

PIREPS

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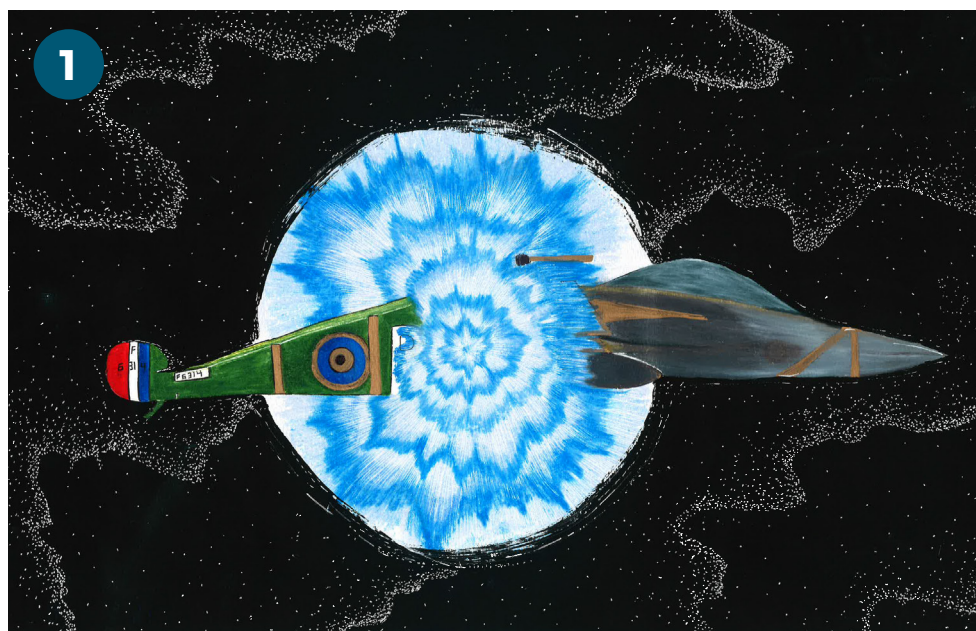
NEBRASKA

Good Life. Great Journey.

DEPARTMENT OF TRANSPORTATION

Aviation Art Contest 2020

By David Morris



1. Addison Kottas, First Place, Senior (Ages 14-17) Raymond Central, Raymond

The dream to fly is thousands of years old. The ancient stories from around the world of those who wanted to take flight started to become reality in the late 1800s. Each generation has learned what is possible while holding true to the love of flight that is in the heart of all aviators. The first airplanes were made of cloth and wood, and those early crafts were powered by engines that produced around 12 horsepower. While the physics of flight remains the same, the technology is always advancing. Aviators have shown what is possible today. What does the future hold? Where will the young aviation dreamers of today lead us?

For youngsters from ages 6 thru 17, it was time to get out their favorite artist supplies and give free rein to their imagination of creating a poster that combines the flights of the past with dreams of the future in this year's theme "Flying Yesterday and Tomorrow."

Due to the current coronavirus (COVID-19) situation, the Aviation Art Contest 2020 awards ceremony had to be canceled. This is a challenging time and our first priority is to do our part in helping everyone stay healthy. This year, all the winning participants will receive their awards in the mailbox.

We want to recognize and congratulate the following individuals for their accomplishments:

