PIREPS

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May 2025

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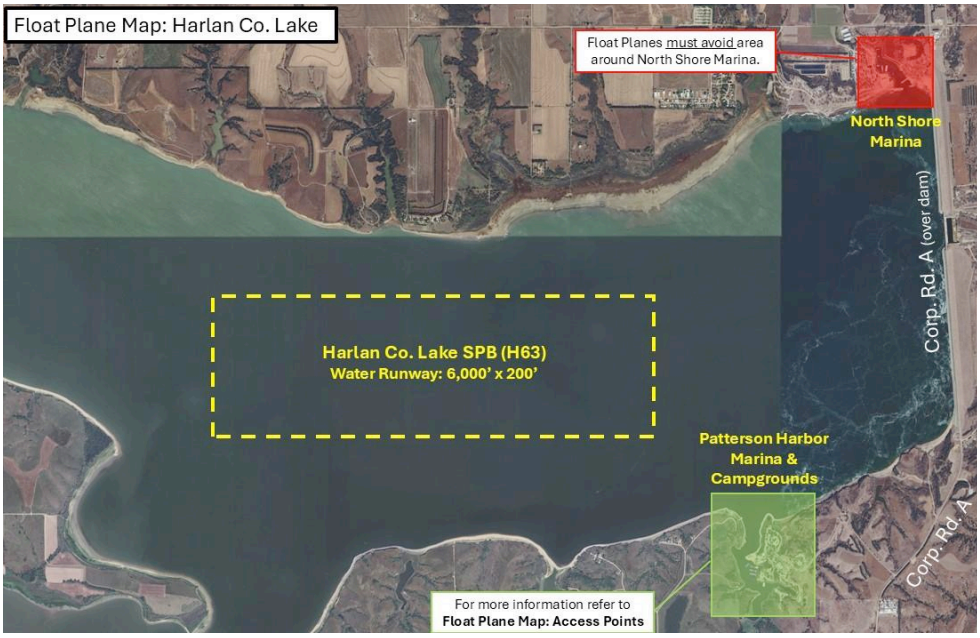
Harlan County Lake Float Plane Gathering
Friday May 2nd and Saturday May 3rd, 2025



Calendar of events

May

- **5/2-3** | Float Plane gathering | Harlan County Lake Seaplane Base (H53) | Call Cristi Higgins at (402) 217-9763 if need a courtesy car ride from Alma (4D9)
- **5/9** | LNK Outdoor Movie Series presents COCO | Lincoln Municipal Airport (LNK) 3801 NW 34th St, Lincoln, NE 68524 | 7:00pm – fun activities & food trucks, movie starts at dark
- **5/31** | NEAAA Hamburger Fly-In | Hastings Municipal Airport (HSI) | 11:30am-1pm

June

- **6/7** | State Fly-In at Gordon Municipal Airport (GRN) | 8am-2pm | Contact: Ken Costello, Gordon Airport Authority, State Fly-In Coordinator at 308-360-9087 or ken.costello@blackhillscorp.com
- **6/28** | NEAAA Hamburger Fly-In | Hastings Municipal Airport (HSI) | 11:30am-1pm
- **6/29** | Pender Municipal Airport (OC4) Fly-In | 8-11am | PIC eat free, contact John Miller 816-210-2081

July

- **7/26** | NEAAA Hamburger Fly-In | Hastings Municipal Airport (HSI) | 11:30am-1pm
- **7/27** | Genoa (97Y) Fly-In | 7-11am | Free breakfast to anyone who flies in | Contact: Richard Gaant (Airport Manager) at 402.270.5103

EAA Chapter 569 has organized a fun and educational weekend about flying on floats. Nebraska happens to have a sea base (H63) located at Harlan County Lake, Republican City. We invite you to come out and learn or share about flying on floats. Mother Nature always has the last word in aviation but several of us will be going rain or shine.

PLEASE NOTE!

There is a Walleye fishing tournament on Saturday May 3rd as well on the North Shore. We are asking our group to remain clear of that group and the North Shore Marina until that afternoon when our group will be going to the North Shore Event Center at 5:00pm.

