



Volume 24 – 02

www.FlyingClub1.org

February 2024



The Privileged View

Steve Beste, President

Condition Inspection! I am blown away by the technical expertise in this club. If ever there were a reason to join a flying club, this is it: you can find people who know so much more about your airplane than you do.

And you're going to need that knowledge. If your Cessna has a problem, you can flip the keys to an A&P mechanic and say, "Call me when it's fixed." Not so with the planes we fly. How many A&Ps in our area have ever worked on a 2-cycle Rotax engine? I don't know of any. For that, you need our Maintenance Chief Tim Loehrke, whose *Light Sport Repairman – Maintenance* rating (and years of experience) qualify him to inspect the Breese.



Stephen Waide, Jeff Crider, Bob Chapman, Grover McCall, Tim Loehrke, Manoj Bhagwat and Mark Wood. Monty Betts, Adrien Penhoet and Steve Beste were also there.

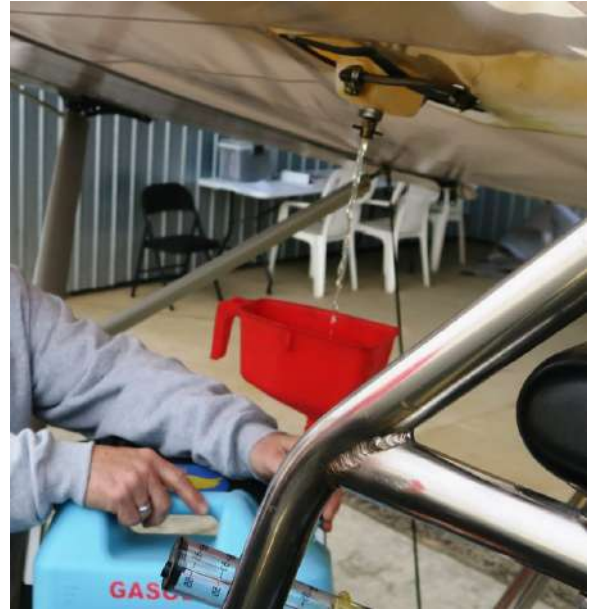
Ten of us showed up at the Culpeper Airport to watch Tim do our first Condition Inspection on our M-Squared Breese. We bought the airplane last August in Florida, took it apart to truck it north, and then put it back together. But we haven't flown it yet. That awaits the Condition Inspection, Tim's sign-off that the Breese is indeed airworthy.

And *that* awaited a warm day in January. When it came, he jumped on it and invited everyone to come watch and help.

Weight & Balance. Before getting to the inspection itself, though, Tim needed to re-calculate the plane's weight & balance. Mysteriously, the plane came with three differing weight & balance sheets, with no explanation. That being the case, Tim started from scratch.

First, we drained the old gas out of the plane's two tanks so we could get its true empty weight.

Then, Tim put his three digital scales under the wheels. But for that, he needed the plane's keel tube to be horizontal. That meant jacking up the main wheels.



Monty Betts and Grover McCall lift the wing so Tim can put a scale under the wheel

We then put the 3 weights into a spreadsheet from M-Squared. Here's the result:

WEIGHT AND BALANCE CHART

January 27, 2024 USE THIS VERSION

DATUM:	NOSE WHEEL CENTERLINE
ROOT TUBE:	LEVEL +/- 0.5 DEGREE

EMPTY WEIGHT CALCULATIONS

NOTE: INCLUDES ALL INSTRUMENTS AND ACCESSORIES, NO FUEL.

ITEM	NET WEIGHT	ARM (INCHES FROM DATUM)	MOMENT (INCH/LBS.)
LEFT WHEEL	283	74.3	21026.9
RIGHT WHEEL	317	74.3	23553.1
NOSE WHEEL	32	0	32
OR			0
TAIL SKID		183	0
TOTAL EMPTY WEIGHT =	632	TOTAL MOMENT =	44612

EMPTY WEIGHT *CG LOCATION = $\frac{\text{TOTAL MOMENT}}{\text{EMPTY WEIGHT}} = 70.59$ INCHES AFT OF DATUM

LOADING CHART

ITEM	WEIGHT	ARM (INCHES FROM DATUM)	MOMENT (INCH/LBS.)
AIRCRAFT EMPTY WEIGHT	632		44612
FUEL (6 LBS/GAL)	96	47	4512
PILOT (S)	592	49.3	29185.6
OTHER		49.3	0
GROSS WEIGHT =	1320	TOTAL MOMENT =	78309.6

