

# Montana and the Sky

Montana Department of Transportation

Aeronautics Division

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## Conference Keynotes: Kendall Switzer to Kick off 2023 Montana Aviation Conference

Preparation is well underway for the 38<sup>th</sup> annual Montana Aviation Conference. The event will be held March 2-4, 2023, at the Billings Hotel and Convention Center in Billings, Montana.

The first of the keynote speakers will be Brigadier General Kendall Switzer, a U. S. Naval Academy graduate and Marine Corps F/A-18 pilot. He graduated from the elite TOPGUN fighter weapons school, served as a Naval Strike Warfare Instructor, and flew with the Navy Flight Demonstration Squadron (Blue Angels). Additionally, General Switzer served in the United States Air Force/Air National Guard as an F-16 pilot, instructor, and commander.

He is currently an aviation instructor with the Gallatin College at Montana State University, as well as a Certified Mediator (Professional Association of Montana Mediators), and a leadership/performance trainer and coach. He holds a Master's Degree in Business Administration, and graduated from the U.S. Air Command and Staff and Air War Colleges.

General Switzer brings over 38 years of leadership experience in successful, high-performance cultures operating in hostile environments throughout the world. His keynote presentations are engaging, motivating, and heartfelt. He has enabled owners, managers, and workers to achieve higher levels of performance in the construction, oil, gas, mining, aviation, automotive, and real-estate industries.

General Switzer will be speaking at the Kick Off Luncheon on Thursday, March 2<sup>nd</sup>, 2023.

Learn more about General Switzer and his team at [www.missiondevelopmentcenter.com](http://www.missiondevelopmentcenter.com).



Brigadier General Kendall Switzer will kick off the keynote presentations at the 38th Annual Montana Aviation Conference. *Photo courtesy of Kendall Switzer.*

### Conference Registration is Open!

Register for the 38th Annual Montana Aviation Conference using the link below or scan the QR code. The Billings Hotel and Convention Center is offering a group rate for conference attendees. See the event website or contact Justin Zindell at (406) 444-9580 for more information. Register online: <https://www.mdt.mt.gov/aviation/conference.aspx>