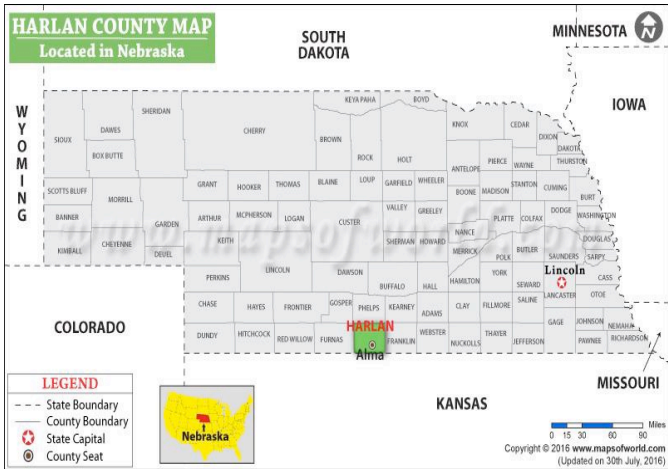
This is something Cristi Higgins has wanted to put together for many years. Lucky to have friends it is finally happening. Direct all questions or concerns to her.

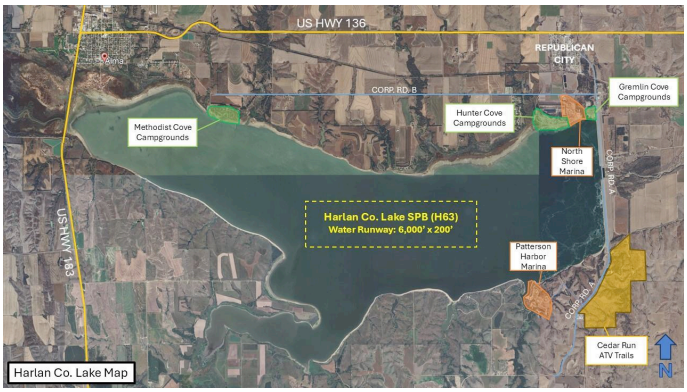
Cristi's cell 402-217-9763

This is for the whole family! We have tried to put as much information here as possible but the bottom line is be at Harlan County Lake 1st weekend in May someway somehow for a great time with your flying friends.

Harlan County Lake Float Plane Gathering Continued

Anyone FLYING in on wheels to Alma (K4D9) airport can also call Cristi Higgins for a courtesy car ride to lake.



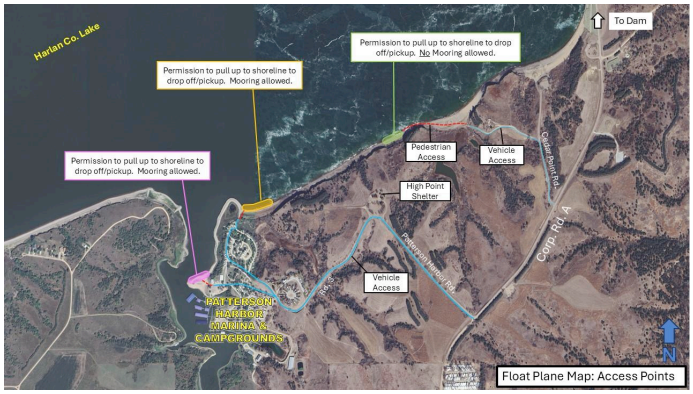


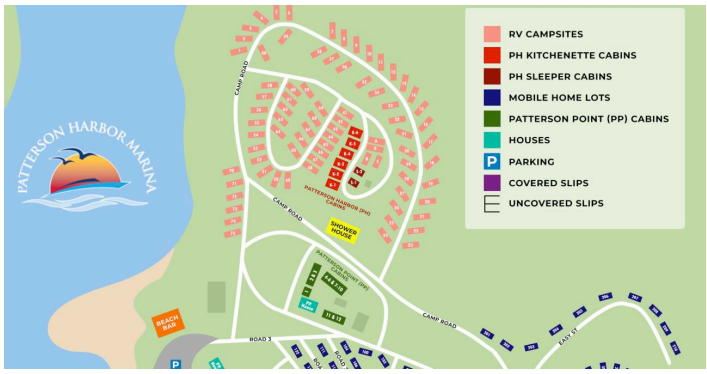
FRIDAY MAY 2nd 7pm

We will start the weekend off and most activity through the weekend will be at Patterson Harbor Marina on the South side of the lake. Join us at the High Point Shelter located on Patterson Harbor Road, for a sunset campfire. Roasting marshmallows and friends, telling lies and jokes are all expected here!