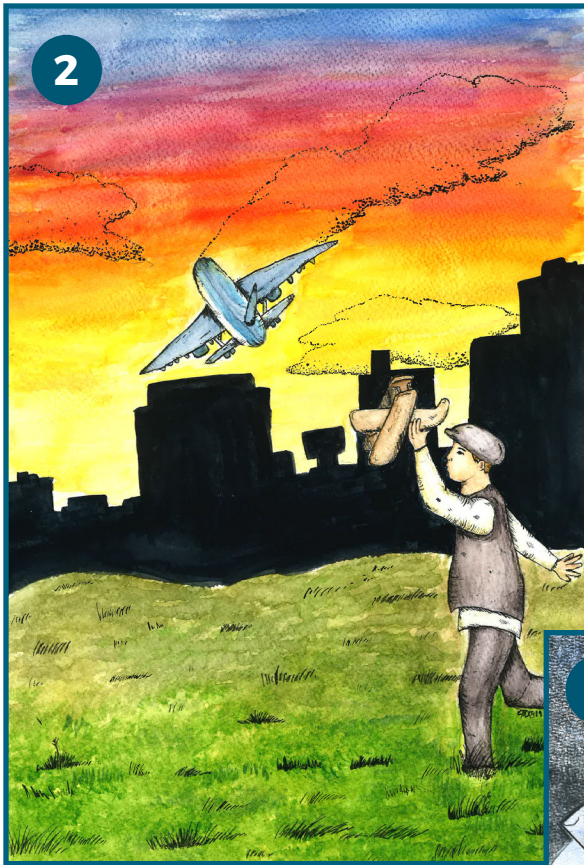
Beginning with Category I Junior (Age 6-9) was Kiersten Hans, Bloomfield, winning 3rd place, followed by Mary Clare Pearson, Wahoo, capturing 2nd place. To wrap up this group was Vivaan Mahapatra of Omaha, taking 1st place.

Pireps Is Going Electronic

**Beginning With The
August – September 2020
Issue Of Pireps, The Publication
Will No Longer Be Available In
Print Form.**

**If You Would Like To Receive
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Send A Current Email Address**

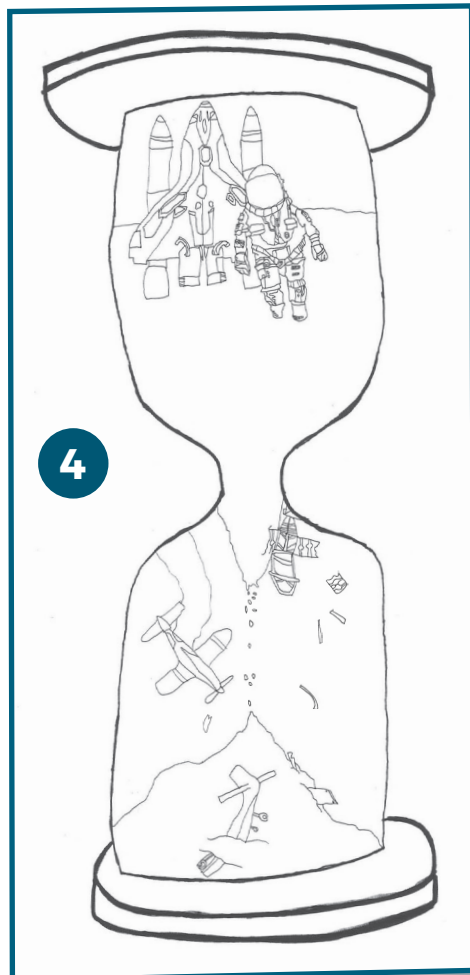
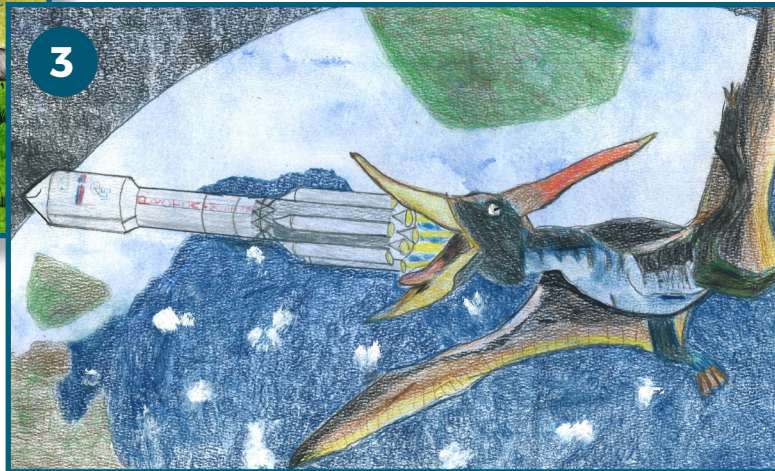
To: david.morris@nebraska.gov



In Category II Intermediate (Age 10-13) was Brandon Rosas, Grand Island, winning 3rd place, followed by Joseph Timperley, Omaha, winning 2nd place. And taking 1st place was McKaylee Houg, Omaha.

