MSO GA NEWS

Missoula MONTANA AIRPORT

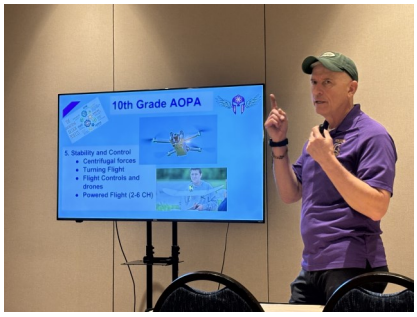
Spring 2025

A grand opening on May 15th and other airport construction news. *Read more*

2025 Montana Aviation Conference held in Missoula Feb. 27 – Mar 1. *Read more*

Real ID required for air travel. *Read more*

MSO CFI Aaron Foster and ATC Mgr. Christel Palmer led a conversation with Missoula pilots. *Read more*



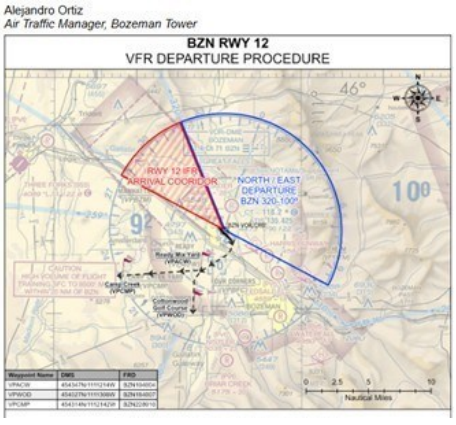
Sentinel High instructor Joe Yakawich explains his aeronautics curriculum at the Montana Aviation Conference. *Read more*

Kurt Kleiner offers aerial photography tips for pilots. *Read more*

New recommendations for VFR departures and arrivals. *Read more*

MSO's EAA Chapter offers "Young Eagle" flights for youth ages 8-17. *Read more*

Minuteman Aviation is a dynamic member of the MSO aviation community. *Read more*



Increasing air traffic creates need for special departure procedures at BZN. *Read more*

The B-25 in the movie *Always* will be added to the Museum of Mountain Flying. *Read more*

Neptune Aviation transitioning its air tanker platform to the Airbus A319. *Read more*

MSO terminal construction and other airport news

Tim Damrow, MSO Deputy Director, and MSO GA News

Well folks, it is almost time to put the finishing touches on terminal construction at the Missoula Airport. The next few months will see a flurry of activity as crews work to complete the remaining items and "officially" end our terminal construction project. *On May 15th, 11am, the airport will host a "Ribbon Cutting" ceremony* to open our new and expanded baggage claim area. This area will feature two large baggage carousels in addition to some much-needed space for meeters and greeters!

The new baggage claim added in Phase 2 will be a major improvement in passenger convenience. Photo courtesy of Tim Damrow.

In early June, the remainder of Phase 2 (B-Concourse) is set to open. This includes moving our rental car operators back into the building (no more tent in the parking lot), two additional jet bridges (B1, B2) and expanded restroom facilities. These gates are greatly needed with our expanded summer flight schedule with all gates at the airport being occupied almost immediately.

The new terminal construction was in three parts. Phase 1, (on the right in the photo), was completed in June, 2024. Phase 2 (seen in the middle in the photo) will be completed in early June, 2025. Phase 3, the smaller extension to the southwest of Phase 2, will be completed in the fall of 2025. MSO GA News photo.

As we move further into the summer (July/August), we will also open our expanded concession spaces (MSO Marketplace and MSO Taphouse), as well as our final gate (B3). While this will be an exciting time, there will still be lots of activity in the terminal as we remodel the temporary baggage claim area to make room for expanded restroom facilities on level 1.

Tim Damrow's son, Maverick, Age 7, shows his Dad how it's done with his airport construction at home! Photo courtesy of Dad.

Phase 3 of the Missoula Montana Airport terminal project is scheduled to be completed in the fall of 2025. It will add a new jet bridge, expanding the east concourse (Phase 2) and bringing the total number of gates to eight. Phase 3 also includes enhancements to the overall passenger experience with improvements to baggage claim, rental car counters, and concessions.

Runway 12/30 reconstruction; runway closed for 6 days in September

The reconstruction of Runway 12/30 will increase its strength and longevity. The upgraded lighting and electronics will reduce energy consumption. MSO GA News photo.

Fun facts about the Runway Project:

54,000 tons of asphalt planned to be paved

80,000 feet of new electrical conductors

330 airfield lights upgraded to LED

35 airfield signs upgraded to LED

See Runways, page 3

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Runways *(Cont. from page 2)*

In addition to the work on the terminal there will be several other projects underway at MSO in the coming months. Most notable is our Runway 12/30 Reconstruction project that will take place in early September. The runway closure will be in effect from 8:00 am on Tuesday September 2, 2025, until 3:00 pm on Sunday September 7, 2025. The Airport will be closed to both airline and general aviation fixed wing operations during this period. Helicopter operations will not be affected.