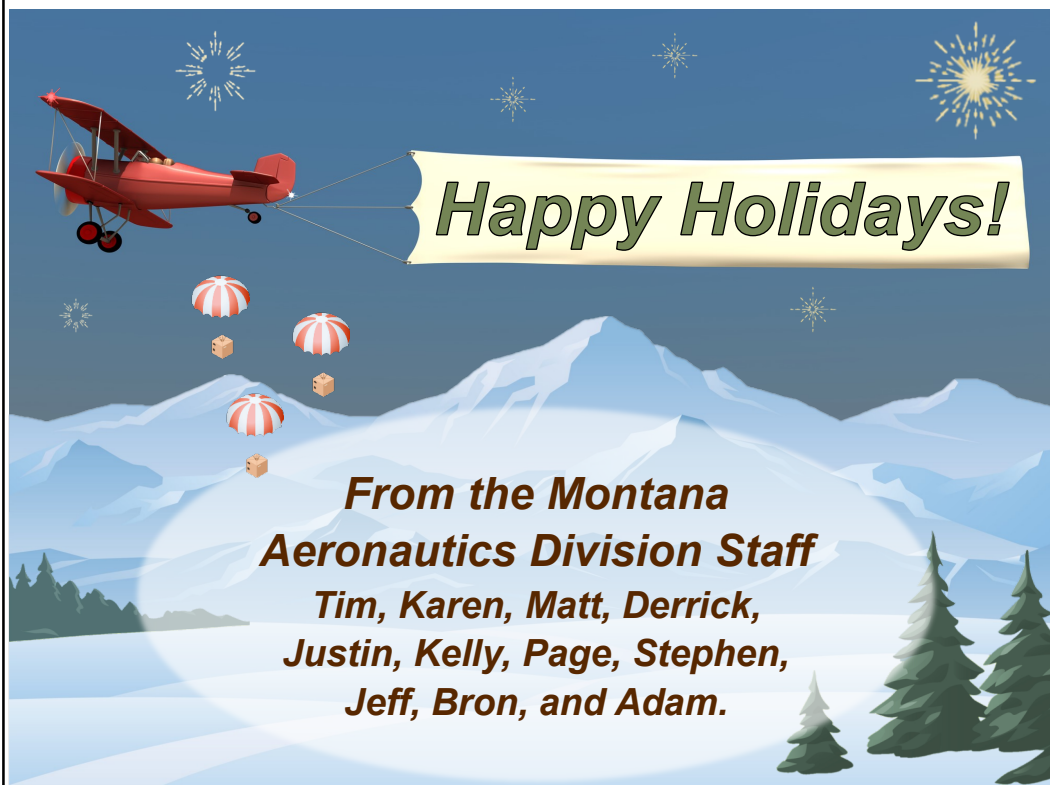


# Montana Airport Management Association Meeting at Helena Airport

The Helena Regional Airport and the Montana Airport Management Association (MAMA) hosted the Federal Aviation Administration Airports District Office (ADO) conference on October 18<sup>th</sup> and 19<sup>th</sup> in Helena, Montana. The Helena ADO oversees and manages airports across Montana and Idaho. Airport representatives and airport managers from both states attended.

Attendees received information on topics, including regulations pertaining to design and construction of airports, planning and environmental considerations, Airport Improvement Programs, and Transportation Security Administration updates. The Terminal Bipartisan Infrastructure Law and updates from Montana and Idaho Aeronautics Divisions were discussed.

Thank you to Jeff Kadlec, MAMA president and Yellowstone Airport Manager, the staff at the Helena ADO, and the Helena Airport for organizing the meeting and bringing everyone together for a helpful exchange of information to assist the airport community.



**From the Montana  
Aeronautics Division Staff**  
**Tim, Karen, Matt, Derrick,  
Justin, Kelly, Page, Stephen,  
Jeff, Bron, and Adam.**



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***Montana and the Sky***  
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# Remembering Charles A. Sherman

Charlie passed away October 12, 2022, at the age of 80 in Surprise, Arizona.

He was born to Charles Sherman, Sr. and Pauline Finn in Weymouth, Massachusetts. On July 24, 1942.

Charlie was a Navy veteran, airplane mechanic, and captain for Western and Delta Airlines. He retired from flying the Boeing 767ER for Delta in 2002. Charlie was honored by the FAA and received the Wright Brothers Master Pilot award for holding a pilot certificate for 50 years.

Charlie was an active member of Alcoholic Anonymous for 40 years. He had the unique gift of helping others to get and stay sober.

He is survived by sister Karol and Eric Weatherby and sister-in-law Kathy Lewis, and many nieces and nephews. He was preceded in death by his parents, son Mike, and brother Kirk.

The Charlie Sherman Museum, Hangar 14 at the Lincoln Airport, is filled with his collection of pictures and airline

memorabilia from his long flying career. The collection may be shown by appointment with Bob and Karen Frank-Plumlee.

A service will be held at the old Lincoln cemetery in Lincoln, Montana at a later date.



Charles A. Sherman, October 12, 1942—July 24, 2022.  
*Photo courtesy of Lucille Gardella*

## Additional Weather Cameras Operational

Thirteen Montana airports now host weather cameras. See the map on the back page of this issue for all locations.

Cameras can be viewed at:  
<https://weathercams.faa.gov>.

Installations have wrapped up for the season with the latest camera installed at the Townsend Airport (8U8).

Due to supply chain issues, some items required for installation have been taking up to four months to arrive, so additional lead time may be required for airports interested in hosting cameras.

Please contact Derrick Olheiser at 406-444-2506 for more information or if you are interested in hosting a camera.



## Quiz: Test your knowledge

1) How many aircraft are currently registered in Montana?

- A) 5,335
- B) 10,350
- C) 975
- D) 1,685

2) How many pilots are actively registered in Montana?

- A) 800
- B) 13,000
- C) 1,275
- D) 2,105

3) Why are there more aircraft than pilots registered in Montana?

- A) Not all pilots own aircraft.
- B) Some people own multiple aircraft.
- C) Some aircraft registered in Montana are based out of state.
- D) All of the above.

4) How many fatal mid-air collisions have occurred in the U.S. in the last 5 months?

- A) 0
- B) 5
- C) 9
- D) 15

5) What percentage of all mid-air collisions occur in the traffic pattern?