In Category III Senior (Age 14-17) was Madilyn Scholl, Falls City, capturing 3rd place, followed by Dalton Helmick, Salem, taking 2nd place, and Addison Kottas, Raymond, taking 1st place.

We are proud to congratulate the following individuals who deservedly won Honorable Mention: Katelyn Markise, Amielia Gomez, Ezekiel Terrell, Nolan Terrell, Blaise Kushen, Pricila Avila, Dayanara Jimenez, Jocelyn Amaya, Manuel Chavez, Amy Vicente Ayala, Angie De Orta, Emanuel Perez Orozco, Alayna Beaton, Sebastian Sosa Raya, Elvin Vargas Paiz, Hailey Ladenburger, Regina Corado Cruz, Bailey Lauritsen, Violet Nunnenkamp, Lydia Salzbrenner, Wynter Schulenberg, Reese Johns, Emma Clark, Kayson Maertins, Kailyn Frederick, Lizzie Hoyt, Madisyn Davis, Gaebrielle Ratliff, Cydney Forsyth and Emily Gilkerson.



2. McKaylee Houg, First Place, Intermediate (Ages 10-13), Art It Art Studio, Omaha

3. Vivaan Mahapatra, First Place, Junior (Ages 6-9), Jeanette's Art Studio, Gretna

4. Joseph Timperley, Second Place, Intermediate (Ages 10-13)' Debie Plog Art Studio, Omaha

5. Madilyn Scholl, Third Place, Senior (Ages 14-17), Falls City High School, Falls City

The NDOT Division of Aeronautics wants to send a special "congratulations" to all the contestants. Your work was outstanding and this made for tough decisions of the judging committee. To the parents, teachers and mentors, the Division wants to say a special "Thank You" for all the time, hard work and support you have put into this program. And, to our friends at the Lincoln Airport Authority Operations and Maintenance, along with all our sponsors, we want to again send a special "Thank You So Very Much." Without your continual generous support, this program simply would not exist. ■



6. Mary Clare Pearson, Second Place, Junior (Ages 6-9), St. Wenceslaus Catholic, Wahoo

7. Brandon Rosas, Third Place, Intermediate (Ages 10-13), Knickrehm Elementary, Grand Island

8. Kiersten Hans, Third Place, Junior (Ages 6-9), Bloomfield Community School, Bloomfield

9. Dalton Helmick, Second Place, Senior (Ages 14-17), Falls City High School, Falls City

2020 a year to remember



Ann Richart

2020 will be a year to remember! We started the year with our annual Nebraska Aviation Symposium in Kearney. That was a wonderful event, giving us all the opportunity to see each other face-to-face, learn about the issues that we're all dealing with, and recognize some of the excellent work that Nebraskans are doing for our industry. We left Kearney on a snowy day in late

January looking forward to the great things we would do in aviation in the year ahead.

And about a month later everything changed!

I have memories about working through events that changed aviation in my lifetime. In the '90s, Desert Storm and the Unabomber changed the way security worked at our commercial service airports. It became more difficult for general aviation users to access their hangars at these airports. But we adapted to a new way of doing business. After the terrorist attacks of September 11, 2001 all air traffic stopped and only came back slowly. TSA was born and we all had to learn to work with a new agency, new operating practices, and security change for all airports. I never would have imagined that a viral epidemic of global proportions would be our next challenge.

But here we are. Again, air traffic volume has plummeted. Congress acted quickly to pass some measures to give us

financial relief. But the relief package, so far, has raised questions. The questions and answers change on an almost daily basis. I'm at a bit of a loss to even know how to talk about our current experience in this article, because it is likely that by the time you read this, there will have been new guidance or new measures to follow.