This 127-hour closure is essential to ensure the highest standards of safety and efficiency for MSO's runway infrastructure and represents a critical phase in the total rehabilitation of Runway 12-30. Working around the clock, the team will completely repave Runway 12/30 and complete full electrical work and additional safety enhancements. The project will increase the strength and longevity of the runway and reduce energy consumption. It is the FAA's top priority project in the Northwest Mountain Region. No pavement will be removed. A paving fabric will be placed on the runway and overlain with 3 inches of asphalt. The fabric adds a little strength, but its main function is to prevent detrimental cracking from coming to the surface. In addition to the rehabilitation work on the runway, the Airport is taking advantage of the operational halt to undertake several other terminal and parking lot maintenance projects.

The approach end of Runway 12 will be displaced 10 days ahead of the main runway closure. The displacement corresponds to the area just south of Taxiway A-6. After the reconditioning project is completed, the runway will again be open to its full length.

Relocation of the VOR checkpoint

The current VOR checkpoint, located at the SE corner of the air carrier ramp has been inaccessible, fenced off during ongoing construction. The checkpoint, used by pilots to check the accuracy of their VOR receivers, needed to be moved because its location will become future commercial aircraft parking positions for the B-Gates. The changed location varies little from the old one and it is hoped that the move can be completed before summer.

Airport Master Plan; decommissioning of Runway 8/26

On a different note, after close to three years of work, the airport has submitted the final chapters of the updated Master Plan to the FAA for final review. This updated plan was developed with input from dozens of community meetings over the last three years and will help guide the airport through the next 20 years of development. The biggest updates from the Master Plan will be the decommissioning of Runway 8/26 and its repurposing as a taxiway, and the addition of a future parallel Runway 12R-30L. The addition of this parallel runway will not occur "soon" and will depend upon the growth of air traffic and the accompanying incompatibility of aircraft with greatly different airspeeds.

The construction to repurpose Runway 8/26 into a taxiway is planned to take place in the spring/summer of 2026. The lighting and markings will be changed from runway to taxiway. Non-movement lines will be relocated to allow for easier taxiing and maneuvering on airside. While Runway 8-26 will be missed, it will pave the way for future general aviation development (taxiways, hangars) insuring availability and access for the GA community. Please stay tuned for development opportunities in the coming years as we work through this decommissioning and development process.

Finally, wholehearted THANK YOU from the airport team and our Master Plan partners to everyone that provided feedback and participated in the process. Your feedback, comments and concerns were instrumental in helping inform our team and guide the Master Plan process!

The News greatly appreciates the help of Shaun Shea in providing information used in this article. Shaun is a Professional Engineer, Vice President and Missoula Operations Manager, Morrison-Maierle. -Ed

Pilot-controller conversation

MSO GA News

Missoula CFI Aaron Foster hosted an April 22nd evening get together with MSO ATC controllers and about 30 Missoula pilots. Jeff Hollenback generously contributed his East LZ Hangar #1 for the meeting place. Missoula ATC Manager, Christel Palmer, and controller Tony Frieske came to share information and hear any concerns.

ATC Controller Tony Frieske was a congenial listener, also sharing some of the issues controllers face in keeping Missoula air traffic safe.

A question came up about pattern work with flight students. The airport is normally busiest between 10 AM and 2 PM but flight training schedules are not flexible enough to completely avoid those times for pattern practice. Students experience considerable extra time and expense travelling to practice at other airports. Controllers are aware and will always try to accommodate flight instruction.

The great importance of patient and "friendly" exchanges between controllers and flight students was noted. Students are typically intimidated by ATC communication procedures. Their inadequate or stumbling call to the controller may be met with critical impatience. That only increases their intimidation and will likely cause continuing communications problems for the student.

One pilot in attendance gave rave reviews to MSO ATC, calling it the "best" among any he experienced among the numerous other airports he had encountered on his flights.

Conversation *(Cont. on page 4)*

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MSO VFR Flight

MSO GA News

The increase in air traffic at MSO has given rise to new safety concerns. The following recommendations for MSO departure and arrival procedures are the collaborative product of MSO ATC and highly experienced local IFR/ VFR pilots. Areas of special concern are: 1) the Bitterroot Valley, which is not only increasingly busy with both GA and commercial air traffic but will also see a new skydiving facility at Stevensville; 2) The "bottleneck" at Lolo where traffic converges. Here are the recommendations:

A. IFR traffic inbound and outbound from MSO

As much as practical no opposite direction IFR arrivals/ departures. It may be necessary in cases of emergency, MedEvac, practice approaches requiring an ILS, or aircraft equipment issues.

B. VFR southbound departure

- Departing MSO, fly altitude 5500 or below until Lolo
- Departing MSO for destinations south of the Bitterroot – Request Flight Following upon initial contact with MSO Ground,121.9; after departure contact Spokane 124.9
- Departing MSO, destination Stevensville or Hamilton
    - Stay on the west side of the Valley
    - After Lolo, altitude 5500 or below, monitor local CTAFs 122.8
    - Maneuvering flight in the valley, above 5500, contact Spokane 124.9 for traffic advisories

C. Inbound to MSO

- From the Bitterroot – Stay on the east side of the valley, arriving at Lolo at or below 5500
- A recommended, general option when inbound to MSO – Utilize communications for Class C airport and contact Spokane Approach 124.9 when 20 miles out: "Spokane Approach, Cessna 12345, 20 miles (direction – N,S,E,W) of Missoula, at 6,000, inbound for landing with information Whiskey request traffic advisories."

