

Montana and the Sky

Montana Department of Transportation

Aeronautics Division

Vol. 73, No. 06

June 2022

2022 Aviation Awareness Art Contest Winners Announced!

Congratulations to the winners of this year's Montana Aeronautics Division's Aviation Awareness Art Contest!

Category I (K-5th grade) winners:

1st place: Haddon B. of Billings
2nd place: Lydia T. of Missoula
3rd place: Addison B. of Great Falls

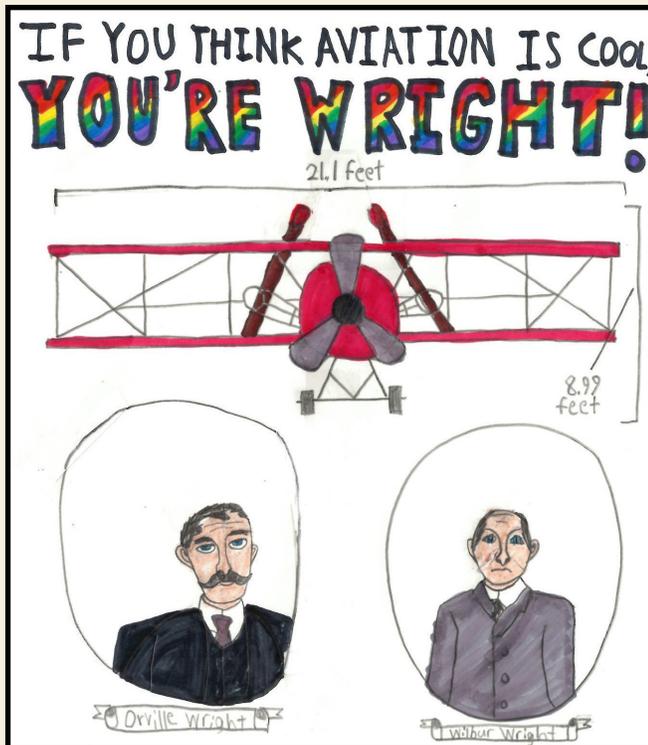
Category II (6th-8th grade) winners:

1st place: Dakota W. of Winifred
2nd place: Lilah F. of Winifred
3rd place: Melody P. of East Helena

Category III (9th-12th grade) winners:

1st place: Rachel T. of Missoula
2nd place: Audrey A. of Billings
3rd place: Valentina R. of Simms

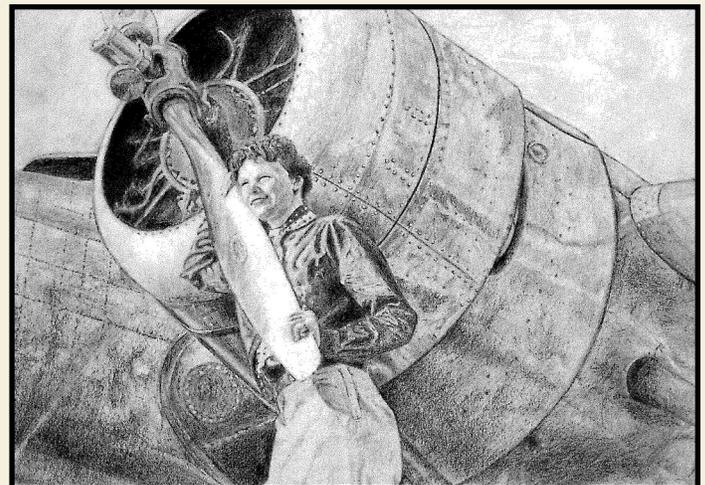
MDT Aeronautics Division programs, such as the art contest, bring aviation and youth together so they might see and experience the impact aeronautics has on careers, transportation, and the economy. Many past winners of this contest have gone on to find successful careers in aviation.