- A) 10%
- B) 30%
- C) 45%
- D) 85%

6) At what distance should you first announce your position and listen for other traffic when approaching a non-towered airport?

- A) 5 miles
- B) 1 mile
- C) 25 miles
- D) 10 miles

Find the answers on page 7, just above the Calendar of Events.

# Increase in midair collisions leads FAA to update see-and-avoid Advisory Circular

*Reprinted with permission from General Aviation News*

The number of mid-air collisions in recent months has led the Federal Aviation Administration (FAA) to update its Advisory Circular (AC) regarding the pilot's role in collision avoidance.

The new AC, released October 22, 2022, replaces one from June 2016, with updates regarding additional information regarding pilot actions, procedures, Notices to Air Missions (NOTAM), and aircraft technology to mitigate the risk of a pilot causing or being involved in a ground collision, in-flight collision, or near midair collision (NMAC).

"This AC is issued to assist pilots with their regulatory obligation to see and avoid other aircraft," FAA officials say in the AC's introduction. "Specifically, this AC looks to alert pilots to human contributors to midair collisions and NMACs, and recommend improvements to pilot education, operating practices, procedures, and improved scanning techniques to reduce midair conflicts."

"The most advanced piece of flight equipment in any aircraft is the human eye," FAA officials say. "Since the number one cause of midair collisions is the failure to adhere to the see-and-avoid concept, efficient use of visual techniques and knowledge of the eye's limitations will help pilots avoid collisions."

The AC notes that your vision is influenced by a variety of factors, such as:

- Atmospheric conditions
- Glare
- Lighting
- Windshield deterioration and distortion
- Aircraft design
- Cabin temperature
- Oxygen supply (particularly at night)
- Acceleration forces

Additionally, a pilot's vision is influenced by some characteristics of the objects you are viewing, including:

- Your distance from the object
- The size, shape, and movement of the object
- The amount of light reflected by the object
- The object's contrast with the surrounding environment

One inherent problem with the eye is the time required for accommodation or refocusing, the AC points out.

"It takes one to two seconds for eyes to refocus from something up close, like a dark instrument panel two feet away, to a bright landmark or aircraft one mile away," it continues.

This delay is significant, when the FAA estimates it takes 12.5 seconds to identify, react, and avoid a midair collision.

Table 1 from the AC, at right, shows the breakdown of this reaction time.

**Table 1. Aircraft Identification and Reaction Time Chart**

Event	Seconds
See Object	0.1
Recognize Aircraft	1.0
Become Aware of Collision Course	5.0
Decision to Turn Left or Right	4.0
Muscular Reaction	0.4
Aircraft Lag Time	2.0
TOTAL Time Before Aircraft Begins to Move	12.5

The AC also discusses other issues with vision and reaction time, including:

- **Empty-Field Myopia.** If there is little or nothing to focus on, the eyes tend to not focus. This usually occurs on vague, colorless days above a haze or cloud layer when no distinct horizon is visible.
- **Binocular Vision.** Binocular vision is using two eyes with overlapping fields of view, allowing good perception of depth. Binocular vision and our perception can be affected when an object is visible to only one eye but hidden from the other by a windshield post or other object, for example. That makes it essential for pilots to move their heads, not just their eyes, when scanning around obstructions.
- **Narrow Field of Vision/Tunnel Vision.** Another inherent problem with human vision is the narrow field of vision/tunnel vision phenomenon. Although our eyes accept light rays from an arc of nearly 200 degrees, they can only focus on and classify an object within a relatively narrow area of approximately 10 to 15 degrees. As a result, the eye cannot accurately identify what is happening in the distance when experiencing tunnel vision or narrow field of vision, even when the eye senses movement by its peripheral vision. That leads pilots to not believe what they see out of the corner of their eyes.
- **The Blossom Effect.** In aviation, the “blossom effect” refers to the visual phenomenon where two aircraft on a collision course will appear to be virtually motionless to each other. The other aircraft will remain in a seemingly stationary position, without appearing to move or grow in size for a relatively long time, and then suddenly bloom into a huge mass filling one of the windows. Given that we need motion or contrast to attract our eyes’ attention, this effect becomes a frightening factor when you realize that a large bug smear or dirty spot on the windshield can hide a converging plane until it is too close to be avoided.

