PIREPS

UNIVERSITY OF NEBRASKA AT OMAHA
AVIATION INSTITUTE

University of Nebraska at Omaha Flight Team Soars to New Heights at 2025 Region VI SAFECON

Omaha, NE — October 20, 2025 — The University of Nebraska at Omaha (UNO) Flight Team, known as the Flying Mavericks, again demonstrated elite performance by capturing 2nd place overall at the 2025 Region VI SAFECON and securing their 17th consecutive bid to the national championship of the National Intercollegiate Flying Association (NIFA).

Held October 13-18 at St. Louis University Parks College, the Region VI competition brought together premier collegiate aviation teams from across the Midwest, including University of North Dakota, Kansas State University–Salina, Minnesota State University–Mankato, University of Central Missouri and University of Dubuque.

UNO's Flying Mavericks excelled across both the flight and ground events:

- 2nd Overall in the Region VI SAFECON – 545 points
- 2nd in Ground Events – 233 points
- 2nd in Flight Events – 312 points
- Winner of the Competition Safety Award

The 2025 team roster comprised 14 dedicated students who earned travel spots and competed with focus and professionalism. Team Captains Tyler Thieman and Trevor Denker led the squad, which included: Cullen Leitner, William Skradski, Chloe Schrick, Thomas Reid, Samantha Stojanov, Connor Grell, Alex Duman, Shay Sinnard, Izzie Peetz, Tyler Suing, Zach Nanfito, and Shoichi Yasui.

"Region VI is one of the toughest in the country," said senior and captain Tyler Thieman. "To place second overall and earn the Safety Award speaks volumes about our commitment to excellence." Senior pilot Thomas Reid, the team's top-scoring competitor, added: "This year's competition was intense, but our preparation paid off. I'm proud of how we worked together and stayed focused under pressure."

Scott Vlasek, Director of UNO's Aviation Institute, commented: "This team continues to impress with their dedication, professionalism and competitive spirit. Region VI is one of the toughest in the country, and earning second place overall is a testament to the hard work of our students and coaches."

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Head Coach, Skip Bailey, said: "I'm extremely proud of the way this team performed this week. All 14 members of the team competed very well and I'm excited to see what they can do against the competition at the National SAFECON in May."

Bailey and Associate Coach Alison Adams guided the Flying Mavericks through months of preparation, blending classroom instruction with rigorous flight training. Their leadership continues to support UNO's reputation as one of the premier collegiate aviation programs in the nation.

Event Highlights

- Preflight Inspection: Tyler Thieman 2nd; Zach Nanfito 6th
- Power-Off Landings: Thomas Reid 3rd; Cullen Leitner 7th; Thieman 12th
- Short-Field Landings: Team had four top 10 finishes including Leitner 4th; Trevor Denker and Thieman tied for 6th; and Alex Duman 8th
- Unlimited Navigation: Thieman & Shoichi Yasui 6th; Reid & Duman 7th
- Message Drop: Leitner & William Skradski 2nd
- Computer Accuracy: Thieman 3rd; Duman 4th; Leitner 7th; Skradski 8th
- Aircraft Recognition: Connor Grell 6th; Tyler Suing 7th; Denker 8th
- Ground Trainer: Reid 2nd; Skradski 12th
- Simulated Comprehensive Aircraft Navigation (SCAN): Reid 3rd; Chloe Schrick 5th; Shay Sinnard 7th

Looking Ahead

Already setting their sights on the next level, the Flying Mavericks now turn their focus to the 2026 National SAFECON, scheduled for May 18-23, 2026 at the Quad Cities International Airport in Moline, IL. There they will compete against the best collegiate aviation teams in the country.

About UNO's Aviation Institute & Flying Mavericks

A key element of this success story is the robust program at the UNO Aviation Institute. Since 1990, the institute has propelled students into aviation careers through top-tier flight training and comprehensive academic preparation. The Bachelor of Science in Aviation degree at UNO offers concentrations in Professional Flight, Air Transport Administration and Uncrewed Aircraft Systems (UAS).

The Flying Mavericks are sponsored by Jet Linx Aviation and compete annually in NIFA events.

