

MSO GA NEWS



Neptune Aviation has exceptional leadership. [Read more](#)



EAA Chapter 517 is flying high! [Read more](#)



Artificial humor is no joke. [Read more](#)



MSO Legal Counsel Lynn Fagan ends tenure. [Read more](#)



The Museum of Mountain Flying grows. [Read more](#)



News from our airport. [Read more](#)



Flight proficiency—tips from a CFI. [Read more](#)



Groundbreaking for National Conservation Legacy Center [Read more](#)



Missoula aviator awarded for her exceptional career [Read more](#)



Family adventure at AirVenture 2024 [Read more](#)



Aircraft innovations abound. [Read more](#)



Unleaded avgas development continues [Read more](#)

MSO Legal Counsel Lynn Fagan ends tenure

MSO GA News



Lynn and Legal Counsel Juniper Davis. Juniper was born and raised in Missoula. She's worked in other states and places, most recently as Missoula County Parks, Trails, and Open Space Manager, and is enthusiastic about her new position.

Lynn first encountered MSO legal matters more than 20 years ago when she was on the legal staff of Missoula attorney Zane Sullivan's law firm. At the time, the airport had "out-house" (airport humor; heh-heh) legal services

unlike today's in-house. Lynn's Dad's employment with TWA at JFK when she was growing up in New York gave her a special interest in aviation. She asked Sullivan to steer more airport legal matters her way, and her familiarity grew. In time, the airport chose to put a legal counselor on its staff. Lynn applied and got the job.

The most dramatic airport event in which Lynn played a key role came in 2004, while she was still on Sullivan's staff. The airport's finance officer, Teri Norcross (recently retired), had discovered irregularities in the financial record. Lynn recognized a potentially illegal transaction involving an LLC she had recently helped form for the airport's Director. The association led to the discovery of his embezzlement and led to his conviction. A dismayed County government even considered disbanding the Airport Authority. The good faith contributions of airport board and staff preserved it.

Enter Cris Jensen, newly hired Airport Director. The Board had committed much research and effort to finding a Director and time revealed its choice to be an excellent one. Cris initiated the providing of Board members with extensive documentation of airport finances and events before each meeting. He scheduled regular meetings among staff members to keep everyone informed and

(See Retirement continued on page 3)

Neptune Aviation adapts to more frequent, intense wildfire seasons

Reprinted from the August 1, 2024 Missoulian with the permission of writer David Erickson

With more than 220 employees, including 37 air tanker pilots, the firm is one of the larger private employers in Missoula. And Draughon, a former collegiate track and field athlete who once worked at Boeing, is one of the few female leaders in the aviation industry.



Neptune Aviation President Jennifer Draughon stands in front of an air tanker support plane on Wednesday, July 31, at Neptune Aviation in Missoula. Photo by Shanna Madison/Missoulian

With the climate changing all over the world and wildfires becoming more frequent and intense, Neptune's nine air tankers that can each drop 3,000 pounds of fire retardant are more in demand. They go everywhere from Florida to Montana to Chile.

"One of the things that I think we've had to shift is (the work) used to be seasonal," she said. "I think, watching the news, those once-in-a-10-year-span fires are happening like on a yearly basis. So it's pretty catastrophic and it is becoming pretty much year-round. So for Neptune, definitely back in the day it used to be seasonal. You knew you were gonna go out in March and come home in August. Now that's not the case so we prepare for all year round."

When the BAe 146 air tankers aren't flying, they go through a meticulous maintenance schedule. Draughon also has to make sure employees have a solid work/life balance.

The company has an air attack division and a general aviation maintenance division; they broker charters, they

(See "Neptune" continued on page 3)

(Retirement continued from page 2)

aware. Today, Director Brian Ellestad and Deputy Director Tim Damrow build on that tradition. Lynn observes that among the boards she's known MSO's is the most functional.

Asked about how she found her career at MSO Lynn thought first of the enjoyable collaborative environment among the people of the airport staff... a great bunch to work with. Among her accomplishments, she thought of her successful efforts to improve the work environment for the airport's ground handlers. The airport was one of the first to offer ground handling to the airlines. However, they were working not only with low pay but with no benefits. Lynn went to Missoula County to find a way to provide benefits, which had not been available because of the irregular working hours of ground handlers. She was successful in establishing a redefinition of hours worked to get benefits and now ground handlers qualify.

Lynn has given the "legal report" at every Board meeting. The many transactions involving airport lands, leases, personnel, and other business with legal implications take place mostly behind the scenes but are

critical to the continuance of smooth airport operations. Lynn's legal expertise has been an essential contribution.

What will she do next? Lynn will enjoy having a bit more of a carefree life. Her daughter was recently married and lives near Lynn. Her best friend, her daughter's Godmother, recently moved in with Lynn after living in Washington DC for 20 years. The shared household achieves a goal the two set years ago to retire together. Among Lynn's enjoyments she'll have more time for are crafts. She gives the example of an embroidery made for her daughter. During her growing up years whenever discipline was needed Lynn would have her sit down and copy one of Walt Whitman's poems that offered a summation of Mom's philosophy. It included phrases like "This is what you shall do; Love the earth and sun and the animals... devote your income and labor to others, hate tyrants, argue not concerning God, have patience and indulgence..."

Lynn's last day on the job will be December 18. Best wishes, Lynn, and thanks for all you've done for Missoula aviation!

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("Neptune" continued from page 2)

have a flight school and the company owns NorthStar Jet, among other things.

Draughon said there are very few women in general in the aviation industry, fewer in the aerial firefighting sector and very few in leadership positions.

"Am I usually the only one in the room? Yeah," she said, laughing. "I mean, I think just in aviation in general, it's a male-dominated industry. And most people know that. I think the latest statistic I've read, which it's been a while since I've looked, but I think women are about 20% of the aviation workforce. So I do not know a woman leader in aerial firefighting."

She pursued her dream by working her way up through the company, and she said she would encourage anyone to do the same.

"If it's your dream, you should go for it," she said. "It's not without challenges. But really, if you come in with confidence, go after what you want to do, keep learning

and understand that, I really truly believe everybody brings a unique perspective to the table and the more inclusiveness we can have the better we're going to be. So I just think go for it."

She acknowledged that there's not a huge amount of mentorship out there for women who want to get into the industry. "Young girls don't see a lot of women in aviation, so it's kind of like not something that they put in their mindset when they're young," she said. "So I think we could do better with that. I try to do that. I think industry-wide, if we could do that, mentor as a woman if you're in the business."