LOADED WEIGHT *CG LOCATION = $\frac{\text{TOTAL MOMENT}}{\text{GROSS WEIGHT}} = 59.33$ INCHES AFT OF DATUM

MAXIMUM LIMITS

MAXIMUM GROSS WEIGHT 1320 LBS.
 MAXIMUM FORWARD CG 57.5" AFT OF DATUM
 MAXIMUM REARWARD (AFT) CG 66.0" AFT OF DATUM

*CENTER OF GRAVITY (CG)

- *Weight.* With the full 16 gallons of gas, the plane can fly with 592 pounds of pilot and passenger. The Breese is simply bigger and beefier than a Quicksilver.

- **Balance.** Since the Breese has no cargo area, there's not much you can do to get it out of balance. Messing with the spreadsheet shows that as long as the pilot weighs at least 30 pounds (Jasmine take note), the center of gravity will be within the Maximum Limits. If we had NO pilot – if we ever tried to turn it into a remote-controlled airplane – we would have to add weight in the pilot's seat. To see why, notice that the empty weight center-of-gravity location is 70.59" aft of datum (which is arbitrarily set as the centerline of the nose wheel). That CG position, 70.59", is outside the allowable range of 57.5" to 66.0". That allowable range comes from the manufacturer.



Weight & Balance explained.

- **Weight** is easy to understand. Load the plane up way beyond its designed gross weight and you risk structural failure.
- **Balance** requires that the plane be not too nose-heavy nor too tail-heavy. This depends on the distance between the plane's center of gravity (CG) and its center of lift (CL). If the distance is too great in either direction, the elevators will not have enough force to level the plane. It will either pitch down into a dive or pitch up and stall.

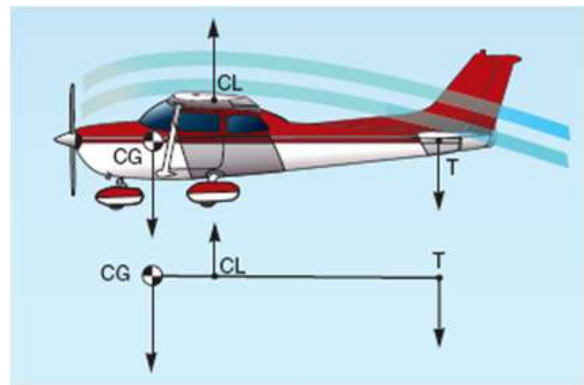


Diagram credit: WingsByWerntz.com

In our case, the M-Squared weight & balance sheet tells us that we must load the Breese such that the CG stays between 57.5" and 66.0" aft of the center of the nose wheel. That's easy to do since both the fuel tanks and the seats are close to that range.

For our kind of airfoil, the center of lift will be about a third of the way aft of the wing's leading edge.



The Condition Inspection Itself. Moving on, Tim inspected every part of the airplane, checking especially the tightness of the bolts that were undone for the move from Florida.



Monty Betts, Mark Wood, Grover McCall, Bob Chapman, Jeff Crider, Tim Loehrke

When he got to the engine, Tim found a problem he expected: varnish in the carburetors. After the builder died, the plane sat for a year and a half. Some of the fuel-oil mix in the carburetors evaporated, leaving deposits on the inside of the carburetor. More worrisome, those same deposits are probably also inside the needle jet, the tiny orifice through which the carburetor sucks fuel. A carburetor rebuild will fix that. (We have two carburetors.) Tim will order the parts and do the work.



Tim will likewise replace the fuel pump for the same reason.



Fuel pump

He also found that some of the important bolts in the plane are not showing the recommended 1½ threads. He will replace them with longer bolts and washers.



Likewise, Tim will replace the split-ring keepers with cotter pins. The rings are used where disassembly is expected. But we don't plan to take the Breese apart again. Tim recalled for us a time when the hub bolts of his wheels were secured with rings. On landing, tall grass snagged one ring and ripped it off. A ways down the runway the wheel also departed. No more split rings for us!

People, this is why you want to hang out with people who have more experience than you do. I would rather learn from Tim's experience than have it myself.