What I'm trying to say is, I know from experience that the aviation community is a family and I'm confident that we will help each other, as we always do, to make our industry a vital tool that the entire economy will need to get back on track. Those of you who have been doing this a few years (like me) know what I'm talking about. We have always been resilient and caring.

Those of you who are at an early phase of your career, or students, may be wondering if there is a future for you in aviation. The answer is a resounding, "Absolutely!!!! Now is when we need you most!" We have adapted to changes in our industry. We got this.

We should all be prepared for changes. We should be ready to speak up when lawmakers work to define a "new normal." We should continue to be ready to use aircraft to help our neighbors, like we did last year during the floods. We are experiencing a watershed event in our industry and in our lifetimes. The measure of character is our willingness to change, adapt, and care for each other as we work through the lasting effects of COVID-19 to Nebraska's aviation businesses.

I'm looking forward to working with you to discover how we will move ahead past this pandemic. ■

The Golden Rule

By David Moll

We've all heard of the Golden Rule, and there are a couple different versions of what it means. Such as, "do unto others as you would have them do unto you." My version is, "whoever has the gold, makes the rules." Now, don't get me wrong, having the gold doesn't always mean money. As pilots, we have the gold because we are the only ones in the airplane who have the education and talent to fly the airplane; therefore, we have the power to decide when to fly and when not to fly. So when I hear about a passenger who has no aviation knowledge, no weather knowledge, and especially no aircraft performance knowledge, who has pressured a pilot to take a flight, then without a doubt our aviation education needs to be updated.

The point I'm trying to make is decisions affect more than just the folks onboard. A perfect example is the Gulfstream crash in Aspen, Colorado in March 2001. The lead passenger demanded the crew land in Aspen, even though the weather was very questionable. He did this while sitting on the jump seat, I assume to intimidate the crew so he could attend a birthday party. In the inevitable lawsuit after an airplane crash, the heirs of the pilot are also named.

I haven't read much on the Kobe Bryant crash, and nothing on the actions or history of the pilot, so I'm not insinuating he

was taking extra risks, but I think it's understood the weather they were flying in was something they call the "marine layer." If you're not familiar with the marine layer, simply put, it is where cool, but moist, surface air is pushed over land and trapped by warmer air above, creating thick fog. This fog dissipates only when the sun's heat becomes strong enough to evaporate it. And Southern California is very well known for its marine layer. Several years ago I attended a wedding very close to where the Kobe helicopter crashed and it's not a flat area; to me it looks unforgiving in minimum visibility.

Do you see a pattern here? The Gulfstream crash had their passengers going to a birthday party, and the Kobe Bryant crash had their passengers going to a basketball game. Are these so important that flights can't be delayed for a few hours? I would surely understand a simple delay due to weather, but apparently some folks can't.

In my youth as a certified flight instructor (CFI) teaching college students, I taught student pilots how to stay safe in minimum weather. The secret is very simple: The airplane will do a 180 degree turn anytime you tell it to, or wait and fly another day. These are two examples of the Golden Rule exercised at its finest. ■

Nebraska Airport of the Year 2019

By David Morris



Pictured, l to r: Eric Johnson, a member of the Airport Advisory Committee for the Fremont airport, Dave Goedeken, director of public works for the city of Fremont, and Ann Richart, NDOT aeronautics division director, during presentation of the Nebraska Airport of the Year 2019 award to Fremont Municipal Airport on January 23 at the Nebraska Aviation Symposium.
Photo by Jake Daniels, NDOT

"The 'Nebraska Airport of the Year 2019' award proudly goes to Fremont Municipal Airport!" This is what everyone present heard at the annual Nebraska Aviation Council Symposium banquet on Thursday, January 23, as the Nebraska Department of Transportation (NDOT) Division of Aeronautics Director Ann Richart welcomed Dave Goedeken, director of public works for the city of Fremont and Eric Johnson, a member of the Airport Advisory Committee for the Fremont airport, to the stage to accept the award on behalf of the city of Fremont.