SATURDAY MAY 3rd 8am

Meet again at the High Point Shelter located on Patterson Harbor Road, for donuts provided by EAA Chapter 569. The float planes will be coming in after 9am. This location is a great view! We are only expecting a couple aircraft. Hopefully they will be able to make a few landings. No rides are happening, but we invite you to come down to the beach and see the aircraft up close once they taxi to beach. Refer to picture of map and look for signs there to find correct beach. Follow Road 3 to beach near Beach Bar on South Shore at Patterson Harbor Marina.





SATURDAY MAY 3rd 12pm High Noon

High Point Shelter for a potluck lunch. Feel free to venture to Republican City or nearby Alma for more food options. Alma is a small town with a big punch. They have groceries, pizza place (gluten free option even), coffee shop, gas stations, ice-cream shop, bakery and more. Please show these businesses we appreciate their hospitality while here.

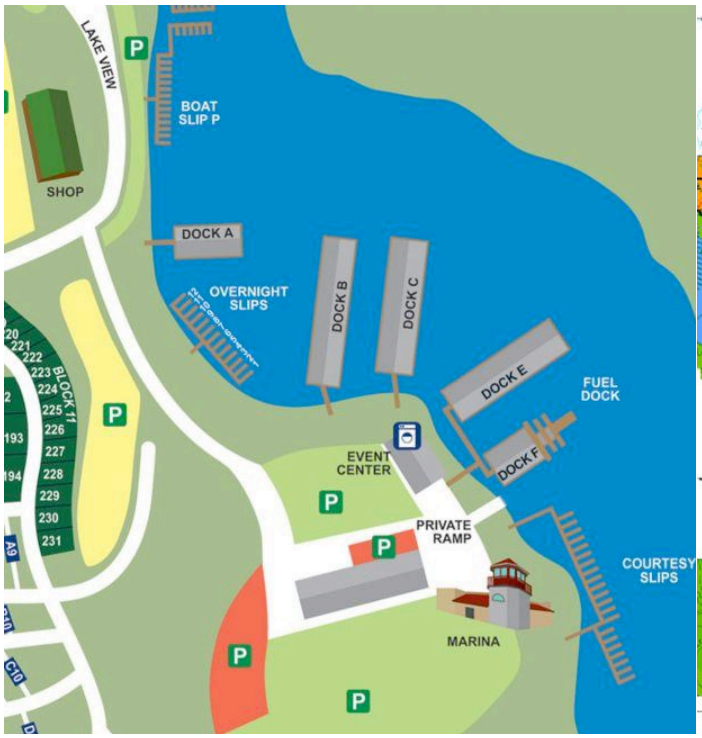
SATURDAY MAY 3rd 5pm

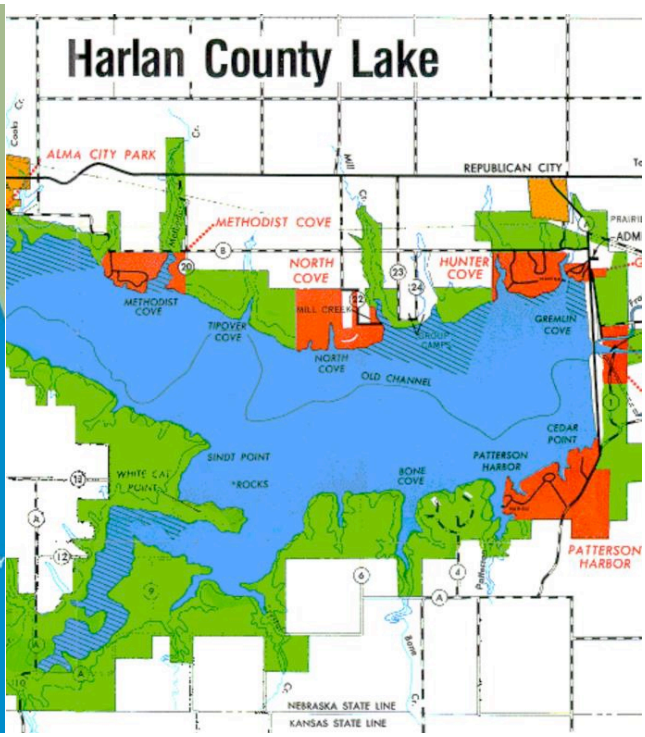
Now we head over to the North Shore Event Center, located on the North Shore for a social and presentation by Ms. Olivia Hughes. Olivia just earned her float plane rating and will share her experience. Possible we will have

