



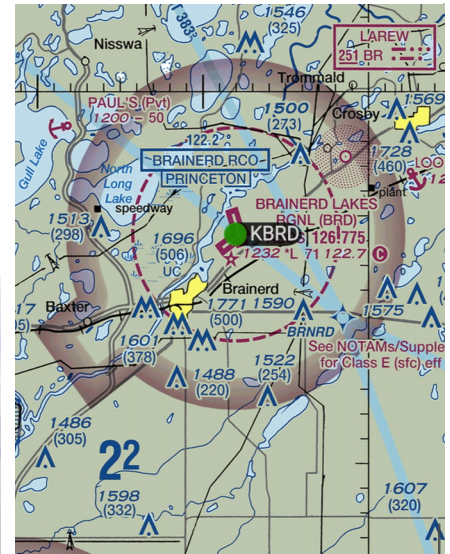
July 2023
Volume 1, Issue 10



CAVU Chronicles

ROD ZASTROW AND BYE AEROSPACE

Immediately following our general business meeting on Saturday, June 10, we attended a presentation on the future of electric aircraft from Mr. Rod Zastrow. He is the Director of Bye Aerospace and spoke how this company has been progressing in the research, development, certification and testing of their E-FLYER.



In this issue:

- Bye Aerospace
- Pine River Open House
- Brainerd Aviation History
- Longster Update
- Aviation Events in July
- Mark Your Calendar

It was interesting to learn they are working on three versions; one for two-passengers, one for four passengers and a commercial eight-passenger version. Through a spirited Q&A session Rod shared some of the following details behind their design.

- In the 2-passenger model, there will be 800 pounds of batteries in various locations.
- Endurance is ~3 hours or a range of approx. 250 nm.
- Battery operation IS affected by extreme heat and extreme cold. In cold conditions, battery pre-heat is recommended. During operation, batteries produce heat. This becomes cabin heat.

BYE AEROSPACE CONTINUED FROM PAGE 1.

Development Issues:

- Airport availability of Level II versus Level III charging stations. A Level II charging station requires a current from a 240-volt electrical source. A Level III charger requires a 480-volt electrical source.
- Providing access to electric “fuel”: Rod explained the concept of the “fuel truck” model. Instead of installing charging stations, refuel electric airplanes using vehicles that are essentially portable battery packs. Their goal is to be able to recharge an E-FLYER in 20 minutes.
- As this industry grows, so will the need for qualified A&P mechanics.
- If a student pilot only trains in electric aircraft, will this limit them to be type/class qualified only in an electric airplane? Rod commented that he was not aware of the FAA’s intention or future plans on that matter.

One distinction that Rod made about the development of the E-FLYER is that Bye Aerospace has been collaborating directly with the FAA during the entire phase of designing. This was done to ensure approval of the specific procedures, methods and measures the FAA will require to be in compliance with regulations. In doing so, they will become the only US manufactured electric aircraft to be fully certified.



With the growth in battery-powered vehicles, there may come a day when the certifying bodies for aircraft, pilots, airports and mechanics may require a distinction between using the word “engine” and the word “motor”. While we use these terms interchangeably, by definition, a motor runs on electricity while an engine runs on combustion.

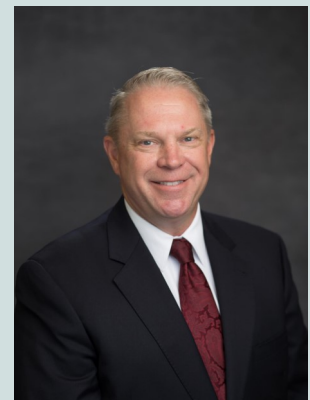
I got to thinking about this question when riding my E-bike on one of the many Minnesota biking & hiking trails. The sign at the trail-head read, “NO MOTORIZED VEHICLES.” It was installed well before E-bikes became commonplace and is intended to restrict motorcycles, snowmobiles and ATV’s. If Parks & Recreation ever decide to recognize this motor vs engine distinction, a lot of signs will need to be reworded...or restrict E-bikes, as well.