It was during the flood event in the Fremont area in March 2019, when all roads were closed, that the airport became the only way in and out of Fremont. Local pilots and organizations arranged for shuttles to bring in supplies and essential community employees through the airport.

The airport's key role and exemplary effort during this historic event is just one example of the qualities that make it stand out as an Airport of the Year. The airport hosts events and provides a number of services that contribute to the community. It is the site of a "Fly-In" breakfast every year, with the local Rotary Club providing a pancake breakfast. The Fremont Municipal Airport has also been the site of meetings, which included Governor Pete Ricketts and Senator Deb Fischer. Along with the normal fuel and maintenance services being available at the

airport, you will find an office and workshop for the Civil Air Patrol.

As an active part of the Fremont community, the Fixed Base Operator (FBO) routinely hosts school groups and tours at the airport. To help improve the efficiency of the airport, the agriculture land on the airport grounds are contracted out to local farming operations.

As a result of years of study and coordination with the Federal Aviation Administration (FAA) and the NDOT Division of Aeronautics, a contract has been let for construction of a new apron in 2020 along with studies of architectural services to design a new Terminal Building in 2020/21.

Here at the NDOT Division of Aeronautics, we want to say "Congratulations" to the Fremont Municipal Airport for a job-well-done. ■

DID YOU KNOW?

By David Morris

I recently read that studies indicate General Aviation supports over 1.1 million jobs and \$247 billion in economic output.

As these statistics remind us, general aviation remains an essential and powerful contributor to our nation's economy, providing critical services to citizens, companies and communities across the country.

Economic growth and opportunity coming from the general aviation industry is increasing, and this trend is anticipated to accelerate as supersonic and electrically propelled business aircraft continue in their development phases. As an industry, we must continue to focus intently on workforce development by promoting the amazing career potential available to young people through general aviation. ■

My Remote Fuel Gauge

By Tom Winter.

I'm at home, in my living room. I check my Remote Fuel Gauge and note that the tanks in my 150, ten miles away in my hangar, now hold 16 gallons of fuel.

At a recent fly-in, the table talk turned to fuel exhaustion tragedies. In one of the stories, a survivor was quoted as saying, "I don't trust the gauges." Somebody piped up, "Of course, when the needle is bouncing on 'E' is no time to doubt. They have to be accurate at two points, and one of them is 'empty!'"

Another tragedy came from counting only the distance: The pilot knew he had enough fuel for the trip because full tanks got him all the way to his destination, so he knew that full tanks would get him all the way back. This, of course, was before GPS would have told him his ground speed!

I trust one fuel gauge, and I check it before ever leaving the house. This gauge is in a notepad, separate from the logbook. Every landing is recorded with a new line in four columns:

Column 1, the Identifier; Column 2, tach time; Column 3, "FILL" or Blank, Column 4, Hobbs time.

The Blue Bird of Happiness, sometimes known as the PIREPS Press Plane, burns a scootch less than five gallons an hour tach time, a bit more than five gallons an hour Hobbs time. The elapsed tach time since the last "FILL" effectively sticks the tanks.

Even before my first flying lesson, I looked at ten years of National Transportation Safety Board (NTSB) reports. With the Cessna 150, there was one glaring problem, and it was never addressed with an Airworthiness Directive (AD): What was it that caused all the bending of Cessna 150 aluminum? Why, the darn things run out of gas!

There could be a placard! A whimsical search for fuel-related placards actually turned up this one about a problematic fuel flow selector. Seems that if this particular fuel selector were not decisively "R" or "L" it would effectively be "off." I quote from the AD: "To prevent a lack of fuel flow to the engine caused by incorrect positioning of the fuel selector, which could result in loss of engine power, accomplish the following: (a) Install a placard..."

So I modestly propose a new placard with parallel wording. We could all print it out, plastic laminate it, and put it in our own plane!