D. Parachute jumping at Stevensville

New to the Bitterroot Valley this spring, Skydive Missoula will be conducting skydiving operations at the Stevensville Airport, 8:30AM-sunset, May through November. The landing area will be a large field on airport property, just west of Bitterroot Aviation. The climbing zone for aircraft prior to jumps is 4 miles northeast of 32S. Jumper aircraft will call on 122.8 two minutes before a jump, and again when jumpers away.

- All Bitterroot Valley aviation traffic – check NOTAMS. This 90-day continuous NOTAM is effective 4/12/25: 32S AIRSPACE PARACHUTE JUMPING EXERCISES WI AN AREA DEFINED AS 3NM RADIUS OF 32S SFC-17000FT. The affected airspace is clearly shown on Foreflight.
- MSO departures – Stevi jumper activity will be given on the ATIS

E. VFR departures from MSO northbound

Because of terrain limitations and a lower air traffic volume there is no perceived need for special departure recommendations.

F. VFR transitioning over MSO from the north

- Contact Spokane Approach 124.9 for transition over KMSO above 5700ft. If there is a potential conflict, Approach will coordinate with the tower.

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.

Conversation *(Cont. from page 3)*

VFR flight protocols for Bitterroot Valley MSO departures and arrivals were a main topic for discussion (see article above). The increasing commercial traffic at MSO is a growing safety concern, particularly at the Lolo "bottleneck" where all outbound and inbound traffic converges. Recommendations include southbound traffic staying below 5500 until Lolo and increased utilization of Spokane Approach 124.9. Other important recommendations are given in the article cited above.

Skydive Missoula (see article on Page 5) is a new skydiving facility based at Stevensville (32S). It began operations April 26th. Both Spokane and MSO will be notified when there is a jump, and the activity will be included in the in the MSO ATIS. The jump plane will make a "2-minute call" on 122.8, before the jump, and then a "jumpers away" call. The jump plane climbing area is 4 miles NE of 32S; the jumper landing site is on the Stevensville Airport.

There was a question about radio procedure: After exiting the runway onto a taxiway and past the hold short line, what should the pilot do when there's no communication from the tower? Answer: Go ahead and contact Ground for taxi clearance.

Tours of the ATC tower are available any day 10 am to 6 pm. Contact Christel for arrangements Christel.Palmer@serco-na.com.

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Skydive Missoula – A note from Luke Short

New to the Bitterroot Valley this spring, Skydive Missoula will be conducting skydiving operations using Cessna 182's at the Stevensville Airport, 8:30AM-sunset, May through November.

Owned and managed by a known power couple in the sport of skydiving, Luke and Beth Short possess the perfect combination of skills, experience and business acumen to ensure that their business will thrive for many years to come. Staffed with extremely talented USPA Multi-rated Instructors, highly experienced pilots and outfitted with the best equipment in the industry, Skydive Missoula provides a fun and safe environment for which to enjoy the thrilling experience you're after.

Luke and Beth are acutely sensitive about matters of safety, efficiency and cooperation within the vicinity of 32S. Being the newest arrivals to the local aviation community, their aim is to minimize their impact on other aviation activities in and around the Bitterroot, and to welcome a dialogue with local area users, aviation professionals and administrators. Both Spokane and MSO will be notified when there is a jump, and the activity will be included in the in the MSO ATIS. The jump plane will make a "2-minute call" on 122.8, before the jump, and then a "jumpers away" call. The jump plane climbing area is 4 miles NE of 32S; the jumper landing site is on the Stevensville Airport.

Offering Tandem Skydives, Student Training and plenty of lift capacity for the experienced skydivers, Skydive Missoula has what you need to make your dreams of human flight a reality.

Outfitted with a full parachute rigging loft and gear store, Skydive Missoula can also assist you with your gear purchases/sales, custom orders, apparel and your rigging inspections/repairs. Call or visit Skydive Missoula and let us help make your dreams come true.

Info@skydivemissoula.com Fly the Big Sky | Skydive Missoula

Bozeman Tower Letter to Airmen

From the March issue of the Montana Aeronautics Division newsletter *Montana and the Sky*

Although this is directed primarily at BZN pilots the airport is a frequent destination for pilots around the state and is of general interest to all of us -ed

Bozeman (BZN) has experienced numerous Traffic Alert and Collision Avoidance System (TCAS) events involving aircraft arriving, departing, and transitioning the airspace. Close proximity events resulting in a TCAS Resolution Alert (RA) pose a significant risk to aviation safety. Because TCAS RAs take precedence over ATC instructions, pilots are expected to promptly follow the RA, even if the resulting maneuver is unplanned and may create additional conflicts.