Draughon said the industry needs bright minds and there are good-paying jobs to be found. "We have an amazing leadership team and they bring incredible talent to the table," Draughon said of the company. "And we all just pretty much love what we do."

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Montanans are greatly blessed to have two special license plates that boost general aviation. Request one of them for each of your vehicles next time your renewal comes up. The Montana Pilot Association plate raises funds to establish an effective "endowment" which will fund at least two flight training or mechanic scholarships of \$4000 every year. MPA President Mike Vivion notes just how important scholarships are given the increasing need for pilots and aviation mechanics. Mike says "we have a LOT of very generous folks in Montana. This is just a very painless way for someone to make a difference, without even having to think about it, year after year."

Missoula's EAA Chapter 517 also has a specialty plate. Funds provide aviation scholarships and pay the expenses needed to keep the Chapter's hangar viable as a place to promote general aviation. The Chapter sponsors Young Eagles events at its monthly breakfast. Young people interested in aviation can go for a ride with one of the Chapter's pilots and also can sharpen their piloting skills in the hangar's flight simulator.

Missoula aviator Sherry Rossiter honored

From the Society of Aviation and Flight Instructors press release



Sherry with Bell 204 Helicopter in 1983. Photos courtesy of Master Instructors and Society of Aviation and Flight Educators

Master Instructors and the Society of Aviation and Flight Educators were honored to gather in Missoula on June 22, 2024 to recognize Sherry Rossiter, Ph.D. for her more than fifty-year passion and commitment to excellence as an Aviation Educator with the title of Honorary Master Aviation Educator.

This award recognizes her unsurpassed dedication to the role of women in aviation, as a helicopter and fixed wing instructor, her unbridled support for excellence and professionalism on the part of all flight instructors and pilots, and the uncounted hours she has given to helping people and organizations grow and realize their full potential. Sherry is near here

Sherry is a Founding and Lifetime Member of the Society of Aviation & Flight Educators (SAFE). In 2015, she was the recipient of the SAFE Founder's Award for "selfless service" in support of the organization's vision and mission. She served one term as a SAFE Board member from 2015-2016, in addition to having previously chaired the SAFE Membership Committee from 2013-2015 and the SAFE Governance Committee from 2010-2012



Sherry receives the Honorary Master Aviation Educator recognition, from Society of Aviation and Flight Educators Board member Michael Phillips at the reception in Missoula

For 10 years, Sherry was an FAA designated sponsor/conductor of Flight Instructor Recertification Courses (FIRC's) nationwide. She also founded and operated two successful aviation businesses as well as worked as a flight and ground instructor, aviation journalist, and part time California Army National Guard helicopter pilot from 1978-1983.

As a pilot, her certificates and ratings include Airline Transport Pilot (airplane and helicopter), Flight Instructor and Instrument Instructor (airplane and helicopter), and Ground Instructor (basic, advanced, and instrument).

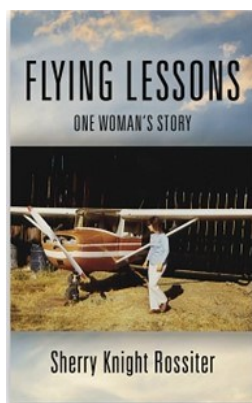
In 1998, Sherry was recognized with the Silver Wings Award by Woman Pilot Magazine not only for her positive contributions to women in aviation, but also for her development of a critical incident debriefing model to be used with general aviation pilots in the aftermath of an aviation accident or critical incident. That same year, the Wolf Aviation Fund gave her a \$1,500 grant to launch the Critical Incident Debriefing for General Aviation Pilots (CIDGAP) website, begin printing the CIDGAP training manual, and establish a toll-free number for general aviation pilots to call for debriefing information.

Sherry has been flying privately and professionally for more than 40 years and is now a retired Licensed Clinical Professional Counselor residing in Missoula, Montana. As a mental health professional, her areas of special expertise included posttraumatic stress disorder (PTSD), trauma recovery, anxiety, depression, and personal empowerment.

Sherry's academic credentials include a doctorate in psychology from California Coast University and a master's degree in counseling from The College of Idaho. She is recognized as a Board-Certified Expert in Traumatic Stress by the American Academy of Experts in Traumatic Stress (AAETS), and she is a current member of the International Critical Incident Stress Foundation (ICISF) and the American Psychotherapy Association (APA).

Dr. Rossiter (Sherry) has presented informational seminars as well as CIDGAP Debriefing training workshops for a variety of civil and governmental organizations including the U.S. Forest Service. She has presented the CIDGAP concept to pilots of all types at EAA's AirVenture in Oshkosh on two different occasions.

The CIDGAP Debriefing Model was first conceived in 1990, when Sherry was completing her dissertation. Since then, the model has continued to be refined as new information about trauma and trauma recovery has become available.



Sherry has authored Flying Lessons: One Woman's Story. It is an inside look at someone who has unselfishly shared her passion for aviation and helping others. The book is available as a paperback and e-book at amazon.com, barnsandnoble.com, and booklocker.com.

Sherry

MSO's EAA Chapter 517 offers dynamic programs

MSO GA News

The chapter headquarters are in one of the Missoula Montana Airport's East LZ hangars, located on the east side of the airport near the approach end of Runway 30. Members, friends, and anyone interested gather in the hangar on the third Monday of each month for pizza and comradery followed by a program. From October through March, coffee and donuts are served 8:30-10:30 on the first Saturday of each month. During April through September, there is a pancake breakfast. The chapter provides free Young Eagle flights for youngsters Young Eagles. Eagle flights are given free to adults expressing interest Eagle Flights. Both Young Eagle and Eagle flights are sanctioned by the National EAA organization.

Besides the regular chapter events, there are others offering exceptional experiences. Earlier this year, the chapter launched a "Young Eagles Build and Fly" project. Youngsters got together regularly to participate in the building of a radio-controlled model aircraft. The project was headed up by the chapter's Young Eagle Coordinator, Ray Aten. Overseeing the build was EAA President Ed Lovrien as well as Butch Guthrie and Dale Hovedy of the Big Sky Thunderbirds. The beautiful model is done and ready to fly (see cover photo), awaiting the completion of the new RC airstrip just west of MSO, overseen by Ed with the collaboration of the Thunderbird's Dave Lewis.

