

Montana and the Sky

Montana Department of Transportation

Aeronautics Division

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2019 Montana Aviation Scholarships Awarded to Fifteen Outstanding Candidates

Through the generosity of Montana aviation communities, organizations, families and individuals, sixteen scholarships, valued at more than \$18,000, have been awarded to well deserving students. These scholarships are offered to Montanans to support their aviation educational career goals. Congratulation to the recipients pictured below.

Scholarship sponsors and committees examined over 160 applications and selections were made at the end of January. Scholarship recipients have been invited to attend an award luncheon being held during the 2019 Montana Aviation Conference at the Fairmont Hot Springs Resort in Anaconda, Montana on March 1, 2019. They will be presented with their award, certificate, and in some cases, will have the opportunity to meet the scholarship sponsor.

More information about Montana aviation scholarships can be found at MDT Aeronautics Divisions website <https://www.mdt.mt.gov/aviation/scholarships.shtml>. Scholarship recipients continued on Page 3...



*EAA Missoula Chapter 517 Scholarship recipient **Carina Bracy***



*Montana Ninety-Nines Scholarship recipient **Morgan Bowen***



*Aviation Organizations of Montana (AOM) Flight Training Scholarship recipient **Adrian Garcia***



*Bob Redding Memorial Scholarship recipient **Nicole Cannavaro***



*Choice Aviation Scholarship recipient **Jordan Carter***



*Montana Antique Aircraft Association Scholarship (MAAA) recipient **Heidi Heiland***

Aircraft Performance



*Schafer Meadows backcountry strip.
Photo Credit: MDT Aeronautics Division*

When we speak of aircraft performance, we're usually answering 3 basic questions: How much can I haul? How far can I go? How long will it take me?

It sounds simple, but there are a few variables you must consider in order to answer each of these questions. Most of the variables have to do with aircraft performance, but the most important variable does not. A good way to plan a flight is to decide how much weight you want to haul to your destination. If these items alone exceed your aircraft's capability, you'll either have to make multiple trips or get a bigger aircraft.

Once you know how much you want to haul you can figure out how much fuel you can take, which together with your weather information, will tell you how far you can go. If you have enough to get to the destination plus alternate plus reserve, you're golden. If not, you'll have to plan a fuel stop.

Now it's time to run a weight and balance calculation to make sure you will be operating within weight and balance limitations and to have information to use in predicting aircraft performance. You'll also have to consider your departure & arrival airport's runway lengths, obstructions and expected density altitude. If the field is short and/or obstructed, you may not be able to safely fly with a full load. Just because the book says the aircraft can do it doesn't mean you can do it. Pilot skill and experience count for a lot when you're trying to duplicate Pilot Operating Handbook (POH) performance figures. So be conservative when you calculate your performance and consider adding a safety factor.

Now we can figure all of this out by consulting the POH right? Maybe not. There's one more huge variable to consider, **THE PILOT**. The POH figures and all our calculations don't mean much if we can't duplicate them in our flying. That's why it's important to document your performance capability at least yearly with a CFI. Fly a typical mission weight and try to duplicate or simulate mission density altitudes. That way you'll know what you and your aircraft can do.

In order to know your performance, you need to establish a baseline. Think of your baseline as a reference that relates pilot and aircraft performance under a given set of environmental circumstances on a given day. Human factors, such as fatigue, and environmental factors, such as higher density altitudes, will result in performance below the baseline while proficiency training and lighter loading will likely result in above baseline performance.

The key point to remember is that for any given flight you need to determine how you and your aircraft will perform. Your baseline is the foundation of that determination. The greatest variable is the pilot, but if you document your baseline performance at mission weight and density altitude and fly regularly with a CFI, you're well on your way to safer flying.