Media Contact

For more information about the Flying Mavericks Flight Team, please contact Skip Bailey at lbaileyjr@unomaha.edu or 402-554-7271. A complete list of results from the 2025 Region VI SAFECON are available on the NIFA website. ■

Icing Intensity review of AC 91-74B

PIREPs are great resource when sharing icing information. Pilots submitting icing PIREPS must be able to give an accurate representation of current icing intensities, along with ice type *(see Icing – Types and Causes on page 3)*, meteorological conditions (layers with altitudes) and temperature. Furthermore, pilots need to be able to properly interpret PIREPs submitted by other pilots so that they may get an accurate picture of icing potential along their route of flight.

Trace: Ice becomes noticeable. The rate of accumulation is slightly greater than the rate of sublimation. A representative accretion rate for reference purposes is less than ¼ inch (6 mm) per hour on the outer wing. The pilot should consider exiting icing conditions before conditions become worse.

Light: The rate of ice accumulation requires occasional cycling of manual deicing systems to minimize ice accretions on the airframe. A representative accretion rate for reference purposes is ¼ inch to 1 inch (0.6 to 2.5 cm) per hour on the unprotected part of the outer wing. The pilot should consider exiting icing conditions before conditions become worse.

Moderate: The rate of ice accumulation requires frequent cycling of manual deicing systems to minimize ice accretions on the airframe. A representative accretion rate for reference purposes is 1 to 3 inches (2.5 to 7.5 cm) per hour on the unprotected part of the outer wing. The pilot should consider exiting icing conditions as soon as possible.

Severe: The rate of ice accumulation is such that ice protection systems fail to remove the accumulation of ice and ice accumulates in locations not normally prone to icing, such as areas aft of protected surfaces and any other areas identified by the manufacturer. A representative accretion rate for reference purposes is more than 3 inches (7.5 cm) per hour on the unprotected part of the outer wing. By regulation, immediate exit is required.

CALENDAR OF EVENTS

Recuring Events

3rd Thursday of every month | Third Thursday Pilot Lunch | 88 Tactical, 15350 Shepard St., Suite 1, Omaha | 11am | Open to the public

3rd Saturday of every month (April - October) | EAA 569 Fly-In Breakfast, 3rd Saturday April thru October | Wahoo Municipal Airport (AHQ) | 8-10am | suggested donation: $10/ adults; $5/kids

Last Saturday of March - October | Nebraska Chapter of the Antique Airplane Association Hamburger fly-In lunch at Hastings Municipal Airport (KHSI) | 11:30am-1pm (free-will donation)

Last Saturday of every month | Burgers & Brats | Wayne Municipal Airport (LCG) | 5-8pm

November

11/8-11/9 | Lincoln Aerospace Heritage Days | Duncan Aviation, Lincoln Airport (LNK) | 8am-5pm

December

12/10-12/12 | Drone Bootcamp – FAA Part 107 Training hosted by Prairie STEM | 1111 N 13th St., Suite 307, Omaha, NE | 8am-2pm | Register: https://my.cheddarup.com/c/drone-bootcamp/items

12/20 | EAA 569 Fly-In Breakfast | Wahoo Municipal Airport (AHQ) | 8-10am | suggested donation: $10/adults; $5/kids

Icing – Types and Causes

By Mark A. Sheldon, University of Nebraska-Omaha, Aviation Institute

Now that we are moving into the winter season, I thought we could look at the different types of icing that affect aircraft. In this article we will look at induction and structural icing. With structural icing, we will look at the three types of icing you can experience and when/where they are most likely to form. We will also look at the formation of frost. Although icing can occur anytime during any time of the year, it is most likely to occur during the winter months. All you really need is for the temperatures to be below freezing and moisture.