Among the chapter's adventures afield was a visit to the Neptune Aviation flight simulator at an off-airport site west, near the wye. Visitors were treated to trying out flights in the simulator. The facility gives Neptune the

ability to train BAE-146 air tanker pilots and sharpen their flying skills without the expense of utilizing the aircraft itself. EAA3 and EAA4 near here

The chapter hangar has undergone a transformation, thanks to the tireless efforts of Ed Lovrien. Ed not only lobbied for the construction of a new loft at the back of the hangar, he also designed it and shepherded it through the permitting process. He personally did most of the fundraising, which was so successful that there are enough extra funds to purchase an advanced flight simulator for the chapter's use. The loft brings significantly more space for optional uses, opening up space on the main floor for meetings, projects, and the hanging of aircraft. EAA5 near here

MSO pilots and aviation enthusiasts are invited to join chapter activities. Come to the next meeting and whet your interests in aviation! Check out the Chapter's website EAA Chapter 517 - Missoula, MT



(L) EAA members visit the Neptune flight simulator facility. L to R, Mike Schauf, Butch Bonell, Bill Shertz, Steve Rossiter, Dave Mihalic, Ed Lovrien, Tyler Stennerson, and the Neptune operator. Photo courtesy of Ed Lovrien



The Young Eagles Build and Fly project. Ed Lovrien (front left), Butch Guthrie (standing to the right of the youth), Ray Aten (standing to the left of the youth. Not pictured, Dale Hovedy and Dave Lewis. Butch, Dale, and Dave participated as members of the Big Sky Thunderbirds RC flying club. MSO GA News photo

(R) Kellen Lovrien, Ed's son, flies the BAE-146 in the simulator. Rumor is that he performed aerobatics! Photo courtesy of Ed Lovrien



(L) : Andy Hendrickson and Zach Stammers of Mountain Peak builders did an awesome job of building the new loft at the EAA Hangar. MSO GA News photo

The Museum of Mountain Flying grows!

MSO GA News

The MMF is a historic icon at the Missoula Montana Airport (MSO) tying the present to a past that is unique to aviation. The Museum not only tells the story of aviation's beginnings in Missoula, it also displays the aircraft that were part of those beginnings. Best known among these is the DC-3 Miss Montana, the pioneering Johnson Flying Service aircraft with a history so notable it was named by the Governor as Montana's State Aircraft. The story of the thousands of hours of volunteer effort to make Miss Montana airworthy, and its flight to Normandy for the 75th anniversary of D-Day, is legendary.

From its spare founding in 1993, fraught with space and funding difficulties, the Museum has grown to include



The Museum's MSO facility is crowded with historic aircraft and displays. The Kalispell expansion will enable more enjoyable visitor experiences. Photo from the Museum website.

its own building housing an incredible array of aircraft and related displays that tell the stories of the planes and people that made general aviation history in Missoula. As time has gone by, so much has been brought to the Museum that it is bursting at the seams and now has an urgent need to grow. Opportunities were lacking at MSO. Kalispell's Glacier Park International Airport (GPI) was interested.

Museum president Eric Komberec has unbounded enthusiasm for the new growth opportunity. Eric has spent several years collaborating with the Glacier Park airport (GPI) and Kalispell community to enable the recognition of how great an asset the MMF can be for aviation, GPI, and the community. Now, the Museum has been granted the lease to about 3 acres of land at the northeast of the airport grounds. It is near Highway 2, which carries millions of travelers to Glacier Park. The Museum will be a popular attraction for not only these visitors but for aviation enthusiasts across Montana.

The museum's facility will attract diverse groups. It will offer not only displays unique to Montana aviation but also will have an important aviation education component, a new Airframe and Powerplant (A&P) Mechanic program. It will provide aspiring technicians with hands-on training. Efforts are underway to find a partnering accredited college that will offer A&P students a degree-earning program with potential job placement upon completion. The program would help Montana aviation businesses now struggling with a shortage of A&Ps.

And there is more, as noted in a GPI press release: "The building will include an aviation-themed cafeteria, restrooms, and a learning center with classrooms and lecture halls offering direct views of the hangar floor. Visitors can admire historic aircraft and observe students working on them, even while dining.

The outdoor area will feature an observation tower modeled after a historic lookout tower resembling the one seen at Libby that was built for the movie "Always." The tower will provide visitors with a panoramic view of the GPI Airport. Families can enjoy a playground complete with a merry-go-round, climbing structure, slides, and monkey bars. This welcoming space will allow families to relax and enjoy a beautiful day in a stunning setting.

Will MSO lose Miss Montana!? No. The MSO Museum will remain active. The plane will share the two locations at different times. More historic planes!? Yes. The Museum is in the process of acquiring the A-26 Invader that was the star aircraft in the movie "Always." Besides its movie role, the plane was used for wildfire fighting in Montana. It will be brought to Missoula soon but there's no room to keep it inside. Another historic aircraft is housed at the Museum's Stevensville facility.



The Museum is acquiring the Douglas A-26 Invader shown in these scenes from the movie "Always." Scenes from the movie highlights on YouTube

(See "MMF" continued on page 8)

More Neptune news

Neptune Aviation Services, a leader in aerial firefighting and aviation services, in May of 2024 was awarded a contract by the United States Forest Service (USFS) with task orders for the three BAe 146 aircraft they had available for the 2024 wildfire season. With this award and their existing contracts, Neptune's entire fleet of nine airtankers was committed to exclusive-use contracts.

"All of our BAe 146 aircraft are strategically deployed under contract in key wildfire-prone regions, including California and Colorado, ensuring nationwide coverage and rapid response capabilities," said Jennifer Draughon, President of Neptune Aviation. "We are proud to support wildland firefighting efforts across the country and we are grateful to everyone at Neptune for helping us to secure this contract. Their commitment to excellence has solidified Neptune as a leader in aerial firefighting."