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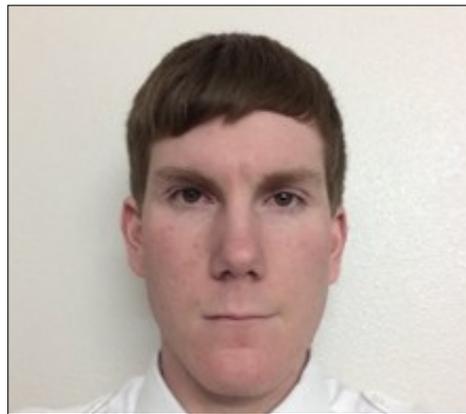


2019 Montana Aviation Scholarships Awarded to Fifteen Outstanding Candidates

Continued from page one...



EAA Missoula Chapter 517 and Montana Pilots Association (MPA) Junior Pilot Scholarship recipient **Bannack Kisthard**



Parrott Family Scholarship recipient **Hunter Koch**



Edwards Jet Center Scholarship recipient **Bridger Lamb**



Tyler Orsow and Chuck Kimes Forever Flying Scholarship recipient **Danielle Maniere**



Montana Ninety-Nines Scholarship recipient **Casey Mann**



Theresa (Nistler) Colley Scholarship recipient **Nicole Phillips**



A Love of Aviation Scholarship recipient **Hayden Patnode**



Montana Pilots Association Air Safety and Education Foundation (MPA ASEF) Flight Training Scholarship recipient **Jason Mittermaier**



Charles Taylor – Rosie Riveter Scholarship recipient **Austin Wischhusen**

Runway Condition Codes (RwyCC) Have Replaced Mu Numbers

Airports will use Takeoff and Landing Performance Assessment (TALPA) procedures to conduct runway assessments and to report those conditions in newly formatted Field Condition (FICON) Notices to Airmen (NOTAMs). The airport operator will assess surface contaminants and determine the numerical Runway Condition Codes based on the Runway Condition Assessment Matrix (RCAM) and report FICON NOTAMs. RwyCCs may vary for each third of the runway and use Percentage (PRCT) based reporting. FICON NOTAM example:

“DEN RWY 17R FICON (5/5/3) 25 PRCT 1/8 IN DRY SN, 25 PRCT 1/8 IN DRY SN, 50 PRCT 2 IN DRY SN OBSERVED AT 1601010139.”

The pilot or dispatcher would then consult the Aircraft Flight Manual (AFM) to determine what kind of stopping performance to expect from the specific aircraft they are operating. Pilot braking action reports are still used, but the term “fair” is now replaced by “medium.” “NIL” conditions on any surface require the closure of that surface.

Assessment Criteria		Control/Braking Assessment Criteria	
Runway Condition Description	RwyCC	Deceleration or Directional Control Observation	Pilot Reported Braking Action
<ul style="list-style-type: none"> Dry 	6	---	---
<ul style="list-style-type: none"> Frost Wet (Includes damp and 1/8 inch depth or less of water) <p><i>1/8 inch (3mm) depth or less of:</i></p> <ul style="list-style-type: none"> Slush Dry Snow Wet Snow 	5	Braking deceleration is normal for the wheel braking effort applied AND directional control is normal.	Good
<p><i>-15°C and Colder outside air temperature:</i></p> <ul style="list-style-type: none"> Compacted Snow 	4	Braking deceleration OR directional control is between Good and Medium.	Good to Medium
<ul style="list-style-type: none"> Slippery When Wet (wet runway) Dry Snow or Wet Snow (any depth) over Compacted Snow <p><i>Greater than 1/8 inch (3 mm) depth of:</i></p> <ul style="list-style-type: none"> Dry Snow Wet Snow <p><i>Warmer than -15°C outside air temperature:</i></p> <ul style="list-style-type: none"> Compacted Snow 	3	Braking deceleration is noticeably reduced for the wheel braking effort applied OR directional control is noticeably reduced.	Medium
<p><i>Greater than 1/8 inch(3 mm) depth of:</i></p> <ul style="list-style-type: none"> Water Slush 	2	Braking deceleration OR directional control is between Medium and Poor.	Medium to Poor
<ul style="list-style-type: none"> Ice 	1	Braking deceleration is significantly reduced for the wheel braking effort applied OR directional control is significantly reduced.	Poor
<ul style="list-style-type: none"> Wet Ice Slush over Ice Water over Compacted Snow Dry Snow or Wet Snow over Ice 	0	Braking deceleration is minimal to non-existent for the wheel braking effort applied OR directional control is uncertain.	Nil