Due to the mountainous terrain (Bridger Range to the east/northeast and Gallatin Range to the south), aircraft around Bozeman are funneled through a southwest-to-northeast oriented, low-lying valley. Aircraft operating under Instrument Flight Rules (IFR) are required to adhere strictly to both standard instrument departure and instrument arrival procedures. Unfortunately, close calls continue to occur when VFR traffic operates within the arrival and departure corridors, bringing them dangerously close to IFR jet aircraft flying at high closure rates.

In an effort to reduce frequency congestion and simplify instructions for VFR aircraft departing BZN—or transitioning nearby—departure routes and associated VFR waypoints have been developed. These waypoints are in the GPS database and can be programmed into Flight Management Systems (FMS) and GPS units. Pilots are encouraged to reference the relevant aeronautical charts for additional guidance and to better visualize these routes.

Application of these departure procedures, or any action taken by Air Traffic Control (ATC) to avoid traffic conflicts, does not relieve pilots of their responsibilities to see and avoid other aircraft while operating under Visual Flight Rules (CFR 91.113). Heightened awareness and vigilance among all pilots—whether operating IFR or VFR—are essential in mitigating risk and ensuring safe operations in the BZN airspace.

To assist ATC with enhancing the safety of operations near BZN, pilots should:

• Familiarize themselves with the airspace surrounding BZN, including nearby terrain.

• Actively listen to ATC instructions and clearances to ensure full understanding.

• Read back instructions and clearances accurately to confirm receipt.

• Familiarize themselves with the airport layout and information prior to flight, including the new VFR waypoints.

Bozeman *(Cont. on page 6)*

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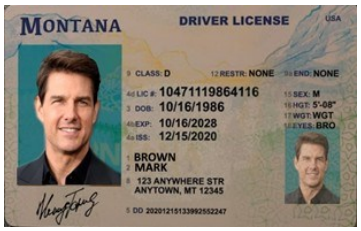
From Dan's Desk – Real ID

Dan Neuman, MSO Business Development Manager

Okie, well this is one that is getting a lot of attention these days especially in places like New Jersey. "Why do I care?" you may be asking yourself. Well, if you're flying commercial it is something that is going to come up. The Real ID Act of 2005 establishes requirements that driver licenses and identification cards issued by U.S. states and territories must satisfy to be accepted for *accessing federal government facilities*, *nuclear power plants*, and for *boarding airline flights* in the US. It is a straightforward process to get one and involves a trip to your local DMV. If you don't have a Real ID, you can still fly, you are just subject to additional screening. You can also use your US Passport as an ID to pass through Airport security.



Reminds me of when I was a kid, and it was a big deal to get a fake ID so we could get access to things like alcohol and cigarettes. If you could find someone older than you that at least looked a little similar…. And you managed to talk them out of their expired drivers license… you had a reasonable chance at getting into the Trading Post Saloon or the Carousel here in Missoula. Now, I'm not saying that I ever did anything like that, or that *I might have been known as Mark Brown at those clubs*…. I'm just saying that it was a thing back then.

Regardless of my checkered past relationship with Fake ID's, you can apply for a Real ID online at: Real ID – MT Motor Vehicle Division. Might come in handy if you ever have the chance to take the kids on a field trip to a nuclear power plant or board an Airplane.

Bozeman *(Cont. from page 5)*

• Ask ATC if there is any doubt about the VFR route assigned, or if you need clarification on any instruction.

- Alejandro Ortiz Air Traffic Manager, Bozeman Tower

The notice and clear view of the chart diagrams can be seen here at:

https://notams.aim.faa.gov/lta/main/viewlta?lookupid=3551176388570519523

These can also be found on Foreflight, Airports, BZN, Procedure. -ed

Minuteman Aviation

Jillian Mamuzich

Minuteman's helicopters operate near fires and include support staff for maintenance and fuel.

As the days grow longer and Montana's landscapes begin to awaken, Minuteman Aviation is shifting full throttle into spring and summer operations. Our team is hard at work preparing our helicopter fleet for the upcoming fire season, ensuring every aircraft is mission-ready to support critical firefighting efforts across the lower 48 and Alaska.

While our helicopter crews fine-tune for fire contracts, our FBO remains a hub of activity. From business flights, to general aviation and flight instruction, traffic is buzzing with energy. We're proud to continue providing top-tier service to every pilot and passenger who comes through our doors.

At Minuteman, we're looking ahead to another busy season serving Montana's aviation community—supporting not only general aviation but also the vital fire missions that help protect our state's natural beauty. Whether in the air or on the ground, we are honored to be a trusted partner for aviation in Big Sky Country.

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.

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Neptune will upgrade its tanker fleet and add to its air attack fleet

Jamie Sharkey, Project Manager, Neptune Aviation, and MSO GA News

Neptune Aviation Services, a leader in aerial firefighting and aviation services, is taking a significant step forward, announcing that it is transitioning its air tanker platform to the Airbus A319. Partnering with Aerotec & Concept (An Expleo Company), a leader in Aircraft Modification, Neptune has begun the process of converting the A319 for wildland firefighting and will gradually phase the aircraft into their aerial firefighting operations, with the first of the new fleet expected to be operational for the 2027 wildfire season.