Neptune's fleet of BAe 146 airtankers is ideally suited for aerial wildland firefighting. These aircraft offer a combination of slow flight characteristics, high cruising speed, and outstanding

maneuverability. They have a stellar record of operational safety and excellent field performance, and do not require special ground support, allowing Neptune to operate out of airfields with minimal assistance. Each aircraft can be loaded with 3,000 gallons of fire retardant or water in as little as six minutes. *From May 23 press release by Dan Green, Resource Advantage*

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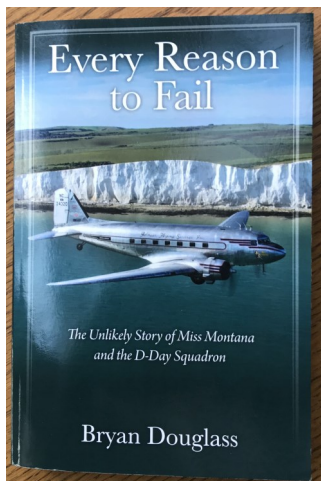
Neptune's Kevin Condit sent this update 11/1/24
 -T03, T16, and T40 are in Winter Maintenance (getting ready for Fire Season 2025)
 -T10 is off contract, in Missoula and available to be deployed if needed by the USFS.
 -T02, T12, T15, and T41 are currently deployed (all in California)

To date, Neptune Tankers have dropped more than 8 million Gallons of Retardant which is above average for a Fire Season.

✈️

Helicopter wake turbulence

The News attended a webinar by Ned Parks, National Association of Flight Instructors, on the topic of helicopter wake turbulence. Although most of us know to keep our airplanes distant from helicopters, the existence of severe wake turbulence behind the flight path of a helicopter is poorly understood and has been the cause of recent, serious crashes. An aircraft following a helicopter too closely as well as taking off or landing too soon on the same path used by a departing helicopter will be exposed to unexpected, severe turbulence and loss of control. A good rule for fixed wing pilots is "3-3-3." Stay 3 rotor disk diameters away from a helicopter, stay 3 miles behind, delay 3 minutes before landing or departing on the same path used by a helicopter. NAFI and Ned are very interested in helping spread the word about this long-neglected flight hazard. Ned's willing to offer a Zoom program to interested groups. Contact Ned, Ned@A360C.com. Watch the YouTube video [Caution!!! Helicopter Wake Turbulence w/Ned Parks](#)



Every Reason to Fail

Bryan Douglass' book about the epic adventure of Miss Montana to Normandy is absolutely a "must read" for aviators, especially those of us sharing a base with the historic DC-3. Bryan's story creates in the reader a deep appreciation for a number of things: The success of a near-impossible effort to make the aircraft flyable in less than a year's time and starting with zero resources; the rarely seen volunteer energy that showed up again and again to do the work; the rich relationships among the Miss Montana crew that flourished because of their sharing of an epic adventure; the physical and performance challenges involved in participating with many DC-3s never before together as a group and called upon to skillfully execute a "one-shot-only" D-Day Seventy Fifth Anniversary performance. The historical accounts included in the book, Mann Gulch, WWII, the Berlin Airlift, give added value. **Every Reason to Fail** can be purchased on Amazon. Bryan will sell an autographed copy for \$20. Contact him at bryan@everyreasontofail.com

From Dan's Desk

Dan Neuman, MSO Business Development Manager and humorist

You know, up until a couple of months ago, I thought Artificial Intelligence (AI) was the exclusive domain of politicians and other such people with grandiose delusions of their own mental capacity. Artlessly pontificating on things that they have no real-world experience in and generally messing up things for the rest of us. Imagine my surprise when I learned that it was the kind of thing we used to read about as kids in comic books like WEIRD Science and Battlestar Galactica. Computers now can perform tasks that typically require human intelligence, such as making decisions, recognizing patterns, and solving problems. It also turns out that you can easily access these activities through platforms such as Google Gemini or Chat GPT.

Being the curious adventurer that I am, I decided to take a stroll down this futuristic path to see just how AI would handle someone as unsophisticated and simple as myself telling a Dad Joke.

Dan - What do you call a cow that just had a baby?

ChatGPT - You call her a "new moo-mom!"

Dan - That is not very funny or clever.

ChatGPT - Alright, let's give it another go: You call her a "baby moo-er!"

Dan - Is that the best you can do?

ChatGPT - Let's try one more: You call her a "calf-ulator" because she's just added a new member to her herd!

Dan - You are not too good at this Dad joke thing are you. The answer is decaffeinated.

ChatGPT -! Not Found



Feeling quite proud of myself for out Dad-Joking a computer, I naturally had to take it to the next level.

**Can you put your shirts on a hangar and your airplane in a hanger?*

**Where can I buy some jetwash?*

**What do you call a pilot named Otto?*

**Can I shut off my APU if I'm plugged into the GPU at the FBO?*

At this point I started to notice smoke emanating from my laptop, so I decided that for the safety of my co-workers I should log off and vacate the premises. Not sure if it is something to be proud of but I'm pretty sure I broke the internet. I guess AI might have a few more things to learn!



("MMF" continued from page 6)

It's a "beautiful" 1936 Howard aircraft with a rich Montana aviation history and hopefully will be flyable again by spring.

The Museum faces the expected challenges in making the Kalispell extension a reality. It has been given a term of three years to complete the project. Lots of planning, lots of coordination, lots of fundraising! Experience at MSO has shown that major challenges can be embraced and overcome. We can all look forward to adding a fascinating and enjoyable MMF extension at GPI.

Are you interested in being a supporter or sponsor for the Kalispell expansion? Contact Eric Komberec at N24320@icloud.com. Want to contribute to the Museum's dynamic growth? Go to the website Museum of Mountain Flying and click on the "donate" button. You'll see the message "Help Keep Rocky Mountain Aviation History Alive" with a second donate button for the "Glacier Park International Chapter Education Center" for contributing to the Museum's Kalispell expansion.



AirVenture on a Budget

Tim Damrow, MSO Deputy Director



For years I have been wanting, perhaps somewhat selfishly, to take my kids (Maverick - 6, Lyla - 7) on a summer vacation to AirVenture. Previously, the thought of a 22hr road trip with a car full of kids or the thousands of dollars in airfare made it so our plans just never got off the ground. This all changed for us last summer with the new service to Minneapolis

with Sun Country Airlines. While the service is currently seasonal (Jun-Aug) with just two flights per week, if your travel days are flexible, you can really save some money. Generally speaking, added air service, regardless of the destination tends to lower all flights/markets but being a low-cost carrier, Sun Country flights were drastically cheaper than legacy options. For example, I was able to book our family of four, with bag and seat assignments, roundtrip for under \$700, compare that to over \$2400 on a legacy carrier!