Harlan County Lake Float Plane Gathering Continued

someone from the Army Corp of Engineers to speak about the lake as well. Dinner is on your own, but we encourage you to stay and mingle with us. North Shore Restaurant and bar is next door, and you can bring your food and drink into the Event Center. EAA 569 has rented the hall with a lakeside deck until 9:30pm.

This wraps up our float plane activities, but this lake has several other things to do for you and the family. Hiking trails, fishing, Cedar Run ATV Park, ground hog viewing area and so much more. Make this a weekend full of outdoor adventure. Camping options are plentiful. ■



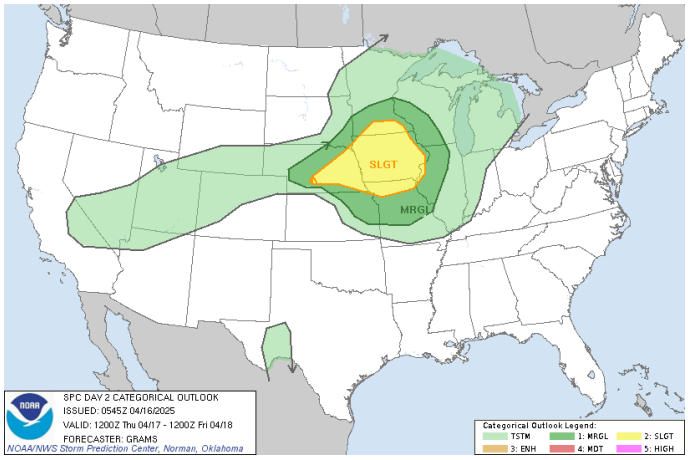


Convection Season

Spring is upon us, and we are now at the start of thunderstorm season. One flight, after dropping off some passengers in Centennial Airport in Denver, I took off empty in a Citation for Lincoln and, in typical Colorado eastern plains summer fashion, a line of thunderstorms had developed, and they were blocking our return home. Fortunately, we could climb to 41,000 and fly over a gap in the line (along with everyone else trying to depart Denver to the east). We had a front row seat to a spectacular nighttime lightning display above the cells. Fortunately, we were able to keep some distance between us and the thunderstorm.

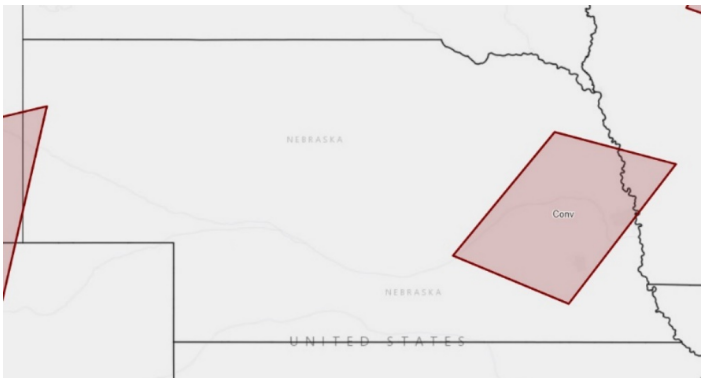
Thunderstorms are hazards to flying for multiple reasons: severe updrafts and downdrafts, turbulence, microbursts, lightning, hail, heavy rain, icing, loss of visual reference to the horizon, and the potential for tornadoes. Pilots need to route around or above them or wait them out on the ground.