"As the leader in aerial firefighting, we are always focused on continuous improvement," says Jennifer Draughon, President of Neptune Aviation. "While our current fleet of BAe 146 aircraft is among the best in the industry, we started planning for this upgrade two years ago as part of our commitment to deliver the best solutions to our customers. The Airbus A319's larger size and higher maximum takeoff weight allow for greater fire retardant capacity, improving operational efficiency, and enhancing the safety of our crews, firefighters on the ground, and the communities we protect."

The decision to move to the Airbus A319 came after two years of extensive research and due diligence in order to pick the right platform. This included months of evaluating air frames, conducting simulated retardant drops to confirm the aircraft's capabilities, and researching engineering firms before selecting Aerotec & Concept as their partner.

"The Airbus A319's increased capacity and advanced features make it an ideal choice for wildland firefighting. Our team is committed to ensuring that Neptune's new fleet is optimized for maximum efficiency and safety. With our extensive experience in aircraft modification, we are confident that this transition will enhance Neptune's aerial firefighting capabilities," says Aerotec & Concept CEO Johan Clochet.

With its new aircraft selected, Neptune Aviation becomes the first company to convert the A319 for aerial firefighting operations. Moving to the A319 will increase retardant capacity to a minimum of 4,500 gallons, compared to the maximum 3,000 that can presently be carried by the BAe 146. The A319 also has greater fuel capacity, which will allow Neptune to reach remote fires located outside of their current service window with a full payload.

As part of the A320 product line, the Airbus A319 is equipped with advanced avionics, featuring a revolutionary fly-by-wire (FBW) flight control system. The FBW system uses computers to process pilot inputs and then sends electrical signals to control the aircraft's flight surfaces, ensuring the desired flight path. These capabilities enhance safety, reliability, and maneuverability, while reducing weight by eliminating traditional cables, pulleys, and rods.

Draughon says the transition to the A319 will happen gradually over a number of years and expects that Neptune will operate between 10-15 aircraft in their fleet—a mix of A319s and BAe 146s—depending on the evolving demands of aerial firefighting.

Airbus will provide comprehensive support for the lifecycle of the A319 fleet, ensuring its long-term operational success. Neptune will also continue to conduct extensive airflow modeling and tank flow evaluations to ensure optimal performance. Recognizing the complexity of the process, the company has worked proactively to ensure success, including the selection of Aerotec & Concept to help guide the project to a successful conclusion.

Neptune has discussed the upgrade to its fleet with its partners, including the USDA Forest Service, Cal Fire, and the Colorado Division of Fire Prevention and Control. Each of these agencies has expressed their enthusiasm for the new fleet and is eager for their addition to the nation's inventory of wildland firefighting resources.

With the recent acquisition of a new Aero Commander 690A Neptune now has 5 air attack aircraft.

Neptune Aviation is expanding its air attack fleet, and with the recent acquisition of another Aero Commander 690A aircraft, now has five of them. Neptune's fleet of Aero Commanders have a superior safety rating, offer exceptional performance in mountainous terrain, and are equipped to handle the rugged duty associated with flying above wildfires. Neptune's Air Attack aircraft are the eyes in the sky above wildland fires. These aircraft assist ground firefighters by providing real time information about fire behavior, aerial fire surveillance and wildfire mapping. In the air, Neptune's air attack aircraft ensure safe aviation operations by coordinating the movement of all air assets working over wildland fires.

For more information about Neptune Aviation Services and its airtanker operations, visit www.neptuneaviation.com.

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Tips to shoot stunning photos from your airplane

By Kurt Kleiner – excerpts from the article published in *General Aviation News*, reprinted with permission.

Although very few general aviation pilots are professional photographers, most of us occasionally shoot a cell phone photo of an interesting sky or terrain feature while we're flying. It's easy to improve the quality of our in-flight photos if we adopt the mindset of an "active" photographer rather than simply snapping photos in passing. Active photography involves selecting a specific target, then maneuvering and positioning an aircraft to intentionally compose an image using different angles, perspectives, light and shadows, and sky conditions to achieve the best possible photos.

But before we concentrate on improving the quality of our photos, we have to acknowledge that aerial photography inherently presents many additional safety and risk management concerns due to dividing our situational awareness and workload between flying the aircraft and shooting photos. Environmental hazards should be assessed and mitigated first, especially if we want to shoot photos of landscapes or scenery at low altitude in remote or mountainous areas. These hazards include other traffic, density altitude, mountain turbulence, and confined terrain that may be obscured by clouds.

Unless there is an impressive cloud formation, sunset, or sunrise, do not include excess sky in the top of the image. There are many examples of outstanding aerial photos of landscapes found in coffee-table books that have no airplane parts or sky in the shot. If you do include a small strip of sky at the top of the frame, try to keep the horizon straight or use the basic editing tool found on most cell phone cameras to correct a tilted horizon.

: If your photos are designed for pilots to enjoy, including part of the airplane is a good idea.

Before taking off, you may wish to read up on some basic principles of photo composition such as the "rule-of-thirds," which is a guideline that places your subject in the left or right third of an image, leaving the other two thirds more open. While there are other forms of composition, the rule of thirds generally leads to compelling and well-composed shots.