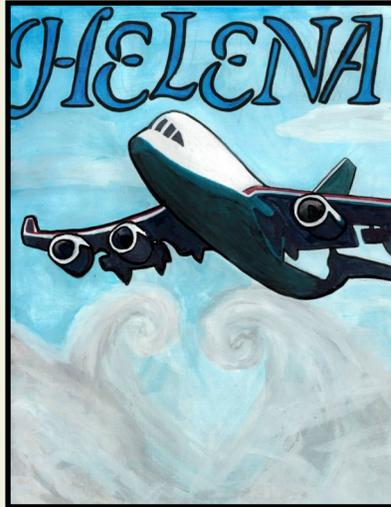
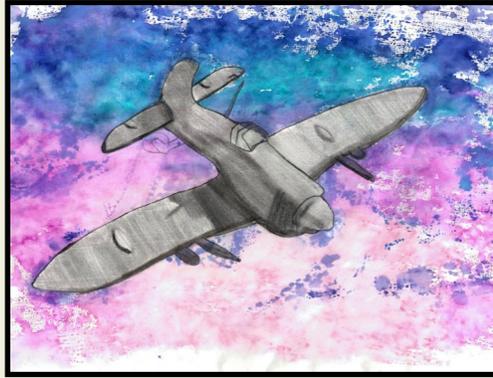
Category I First Place Winner: Haddon B. (above)

Category II First Place Winner: Dakota W. (upper right)

Category III First Place Winner: Rachel T. (lower right)



Art Contest Winners, cont.



Category I Second Place Winner: Lydia T. (upper left)
 Category II Third Place Winner: Melody P. (upper right)
 Category II Second Place Winner: Lilah F. (middle left)
 Category III Second Place Winner: Audrey A. (middle right)
 Category I Third Place Winner: Addison B. (lower left)
 Category III Third Place Winner: Valentina R. (lower right)

Attention Airport Sponsors and Engineers

As a friendly reminder, airport sponsors who were previously awarded a loan or grant from Montana Aeronautics are required to complete a status update or project closeout form to be eligible to apply for additional funding. The loan and grant application period opens on July 1, 2022 and will close on November 15, 2022. For assistance or questions, please contact Karen Speeg at 406-444-9581 or kaspeeg@mt.gov



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Aviation Career Exploration Academy

Provided by the Montana Department of Transportation, Aeronautics Division, the Aviation Career Exploration (ACE) Academy is a camp offered each summer for high school students to learn about careers in aviation and explore flight. This camp helps students from across the state learn what is available within the industry. This year, ACE Camp will be held July 22-23, 2022, in Helena. Tuition of \$120 includes lodging, all activities, discovery flight, meals, snacks, supplies, drinks, and ground transportation.

On the first day, students are exposed to as many areas and careers in aviation as possible. Students will receive introductory flights in Division aircraft to start out the day, followed by touring many local aviation facilities and hearing from industry experts. Possibilities include a tour of the Montana Army National Guard Aviation Support Facility, a fixed based operator, an air ambulance company, the Helena Air Traffic Control tower, the Helena Airport, a local fire department crash rescue facility, the Boeing manufacturing plant, Helena college Airframe and Powerplant mechanic program, and a drone company. Additionally, students have the opportunity to hear from industry experts such as professional pilots, engineers, aircraft mechanics, flight nurses and paramedics, various local aviation business owners, and other aviation professionals.

On the second day, students will be taken to the Great Falls International Airport to attend a military open house, "Flight Over the Falls". The airshow will feature the United States Air Force Thunderbirds team. A variety of presentations from military services and other organizations will be present, including a P-51, P-38, the Jelly Belly team, Precision Exotics, and a growing list of other performers! More information on the open house and airshow can be found at <https://greatfallsairshow.com/schedule/>.

Scholarships may be available to students for tuition. In order for a student to receive a scholarship from a donor, students must submit an essay explaining their interest in aviation and financial need for the award. Essays should be typed and no more than 500 words. They can be emailed to mdtaerosafetyed@mt.gov.



Photo courtesy of Aeronautics Staff

Sponsors Needed!

In previous years, the majority of students were sponsored by generous individuals and businesses in Montana. Thank you! Direct donations are accepted, and sponsors are welcome to attend and participate in ACE camp. Volunteers are always welcome!

