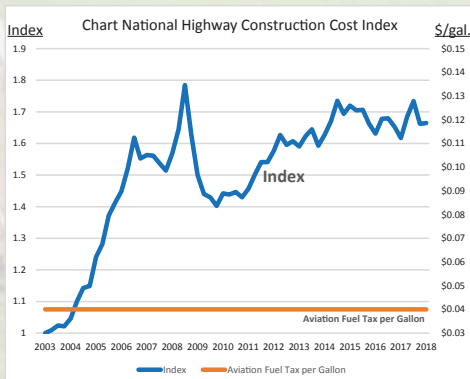


# PILOTS FOR MONTANA AIRPORTS

*Montana's Community Airports and MDT Aeronautics are in critical need of help and the solution is quite SIMPLE!*

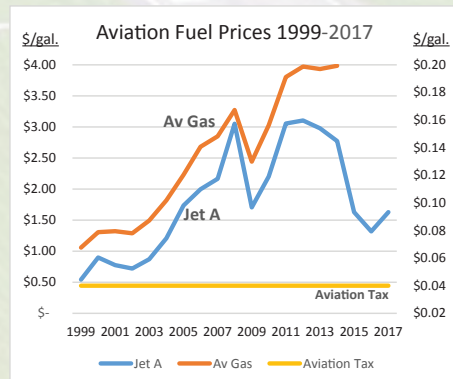
1. The Aviation Fuel tax has remained static at \$0.04/gal since 1999.
2. **MDT Aeronautics is a self-funded program** dependent on revenue from aviation fuel taxes (60% of total budget) for Aeronautics Operations and Grants to Montana's public use airports.
3. 90% of aircraft registration fees go to the general fund. The 10% going to MDT Aeronautics does not cover the cost of the registration program.
4. MT Aeronautics has run significant deficits despite an annual infusion of \$150,000 from Montana Department of Transportation (MDT).
5. Scheduled Passenger Air Carriers (Airlines) received **rebates** of \$362,926 in FY17 and are projected to receive \$591,000 in FY19 and \$530,000 in FY20.
6. Critical airport improvement projects are not moving forward due to lack of funds.
7. Construction costs and fuel prices are significantly higher while the aviation fuel tax has remained fixed at \$0.04

Construction Costs are significantly higher while Montana's Aviation Fuel Tax has remained fixed



Source: US DOT Federal Highway Administration

Aviation Fuel has increased 250 - 400% while Montana's Aviation Fuel Tax has remained static



Source: US Energy Information Administration

STRANGE AIRCRAFT

# Moller Skycar an idea ahead of its time



By Steve Rossiter

Paul Moller has been one of the longest pioneers in the field of personal vertical takeoff aircraft/vehicles. His focus has been to use multiple rotary engines as the power source. Unfortunately, he has not yet had a flight on an un-tethered vehicle. The design looks cool and he worked out computer control of the engines, but hasn't pulled together a viable business model.

Most of us are watching a variety of newer VTOL vehicles using, what looks like a more reliable system, electric motors. As in the 19th Century, pioneers often end up face down in the dirt with arrows in their back.



**Paul Moller in his Skycar.**



# Follow EAA 517 on Facebook

## Join EAA's official Facebook group

By EAA

Have you joined the official EAA Facebook group? In conjunction with our normal Facebook page, our Facebook group will be a place for EAA members, pilots, and aviation enthusiasts in general to have discussions and share photos and ideas about aircraft, EAA AirVenture Oshkosh, other aviation events, homebuilding, flying tips, maintenance, and anything else related to aviation! Join today!

### **BUILDER'S REPORT**

#### **Rutan**

Ed Lovrien  
Limo EZ – 50%

#### **Sonex**

Larye Parkins  
Waix – 30%

#### **Van's RV**

John Barba  
RV-6

#### **Zenith**

Duane Felstet  
CH-750 75%

*Builders, please send updates to the newsletter editor at [cburson@gmail.com](mailto:cburson@gmail.com) so this list can be kept current.*



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Exhibitor Hangar Forum & Workshop Tents		Fenced City Storage Yard	



## COME TO SEE

- AIRCRAFT & EQUIPMENT VENDORS & NON-AIRCRAFT EXHIBITS
- AVIATION SEMINARS, FORUMS & PRESENTATIONS
- AIRPLANE CONSTRUCTION WORKSHOPS
- AVIATION EDUCATION RELATED SCHOOLS AND INSTITUTIONS
- AIRCRAFT ON DISPLAY
- AIRCRAFT AND HELICOPTER RIDES
- LEARN HOW TO BE A PILOT
- LEARN ABOUT ALL THE CAREERS IN AVIATION
- KIDS SCIENCE AND TECHNOLOGY DISPLAYS
- FOOD VENDORS
- SEE PLANES FLY AND AIR SHOWS

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- Aluminum cutting, drilling, riveting.
- Composite, with aircraft epoxy and fiberglass.
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## ADULT AVIATION EDUCATION

- Forums and presentations to introduce and explain other aspects for new pilots, pilotage, equipment, safety and skills.
- Topics to improve pilot skills and understanding of aircraft, airspace, operations and technology.
- Conducted by experts including FAAST Trainers and Expert Topic Leaders.