The earlier a pilot can predict convective activity, usually the lower the inconvenience. The Storm Prediction Center (https://www.spc.noaa.gov) offers 1, 2, 3, and 4-8 day outlooks which displays areas of expected convective activity and is updated several times daily:



This Day 2 outlook graphic lets me know that on April 17th, 2025), I may need to be mindful of convective activity especially in eastern Nebraska. The forecast discussion summary that accompanies this graphic states “Isolated to scattered severe thunderstorms are possible, mainly from late afternoon Thursday into the evening, across parts of the Corn Belt States. Large to very large hail, a couple tornadoes, and localized damaging winds may occur”. If I may be flying during that time, then I will need to continue to get updated weather information as we get closer to takeoff.

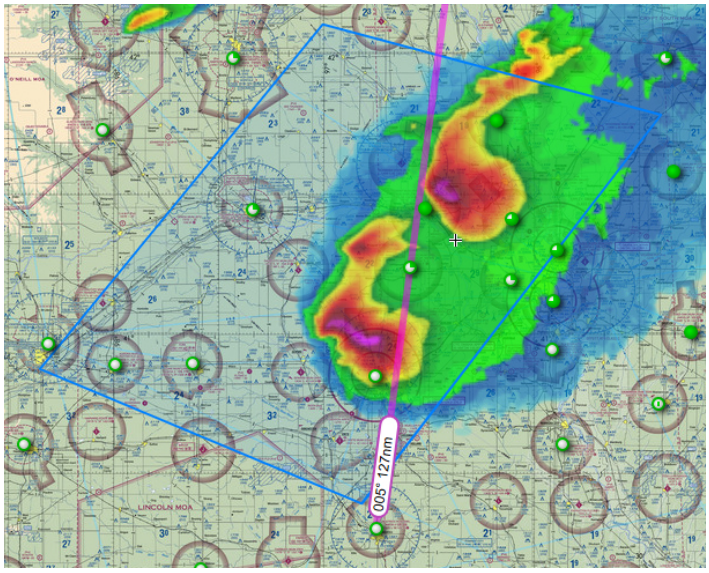
As we get within a few hours of departure on the day of the trip, I can use the Traffic Flow Management Convective Forecast (https://aviationweather.gov/tcf) to get an updated forecast: The forecast shows that at 8 PM (CDT) on April 17th, expect medium coverage with tops greater than 40,000 ft around the Missouri River in eastern Nebraska.



For discussion, let’s consider a flight from Beatrice (BIE) to Sioux City (SUX) departing at 8 PM. At 8 PM, I find a convective sigmet has been issued for Eastern Nebraska (https://aviationweather.gov/gfa/#sigmet):

A quick peak at the current radar shows my route will go right through areas of heavy precipitation:

We have 2 options: we could wait this storm out (which is never a wrong answer), or we could consider a route that



keeps us away from the cells with an emphasis of staying in VMC where we can see and avoid any cells. You will find the best chance for clear, smooth air on the upwind side of thunderstorms. Time lapse radar shows these cells moving eastward (coincidently, along a eastward moving cold front, which is providing the lifting action for these cells). You likely will not find the skies as clear or as smooth on the downwind side, with precipitation, turbulence, or hail (especially under any anvil that may form ahead of these cells). Therefore, for this trip, I may consider a route to Sioux City via the Columbus VOR, knowing quite well that there are several diversionary airports along our route should any additional cells pop up. We can make the turn towards Sioux City when we are certain we can stay in the clear. ■

It's Spring, so Let's Talk Thunderstorms.

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

Let's first look at what a thunderstorm is. A thunderstorm is a local storm produced by a cumulonimbus cloud and is always accompanied by lightning and thunder. Thunderstorms can also produce heavy rains, large hail, strong winds, severe icing, extreme turbulence, and tornadoes. Pilots should stay at least 20 nautical miles away from thunderstorms. Whenever I talk about thunderstorms in my Aviation Meteorology class, I do a Foot Stomp. I do this just emphasize the dangers that they cause for aircraft, especially general aviation aircraft.

What conditions are needed for a thunderstorm to form? Thunderstorms can develop anytime there is a source of lift (surface heating, fronts, low pressure centers, convergence, or orographic) and the atmosphere is unstable. Moisture is also an important part of thunderstorm development, and the more the moisture the better! Thunderstorm heights can range from 20,000 – 80,000 feet tall, and no matter their height, you should respect all of them.