Let's start with ***induction icing***. Induction icing occurs on the inside of the engine of your aircraft. It can occur in aircraft that have an internal combustion (carburetor) engine or a jet engine. With carburetor icing, it occurs when moist air enters the carburetor. As it flows through the carburetor's Venturi, it will quickly cool as it adiabatically expands. This cooling allows icing to form by the process of deposition. Deposition is the process that water vapor changes straight to ice. This icing can partially or completely block the airflow, causing your engine to run rough or a partial to total loss of power from the engine. You need to be aware of the conditions that are favorable for carburetor icing, because it can occur even if the air temperatures are well above freezing, even in clear skies. I have added Figure 1 that I found on pilotworkshop.com. This shows you the temperatures and relative humidity conditions that carburetor ice can form.

As most of you know, adding heat to your carburetor is a great way to remove or keep this icing from forming.

I looked at the NTSB website when I was writing this article (14 Oct 2025), and based on their data from 2012-2021, carburetor icing accounted for 241 of the 282 general aviation accidents attributed to icing. That is 85%!

In jet engines, icing can form in a similar manner. In this instance, the air cools as it flows through the compressor air intakes, and icing form. With either type of induction icing, you should look at the aircraft's handbook for more information about this type of icing.

Now let's look at ***structural icing***. As the name suggests, structural icing forms on the outside of your aircraft when the temperatures are below freezing and there are supercooled water droplets. These droplets will then freeze when they contact your aircraft. The main issue with structural icing is that it disrupts the airflow around your aircraft, which can cause issues with its aerodynamics and stability. It can also coat your propeller and cover your landing gear. The three main types of icing are: Rime, Clear and Mixed.

Rime icing is the most common type of icing you will encounter as a pilot. This icing forms when the temperature is less than -15°C and is most common in stratiform clouds. Rime icing forms when water droplets freeze immediately as they contact your aircraft. This causes the icing to form with air bubbles between the ice, giving it a rough, opaque and milky white appearance. Because of how it forms, this icing can be cleared very

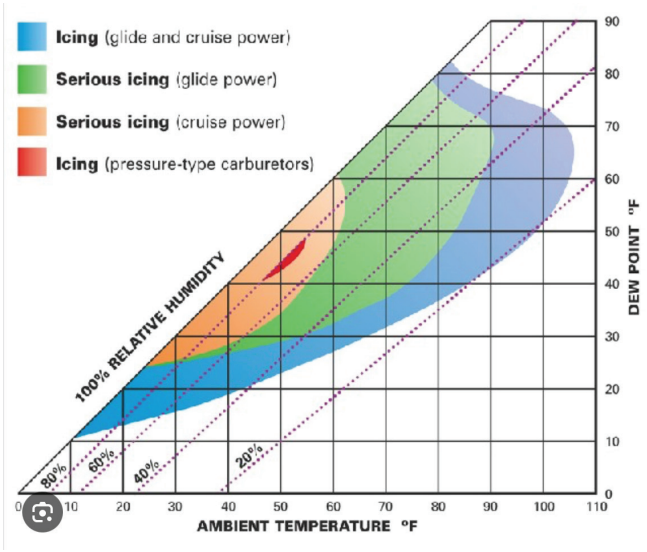

Figure 1: Carburetor Icing Formation

easily with de-icing equipment (if you have an aircraft with de-icing equipment) and is the least hazardous of the icing types.

Clear icing is the most severe and the hardest to remove when it forms. This icing forms when the air temperature is between 0°C and -10°C. Clear icing forms in a sheet-like appearance as the water droplets will spread out before freezing on your aircraft. Because of how it forms, clear icing can create a thick/heavy transparent sheet, and as I mentioned above, making it very hard to remove. This type of icing is the least common of the icing types, probably because pilots avoid flying in the conditions in which it is most likely to occur. Clear icing occurs most often when there is freezing rain or drizzle and in cumuliform (Thunderstorm) clouds. When I was in the Air Force, whenever we forecasted freezing rain, we forecasted severe clear icing. When we forecasted freezing drizzle, we forecasted at least moderate clear icing. You may also hear clear icing be called "supercooled large droplets (SLD)". This is because of the conditions in which it forms, an atmosphere with large water droplets that are supercooled, or below freezing.

Mixed icing is our last type of icing. Mixed icing is a combination of Rime and Clear icing. It will form when the air temperature is between -10°C and -15°C and can form

Icing - Types and Causes (cont'd)

in either cumuliform or stratiform clouds. Mixed icing can form in a similar manner to clear icing, so it can also be difficult to remove.