You can impact a student's future with your life-changing donation of \$120, or more to the program and send a student to ACE! Some of Montana's youth live in areas without access to aviation exposure. For many, this will be their first time flying or even being around someone in aviation.

ACE is open to high school students (those who will be freshmen through those who just graduated). Capacity is limited, and is available on a first-come, first-served basis. Online registration is available at https://www.eventsquid.com/event.cfm?event_id=16682&fromdash.

Contact Aeronautics at (406) 444-2506 or email mdtaerosafetyed@mt.gov to set up a sponsorship or with any questions.

Search Pilot Clinic is BACK

For most of four decades, Montana Aeronautics has held a search pilot clinic to train volunteer pilots to search for missing aircraft. It's been a few years since Montana Aeronautics has offered this training, but it will be held again in Helena, August 5-6, 2022. Montana is one of very few states to operate its own search services using both state and volunteer aircraft, pilots,

and observers. Participating pilots will receive dual instruction in a Cessna 182 or 206 airplane focused on mountain flying techniques in addition to learning search techniques, and receiving ground instruction. Volunteer observers will be trained to look for signs of a crash site and gain experience sitting in the back seat on training flights. Also included in the program is direction-finding theory and training for emergency locator transmitters. The mountain ranges surrounding Helena will provide good training for route and grid searching.

Aeronautics will select up to 24 qualified candidates to attend the course. The cost is \$175 plus lodging. Applications can be submitted at https://www.eventsquid.com/event.cfm?preview&event_id=17078.

For more information about this clinic, contact Matt Lindberg at (406) 444-9568 or mlindberg@mt.gov.



Photo courtesy of Aeronautics staff

So, You Want to Fly Powered Paragliders?

By Matt Lindberg, Montana Aeronautics Division Safety and Education Bureau Chief

By nature, most pilots are adventure and thrill seekers. We know, understand, mitigate, calculate, and tolerate risk based on our own levels of comfort. As a fixed-wing pilot for 19 years, I am quite comfortable flying airplanes, and enjoy it very much. But, as pilots, we are usually seeking “the next best thing” in our flying careers. For some, that is a new rating or perhaps a tailwheel, high-performance or complex endorsement. For others, that means a long weekend in Lake Havasu getting a seaplane rating that they may never use again, just for the fun of it. Of course, any and all training is valuable and important to build skills in its own way, but what do you do when you are really looking for something new and challenging in aviation? You scare yourself! Well, at least that is what I did.

I recently met a new friend in the flying community that flies powered paragliders (PPGs). I quickly became very envious of his spontaneous flights from nearly anywhere that was open enough, and legal. Many long discussions about the sport led to many months of my own research and education about the sport. I quickly realized not many people fly PPGs in Montana, and access to training is slim in our area of the country. Discouraged, my interest in flying PPG’s began to wane when suddenly a mutual acquaintance, and helicopter instructor, said he was going to sell his paramotor and wing. I didn’t delay going to check out his gear on the day I heard about it. The next day, I found myself at home in my garage staring at this huge backpack fan wondering what in the world I was going to do with it.

In April, I ended up in St. George Utah for 8 days to learn how to fly PPGs. If you are like I was, you think that flying these machines looks easy in the online videos. But I will say this is just like boot camp. It is very physically demanding and requires forgetting everything you know about flying airplanes and learn to fly all over again but without regulation, standards, testing, or official oversight. After the first day, I was sitting in the hotel jacuzzi staring at the deep purple and yellow bruises emerging on my arms, wondering if I was going to find some energy for dinner, just hit the hay early, or just pack up and drive back to Montana. But, day after day, I continued to show up at dawn and do what I came for. On the morning of the third day, I solod! Imagine flying in a single seat aircraft for the first time but having no idea how to fly it. Crazy thought, right? Well, that is how PPG training is. Most of the training focuses on ground handling and learning how to master control of the glider, this is called kiting.