We booked our trip to arrive the Saturday just before the start of AirVenture and returning the following Wednesday. Once we arrived in MSP, we had reserved a rental car, and began our drive to our first stop, the Wisconsin Dells. For those that are unfamiliar with “the Dells”, it is a summer tourist town that touts several of the largest water/adventure parks in the country. This first stop was a bit strategic, a great place for the kids (and myself) to get in some laps on the waterslides and some quiet pool time for my wife.

After a few days at the Dells, we made the short drive up to Oshkosh for the opening day of AirVenture. From past trips to AirVenture, I find the beginning of the festivities to be much more enjoyable due to the smaller crowds. About an hour outside Oshkosh, the kids began pointing out all the arriving aircraft, within about 20 minutes they were exhausted!

Once we arrived at OSH, this excitement continued as the kids ran from aircraft to aircraft, chatted with pilots and took part in various activities throughout the grounds. Within about 5 hours, the kids, and their parents, were exhausted! We hoped to rest for a bit while the airshow kicked off but due to some severe weather the show was

delayed. This was a bit of a bummer but with so many other things to see and do we pressed on for the rest of the afternoon. As we got closer to dinner, it was time for us to head out and catch our flight back to MSO in the morning.

The drive back was around 4 hours from OSH to MSP with picturesque scenery as we transited through Northern Wisconsin. During the drive I had some time to reflect on our recent adventure and figured out what had drawn me, and now my kids to AirVenture. This was not the kids' first time being around airplanes, having been to flight



museums and several GA BBQs, they are quite well versed. The AirVenture difference hit me when my son, Maverick (yes, named from movie ☐), asked a simple question, “Daddy, can we go inside that airplane?”. At AirVenture, the answer to this question is almost always “YES!”, with pilots and vendors alike eager to show off their aircraft to our next generation of aviation enthusiasts. This reminded me and reinforced the importance for kids to have these types of hands-on experiences, sitting inside an aircraft, touching the wings and of course, pushing all the buttons they want! While this was the family's first trip to AirVenture, it will not be the last, they have been bitten by the aviation bug!



Tips from a CFI

By Kurt Kleiner



Kurt presents at an EAA meeting, describing the flight hazard of mountain wave and how to manage the risks it brings when present.

Treat every routine personal flight as if it's a check ride. Hold yourself accountable to ACS standards on flying your heading, holding altitude, and managing power settings, flying the proper airspeed on approach, etc. Make every landing an accuracy approach to a predetermined touchdown point regardless of whether flying alone or with passengers. This instills consistent habits, prevents getting rusty, sloppy or complacent, and makes each flight more satisfying.

If you are not carrying a non-pilot passenger, take a few moments to practice at least one or two check ride maneuvers on a regular basis such as slow flight, steep turns, lazy eights, power off 180 accuracy landings, etc.

If you are not an active, current Instrument-rated pilot, take a safety pilot or CFI with you on a 30-minute flight at least once every 2 or 3 months and wear a hood or goggles to at least practice climbs, descents, standard rate turns, and recovery from unusual attitudes. Likewise, if you are Instrument rated, try to practice at least one approach along with holds, intercepting and tracking VOR radials, etc. at least once every 4-6 weeks, or preferably more often than that.

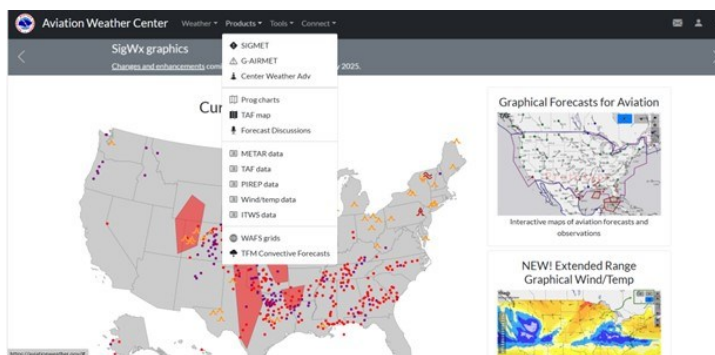
Become a lifelong student of weather.

- Get good at “ocular estimations.” Before you check METARs or your local ASOS/ AWOS, or ATIS report, look at the sky and visually determine if the ceiling is “few, scattered, broken, or overcast” and take a guess at the altitude of the cloud base. Then look at (or listen to) official data to see how close you were in your estimation.
- Either BEFORE you pre-flight the aircraft, or AFTER you do your final walk-around (to be sure fuel caps are secure, towbar is removed, etc.), take a couple minutes to feel the wind in your face. Does it noticeably change in direction or velocity? Estimate the angle of the wind from the runway alignment. (This only works if you are in an open area away from hangars, and if you can see the runway from where you are standing.) Have the clouds or

wind changed while you were doing the pre-flight?

- Look at Prog charts, TAFs, etc. Then look at real-time weather reports tomorrow and the next day to determine if the forecast was accurate, or if your interpretation or expectations were correct.

Whenever possible, as time and budget permit, instead



Two excellent sources of comprehensive aviation weather are Foreflight and the Aviation Weather Center [Aviation Weather Center](#)

of getting a standard 61.56 Flight Review every two years as required by 14CFR Part 61.56, challenge yourself to achieve something more difficult but far more rewarding. For example, if you do not yet hold an Instrument or Commercial certificate, consider adding them even if you don't intend to pursue a professional flying career. Another option is to add a category or class rating to your existing certificate by acquiring the training and passing the check ride for Airplane Single Engine Sea (ASES), or a multi engine rating, or Glider rating. Adding these ratings can be a real eye opener and extremely fun and rewarding. Acquiring some unique and specialized knowledge and skills will make your Flight Review feel way more rewarding than any you've done in the past.

Completing a Phase of the Wings program (as described in www.faa.gov and in 61.56) serves as another acceptable alternative to a standard 61.56 Flight Review. In most cases, this is a very affordable alternative, but it requires a bit more study and flight time since it requires performing specific flight skills to ACS (check ride) standards. The idea behind Wings is to acquire knowledge credits and flight activity credits in small but continuous increments every few months over the course of each year so that your phase of wings never expires, and

(See “CFI” continued on page 11)

Unleaded aviation fuels – update

MSO GA News

The saga of developing unleaded aviation fuels continues. The Eliminate Aviation Gasoline Lead Emissions (EAGLE) initiative began in February 2022 with a goal of transitioning to unleaded aviation fuel for piston-engine aircraft in the United States by the end of 2030. Writer Janice Wood updated progress in the November 7 General Aviation News (The latest on the journey to unleaded avgas — General Aviation News). Today's GA aircraft use 100LL (100 octane low lead) aviation gasoline almost exclusively. The lead additive increased the octane of the fuel, enabled it to burn more smoothly, and reduced wear on engine valves and valve seats. However, the GA community agrees with health authorities that the lead emitted from aircraft exhausts is a source of impacts on human health and we need unleaded fuels.