Many excellent photos are ruined by the reflection of window glare. Whenever possible, open the window, if it is allowed below a specified airspeed by the aircraft manufacturer. Consider holding the camera two or three inches inside the airplane or wear a wrist loop in case it slips from your grip. If you cannot open the window, you can often eliminate glare by holding the camera right up against the plexiglass window. Be sure the camera is in a soft padded case or attach a small strip of adhesive moleskin just above the lens to avoid scratching the plexiglass. Be aware that airframe vibration can cause a photo to be blurred, while tinted glass may distort or diminish the colors of what you are trying to photograph.

The best time of day for capturing rich colors and impressive contrasts between light and shadow is the 15 or 20 minutes immediately after sunrise or just before sunset when the atmosphere filters out green and blue colors and accentuates the red, orange, and yellow tones. It is usually best to photograph only the sunlit side of a subject from different angles using multiple passes or fly-bys at this time of day rather than shooting photos from all sides while circling. Look for opportunities to capture contrasting shadows that are cast at different geometric angles.

In mountain photography, the presence of a cloud or a fog layer in a canyon behind the focus of your photograph can add a desirable mystical element. But be aware that any flight near terrain obscured by clouds requires additional situational awareness, planning, and risk-based decision-making skills. At no time should the urgency to capture a perfect shot ever outweigh the safety of flight. No photo is worth risking inadvertent flight into IMC or

Photos *(Cont. on page 9)*

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Missoula hosts 2024 Montana Aviation Conference

MSO GA News

This year's annual conference in Missoula, February 27 -March 1, lived up to the tradition of "best in the west!" Good speakers, good programs, good exhibitors and, especially, good food! The opening speaker on Thursday was U.S. National Aerobatics Champion Brittanee Lincoln. The videos of her maneuvering the airplane through different aerobatics was dramatically eye-opening, particularly for those pilots among us who don't go much beyond steep turns. Friday's special guest speaker was Tom Haines, whose career at AOPA embraced 40 years of flying adventures and writing about them. Saturdays closing banquet featured Patrick Williams' highly entertaining descriptions of the exciting challenges in a flying career that went from the Idaho backcountry to the Air Force Academy, to flying F-15s and F-22s, and still today in Supercubs flying the backcountry.

The concurrent sessions were, as always, interesting, well attended, and included experienced pilots and aviation writers. Local pilots are familiar with FAASTEAM member and CFI, Kurt Kleiner. Kurt gave presentations on flight operations in mountain wave and on aerial photography (see story on Page 8). The subject of backcountry flying got a lot of attention. It's becoming more popular and besides offering adventure and challenges also carries a significant element of risk. Pilots are encouraged to explore backcountry destinations with an experienced instructor. There was an excellent presentation by Missoula's Sentinel High School instructor Joe Yakawich. He related students' experiences embracing the AOPA STEM curriculum utilized in his classes (see story on Page 10).

Mike and Svetlana Schwartz celebrate Mike's Wright Brothers Master Pilot Award. MSO News photo.

Friday's Awards Luncheon included recognition of an

Photos *(Cont. from page 8)*

Conference *(Cont. on page 10)*

controlled flight into terrain.

Mountain photography requires adherence to hard personal limits and some additional knowledge of mountain weather. As a general rule, it is best to simply avoid low-level mountain flying altogether on windy days due to hazardous lee-side downdrafts, rotors, and turbulence. If the wind at mountaintop level is greater than 10 knots, I recommend never flying lower than 200 to 300 feet above the summit altitude. If the wind speed is more than 20 knots, but less than 30, you might wish to remain higher than 1,000 feet above all mountainous terrain, and only fly on the windward side of any peak. There are many variables that will factor into your personal altitude and wind limits, such as the shape and scale of terrain, density altitude, your aircraft weight vs. power available, and the availability of an escape route in the event of an emergency.

Always avoid flying in confined terrain like box canyons. If you need to remain at a higher altitude, you may still be able to capture stunning photos using partial zoom to enlarge the subject in the frame. But be aware that photos are more easily blurred when using zoom and when flying in turbulent air.

As pilots, we have a unique opportunity to capture impressive aerial photos from a highly maneuverable platform if we make the effort to experiment with the concepts of active photography. The rewards require us to identify and evaluate new hazards and consciously accept additional risk as a foremost priority. There will always be days, locations, and conditions when it is best to forego any attempts at aerial photography. But when the opportunity is available, you may end up with images worth printing on canvas for your living room, office, or to share as gifts for loved ones.

Kurt Kleiner earned his pilot certificate in 1988 after 12 years immersed in rock climbing, skydiving, and paragliding. He's been an active CFI and FAASTeam Representative since 2005 and is employed as a pilot and CFI at a small flight school and skydiving operation in Stevensville, Montana. He recently retired from a career as an aviation manager with federal wildland firefighting agencies with a focus on operations, safety, training, and risk management. He continues to work several weeks each year as an interagency fire airspace coordinator to esign and manage TFRs for large fire incidents.

Thanks to Janice Wood, General Aviation News, for permission to reprint Kurt's story. For the full, excellent story: https://admin.flymissoula.com/wp-content/uploads/2024/12/GA-newsletter-Fall-2024.pdf

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Spartan Aeronautics

Joe Yakawich, Missoula Sentinel High School Instructor

Five years ago, Sentinel High school incorporated Aeronautics into its Engineering curriculum and has been slowly gaining altitude ever since.