Photo courtesy of Aeronautics staff

After that, you practice inflating the wing and “taxiing” on the ground while running forward with your 70-pound motor and fuel on your back while looking up at the wing, attempting to control it. Boy, I am glad I decided to buy a trike to mount my paramotor on, just sit down and go fly! The instructor watches you from an uncomfortably close distance and coaches you through a Bluetooth intercom in your helmet. Eventually he determined that I was looking stable enough and I heard GO GO GO GO! I mashed the throttle and held it there. I was airborne in under two seconds. Looking back, I was so sharply focused on what I was doing I can barely remember the first flight. As I flew my first circuit, it got bumpy, and I had to go-around on my landing attempt. I was now anxious to land, as I was starting to oscillate, swinging like a pendulum beneath the wing. Eventually this subsided as I got lower to my landing site in a park. I surprisingly greased the landing and was greeted by a crowd of high fives. My face is still sore from the big grin on my face, I had put so much effort and time into planning how to do this, and I think I surprised myself that I finally did it. Then, I realized my legs began to shake as the adrenaline was wearing off as I unstrapped myself from the harness. But I was ready to do it all again!



Photo courtesy of Aeronautics staff

The greater majority of my flying friends have repeatedly told me “you are crazy for flying that kite!” At first, I agreed. But knowing what I know now, I am encouraging everyone I know to get into the sport. It is very affordable flying, (considering the costs of other forms of aviation) portable, rewarding, and exhilarating. If you are also looking for “what’s next” in your flying career after all your ratings, endorsements, and travels, I encourage you to research a reputable training location and go for a tandem instructional flight. You will also be hooked on PPGs like you can’t believe. If you loved the feeling of when you first began learning to fly, and crave that again, this is for you!

Density Altitude Remains a Top Nemesis of Pilots

The Aircraft Owners and Pilots Association (AOPA) launched a new campaign to bring additional awareness to density altitude (DA). In addition to their online training resources, the AOPA developed a new DA reminder poster you will soon see at many airports which contain airport specific DA information. Montana's airports are no exception to this campaign! Be on the lookout for a poster like this one to appear at airports in Montana in the near future. You will commonly see them at self-serve fuel pumps, pilot lounges, fixed base operators, outhouses, fence posts, etc.

Efforts brought forth by the Montana Pilots Association (MPA), other volunteers, and the Montana Aeronautics Division joined together to create a powerful force to calculate, produce, and install these posters in areas most visible to pilots. The MPA provided the time and mathematical skills to calculate the DA for Montana's public use airports as well as distribution and installation at many airports. Montana Aeronautics also aided in production of the signs, distribution, and installation. Paper posters can be found inside, and foam core signs laminated with aluminum sheeting and ultraviolet light resistant ink can be found outdoors.

As we know, the "three H's" are not a pilots friend. When it is high, hot, and humid, we experience significant decreases in aircraft performance. Overlooked, these can prove to quickly be the leading cause of an accident. In Montana last year, we experienced multiple aircraft accidents in which DA is suspected to have played a significant roll in. Just because you depart from a 7,000 foot runway does not mean you will sustain the performance required to operate in areas with high DA, particularly in rising terrain.

High DA increases true airspeed, takeoff and landing rolls, and reduces the rate of climb. Don't be fooled by your indicated airspeed, it isn't going to change. You ARE moving much faster "over the ground" when the DA is higher.

Remember: The performance data published in Pilots Operating Handbooks (POH) typically start at sea level. Always study your particular airplanes performance charts prior to each flight, accounting for the variables you are currently encountering. Always follow your aircraft's POH to lean for best power. Just because it isn't "hot" outside, it does not mean that the DA's affects can't be substantially impactful or catastrophic. It is helpful to keep a copy of the Koch Chart in the cockpit for quick reference when the "three H's are on your mind. It can be to remind you of DA, and it may make you think twice about the flight you are about to embark upon!

WARNING, PILOTS!
DENSITY ALTITUDE CAN KILL!
High density altitude means longer takeoff and landing distances and shallow climb gradients.