Using the familiarity of the electric auto industry as a comparison, using a Level II charging station can typically return a battery to its fully-charged state after a couple of hours. A Level III charging station can deliver a full charge in approximately 30 minutes.

To learn more, visit <https://bye aerospace.com>

In the FAR’s the definition of **Aircraft Engine** reads, “means an engine that is used for propelling aircraft. It includes turbosuperchargers, ap-purtenances, and accessories necessary for its functioning, but does not include propellers.”

Under Part 33 of the CFR’s, Part 33.7 defines the engine ratings and operating limitations for (b) reciprocating engines, (c) turbine engines. A future re-write may include a section for motor-driven performance ratings.



For those of you who attended the presentation on June 10th, you will recall meeting Rod Zastrow. Bye Aerospace just announced his appointment as President and Chief Operating Officer (COO). “Zastrow joins the leadership team to spear-head the final stages of FAA certification and commence production of the highly anticipated eFlyer 2, the world’s first FAA Part 23 certified electric airplane.”

WHAT'S COMING UP IN JULY, YOU ASK?

Pine River is having their Sesquicentennial Celebration July 6-8, 2023.

150 YEARS OF PINE RIVER!

JULY 6 - 8, 2023




JULY 6 THURSDAY
 Registration & Open House at Pine River - Backus School 12:00 - 6:00 p.m.
 Cemetery Tours
 Historic Tour of Original Barclay Trading Post & More
 Variety Show Rehearsals

Questions?
pr150years@gmail.com, 218-587-4000

Follow us on Facebook
www.facebook.com/pinerivermn150th/



SPEND THE WEEKEND!

There will be camp sites available to reserve at the Cass County Fairgrounds for electric & generator use. Camping reservations are first come, first served and will open with the rest of the event tickets.

Stay tuned on Facebook & the Chamber Website! You may choose to camp the whole weekend or an individual night, such as Saturday night following the dance & beer garden.

JULY 7 FRIDAY

School Open for Individual Class Gatherings & Registration 9:00 a.m. - 6:00 p.m.

Picklefest Activities next to Tractor Supply 10:00 a.m. - 5:00 p.m.
Vendors, Contests & Local History

Quilt Show at New Life Community Church 10:00 a.m. - 3:00 p.m.

Visit Downtown & Around the New Dam Sidewalk Sales, Food & More

Historic Depot Open 1:00 - 5:00 p.m.
Featuring Historical Displays, Local Photos, & More

Duck Races

Farmer's Market 2:30 - 5:30 p.m.

Variety Show at the School 7:00 p.m.

JULY 8 SATURDAY

Lion's Club Pancake Breakfast at the Fairgrounds 8:00 - 11:00 a.m.

School Open 9:00 - 11:00 a.m.

Quilt Show at New Life Community Church 10:00 a.m. - 3:00 p.m.

Parade Downtown 11:00 a.m.

Car Show at the Fairgrounds 12:00 - 3:00 p.m.

Dedication of the New Dam 12:30

Visit Downtown & Around the New Dam Sidewalk Sales, Food, Demonstrations & More!

Dance, Music & Beer Garden at the Fairgrounds 7:00 p.m. - 12:00 a.m.

WAYS TO CONTRIBUTE

- Be an act in the Variety Show
- Be in the Parade
- Volunteer for Activities
- Host your own Activities
- Participate in Sidewalk Sales
- Play Music at Events / Downtown
- Participate in the HGN's Beard Growing Contest
- Be a Food Vendor
- Purchase Reusable Pine River Shopping Bags
- Keep a Lookout for Sponsorship Opportunities
- And of Course, Attend the Events & Have Fun!

A link to sign up & for more information will be available on our Facebook & the Pine River Chamber's Website at the beginning of 2023!