In an October 2024 update, Eliminate Aviation Gasoline Lead Emissions (EAGLE), officials stated: "This transition is about more than meeting regulatory requirements — it's about ensuring that aircraft owners feel confident in the safety and reliability and availability of the new fuel," they continued. "The solution must be robust enough to meet the diverse needs of the piston-engine fleet, ranging from the World War II era planes to modern helicopters." Officials added: "Aircraft owners need assurance that switching to a new fuel won't void manufacturer warranties. They also need to be confident that it won't cause damage to paint, electronics, engine components or fuel systems."

Three firms are developing unleaded aviation fuels. One of them, General Aviation Modifications, Inc. (GAMI) is selling its G100UL 100 octane unleaded fuel at California's Reid-Hillview Airport, which banned the sale of 100LL in January 2024. All three firms are experiencing resistance to the use of their fuels. Cirrus Aircraft warned its owners that their use of G100UL would void their warranty. The University of North Dakota experienced problems with its use of Swift Fuels' unleaded UL94 and discontinued its use. Extensive evaluation, testing and certification efforts are continuing along a number of pathways with the goal of achieving broad certification and approval before the 2030 target date.

AOPA is testing G100UL in a 1966 Beechcraft Baron. The aircraft has two identical, recently overhauled Continental IO-520 engines. One is fueled with the standard 100LL and the other with GAMI's G100UL unleaded fuel. After a year and 200 flight hours both engines are performing flawlessly and AOPA reports: "Regular oil analysis, compression checks, and borescope

inspections show the engines are healthy and strong." AOPA continues testing and gathering volumes of flight data including how both engines pull during the takeoff roll and in cruise, fuel consumption, fuel leaning, and other performance criteria.

What's ahead for unleaded fuels? There's lots to be worked out, not the least of which is production and distribution. Hopefully we'll see success within the 5 years that remain before the target year of 2030.

Meanwhile, California Governor Gavin Newsom has signed California Senate Bill 1193, banning the sale and distribution of leaded aviation gas throughout the state. SB1193 makes California the first state in the nation to eliminate the sale of leaded avgas. It will be effective beginning on January 1, 2031.



A fuel truck at Reid-Hillview Airport (KRHV) in California, the first airport to sell the unleaded G100UL fuel. (Photo courtesy GAMI)



"CFI" continues from page 10

flying regularly with a CFI becomes an ongoing way for you to maintain your personal proficiency. You can learn more about how it works at <https://www.faasafety.gov/>, or consult a FAASTeam representative for more information. No matter which goal or method you pursue, you will be challenged and rewarded far more than simply completing a standard Flight Review and enjoy the satisfaction of being more proficient than an average pilot.

Kurt is a CFI and FAASTeam member residing in the beautiful Bitterroot. He gives aviation presentations throughout the Pacific Northwest.



Missoula Montana Airport news

MSO GA News



MSO Airport Board member Deb Poteet lets Chef Brian know that his BBQing is widely acclaimed by attendees!



MSO's Civil Air Patrol Grizzly Composite Squadron was an appreciated participant in the BBQ. (L) Capt. Jim Meixner, Squadron Commander and (R) C/ SrA Gabriel Stroud

General aviation BBQ The “GA BBQ” has been a tradition for many years. The airport provides not only the peerless chef expertise of Airport Director Brian Ellestad and Deputy Director Tim Damrow but also all the elements of the ample feast. This year’s BBQ was on Saturday, September 21, and was held at the EAA Hangar in the East LZs. EAA’s neighbor, Bruce Doering, generously shared space in his hangar for diners. The airport sponsors the BBQ in recognition of the role of general aviation at our airport.

Runway closure Runway 12-30 will be closed September 2025, from 8 am on the 2nd to 3 pm on the 7th. The airport has collaborated with the airlines and with Neptune to ensure that the disruption will have the least possible impact. General aviation pilots planning flights during that period will want to arrange to use alternate airports for arrival and departure.

The runway surface has deteriorated over the 20 years since it last received attention and will be “completely” rehabilitated. Among several related improvements included in the project is the upgrading of runway lights to LEDs.



MSO's 9,500-foot Runway 12-30 will be completely resurfaced in September, 2025.



One of three options proposed for general aviation hangar development. Existing hangars are in white; potential hangar locations are outlined in red. Runway 8-26 is being decommissioned.

Airport Master Plan The process of updating the Airport Master Plan is rigorous and involved. Its purpose is to facilitate optimal airport growth and development for the next 20 years. The last one for MSO was done in 2008. The process begins with an inventory of airport facilities and continues with detailed forecasting of demand and facility requirements. It ends with an “Airport Layout Plan” locating the needed growth in the terminal, runways, and locations of hangars and airport service buildings. MSO’s planning process began more than a year ago. After many meetings with input from airport stakeholders, administration, and the public the plan is being finalized by the professional planners and engineers of Morrison/Maierle. Final results are expected “soon.”

See “Airport News” continued on page 13

"Airport News" continued from page 12

Explore MSO The airport website says: "No flight? No Problem. Come Explore MSO!" The Missoula Montana Airport has introduced "Explore MSO" a new program that allows non-ticketed visitors the ability to pass through TSA checkpoints to surprise arriving travelers at the gate, spend extra time with loved ones before they depart, enjoy dining, or shopping. There will be occasional, exclusive pop-up events! Interested? Register here: [Explore MSO Pass](#) | Missoula Montana Airport



Explore MSO gives non-passengers entry to the gate areas where they can greet arriving friends and family.



Expanded parking areas give travelers more spaces and more options.

More vehicle parking Recent additions to vehicle parking now bring the total to around 1500 total parking spots. There are 168 in the Premium Lot (\$20/day), 941 in Long Term (\$12/day), and 390 in Economy (\$8/day). Current occupancy is averaging about 80%. Demand is expected to grow, and there are plans to expand parking by several hundred more spaces.