How long do thunderstorms last? Thunderstorms generally last 30 – 90 minutes and go through three stages of development during this time. The first stage is the cumulus stage which is marked by only updrafts. These updrafts can reach speeds of 22 – 34 mph. The second stage is the mature stage which is the most severe part of the thunderstorm development. During this stage, downdrafts begin, and precipitation starts to occur at the Earth's surface. The updrafts during this stage can reach speeds of 56 – 90 mph, and in supercell thunderstorms, the speeds can reach 175 mph. This is also the stage where hail and tornadoes can be produced. The last stage is the dissipation stage, which is dominated by downdrafts. The rain will end, and the thunderstorm will dissipate.

Now let's look at air mass, multi-cell, and supercell thunderstorms. Air mass thunderstorms will develop either because of convection, orographic lift, or nocturnal lift. Convective thunderstorms are formed by surface heating and occur mostly in the mid to late afternoon. Orographic thunderstorms form as air is lifted by a mountain. Lastly, nocturnal thunderstorms form at night by lift provided by the low-level jet.

Multi-cell thunderstorms are clusters of single cell thunderstorms. The life cycle of the individual cells is still 30 – 90 minutes, but because of the dynamics associated with multi-cells systems, they system itself can last much longer. A squall line is a good example of multi-cell thunderstorms. These can form because of fronts and drylines.

Supercell thunderstorms are the most dangerous, but the least common. A supercell thunderstorm is associated with a rotating mesocyclone and can produce violent tornadoes and very large hail. See Figure 1.

Figure 1 - Supercell over Millard, NE., Jun 29, 2016.

Thunderstorms Continued

What makes a thunderstorm severe? A thunderstorm is classified as severe if it produces winds > 50 knots (58 mph) and/or hail > 3/4 inch.

Hail is formed within a cumulonimbus cloud anytime it reaches the freezing level. Water droplets are carried upward beyond the freezing level by the updraft where they freeze. The hailstone will grow larger as more water is lifted and freezes on the hailstone that is formed. The hailstone will continue to grow if the updraft can support it. Once it is too heavy, it will fall to the ground. Most hail produced is small (< 3/4 inch) but they can be quite large.

What is a microburst and how can it be dangerous to aircraft. A microburst is a concentrated severe downdraft of air from a thunderstorm or rain shower that creates an outward burst of damaging winds at the Earth's surface. The occurrence of a microburst is dangerous to aircraft because they create low-level wind shear (LLWS). Figure 2 shows a depiction of the conditions you can expect when encountering a microburst.