The reason I bring this up is because on Saturday, from 1:00—4:00 pm, there will be an open house at the Pine River Airport.

PINE RIVER AIRPORT

**Meet among others: MN State Patrol,
Experimental Aircraft Association
members & North Memorial Aviation
pilots and view their aircraft!**

JOIN US!



Open House
 Pine River Airport
 Saturday, July 8, 2023
 1PM to 4PM
 Static display of aircraft!
 Meet your local pilots and mechanics to discuss general
 aviation and career opportunities!

Immediately following our regular business meeting on Saturday the 8th, EAA Chapter 1610 will be participating in this event. We will have our canopy set up on the tarmac. Those who have volunteered to help out are: Rod, Becky, Ron, Mark C, Mark B, Walt & Corinne and Trudi.

While this is not planned as an official "Fly-In", pilots are welcome to arrive by air.

Aviation Stays Alive in the 30's

By Mike Petersen

Few would argue that the 1932 Brainerd Airshow was smaller and less spectacular than that of 1929, however it certainly could be deemed a success. In spite of millions out of work and barely enough to feed their families, interest in aviation was still keen in the general public, and a free event like an airshow was perfect for the time.

The great depression was no doubt disastrous for the aircraft industry. With the change in the economy, many manufacturers that entered the industry were not able to sustain their companies when the demand for aircraft plummeted. Of the hundreds that shuttered their factories, most you have probably never heard of. If you are at all a study of antique aircraft you would recognize major firms closing like Alexander Aircraft maker of the Eaglerock, Command Aire Biplanes, Loening Aircraft, Granville Aircraft, maker of the Gee Bee, and Travel Air. Of those, Travel Air was shut down during the depression only to have Walter Beech start it back up again as Beechcraft.

It was no surprise then that aviation activity slowed down in Brainerd as well. The 1933 airshow drew just seven aircraft and pilots and about 5,000 people. The highlight of the show was parachute jumping including a thrilling delayed release at 1,000 feet. While airshows continued during the 30's they continued to decline in size and scope. The Brainerd area however would continue to grow into this decade of aviation with infrastructure projects.

January of 1933 brought the beginning of construction planning for the Gull Lake Airport. Intended to serve the resort community it was to be built on the Pine Beach Peninsula. Expecting to finish the grading by February, labor issues halted further progress until June when they returned to work.

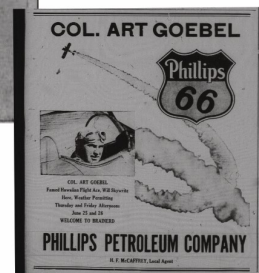
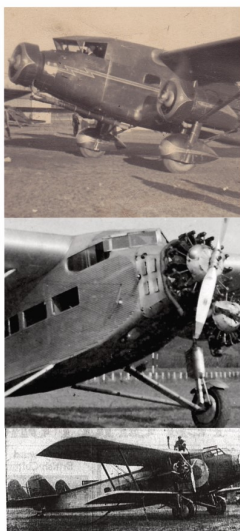
In January of 1934, the Rosko brothers agreed to lease the airport to the city of Brainerd for \$1.00 per year for a five year lease, and forgiveness of property taxes. The city council like most city councils, saw this as an opportunity, as the lease made the airport eligible for federal funding for improvements. By the middle of January construction was in full swing with 110 men working on building 3,000 total feet of runways. The project cost of \$11,076 was paid by the federal government under the Civil Works Administration(CWA) intended to provide employment to those desperately in need. Originally expected to be complete in February of 1934, inspection snafus and the failure of the CWA program. the project was on hold until August when it was competed under another program FERA(Federal Emergency Relief Administration).

Perhaps the most exciting thing to actually happen IN the air was a formation of 10 Army Bombers that flew over the city in July 1934, en-route to Winnipeg, creating quite a stir if for only five minutes. In addition there was an all day "flying circus" airshow promising free airplane rides in a variety of aircraft.