"To prevent a lack of fuel flow to the engine, which could result in loss of engine power, accomplish the following: "Stick the tanks before flight. Add fuel as appropriate. Failure to comply may result in injury or death."

And we could add these words to the Federal Aviation Regulations (FARs) part 43.3(g), you know, that one authorizing pilots to do limited service on their own plane: "The holder of a pilot certificate may fill the gas tanks." ■

Land-O-Matic Makes "Flying Like Driving"

By Kim Stevens



In the late 50s, Cessna and their nationwide network of dealers did a great job marketing the company's new C-172 by mailing out postcards to prospective students and owners.

A number of years ago, I came across a stack of old postcards including the one shown with this article, addressed to my dad, from Clinch Flying Service, the Cessna dealer located at the Municipal Airport in North Platte at the time. The card was postmarked April 10, 1957 and was sent as a reminder that ground school class would be held on the following Saturday at 10:00 a.m.

The shiny C-172 pictured with a first-generation Corvette certainly caught my eye, as I'm sure it must have for anyone who saw it back in the day. The back of the postcard reads: "Take a 'drive' in the sky in this amazing new airplane, the Cessna 172 with patented 'Land-O-Matic' landing gear. It makes 'flying like driving!' See and fly one at your nearest Cessna dealer today."

My dad got to fly the 172 on many cross countries back then. Although he received his Private license in Tulsa, Oklahoma in the mid-50s on the G.I. Bill, he obtained his Commercial with Clinch in North Platte. "I had to drive the 44 miles to the airport for each lesson since I lived in Cozad at the time," my father told me, "but I loved that plane."

Clinch Flying Service was started in 1938 by John Clinch, a native of Norfolk, Nebraska when the airfield was a fenced pasture. Clinch is considered the "father of North Platte aviation." For thirteen years, he also managed the North Platte airport. Clinch also assisted in the development of the Nebraska Department of Aeronautics and helped organize the Nebraska Aviation Trades Association.

Eventually, my father chose music as a career rather than aviation, but I am grateful that he shared his love of flying with me. He also helped me finance my commercial license and instrument ticket. I'm glad I had the opportunity to take him up with me a couple of times to demonstrate that his investment had paid off, but more importantly, to share in the joy that we shared as father and son. ■

Turbulent Times

By Jesse Schulz, NDOT Meteorologist

Springtime can be filled with many beautiful things when grass starts to grow, flowers start to bloom and leaves begin forming on trees. However, springtime also brings hazards such as thunderstorms. Thunderstorms bring many different hazards, such as, lightning, heavy rainfall, strong winds, hail and tornadoes. All of these can be dangerous to aviation.

There are three ingredients needed for a thunderstorm to form: moisture, lift and instability. Moisture is the most obvious of these ingredients; the fact is, sufficient moisture is needed to form clouds and rain. As warm air rises it cools, which then condenses into cloud droplets that you see from the ground. As the water vapor molecules condense, they release heat, which allows the rising air to continue to rise and condense, growing the cloud bigger and bigger.

However, we need air to begin rising somehow. There are a few different methods that cause air to be lifted, including convection, buoyancy, fronts, and interactions between the jet stream and surface weather fronts. There are also mechanical methods, such as air coming to a mountain range. Air cannot go through a mountain range and will rise with it, causing the water vapor droplets to cool. Once we get the air to lift, it cools and condenses, which releases heat; this in turn causes the air to continue rising.

The last ingredient needed for thunderstorm formation is instability. Atmospheric stability is defined as the atmosphere's tendency to discourage vertical motion. If the atmosphere is unstable, when air is lifted from the surface it has positive buoyancy, which will allow it to continue to rise and cool and condense into water droplets.

When these three ingredients are present, you have the necessary ingredients for thunderstorm development. When thunderstorms form, they produce all types of hazards that can be dangerous to aviators: lightning, turbulence, wind shear and icing.