Terminal construction phases 2 and 3 New terminal construction is taking place in three phases. Phase 1, the South Concourse, was completed in June 2022 and features new and expanded ticketing, screening, and boarding experiences for passengers. Phases 2 and 3, the East Concourse and its extension, the "South Paw," will expand baggage claim, rental car counters, concessions and passenger gates to serve the Missoula area communities into the future. Phases 2 and 3 are expected to be completed in May 2025.



Concept of the completed 3 phases of terminal construction. Quite a contrast from the terminal of the 1950s (inset).

See "Airport News" continued on page 14

Airport weather and conditions by phone and radio

ATIS by phone 406-549-2989, when you're away from a radio during hours of tower operation

ASOS (Automated Surface Observing System). 406-728-3743. MSO weather 24/7.

After the tower closes, ASOS weather is available by radio at 126.65.

Talk to a real person. 406-329-4840. The staff at our local National Weather Service office is always glad to visit with pilots about weather and can often clarify uncertainties in a forecast.



A segment of the abandoned Milwaukee Railroad route passes through the airport and could become part of the Great American Rail Trail.

MSO Airport Milwaukee Trail Corridor The City of Missoula is proposing the purchase from the airport of 1.5 miles of a 150-foot-wide corridor that is the abandoned roadbed of the historic Milwaukee Railroad. The City would construct a trail on the property, which would be part of the future Milwaukee Trail/Great American Rail Trail (GRT). The trail would provide neighborhood and community benefits as a linear park and local trail corridor with connections to other local trails. The GRT would extend for 3,700 miles from Washington, D.C. to Washington State. The trail is now over 55% complete nationwide. With the completion of the trail segment that's now airport property, the airport would be one of only a handful of airports in the U.S. with direct access to a regional commuter trail. Acquisition of the property may occur by the end of 2024, pending approval by MSO, the FAA, and the City Council. A story in the Missoula Current has more information about the trail: New bike path may soon serve fast-growing Mullan neighborhoods

Grant Creek Restoration Grant Creek courses from its pristine beginnings in the Rattlesnake Wilderness through neighborhoods and transportation corridors to its confluence with the Clark Fork River. The Clark Fork Coalition led in the recognition that local development had badly degraded the waterway. The Coalition created the Restore Grant Creek Campaign with the goal "... to heal the creek where it has been harmed, re-naturalize it where it needs greater resilience, and protect it where its waters are still pristine." It established the Grant Creek Working Group in 2022, including public stakeholders, landowners, development interests, and conservation allies. It has met monthly and collaborated with the City of Missoula, Missoula County, and the Missoula Conservation District to develop a vision and strategy for restoring Grant Creek.

The Working Group has consulted with the airport to ensure that the remediation and restoration of the creek bed near the airport did not include any elements, such as large trees or raptor habitat, that would add risk to aviation traffic. Although it will take time, it's hoped that Grant Creek can one day be fully restored to a naturally functioning waterway. For more information, see the Coalition website: Grant Creek Restoration - Clark Fork Coalition



This diagram from the Grant Creek Riparian Assessment Report shows the creek bed from Broadway south, colored red, to be badly in need of restoration. The airport is at the upper middle of the diagram.

Get Out and Fly!

National Museum of Forest Service History

MSO's neighbor's new National Conservation Legacy Center will feature mass timber
Reprinted from the August 1, 2024 Missoulian with the permission of writer David Erickson



Designers' conception of the completed center. From the website.

The National Museum of Forest Service History, located right here in Missoula County, held a groundbreaking ceremony on Friday for construction of a new \$13.5 million National Conservation Legacy Center.

The new two-story, 26,000-square foot building will be constructed using mass timber at the museum's 31-acre campus at 6305 Highway 10 West. With an eye-



Lisa Tate, Museum Executive Director, addresses the large gathering at the groundbreaking on August 1. Photo courtesy of Lisa Tate.

popping exterior design by architect Tom Chung at Leers Weinzapfel Associates, it should be ready to welcome guests by late 2025. It will be built with an innovative and environmentally-friendly material, mass timber. The Center "will be a flagship facility for conservation history," according to museum executive director Lisa Tate.

"I am looking forward to bringing this world-class destination to my hometown of Missoula," Tate said. "I am also excited to be working with Dick Anderson Construction and our many, many partners on this project. This will be an amazing museum for Missoula, Montana, and our nation."

Tate said the museum is a nonprofit and has been fundraising and planning for several years on the project. A crowd of several hundred turned up to the ceremony on Friday. She said the Center will highlight the history of conservation through state-of-the-art, participatory exhibits where visitors can directly interact with past events.

Visitors will be encouraged to "explore the cultural, ecological, political and social history of the lands and

the people that have defined the nation and given meaning to the term 'conservation'," according to Tate. And she said it will be the first conservation history museum in the country to not only feature mass timber but highlight mass timber components in its design to a national audience.

Mass timber construction means building with large, structural panels of products like cross-laminated timber, which is created from gluing and pressing together perpendicular layers of dimensional lumber. Cross-laminated timber is much lighter than steel and stronger. That means foundations don't have to be as complex, and it's easier and quicker to put into place on a construction site. The construction industry in the U.S. has been dominated by steel and concrete for many decades, but those materials cause significant carbon emissions and account for a significant percentage of carbon emissions globally, according to the United Nations Environment Program.

Cross-laminated timber is a largely carbon-neutral building material because trees sequester carbon from the atmosphere and can be regrown. Rather than causing carbon to be emitted like steel and concrete, timber removes carbon out of the atmosphere. The technique is gaining popularity in the U.S. after seeing many decades of use in Europe.

"We really wanted this project to be special and unique, not only in the stories that we'll be telling but in the building," Tate said. "We wanted the building itself to be special and to be a story in and of itself to help people understand the forest products industry, the products that they manufacture, and the new wave of energy-efficient and environmentally-friendly products in mass timber."

Tate said the new Center will showcase mass timber's evolving role in contemporary history. The exhibits are being designed by a firm called Art Processors, which

(See "Museum" continued on page 16)

Save the Date!

40th Annual Montana Aviation Conference

February 27 – March 1, 2025

The conference will be held in **Missoula** at the **Hilton Garden Inn**. The conference is broadly recognized as one of the best. It offers distinguished speakers, instructive and enjoyable concurrent sessions, and attractive displays by aviation vendors, as well as opportunities to renew pilot acquaintances and make new ones.

On Friday afternoon there will be a static display of aircraft at the Missoula Montana Airport with refreshments and social time sponsored by the Montana Pilot Association.