In what had the potential of a big news story, Charles Lindbergh paid a visit to his uncle Frank, the Crosby postmaster in September of 1935, visiting again three days later with his wife. His uncle said he was wearing dark glasses to hide his identity and the Dispatch reported that he had not been seen in Brainerd!

The summer of 1936 was a bit more exciting for aviation buffs.

In June the legendary pilot and skywriter Art Goebel came to town to perform his aerobatic and skywriting show. Sponsored by Phillips Petroleum he performed for two days. Winner of the deadly 1927 Dole Race to Hawaii, Goebel was world renowned as a stunt pilot, air racer and a pre-eminent skywriter. Google him, the story of the Dole Race that killed many a pilot is most interesting.



Rosko field had at least 3 different Tri-Motors, a Ford, a Stinson and the giant Boeing Biplane giving rides at one time or another. Interestingly enough, the cost of airplane rides seems to be a barometer of how the economy is doing. Look at the ads below.

FREE AIR SHOW
The Three Hawks
 SATURDAY AND SUNDAY
 Standing By
LYLE STRONG
 Upside Down Flying, Rolls and Spins
PARACHUTE JUMP
 by
LEO KUVRNA
 Most renowned jumper in the Northwest
AIR RACE
 RAY GRETEL and LYLE STRONG
 Transport Plane
6 Place Cabin Plane, piloted by Paul Quinn
 who has flown 15 years, with a perfect record, carrying 50,000 passengers.
SCENIC RIDES OVER BRAINERD
 for Only
75c
osko Bros. Airport
 Brainerd, Minn.
 Show Starts at 2 p. m.

1933

40c
 BETWEEN
 2 and 3 p. m.
50c
 3 and 4 p. m.
60c
 4 to 5 p. m.
FORD
Tri-Motor
 17 Passenger Airliner
 1100 H. P.
Thursday
 September 7, only
BRAINERD AIRPORT
 Major Flying Service, Inc.
 20 years Flying Experience

1937

FLY in America's Largest Tri-Motor With CONOCO BRONZE Gasoline 50c
Arrives At the Brainerd Airport Wednesday, July 19, at 1:30 p. m. WELL BE THERE WEDNESDAY AND THURSDAY ONLY!
 This will be absolutely your last chance to fly in this magnificent airplane with our 50c Conoco Bronze Gasoline.
Remember—Flying Starts Both Days at 2:00 p. m. for 50c Each
 The Largest Ship Ever to Visit Brainerd! 28 Passengers
SCHEDULE OF RATES BOTH DAYS!
 2 p. m. to 3 p. m. 40c
 3 p. m. to 4 p. m. 50c
 After 7 p. m. 75c
 The Choice of the Operators of this Great Airliner.
Conoco Bronze Gasoline
 Sold by
LAKE REGION OIL CO.
 Grand Rapids, Mich.

1939

At the 1929 airshow Tri-Motor rides were \$3.00 and a dollar at the 1932 show. It seems that as people began to grasp the depths of the depression it became evident that they had little disposable income. Operators reduced ride prices to try and break even and keep their operations afloat. If they could keep the planes full they would likely survive.

Like everything else, nothing is ever forever, and with the winds of war blowing in Europe, everything including aviation, would soon be drastically different.

EAA CHAPTER 1610 LONGSTER PROJECT: STATUS REPORT

Progress continues. Fabric covering and reinforcement tapes on all surfaces of the fuselage and tail components has been completed. Joe did some fabric shrink-testing on one of the wings to determine the best way to achieve apply adhesives and avoid

wrinkling when the fabric is heated. The place most susceptible to this is the leading edge. To manage this, Joe and Rollie applied a thin sheet of aluminum (0.010" thick). Nicely done, gentlemen.