Icing can form along any type of front, but the icing associated with a warm front is more widespread than the icing associated with a cold front. This is because the warm front generally has a larger cloud pattern. Also, if freezing rain/drizzle or snow with a high-water content is occurring, more icing is possible.

Since we are talking about icing, we can't forget to talk about frost. ***Frost*** occurs either because of deposition or freezing. You need to also need to know that frost can form even when the reported surface temperature is above freezing. For deposition, the dewpoint is below freezing, and the water vapor changes straight to ice. This type of frost occurs on clear nights with light winds, and can occur on plants, grass, cars, and yes, aircraft. You may hear this also called "hoar frost". So why do you see frost forming when the temperature is 36°F. The first thing is to remember that the height of most temperature sensors is 6 feet. The air below this level can continue to cool below 32°F because cool/cold air will sink as the Earth radiates heat. This allows the frost to form. Metal objects, such as your car and aircraft, are even better at radiating their heat, so they can have frost on them even at warmer temperatures.

Freezing frost (aka Frozen Dew) occurs when the water droplets develop before the temperature drops be below freezing, at which point the droplets will freeze. This type also forms on clear nights with calm winds.

As with the other types of icing, frost can be a hazard to your aircraft by disrupting the airflow around it and adding weight to it. To mitigate the effects of frost, most people just wait for it to warm up and the frost to melt. But putting the aircraft in a warm hangar is of course another option.

To help you plan your flight and avoid the occurrence of icing, be sure to review any G-AIRMETs or SIGMETs issued by the National Weather Service's Aviation Weather Center. And while you are there, don't forget to look at the PIREPS people have submitted. Also, if you are near a military installation, they will put icing in their TAFs, but you will just need to know how to decode the coding. If you want a sheet for this, just send me an email: msheldon@unomaha.edu.

I hope this article helps with your understanding of the different types of icing you can encounter, their causes, and how to react if you encounter them. And maybe most importantly, how to avoid areas of potential icing altogether. And as I mention to my students all time, be sure and give PIREPS when you encounter any weather you feel is significant.

Safe Flying Everyone!

The FAA and MOSAIC

By David Morris

The Federal Aviation Administration (FAA) released the final Modernization of Special Airworthiness Certificates (MOSAIC) rule in July 2025. Some changes will take effect in October 2025, and other rules in July 2026. The MOSAIC final rule is going to open up significant possibilities for light sport aircraft and the sport pilot community.

Sport pilots medically "self-certify" with a driver's license and don't have to go through the FAA certification process, removing a significant barrier to aviation for many.

MOSAIC redefines the light sport aircraft category and raises the size and performance capabilities of airplanes that can be flown by sport pilots. The rule now allows alternative propulsion systems, such as electric and hybrid powertrains, to be certified as light sport aircraft.

The MOSAIC limitation of 59 knots clean stall speed will allow the sport pilot to fly an aircraft like a Cessna 172 or a Piper Cherokee. Actually, a vast majority of single-engine piston aircraft models will now qualify to be flown by sport pilots. This change takes effect October 22, 2025. Rules affecting airworthiness certification of new aircraft will take affect on July 24, 2026. The "light sport aircraft" definition will be removed from 14 CFR 1.1 in 2026 and as a result special airworthiness certificates issued to qualifying aircraft after July 24, 2026, will be granted to "light-sport category aircraft." Removal of the Light Sport Aircraft (LSA) definition allows separation of the sport pilot and the light sport aircraft regulations. Manufacturers will be allowed to design LSAs with features such as retractable landing gear, higher speeds and even simplified multi-engine flight controls. Some predict now that the new light sport aircraft category rules are set, manufacturers will likely bring even more new and modern models to market.

Night flying is now possible, as well as some commercial applications, such as aerial inspections, photography and agricultural observation. MOSAIC requires an endorsement for some of these activities and a third-class medical or BasicMed is required for night flying. According to the new rules, 2.5 hours of simulator time can be credited toward the aeronautical experience requirements of a sport pilot certificate. ■