Richey Airport (7U8)

Richey Airport was established in 1964 when Dawson County received money from the National Plan of Integrated Airport Systems. Montana Department of Transportation Aeronautics Division became the owner of the airport in December 1997 after an agreement was reached with Dawson County.

FAA identifier is 7U8, elevation is 2494 feet MLS, and the 2690 x 75 ft grass runway is in rough condition. There is no snow removal and the runway is soft when wet.

Latitude: **47-37-36.052N**
Longitude: **105-04-34.913W**

Richey Airport is located about one mile southwest of Richey. For more information about the town of Richey, MT visit richeymt.com.



Photo Credit: MDT Aeronautics Division

Airport Grants and Loans Awarded

Fiscal Year 2020

On January 17, 2019, the Montana Aeronautics Board, along with the MDT Aeronautics Division, awarded a little over \$637,000 in loans and grants to various Montana airports as part of its annual loan and grant program. The program has become a welcome contributor to Montana airports. At any given time, there is usually over a million dollars of Aeronautics Division funds obligated to various airport projects around the state. There was about \$270,000 in grants and about \$369,500 in loans available for disbursement this year for aviation projects around the state.

Funding for this program is provided by a \$0.02 / gallon tax on fuel sold to general aviation aircraft in Montana. Although most of the money given in grants and loans each year goes to leverage 90/10 Federal (FAA) match dollars for large airport construction projects, there is usually a significant percentage awarded for various smaller airport projects as well. Applications for the money are due into the Aeronautics Division on November 15 each year, and the money is typically awarded in January of the following year. Although the money is awarded in January, the funds are not available until the beginning of the next fiscal year — July 1. The nine members of the Montana Aeronautics Board have sole responsibility for awarding loan and grant monies.

This program is open to all public-use airport entities, and the money can be used for any qualified airport or aviation related project. For more information regarding the program, contact the Aeronautics Division. Here are the awards for fiscal year 2020.

The projects funded for FY 2020 are as follows:

AIRPORT	GRANT AMOUNT	LOAN AMOUNT
Anaconda - PVMT maintenance	\$22,499	\$0
Big Timber - PVMT maintenance/ Fencing	\$13,050	\$18,050
Bridger - PAPI	\$15,000	\$0
Conrad - Fuel system	\$0	\$27,000
Deer Lodge - PVMT maintenance	\$9,232	\$9,232
Dillon - PVMT maintenance/access road	\$16,400	\$19,600
Dutton - PVMT maintenance	\$2,500	\$0
Fairfield - PVMT maintenance	\$4,500	\$0
Glendive - PVMT maintenance	\$25,015	\$0
Hysham - PVMT maintenance	\$39,020	\$6,886
Jordan - PVMT maintenance	\$6,750	\$6,750
Laurel - PVMT maintenance	\$36,563	\$115,117
Lewistown - PVMT maintenance	\$10,000	\$10,000
Plentywood - Snow removal equipment, lighting	\$0	\$36,890
Roundup - PVMT maintenance	\$0	\$15,500
Sidney - PVMT maintenance	\$33,395	\$0
Terry - PVMT maintenance	\$12,790	\$12,790
Thompson Falls - PVMT maintenance	\$0	\$13,500
Turner - PVMT maintenance	\$23,286	\$23,286
Wolf Point - PVMT maintenance	\$0	\$2,500

Primary Commercial Service Airport Pavement Preservation Program

AIRPORT	GRANT AMOUNT
Billings	\$10,812
Bozeman	\$10,812
Butte	\$10,812
Great Falls	\$10,812
Helena	\$10,812
Kalispell	\$10,812
Missoula	\$10,812
West Yellowstone	\$10,812
TOTAL	\$86,500

Montana Companies Refurbish Popular AOPA Sweepstakes Airplane

By Alyssa J. Cobb

Aircraft Owner and Pilot Association (AOPA) 2019 Sweepstakes Super Cub giveaway airplane, one of the most popular in the association's history, has deep roots in Montana.