For those who wish to help with this project, we meet at Paul's the first and third Thursdays of every month, starting at 6:00 pm. Paul's shop is very spacious and well-equipped to accommodate this endeavor. Please feel free to join us for the camaraderie and educational opportunity to learn new skills.



ON THE 'LIGHTAIR' SIDE: 😂



OTHER ITEMS OF INTEREST ON THE JULY CALENDAR.

JULY 6: BURGERS AT LONGVILLE (XVG) from 5-7 pm.

This is sponsored by EAA Chapter 1397, the Mississippi Headwaters Flyers of Bemidji. They schedule a weekly fly-out for burgers every Thursday evening during the summer months.

JULY 15-16: THE DULUTH AIR SHOW.

This year the United States Navy Blue Angles headline the show along with a host of other world-class performers.

JULY 22-23: WINGS OF THE NORTH AIR EXPO.



LOVE OF EDUCATION LOVE OF PEOPLE

WINGS of the NORTH

AirExpo 2023

JULY 22-23

Flying Cloud Airport

Saturday 9-5 Sunday 9-4

Gates open at 8am

TICKETS ON-LINE:
\$25 for Adults
\$5 for Kids 6-17

TICKETS AT GATE:
\$30 for Adults
\$5 for Ages 6-17
Kids 5 and under - Free

SCAN ME

- 30 to 40 Aircraft
- Hangar Full of Displays
- Pancake Breakfasts (8-11am)

LOVE OF FLYING WOTN 25 YEARS LOVE OF INDUSTRY

JULY 24-30: EAA AIRVENTURE Oshkosh Fly-in.

JULY 30: THE OLIVIA LIONS FLY-IN BREAKFAST.

This will be held at the Olivia Regional Airport (KOVL) from 7:30 am to 12:00 noon.



EDIT YOUR CALENDAR

Any highlights below in **RED** means something has been added or re-scheduled for Chapter 1610 meetings and events.

July 8: Regular Meeting & **PINE RIVER AIRPORT OPEN HOUSE from 1-4 pm.**

July 15: EAGLES FLIGHTS for Adults, Brainerd Airport (CANCELLED)**

August 12: Regular Meeting

September 9: 'GRASS is a GAS' POKER RUN No regular meeting this Saturday

September 16: YOUNG EAGLES FLIGHTS at Breezy Point

October 14: Regular Meeting



CLOSING REMARKS

**The reason the Eagle Flights were cancelled is because this program is about sharing a hands-on flight experience with an adult who has already expressed an interest in aviation. It focuses on the introductory flight experiences and includes offering support and mentoring to help them achieve their goal of becoming a pilot. It is not a program for adults to simply get an airplane ride. The EAA envisions the Eagles Program as a one-to-one, hands-on experience, including extensive pre-flight, in-flight and post-flight counseling. Who qualifies? Any person 18 years or older who has expressed a serious interest in learning how to fly.

To be a pilot for an Eagles program, the requirements are the same as for the Young Eagles program. However, a separate Eagles registration form needs to be completed prior to conducting each Eagle Flight.

Current EAA members participating in the Eagles Flights program are eligible for up to \$1 million passenger liability insurance coverage, if they carry a minimum of \$100,000 per seat liability insurance. This coverage is in place automatically; no additional forms are required.



I am still interested in hearing your suggestions for future topics in the Newsletter. I also encourage budding authors to submit content.

Please contact Mark Bearss

- ◆ email to mgbearss@gmail.com
- ◆ Text to 952-818-9986

And finally, the contact information for Chapter 1610 has changed.

- ◆ The new email address is eaachapter1610@gmail.com
- ◆ The new phone number is (320) 232-5122

DID YOU KNOW...?

An easy and convenient way to keep up-to-date on scheduled Chapter 1610 meetings, events, and other aviation-related programs is our Website.

First, open your web browser and type in **#eaa 1610**.

Once you open the website, select the tab **Event Calendar**.

The rest is easy.