## VENDORS

Exhibitors and Vendors. Show and Demo your products.

## BE A SPONSOR

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[WWW.COPPERSTATE.ORG](http://WWW.COPPERSTATE.ORG)

[WWW.BUCKEYEAIRFAIR.COM](http://WWW.BUCKEYEAIRFAIR.COM)

for MORE details and contacts as the date approaches

6/28/18



**46<sup>th</sup> Annual**  
**February 8, 9, 10th**  
**(Fri, Sat, Sun)**

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Where education, aviation and friends  
come together in the Southwest.*

## EXPLORE AVIATION

If you are interested in exploring aviation careers or would like to learn to fly, you have an opportunity to talk to flight schools, educational institutions and pilots about how to achieve your goals. You can also attend any of the forums or workshops offered.

**COPPERSTATE Fly-In** fosters curiosity and helps build a foundation in educating youths on aviation. We keep that dream alive through youth programs, educational links, and focused topics of interest for active pilots.



Our programs include Youth Education, Air Academy, Scholarships, CFI Instruction, Careers in Aviation.

## FLY-IN OR DRIVE IN TO

**See** the Airport, Community Events, Vendors, Exhibits and Forums. Also, see latest experimental, general aviation and kit planes

**Talk** with pilots and groups

**Operate** the new aviation gear and equipment

**Shop** for all your yearly aviation supplies and equipment.

**Clean** out your hangar and bring it to the AeroMart to sell.

**Show** off your aircraft and be judged in a multitude of categories.

**Tour** on-field businesses & FBO

**Volunteer** before/after/during the event.

**Attend the Banquet** for Awards and Social Dinner Saturday nite

Meet and learn of aviation groups and clubs. Learn what the aviation clubs and groups are, what they work on, and how they give back to the community.

## BE A VOLUNTEER

To volunteer, go to [www.copperstate.org](http://www.copperstate.org), and look over positions and/or contact the Volunteer Chairman. Let them know your area of interest, or just be a general volunteer. We will help find you a spot. Remember, you DO NOT have to be a pilot or in aviation to volunteer. Many of the folks who work with us have no flight or aviation experience at all.\*

**The principle mission of the COPPERSTATE Fly-In 501c3 is Aviation Education**

**COPPERSTATE Fly-In, Inc** is staffed with volunteers whose focus is to accomplish this mission.

\*COPPERSTATE Fly-In is a nonprofit aeronautical organization whose focus is to promote youth and adult Aviation Education, opportunities and career paths. We are all part of the COPPERSTATE family. This also means that you are like us, we need you. COPPERSTATE can only survive with your help, support and involvement.



# XP-82 Twin Mustang makes first flight in decades



By EAA

On December 31, 2018, the XP-82 Twin Mustang flew for the first time since December 14, 1949. But the restored aircraft wasn't supposed to fly that day. The original plan was to do the last FAA required runway high-speed taxi test, lift off for a second or two, touch back down, deploy full flaps, and brake to a stop. It accelerated so fast after the planned liftoff that test pilot Ray Fowler, EAA 229470, realized that getting it back down and stopping it in the remaining runway would be risky. So, he pushed the power back up and flew for about five minutes.

There are virtually no photos of this flight as it was not expected to happen.

The unexpected and dramatic acceleration of the XP-82 at 55 inches of manifold pressure occurred because it was approaching three times the horsepower of a single-engine Mustang at only about 1 1/2 times the weight. The XP-82 has 1,860 hp on each side for a total of 3,720 hp — the P-51 has 1,500 hp. The XP-82 weighs 14,700 pounds compared to 9,500 pounds for the P-51.

The very short gear-down flight showed zero airframe squawks, it flew hands-off with no trim required,

and all engine temperatures and pressures were normal.

"This wonderful test flight came after a 10 1/2-year restoration encompassing 207,000 labor hours," said owner and restorer Tom Reilly, EAA 802376. "Many thanks to Ray and all of the men and women that made this restoration possible."

The first official test flight is scheduled for the end of January. For more information, read the cover story in the August 2018 issue of Sport Aviation, and see staff photographer Connor Madison's blog post about shooting this magnificent warbird.



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