In the 1990s, the Piper PA-18 was used as a year-round ranching tool. Montana ranch owner and pilot Bill Allison, known for his exquisite saddlery, flew the Super Cub on tires in the summer and skis in the winter to survey water lines and livestock on his ranch near the Tongue River outside Miles City, cutting what would have been six hours of driving a day into 35 minutes of flying.

In 1997, Allison and his wife were in an accident in the Super Cub shortly after takeoff. The two survived with minor injuries, but the airplane was heavily damaged. A mechanic purchased the aircraft but let it sit for years. Roger Meggers, owner of Baker Air Service in eastern Montana, eventually bought the airplane and restored it as the AOPA Sweepstakes Super Cub in 2017 and 2018.



The AOPA Sweepstakes Super Cub soars over the Virginia countryside. The Super Cub spent half of the sweepstakes on tundra tires but will be given away on amphibious floats. Photo by David Tulis

Roger and his son, Darin, spent about 2,000 hours meticulously restoring the aircraft and applying more than 30 supplemental type certificates to enhance its performance. The poly-fiber fabric covering and high-gloss Lock Haven Yellow paint are so smooth that pilots can't resist touching the airplane.

The Super Cub's cockpit is as impressive as the exterior, with carbon-fiber panels, leather seats, and a modern instrument panel. The experts at Aerotronics in Billings spent nearly 400 hours designing, cutting, and helping to install the panel. The panel is only three-sixteenths of an inch taller than the original yet it is packed with state-of-the-art avionics including a Garmin Aera 660 touch-screen GPS, two G5 electronic flight instruments, a radio and ADS-B-compliant transponder, and a J.P. Instruments EDM 900 all-in-one digital engine monitor.

After the impeccable restoration by Baker Air Service and Aerotronics was complete, AOPA flew the Super Cub to Florida to debut it at Sun 'n Fun in April 2018. But, it wasn't long before the yellow Super Cub made its way back to its beloved state.

The AOPA Fly-In at Missoula just a few months later in June proved a perfect opportunity to show it off to Montana's pilots. Everyone who saw the plane was excited by the prospect of winning it and the three sets of landing gear that come with it: 26-inch Alaskan Bushwheel tundra tires, Wipaire Wipline AirGlide hydraulic skis, and Wipline 2100 amphibious floats. Several pilots noted ways they would put all three sets of gear to use.

The sweepstakes entry period ends May 31 this year. Will it end up coming back "home" to Montana? We'll know this summer!

To learn more about the sweepstakes and its official rules and ways to enter, and to see the aircraft's step-by-step restoration, visit www.aopa.org/sweeps.



Aerotronics painstakingly designed, cut, and helped install the impressive, modern panel in the AOPA Sweepstakes Super Cub Photo by Mike Fizer

Calendar of Events

February 28 - March 2, 2019 — 35th Annual Montana Aviation Conference. The conference will be held at the Fairmont Hot Springs Resort located at 1500 Fairmont Rd., Anaconda, Montana. The closest commercial service airport is Bert Mooney (BTM) in Butte, Montana. **Lodging Information** - The conference has arranged transportation between the Fairmont, Best Western and the Copper King locations.

- **Fairmont Hot Springs Resort** located at 1500 Fairmont Rd., Anaconda, MT. Rooms can be booked by calling (406) 797-3241.
- **Best Western Plus Butte Plaza Inn** located at 2900 Harrison Ave., Butte, MT. Rooms can be booked by calling (406) 494-3500.
- **Clarion Inn Copper King Convention Center** located at 4655 Harrison Ave., Butte, MT. Rooms can be booked by calling (406) 565-5001.