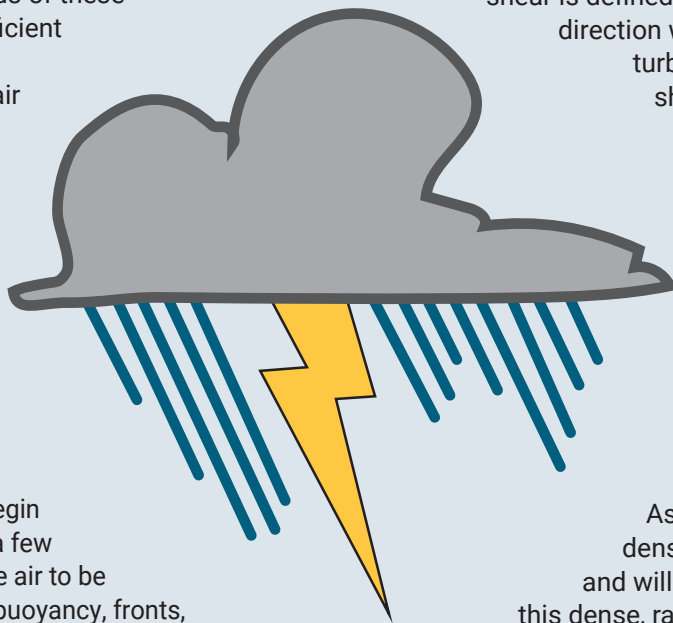
Lightning is common in all types of thunderstorms. Lightning is one of the more dangerous hazards that thunderstorms can cause, in part because it can strike up to 10 miles away from any precipitation. It can also strike the ground, but it may also strike another cloud or discharge into clear air.

Wind shear is another common hazard associated with thunderstorms: the more severe the thunderstorm, the greater the wind shear. Wind shear is defined as changes in wind speed or direction with height, which can lead to turbulence. The severity of wind shear will affect the severity of the turbulence.

One other hazard associated with thunderstorms is what is called "gust fronts and microbursts." As rain falls toward the earth, some of the rain will evaporate back into the atmosphere; to do this, it has to remove heat energy from the atmosphere.

As the air cools, it becomes denser than the air around it and will fall toward the earth. Once this dense, rained-cooled air reaches the ground, it cannot go any further and spreads out, causing what is called a "microburst." As this microburst spreads out, when it reaches the ground it causes a "gust front," which is some very strong winds out ahead of a thunderstorm. This happens on both sides of the dense, rain-cooled air. This can be hazardous to aviators; as an airplane follows its glide slope it encounters a "headwind," which causes the plane to rise above the glide slope. However, as the plane continues through the thunderstorm, it will encounter the microburst that will quickly shove the plane toward the ground.

This article has provided some insight into thunderstorm formation and the hazards they can cause to aviation. As we head further into spring and into the summer months, thunderstorms will become more active. Take time to enjoy the beauty of the seasons, while heeding the volatility of Nebraska weather and its impacts on flying. ■



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STATE FLY-IN NOMINATIONS 2021 and 2022

The Nebraska Aviation Council
is seeking nominations. Letters
have been sent to each airport.

Online nomination forms can
also be accessed at
nebraskaaviationcouncil.org

For additional information, please
contact Diane Bartels @ 402-429-3342
or DBSharpie@aol.com

Events Calendar

York Airport (KJYR),
EAA Chapter 1055 Fly-in breakfast
(free-will donation) on the
1st Saturday of the month, 8:00-10:00 AM.

Crete Airport (KCEK),
EAA Chapter 569 Fly-in breakfast
(free-will donation) on the
3rd Saturday of every month, 8:00-10:00 AM.

Aurora Airport (KAUH), Fly-in breakfast
June 27, 2020 7:00-11:00 AM
Fly-ins eat free

-50th Anniversary of Genoa Airport (97Y)
Fly-In and Breakfast
July 26, 2020 7:30-11:30 AM
NG Rescue Helicopter-Med Vac
Lions Club Pancake Breakfast
Lions Club Eye Screening
Fly-Ins eat free
Contact: Ike Anderson at 402-362-8631