Airport Name: _____
Airport Elevation: _____ MSL Standard Temperature at This Airport: _____ OC / _____ OF

IMPORTANT! The density altitudes listed below reflect a STANDARD DAY at this airport. Altimeter settings below 29.92 will increase density altitude and decrease aircraft performance.

TEMPERATURE	DENSITY ALTITUDE
13°C/55°F	MSL
15°C/59°F	MSL
18°C/65°F	MSL
21°C/70°F	MSL
24°C/75°F	MSL
27°C/80°F	MSL
29°C/85°F	MSL
32°C/90°F	MSL
35°C/95°F	MSL
38°C/100°F	MSL

AIRCRAFT PERFORMANCE ↓

What is Density Altitude?
Density altitude is pressure altitude corrected for nonstandard temperature. In other words, the density of the air decreases as altitude, temperature, and humidity increase. This degrades power, lift, and flight control effectiveness. In a sense, it's the altitude at which the airplane "feels" it's flying. The thinner air results in longer takeoff and landing distances and degraded climb performance.

Know your aircraft performance!
To learn more, scan the code below.

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Download a PDF of this poster at [AirSafetyInstitute.org/DAPoster](https://airsafetyinstitute.org/DAPoster)

Image provided by the Aircraft Owners and Pilots Association.

Pilots Now Able to Track Medical Applications in Real-Time

The FAA has added a new feature to MedXPress that allows pilots to track the status of their medical certificates online throughout the application and review process.

Before the addition of this new feature, pilots had to call the Office of Aerospace Medicine to check their application status. "If you can track where your ridesharing car is or the status of a company delivering your package, pilots should be able to see online the real-time status of their application," said Federal Air Surgeon Dr. Susan Northrup. "We will continue to explore how we can be more transparent with the aviation community."

As soon as an application is submitted, it will appear in the pilot's MedXPress profile. Status updates will change as the application moves through the FAA's review process. If an application is deferred or denied, the applicant will receive detailed information through the mail, according to FAA officials.

The certification process itself does not change, officials added.

You can learn more about FAA's medical certification process at [FAA.gov](https://www.faa.gov).

Article reprinted with permission from General Aviation news <https://generalaviationnews.com/2022/04/20/pilots-now-able-to-track-medical-applications-in-real-time/>

Lincoln Students Visit Their Local Airport

On May 2nd, four classes from the Lincoln school were able to check out their hometown airport thanks to the generosity from local pilots Bob and Karen Frank-Plumlee.

Forty-three students from the 7th, 8th, 9th, and 10th grades were escorted by their teacher, Nancy Schwalm, to the airport in four shifts. During their visits, they heard flying stories from Karen and Bob under the wing of their 1976 Cessna 172 inside their beautiful hangar at the Lincoln Airport. The Montana Aeronautics Division Safety and Education Bureau Chief, Matt Lindberg, attended for the day. He briefed students on many aviation career opportunities, Aeronautics camps and programs, and aviation career/training funding options and pathways. A tour of the Division's Cessna 206 finished the session. For many of the students, this was their first time seeing an airplane up close.

Karen told the story of her 45 years in aviation covering inspiration for learning to fly based on her need to commute long distance to graduate school. She also covered how she made it possible being a mother of six with no surplus income and how she became a three-time aircraft owner and leisure traveler with her husband, Bob, who is also a pilot. Before graduate school, she had never flown in a small aircraft and had no idea what a Cessna 150 was. She never would have dreamed she would be owning one so soon after someone mentioned learning to fly to her so she could commute to her school. Bob considers himself a lucky fellow for finding such a beloved wife who happened to have an airplane! As we know, aviation often brings people together, and that was the case for this flying couple. During the Lincoln visit, Bob explained to the students the various kinds of pilot certificates and options that are available to obtain, and what you can do with each of those certificates. He passed photos of their aircraft around the groups as Karen



Photo courtesy of Aeronautics staff

narrated their stories of how airplanes have been involved in their lives. Bob and Karen hope to inspire many young minds to further investigate aviation and all that the wonderful community, industry, and lifestyle have to offer.