Based on AOPA's High School curriculum, Sentinel's Aeronautical Engineering program became a reality in large part due to the advocacy of Burt Caldwell and the backing of the district's CTE director Kasey Dirnberger. Initial classes leveled out at about 17 students, but the program has gained popularity with a maxed-out class sizes of 30 students this year..

Though AOPA offers a full four-year program to prepare new pilots for the aviation industry, Sentinel is limited to one year's curriculum due to funding and instructor availability..

The course instructor, Joe Yakawich, said he selected AOPA's 10th-grade course, (Principles of Flight), because it had the potential for the most project-based learning opportunities–an approach he finds important to student learning. He added, "besides, the students love the hands-on approach to learning, building, and competing for the

Aeornautics *(Cont. on page 11)*

accomplished Missoula area pilot. Michael Schwartz received the Wright Brothers Master Pilot Award for 50 years or more of safe flying. Mike's interest in aviation began as a 5-year-old, building balsa wood model aircraft. Influenced by his naval aviator Dad, Mike soloed at age 16 and received his Private Certificate in 1974. His career in aviation included instrument flight instruction and flying passengers or cargo in Montana, Southeast Alaska, and the Western U.S. Mike flew wildlife surveys for Montana Fish, Wildlife and Parks and conducted low/high altitude aerial mapping missions. He's accumulated over 4,300 hours of accident-free flying. He enjoys flying his Cessna 182, hangered at the Stevensville Airport in Stevi, is an Air Transport Pilot and CFII, and still does some instruction. Congratulations, Mike, for the richly deserved honor!

Always a highlight at these conferences is the Social Hour sponsored by the Montana Pilots Association (MPA). Free beverages and snacks add to attendees' enjoyment of visiting with each other and viewing static displays of aircraft. Thanks to Northstar Jet General Manager Jamie Jones and his staff for all their work in providing a spacious hangar for the event. All things considered, the conference added up to another great success!

The Friday Night Social featured static displays of exceptional aircraft. Among them was the always admired DC-3 Miss Montana, a USFS Sherpa smokejumper aircraft, and Helena pilot Steve Fulton's beautifully restored Howard DGA15 from the 1930s. Perched on the wing of one of the display aircraft was evidence of a "quackup." MSO News photos.

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EAA Chapter 517 news

MSO GA News

Your MSO-based Experimental Aircraft Association (EAA) chapter keeps going strong! Monthly chapter meetings feature programs of interest to pilots past, present, and future. Meetings are held on the 3rd Monday evening of each month. Pizza's served at 6:30 and the meeting follows at 7:00. The meeting place is the Chapter Hangar, Unit 4 in the East LZ Hangars, 4198 Corporate Way at the Missoula Airport. The May 19th meeting will feature a tour of Ralph Johns' Zenith CH 650 aircraft building project. On June 16th, Michael Hochella will talk about GA airplane design innovation. July 21, David Bixby and Joshua Phillips from Glide Missoula will talk about their paragliding off Mt Sentinel and how to avoid running into them. August 18, Chapter member Don Bonem will present Sun N Fun 2025 highlights. He has been volunteering there for many years and has a lot to share.

Cal and Lisa Geyman enjoying his RV-9a

A foundational purpose of EAA is assisting pilots in building their own aircraft, providing guidance and resources for the projects. There are thousands of these "homebuilts" flying today. Missoula pilot Cal Geyman recently completed the building of his Van's RV-9a and has flown it for more than the 40 hours required to enable flights outside a limited area and with passengers. This success is absolutely remarkable (see " How to crash your plane, learn from it, and start over": GA-newsletter-Spring-2023.pdf). Cal serves as Chapter Secretary, not only doing a great job of keeping members updated on meetings and events, but also assuming the big task of putting together the Chapter's monthly newsletter.

: *Youngsters and their advisors recently completed this radio-controlled model, now awaiting its first flight.*

The Chapter's activities include opportunities for youth. Several had the opportunity to participate in EAA's "Build and Fly Program," assembling an electric-powered, radio-controlled model plane. They completed the build and its maiden flight will happen soon. Chapter President Ed Lovrien oversaw the construction of a brand new RC airfield, west of the airport and the flight of this RC plane will be the first.

Aeronautics *(Cont. from page 10)*

best designs." In general, the AOPA course spans topics from aircraft materials, fluid dynamics, forces of flight, propulsion, and airframe systems. In amongst the classroom instruction, Yakawich has incorporated numerous "Engineering Challenges" for students to demonstrate what they were exposed to in the classroom such as: drone operations, density, scaling, modeling, wing and propeller design, soldering, riveting, Barany chair physics, and fluid dynamics to name a few.

Another important aspect of Sentinel's Aeronautics program is exposing students to the aviation industry and careers with real people. To this end, the program has been tremendously enhanced with the support of Missoula's EAA chapter and local pilots. And this year, Neptune Aviation has been generous enough to take on several Sentinel students in a work-based learning program. Yakawich hopes to expand outreach to the aviation community to further deepen understanding and interest in these vital careers. To date, several Spartan Aeronautics graduates have gone on to study aerospace/ aeronautical studies, seven have earned pilot licenses, and two have graduated with A&P certifications…and they are just getting off the ground!