Visit <https://www.mdt.mt.gov/aviation/events.shtml> for registration forms. For more information, contact Aeronautics Division at (406) 444-2506 or email MDTAvConf@mt.gov.

February 28, 2019 — AOPA Rusty Pilot Seminar. The seminar will be held in conjunction with the annual Montana Aviation Conference at the Fairmont Hot Springs Resort from 1:45 p.m. - 4:45 p.m.

March 1-2, 2019 — Montana Aircraft Mechanic Refresher & IA Renewal Seminar. The seminar will be held in conjunction with the annual Montana Aviation Conference at the Fairmont Hot Springs Resort. **Due to limited seating, IA Mechanic Seminar registrations will be accepted until sessions are full.** Each session contains four hours of training with a total of four sessions. When registering, indicate which sessions you plan to attend. Only two sessions are required to meet Title 14 of the Code of Federal Regulations (14 CFR) part 65, §65.93(a)(4) for IA renewal. Visit <https://www.mdt.mt.gov/aviation/events.shtml> for registration forms. For more information, contact Aeronautics Division at (406) 444-2506 or email MDTAvConf@mt.gov.

March 1, 2019 — Aircraft Registration Renewal Deadline. Please mail in your aircraft registrations by March 1, 2019 to avoid late penalties. For more information or questions, please contact the MDT Aeronautics Division's main office at (406) 444-2506.

April 1, 2019 — Aviation Awareness Art Contest Deadline. Students from across Montana are invited to participate in the 2019 MDT Aeronautics Division Aviation Awareness Art Contest. For more information, visit <https://www.mdt.mt.gov/aviation/events.shtml>, call (406) 444-9568 or email ptrooien@mt.gov.

June 25-26, 2019 — Aviation Career Exploration (ACE) Academy. Program geared toward high school students interested in aviation. For more information call (406) 444-9568 or email ptrooien@mt.gov.

July 21, 2019 - Annual St. Ignatius (52S) Huckleberry Pancake Fly-In Breakfast. From 8:00 a.m. until 12:00 p.m. This free event is sponsored by the EAA Chapter 1122. For more information, contact Michael Kuefler at (406) 544-2274.

REMINDER

Pilot Registration Renewal

Pilot registration renewal PDF form can be found at <https://www.mdt.mt.gov/aviation/regpilot.shtml>.

Online registration is available at <https://app.mt.gov/aeronautics>. Vendor fees apply.

Alternative accessible formats of this document will be provided on request. Persons who need an alternative format should contact the Civil Rights Bureau, Department of Transportation, 2701 Prospect Avenue, PO Box 201001, Helena, MT 59620. Telephone (406) 444-9229. Those using a TTY may call (800) 335-7592 or go through the Montana Relay Service at 711.



VISION ZERO

zero deaths · zero serious injuries

MONTANA DEPARTMENT
OF TRANSPORTATION

March 2019

5403

Aeronautics Division
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Vision Zero: A Goal for Everyone

In 2018, there were 181 fatalities on Montana roads.

What does that mean? 181 parents, children, grandparents, friends, siblings, spouses, and other loved ones had lives that were cut short. It also means countless tears and shattered lives for those left with the aftermath of unsafe driving behaviors. Which loved one are you prepared to lose? If your answer is none, then Vision Zero is also YOUR goal.

It will take every one of us to work towards the day that Vision Zero is met, and the fatality total reads "ZERO." Two of the highest contributing factors to traffic fatalities in 2018 were alcohol and no seat belt.

These are behaviors that can be changed! Start by always wearing your seatbelt and planning for sober transportation. Remind your loved ones and those around you to do the same.

-Director Mike Tooley, MDT

Visit www.mdt.mt.gov/visionzero for more information.

VISION ZERO ★
zero deaths · zero serious injuries

**MONTANA DEPARTMENT
OF TRANSPORTATION**

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