It is because of outstanding community leaders like Bob, Karen, and Nancy that aviation has a bright future in Montana. Community activities such as the Lincoln field trip foster interest and excitement about aviation in the next generation of aviators, thank you!

If you are interested in hosting a field trip to your airport, please let Aeronautics know and we are happy to help facilitate communication with local schools and plan activities for the students with you. Montana Aeronautics can be reached at mdtaerosafetyed@mt.gov or (406)444-2506.



Photo courtesy of Aeronautics staff

New Aircraft Maintenance Shop Opens in Three Forks

JL Aerospace has moved into a new hangar on the south end of the Three Forks airport. Formerly a mobile only maintenance business, JL Aerospace now has room in their shop for multiple aircraft. However, they will still travel to your location when needed. The

company offers a wide variety of piston and turbine airplane and helicopter services including annual and condition inspections, major repairs, general airframe and powerplant maintenance and avionics work. More information about JL Aerospace can be found at <https://jlaerospace.com>



Left photo courtesy of Aeronautics staff



Right photo courtesy of JL Aerospace



Calendar of Events



June 4, 2022 — Havre Air Fair Fly in to KHVR Havre City/County Airport June 4th. Free admission, and breakfast served for \$10, 7:00 a.m. to 11:00 a.m. For more information, contact Willie Hurd at (406) 945-3646 or Tony Dolphay at (406) 390-5689.

June 11, 2022 — Big Timber Airport Fly-In and Car/Truck Show Fly or drive in to the Big Timber Airport June 11th. Breakfast served 7:00-11:00 a.m., lunch served 11:00 a.m.-1:00 p.m., donations accepted. Profits go to Sweet Grass Technical Institute in Big Timber. If weather turns bad, this event will be moved to June 12, 2022. For more information, contact Ken Wendland 406-224-1175.

June 11, 2022 Butte Wings & Wheels Featuring the C-47 steeped in Montana aviation history, "Miss Montana" & smokejumpers! Fly-in or drive to Bert Mooney Airport in Butte (KBTM) for our second annual aircraft fly-in & car/truck show. Enjoy a free breakfast 7:30-10:00 (donations accepted; fundraiser for Butte Composite Squadron-Civil Air Patrol). Fuel discount at Butte Aviation, and fun for young and old alike. Prizes! For more information, contact Walt McIntosh at (406) 670-1846.

June 11, 2022 — Choteau Fly-In 6:30-10:00 a.m. Free breakfast, donations welcome. Young Eagles airplane rides available. Skydiving by prior sign-up. For more information, contact Scott Gasvoda at (406) 590-2836.

June 18, 2022 — Meadow Creek Work Session Starting at 9:00 a.m. Bring your shovels to 0S1 and pitch in!

June 18, 2022 — Roundup Airport Fly-In Pancake Breakfast (KRPX) Join us for breakfast served from 8:00 am. to 12:00 pm. at the Roundup Airport. For more information contact Ron MacAdon at 406-323-2139 or backforty@midrivers.com.

June 20-26, 2022 Commemorative Air Force Flying Legends of Victory Tour Great Falls, MT. B-17 Flying Fortress *Sentimental Journey* and B-25 Mitchell *Maid in the Shade* will make a stop in Great Falls. Come see these historic military aircraft up close, or even purchase a flight in one. For more information, visit <https://www.azcaf.org/location/great-falls-mt-tour-stop/>

June 24-26, 2022 — Missouri Breaks Fly-In Join MPA for a full weekend of fun between Winifred, the Upper Missouri Breaks National Monument, Lewistown, and the Judith River. There will be fly-ins and several airstrips to explore over the course of the three days, as well as camping and cook-outs. For more information, visit https://www.montanapilots.org/content.aspx?page_id=4001&club_id=569645&action=cira

June 25, 2022 — Lewistown Fly-In Sponsored by the Central Montana Hangar, come to Lewistown, LWT. Breakfast from 7:00 a.m. - 12:00 p.m. For more information, contact Jeff Martinez at (406) 707-0598.

June 25, 2022 — Whitefish Fly-In Come to 58S for a fly-in June 25th! For more information, contact Bill McKinney at (406) 261-4385.