Registration is open: [Montana Aviation Conference](#) | [Montana Department of Transportation \(MDT\)](#)

Aviation weather cameras at Montana airports

<https://weathercams.faa.gov/map/>

Live views of weather at many Montana airports, including Glacier Park, Ferndale, Superior, Seeley Lake, Lincoln, Helena, Deer Lodge, Butte, Missoula, Hamilton, and others.

("Museum" continued from page 15)

Tate said is a global exhibit design leader that is "setting new standards for immersive and participatory storytelling."

Allen Frankl of Dick Anderson Construction said the new facility represents the preservation of the history of the conservation of public forest lands. "Today we're breaking ground on a facility that will be enjoyed by our families, friends, community members and visitors from throughout our great nation," Frankl said. "To be part of the amazing team that will bring to life this facility that will be enjoyed by the public for generations to come, makes us very excited and extremely proud."

For more information and to see a video sneak peek of the new Center, visit online at <https://forestservicemuseum.org/>

To support local journalism in Missoula, go online to <https://missoulain.com/> and consider a subscription.

MSO



Neptune's retired P2V Tanker 12 is an onsite symbol of the rich aviation history that is part of the Museum's story. MSO GA News photo.

Innovative aircraft take to the skies

MSO GA News

Innovation in aircraft design is certainly nothing new and is increasing. Sensitive to the statistic that aviation is responsible for about 2% of global greenhouse emissions, the International Civil Aviation Organization to adopt the goal “net-zero carbon emissions by 2050.” Adoption of this goal has accelerated the pace of development for new aircraft designs and propulsion systems.

All-electric¹

Eviation Aircraft will provide the commuter airline UrbanLink with 10 of its all-electric, 9-passenger Alice aircraft (cover photo), with an option to acquire an additional ten planes. The new aircraft will support UrbanLink’s commitment to developing an all-electric fleet of aircraft, marine craft, and ground vehicles to provide end-to-end zero-emission transportation. Alice will operate out of UrbanLink’s s hub cities of Miami, Los Angeles, and San Juan, Puerto Rico.

The 57-foot-long Alice aircraft is powered by 8,000 pounds (4 tons!) of batteries. With battery technology similar to that of an electric car or a cell phone and 30 minutes of charging, the nine-passenger Alice can fly about 440 nautical miles (550 miles). The plane has a maximum cruise speed of 250 knots or 287 miles per hour. For reference, a Boeing 737 has a maximum cruise speed of 588 miles per hour.

Aviation Aircraft, focused exclusively on electric air travel, hopes that electric planes that can accommodate 20 to 40 passengers will become a reality in seven to ten years.

Hybrid²

Electric aircraft are getting a lot of attention from the aviation industry, but they come with important handicaps. The batteries needed are 40 times heavier than aviation fuel. Limited range is a problem because of the need to recharge the batteries.



Ampaire's Eco Caravan

In time, biofuels or hydrogen may become the “clean” fuels of the future. For now, some aviation companies are betting on the nearer-term approach of

hybrid systems that combine electric batteries and traditional fuel, allowing planes to fly more miles with less carbon emissions.

One version of the hybrid approach combines combustion and electric power into the same engine—a bit like basic hybrid cars. In essence, the electric power only

kicks in when the engines need it most, such as taking off or increasing speed in flight, instead of helping to power the plane for the entire flight. The rest of the time, the plane relies on a smaller and more-efficient conventional engine that is optimized for cruising. The aerospace company Ampaire is using that strategy and expects fuel savings of roughly 50% on average.

Ampaire will start by retrofitting popular models of planes. Its Eco Caravan with its plug-in hybrid-electric powertrain is now flying and available to order. The 9-seater aircraft is powered by both a combustion engine and an electric propulsion system with energy supplied by a battery pack located in the cargo pod. The Eco Caravan is the lowest emissions aircraft in its class. Ampaire says this aircraft with no charging stations required, industry leading cost metrics and a clear path to certification, is the best platform to lead the charge in sustainable aviation.

Hydrogen³

Airbus’ ZEROe project is comprised of four concept aircraft, all powered by Hydrogen. The manufacturer’s goal is to market the world’s first hydrogen-powered commercial aircraft by 2035. It is exploring a variety of configurations and technologies. Among the concept aircraft three are powered by “hybrid” hydrogen engines. Modified gas-turbine engines burn liquid hydrogen as fuel and hydrogen fuel cells generate electricity. A fourth concept aircraft is fully electric. It is based on an electric propeller propulsion system powered by hydrogen fuel cells, which transform the hydrogen into electricity through a chemical reaction.



Airbus ZEROe concept plane powered solely by electricity generated from hydrogen fuel cells.

1. [World’s 1st all-electric planes to fly in US, 505-mile range on 30-min charge](#)
2. [Hybrid-Electric Aircraft | Ampaire Inc. | United States](#)
3. [ZEROe | Airbus](#)

ZERO

MSO GA News thanks Kevin Condit, Neptune Marketing Manager; Zac Covington, City of Missoula Open Space Manager; Tim Damrow, Missoula Montana Airport Deputy Director; David Erickson, Missoulia Business Reporter; Dan Green, Resource Advantage; Kurt Kleiner, CFI; Eric Komberec, President, Museum of Mountain Flying; Ed Lovrien, President, EAA Chapter 517; Dan Neuman, MSO Business Development Manager; Lisa Tate, Executive Director, Museum of Mountain Flying for their contributions to this issue of the News.

If you have something interesting to write about we'd like to put it in the newsletter and share it with the Missoula aviation community! Long (about 500 words), short, funny, serious, whatever. The News is published intermittently. Interested in contributing? Contact the editor (see below).

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MISSOULA AVIATION WEB SITES

Ace Aviation: <https://www.aceaviationmso.com/>

Aerotronics: <http://www.aerotronics.com/>

Flying drones safely: <http://knowbeforeyoufly.org/>

Heli-1: <https://heli-1.com/>

Homestead Helicopters: <http://www.homesteadhelicopters.com/>

Minuteman Aviation: <https://www.minutemanaviation.net/>

Missoula Montana Airport: <http://www.flymissoula.com>

Nat'l Museum of Forest Service History: <http://www.forestservicemuseum.org/>

Neptune Aviation: <http://www.neptuneaviation.com>

Northstar Jet: <https://neptuneaviation.com/fixed-based-operations/>



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