### Tips

The AC also offers a myriad of tips on staying safe during airport ground operations, operations at non-towered airports, formation flights, training, and effective scanning techniques during flight.

“Effective scanning is accomplished with a series of short, regularly spaced eye movements that bring successive areas of the sky into the central visual field,” it advises. “Each movement should not exceed 10 degrees and each area should be observed for at least 1 second to enable detection. Although most pilots seem to prefer horizontal back-and-forth eye movements, each pilot should develop a scanning pattern that is most comfortable and then adhere to it to ensure optimum scanning.”

**Figure 1. Sample Scan Pattern**

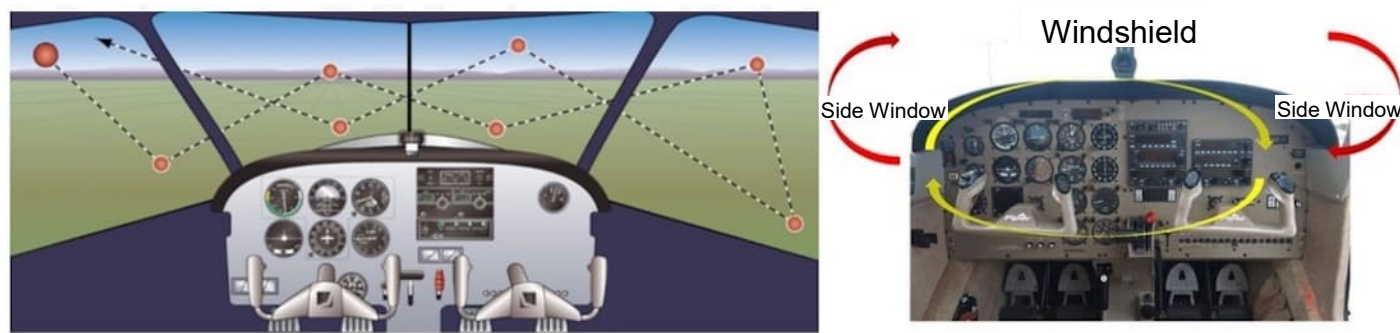


Figure 1 from the FAA Advisory Circular shows a sample scanning pattern that can help pilots see and avoid traffic.

Pilots can compensate for blind spots and enhance identifying other aircraft in a climb by adjusting the aircraft's pitch attitude to improve visibility over the nose of the aircraft (which optimizes your scanning for traffic ahead). Additionally, when in level cruise or descending, execute gentle shallow bank turns left and right for a clear view of traffic ahead and from either side.

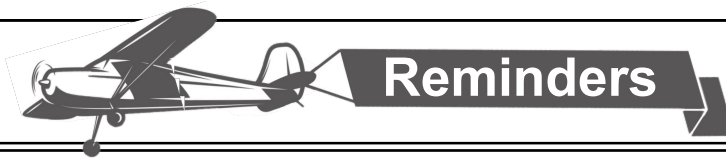
Scan the rear of the aircraft by scanning from behind the right wing, through the windscreen, to the back of the left wing.

In the traffic pattern, the FAA recommends that pilots continue to scan for other aircraft and check blind spots caused by fixed aircraft structures, such as doorposts and wings.

High-wing airplanes have restricted visibility above, while low-wing airplanes have limited visibility below. The worst-case scenario is a low-wing airplane flying above a high-wing airplane.

Banking from time to time can uncover blind spots. The pilot should also occasionally look to the rear of the airplane to check for other aircraft.

You can read the entire AC at: [https://www.faa.gov/documentLibrary/media/Advisory\\_Circular/AC\\_90-48E.pdf](https://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_90-48E.pdf)



## Reminders

### MDT Aeronautics Annual Pilot Registration

Montana is required to register all pilots in the state, with some exceptions. The annual fee is \$10 and includes a Montana Airport Directory, subscription to the monthly *Montana and the Sky* newsletter, and your annual pilot registration card.

Registered pilot information is collected to aid in the event of a search and rescue case, as it can help us locate and contact you more quickly during an emergency.

Annual pilot registration renewal memos will be mailed in early December. **If you own an aircraft, you also automatically receive a pilot registration form with your annual aircraft registration invoice.** Only one pilot form is required to be returned or completed online per pilot.