June 27-July 4, 2022 — Commemorative Air Force Flying Legends of Victory Tour Bozeman, MT B-17 Flying Fortress *Sentimental Journey* and B-25 Mitchell *Maid in the Shade* will stop in Bozeman. Come see these historic military aircraft up close, or even purchase a flight in one. For more information, visit <https://www.azcaf.org/location/bozeman-mt-tour-stop/>

July 5-10, 2022 — Commemorative Air Force Flying Legends of Victory Tour Kalispell, MT B-17 Flying Fortress *Sentimental Journey* and B-25 Mitchell *Maid in the Shade* will make a stop in Kalispell. Come see these historic military aircraft up close, or even purchase a flight in one. For more information, visit <https://www.azcaf.org/location/kalispell-mt-tour-stop/>

July 11-17, 2022 — Commemorative Air Force Flying Legends of Victory Tour Missoula, MT B-17 Flying Fortress *Sentimental Journey* and B-25 Mitchell *Maid in the Shade* will make a stop in Missoula. Come see these historic military aircraft up close, or even purchase a flight in one. For more information, visit <https://www.azcaf.org/location/missoula-mt-tour-stop/>

July 16-17, 2022 St. Ignatius Fly-In Come to St. Ignatius, 52S, for a weekend of fun. Saturday, July 16th there will be a free barbeque, as well as helicopter rides available for purchase from 4:00 - 8:00 p.m. Sunday, July 17th there will be a free huckleberry pancake breakfast, and more opportunities for affordable helicopter rides. For more information, contact Michael Kuefler at (406) 544-2274.

July 16, 2022 — Schafer Meadows Work Session Fly in to Schafer for the annual work party! Work starts at 9:00 a.m.

July 22-23, 2022 — Aviation Career Exploration (ACE) Academy See Page 3 for more information.

July 23, 2022 — Lincoln Airport Annual Community Open House and BBQ Potluck Head over to S69 from 10:00 a.m. to 3:00 p.m. for their annual community open house/barbeque potluck and fly-in. For more information, contact Jerome Cain at (406) 461-5631.

July 23-24, 2022 — Flight Over the Falls Montana Military Open House The Malmstrom Air Force Base 341st Missile Wing and the Montana Air National Guard 120th Airlift Wing are co-hosting a Montana Military Open House at the Great Falls airport. There will be aerial demonstrations both days, including the U.S. Air Force Thunderbirds, as well as a variety of other organizations and aircraft. This event is free and open to the public. For more information and safety reminders, please visit www.greatfallsairshow.com

August 5-6, 2022 — Search Pilot Clinic, Helena See Page 3 for more information.

September 10, 2022 — Glasgow Open House and Car Show 10am-2pm. Lunch sponsored by Cape Air. For more information, contact Lucas Locke at (406)228-2719



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Thank you for reading this month's edition of Montana and the Sky, fly safe!

Do You Know of an Aviation Event in Montana?

Montana Aeronautics relies on input from sponsors, planners, hosts, and volunteers from aviation events in Montana to let us know about planned aviation activities. Please let us know what events you have planned, and we will put them on our calendar of events to share with the flying community.

Contact Montana Aeronautics at mdtaerosafeteyed@mt.gov or (406)438-7677

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Alternative accessible formats of this document will be provided on request. Persons who need an alternative format should contact the Office of Civil Rights, Department of Transportation, 2701 Prospect Avenue, PO Box 201001, Helena, MT 59620. Telephone 406-444-5416 or Montana Relay Service at 711.

Contact Matt Maze, MDT External ADA Coordinator, at (406) 444-5416 or mmaze@mt.gov, two weeks prior to the event if you are a person with a disability and require a reasonable accommodation or auxiliary aid or service to participate an event. The Department of Transportation makes reasonable accommodations for any known disability that may interfere with a person's ability to participate in training. Persons needing an accommodation must notify MDT no later than two weeks before the date of training to allow enough time to make arrangements. To make your request, you can call (406) 444-5416, or through the Montana Relay 711.