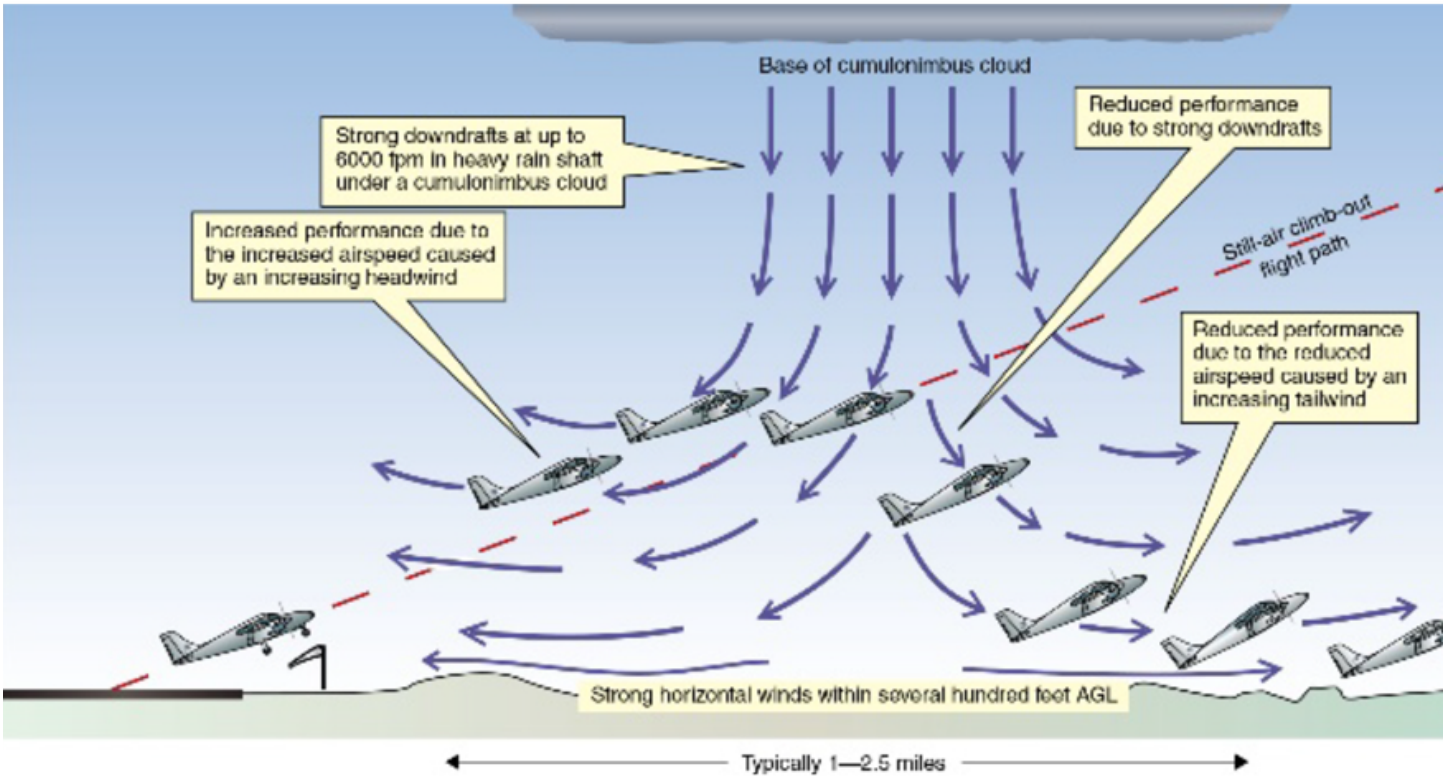
Figure 2- Image credit to learntoflyblog.com.

Another phenomenon that can be created by thunderstorms is a gust front. Also known as an outflow boundary, they are formed when a downdraft from a thunderstorm reaches the ground. The gust front can spread out in all directions or can be focused on a single direction. They are dangerous as they have upward motion along the front edge, and downward motion behind it. The passage of the gust front is associated with a pressure jump, strong winds, and a significant drop in temperature. You can identify this feature moving at you because it forms an arcus cloud, which is better known as a roll cloud because of the rotation of the cloud as it moves toward you.

Figure 3 - Roll Cloud taken in Millard, NE., Aug 31, 2014.

So how can you prepare yourself for thunderstorms before you fly? 1. Read the TAFs and observations. Look at all the TAFs and observations along your route and look for any forecasted or observed thunderstorms. Be sure and read the whole TAF. Pay attention to the lines before and after your arrival/takeoff times. For the observation, be sure and read the remarks section. Lots of good information about thunderstorms and lightning will be included there. Doing all of this will give you a complete picture of the weather. 2. Watch the local RADAR. Look at your favorite App or go to the local NWS website and look at their RADAR. 3. If you look at the TAFs/Obs and RADAR, and are not quite sure, get a weather briefing before you take off. If you have any questions about making that Go/No-Go decision, you can always call 1-800-Wxbrief and talk to an aviation weather forecaster for assistance.

Safe Flying Everyone!! ■



Gordon Municipal Airport

Saturday, June 7, 2025

Nebraska State Fly-In 8:00AM – 2:00 PM

Some of the activities being planned are:

Aerial Show by the Red Star Pilots Association, a Drone Demonstration,
National Guard Fly-Over, Vendor & Business Reps,
Pilot Competitions, Entertainment, Crafts for Children, and …

FOOD!

Including a FREE BREAKFAST!

For more information, please email:

Ken Costello, Gordon Airport Authority, State Fly-In Coordinator
ken.costello@blackhillscorp.com 308-360-9087

Sponsored by: NEBRASKA AVIATION COUNCIL

Airport location is: 1882 U.S. Highway 20, Gordon, Nebraska 69343