- To register as a pilot online, please visit: <https://app.mt.gov/aeronautics>. Payment processing fees apply.
- To locate and print the form online for mailing to the Aeronautics Division, please visit: <https://www.mdt.mt.gov/aviation/regpilot.aspx>
- To request a Pilot Registration form be mailed or emailed to you, please call the Aeronautics Division at (406) 444-2506 or email [mdtaerosafetied@mt.gov](mailto:mdtaerosafetied@mt.gov).

Please note: Annual pilot registration with the Montana Aeronautics Division is required by state law, with some exceptions, and should *not* be confused with Montana Pilots Association's (MPA) registration dues, if you are also a member of the MPA.

For more information, or to view the applicable statutory exceptions, please see § 67-3-211, MCA:

[https://leg.mt.gov/bills/mca/title\\_0670/chapter\\_0030/part\\_0020/section\\_0110/0670-0030-0020-0110.html](https://leg.mt.gov/bills/mca/title_0670/chapter_0030/part_0020/section_0110/0670-0030-0020-0110.html)

### 2023 Flight Instructor Refresher Course

The Montana Aeronautics Division is pleased to announce registration is open for the 2023 Flight Instructor Refresher Course!



**Tuition is \$75**

Pilots currently registered with the Aeronautics Division can save \$25!

Montana pilot registration is \$10 /year. Call MDT Aeronautics Division to register as a pilot and/or ask for the promo code to receive your discount.

- ♦ This two-day course meets FAA renewal requirements for Certified Flight Instructors (CFIs).
- ♦ Training provided by experienced instructors from Aviation Seminars.
- ♦ You do not need to be a CFI to attend. The course includes useful material for all aviators.
- ♦ A room block is offered at the Comfort Suites of Helena. Call (406) 513-1141 and reference the "MDT Flight Instructor Refresher Course" to receive the state rate.

**February 10-11, 2023  
Helena, MT**

To sign up: <https://aviationseminars.com/mt-firc/> or scan the code below.



**Sign up  
Online!**

For more information:  
Montana Aeronautics Division  
(406) 444-2506  
[mdtaerosafetied@mt.gov](mailto:mdtaerosafetied@mt.gov)

### Winter Survival Clinic

The annual Winter Survival Clinic will be held  
**January 6-8, 2023, near Anaconda, Montana.**

The course cost is \$75. This price includes meals (except for dinner on the campout night), instruction, and lodging.

**This clinic is FULL!**

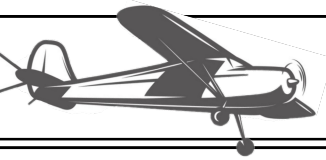
**Join the waitlist online at:**

<https://www.eventsquid.com/event/18492>

For more information, please contact the Aeronautics Division by calling (406) 444-2506 or email [mdtaerosafetied@mt.gov](mailto:mdtaerosafetied@mt.gov).



## Reminders



# MDT Aeronautics Annual Aircraft Registration Deadline March 1, 2023

Montana does not tax aircraft, but does assess an annual aircraft registration fee in lieu of tax. The fees are set by the Montana Legislature and are determined according to the type and age of the aircraft.

Aircraft customarily kept in Montana, as well as any aircraft with a Montana address on its FAA registration, **must** be registered with the Montana Aeronautics Division on or before March 1 every year (or within 30 days of purchase date for any aircraft purchased). Aircraft renewal invoices are sent the first week of December, and a reminder letter is sent before the renewal deadline. **A statutory penalty for late registrations must be assessed in the amount of five times the registration fee if payment OR signed affidavit for exemption with supporting documentation is not received by the deadline.**

***PLEASE POSTMARK OR TIMESTAMP YOUR REGISTRATION PAYMENTS OR AFFIDAVIT FOR FEE EXEMPTION WITH REQUIRED DOCUMENTATION ON OR BEFORE MARCH 1 FOR A RENEWAL (OR WITHIN 30 DAYS AFTER A NEW AIRCRAFT PURCHASE) TO AVOID THE PENALTY.***

Please note that aircraft out of annual inspection are not considered “unairworthy” as defined by administrative rule and **are** subject to annual registration fees.