Top: Sentinel High School engineering instructor Joe Yakawich (L) with Burt Caldwell
Below: The aeronautical program at Sentinel is unique in Missoula

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Always: The Plane

By John O. Haines, reprinted with permission from the Museum's *Backcountry Flyer, spring 2025*

Some made the winter trek from Montana by automobiles, others by private plane, while a few took a more commercial airline route to, of all places, Brownsville, Texas this December. All 17 or so museum volunteers arrived hoping a World War II era A-26, that was featured in the Steven Spielberg movie "Always", would soon find a welcoming home back in Montana where it served as a retardant bomber while under contract with Lynch Flying Service out of Billings.

The movie "Always" was filmed and set in Libby, MT. It was released in late 1989 and is known for being Audrey Hepburn's last movie but Richard Dreyfus, John Goodman, and Holly Hunter were also part of the movie's cast.

The goal of the Museum of Mountain Flying is to make the plane airworthy and fly it back to Northwest Montana and highlight its history in firefighting and the movie at airshows, our museum in Missoula and a future location at Glacier International Airport. The hope is to occasionally fly it to Libby for many to relive the "Always" filming experience.

Currently the Always A-26 is in Brownsville, TX but it has undergone a thorough evaluation of any mechanical challenges and most of those issues have been addressed. The plane awaits a test flight and if all goes well it could be flown home in the near future. Fingers crossed. It is in pretty good shape given the plane's age and history.

The museum would like to extend a special thank you to Bob Steinbock who has taken care of the Always A-26 for several years and hosted our work parties while we were in Brownsville. This would have been impossible without you. Thank you very much.

If you would like to support the Always endeavor, please contact us at the Museum of Mountain Flying. (Annual dues: Single $35, Family $59, Lifetime $1500; mail your check to: Museum of Mountain Flying, Missoula International Airport, P.O. Box 16601, Missoula, MT 59808-6601 -ed)

(Continued from page 11)

Chapter member pilots participate in EAA's *Young Eagle* program, giving short, introductory plane rides to youth ages 8-17. Several former Young Eagles have gone on to become pilots themselves. Got young friends or family members? Visit the Chapter's Young Eagles page for more information. The Chapter's Young Eagle flights normally occur on the first Saturday of each month but are dependent upon weather and pilot availability. "Eagle Flights" are offered for persons over 17 years of age. Interested persons can contact our Chapter's Young Eagles coordinator, Ray Aten rayaten44@gmail.com.

Pancake breakfasts (!) are served by the Chapter's master chefs on the first Saturday of each month, April through September. Everyone's welcome to come, relax and enjoy breakfast, and learn more about our Chapter.

[*Update from Museum President Eric Komberec, 5/1/25: The A26 is near completion and ready for its test/acceptance flight and will soon return home to Montana where she belongs. A date has yet to be decided but realistically now sometime in June.]*

Dorinda (Holly Hunter) says goodbye to her boyfriend, Pete (Richard Dreyfuss) in the movie Always just before his fatal firefighting flight. From the YouTube video

Other Museum news

From pilot Bryan Douglass and Museum volunteer Pat Collins: The upcoming schedule for the Museum's DC-3 Miss Montana begins with a flyover of Montana State Veterans cemeteries at Fort Harrison and in Missoula on Memorial Day. The aircraft will be featured at the National Smokejumper Reunion in Missoula in June, at a private event in June in Ennis, a Butte Fly-In early June, and an Anaconda Fly-in August 24.

The Museum will host a visit from the Commemorative Air Force, bringing their B-17 and B-25 back to Missoula for a week beginning July 14th.

From Eric Komberec: The Kalispell facility is moving along nicely. We have a visual concept plan that was donated by Mead & Hunt architecture firm out of Minnesota who designed the GPIA terminal building. Next, we are working on assembly of more of a timeline of events and project management that would take it through the building phase. Once we have accurate costs and timelines we can move into fundraising.

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. 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

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MSO GA News thanks **Pat Collins, Bryan Douglass, and John Haines, volunteers with the Museum of Mountain Flying; Tim Damrow, MSO Deputy Director; Aaron Foster, MSO CFI; Cal Geyman, Secretary, EAA Chapter 517; Dan Green, Resource Advantage; Kurt Kleiner, MSO area pilot, CFI, and FAASTEAM member; Eric Komberec, President, Museum of Mountain Flying; Matt Lindberg, Montana Aeronautics; Jillian Mamuzich, Minuteman Aviation; Dan Neuman, MSO Business Development Manager; Christel Palmer, Manager, MSO ATC; Mike Schwartz, Missoula area pilot; Jamie Sharkey, Project Manager, Neptune Aviation; Shaun Shea, PE, Morrison-Maierle; Luke Short, Skydive Missoula; Janice Wood, General Aviation News; Joe Yakawich, Missoula Sentinel High School Instructor** *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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Aviation license plates

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.