Online fee payment services for aircraft and pilot registration are available at:

<https://app.mt.gov/aeronautics>. Payment processing fees apply.

For questions, please contact the Aeronautics Division at (406) 444-2506 or [mdtaerosafeted@mt.gov](mailto:mdtaerosafeted@mt.gov).

**\*ACTION IS REQUIRED BY AIRCRAFT OWNERS ON ALL AIRCRAFT REGISTRATIONS EACH YEAR**

Quiz Answers: 1) A. 2) D. 3) D. 4) B. 5) C. 6) D.

## Calendar of Events

**January 6-8, 2023 — Winter Survival Clinic.** Come learn essential winter survival skills with experienced instructors from Emergency Response International. **The 2023 clinic is full.** Join the waitlist at: <https://www.eventsquid.com/event/18492>. For more information contact Aeronautics at (406) 444-2506.

**January 17-18, 2023 — Aeronautics Loan and Grant Board Meeting.** For more information contact Stephen Torske at (406) 444-9569 or [storske@mt.gov](mailto:storske@mt.gov).

**February 10-11, 2023 — Flight Instructor Refresher Course.** To sign up visit: [www.aviationseminars.com/mt-firc/](http://www.aviationseminars.com/mt-firc/). Contact Aeronautics at [mdtaerosafetyed@mt.gov](mailto:mdtaerosafetyed@mt.gov) or call (406) 444-2506 for more information. To book a room, call Comfort Suites at (406) 513-1140 and reference “MDT Flight Instructor Refresher Course.”

**March 1, 2023 — 2023 Aircraft Registration Deadline.** Renewal notices will be mailed at the end of the year. Remember to get your Montana aircraft registered no later than March 1, 2023 to avoid penalty fees. For more information, contact Aeronautics at (406) 444-2506.

**March 2-4, 2023 — Montana Aviation Conference.** Billings Hotel and Convention Center, Billings, Montana. For more information, or to register visit: <https://www.mdt.mt.gov/aviation/conference.aspx> or call Justin Zindell at (406) 444-9580.

## Do You Know of an Aviation Event in Montana?

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

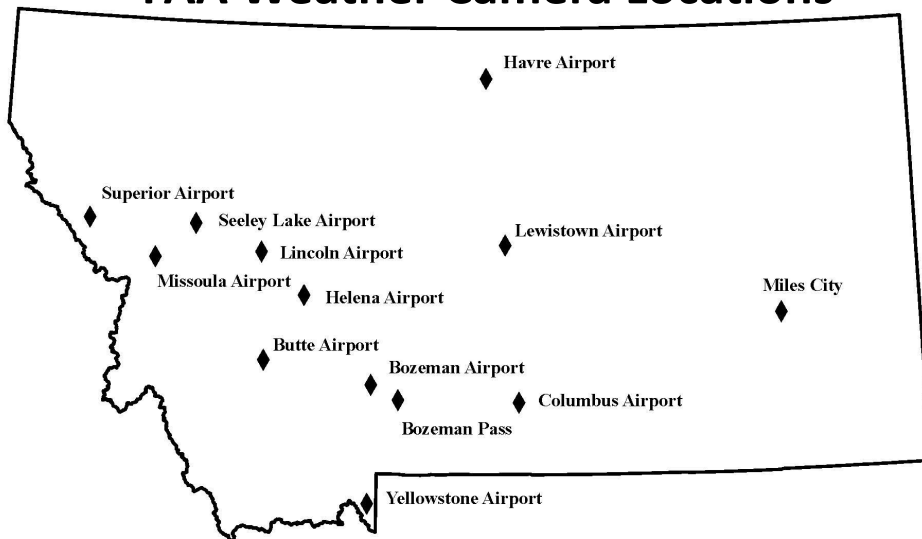
You can email your events to [mdtaerosafetyed@mt.gov](mailto:mdtaerosafetyed@mt.gov).

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**Thank you for  
reading  
*Montana and  
the Sky.*  
Fly Safe!**

To manage your *Montana and the Sky* newsletter subscription preferences, please email [mdtaerosafetied@mt.gov](mailto:mdtaerosafetied@mt.gov) or call (406) 444-2506.

## FAA Weather Camera Locations



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