Lastly, the battery of the ELT (Emergency Locator Transmitter) will expire this March. Tim will replace it now.



ELT. The battery in the case costs \$275



Tim removes a fuel filter from one of the carburetors

The upshot is that the Condition Inspection is not yet done. After the parts come in and Tim rebuilds the carburetors, he'll return to the plane to finish the inspection and sign it off in the log book. I'll let everyone know when that day is if you want to be there. Thank you, Tim, for volunteering your expertise!

Fly safely,
Steve



This Month's Fly-In Destinations

To encourage all of us to get in the air more, the following is a list of fly-ins I found within (about) 100 NM of the Warrenton-Fauquier Airport which are occurring in the next month. Sources are: The [EAA Calendar of Events](#), www.socialflight.com, funplacestofly.com and the [Virginia Department of Aviation Calendar of Events](#).

Date	Event Description	Location	Distance
Sat, Feb 17 / 10AM-12:30PM	EAA Chapter 1563 Breakfast and Monthly Meeting	Gordonsville Municipal Airport (KGVE)	35 NM
Sat, Feb 24 / 8:30-10:30AM	EAA Chapter 339 Pancake Breakfast	Chesapeake Regional Airport (KCPK)	138 NM
Sat, Mar 16 / 10AM-12:30PM	EAA Chapter 1563 Breakfast and Monthly Meeting	Gordonsville Municipal Airport (KGVE)	35 NM
Sat, Mar 23 / 8:30-10:30AM	EAA Chapter 339 Pancake Breakfast	Chesapeake Regional Airport (KCPK)	138 NM
Sat, Apr 13 / 8-10:30AM	Bear River Pancake Breakfast RSVP 540-810-3144	Bear River Field (VG54)	51 NM

Don't forget that there are several great local flying destinations with restaurants on or near the airport. Did I miss some? Let me know!

- Shannon Airport (KEZF) - On the field: Robin's Nest Cafe (closed Sundays), Walkable: Wawa, Perfect Pollo. Ultralights (with no N-number) not welcome on the field.
- Sky Bryce Airport (VG18) - Across the street at the ski slope: Copper Kettle (closed Mon/Tue)
- Cumberland Airport (KCBF) - On the field: Hummingbird Cafe (closed Mondays)
- Eastern West Virginia Regional Airport (KMRB) (towered) - On the field: Crosswinds Cafe (closed Sundays)
- Hagerstown Regional Airport (KHGR) (towered) - On the field: The Grille at Runways
- Front Royal-Warren County Airport (KFRR) - 20 minute walk: 619 Market
- Williamsburg-Jamestown Airport (KJGG) - On the field: Charly's

New Restaurant!

I just found out about a new(ish) restaurant located at the St. Mary's Airport (2W6). I have yet to check it out, so if any of you go, let me know how it is! They are open Wednesday through Saturday 10AM-2PM. See their website: birddogbistro.com.

Also, check out the map created by our very own Club President, Steve Beste on the [Flying Club 1 website!](#)

Quiz

Jim Heidish was the first and only person to identify last month's image as the Hanging Bridge on the North Fork of the Shenandoah River. Steve Beste adds more info:

The suspension bridge is Historic Hanging Bridge at [38.860417003330745, -78.50173681490533](https://www.google.com/maps/place/38.860417003330745,-78.50173681490533)..

Mark and his friends found it while visiting the Muse Vineyards, on the right bank of the river.

There are actually three pedestrian suspension bridges in the area. Read about them [here](#).

This month's quiz will hopefully get us out and exploring the area around our new home base. What airport is this?



Know the answer or have a picture for the guessing game? Email me at ooi.lucy@gmail.com.



Flying in Costa Rica

By Mark Barron

To get us through the last of the cold weather this year, Mark Barron shares some pictures and information about his trip to Costa Rica last spring. We're all jealous Mark!

Here are a few pics from my trip in Jaco Beac, Costa Rica. This trip was hosted by One Up Adventures out of Florida. I did my Tandem Trike training with them in 2019. They do fun trips to various places with motor rentals, lodging, transportation, and activities all planned out. All you do is bring your wing and helmet and a great attitude. We did some Paramotor flying from the beach, ParaGliding from a beginner hill, ATV tour (not your typical tour...these guys have a local guide that has friends), Crocodile tour, and evenings out at a different restaurant each time.





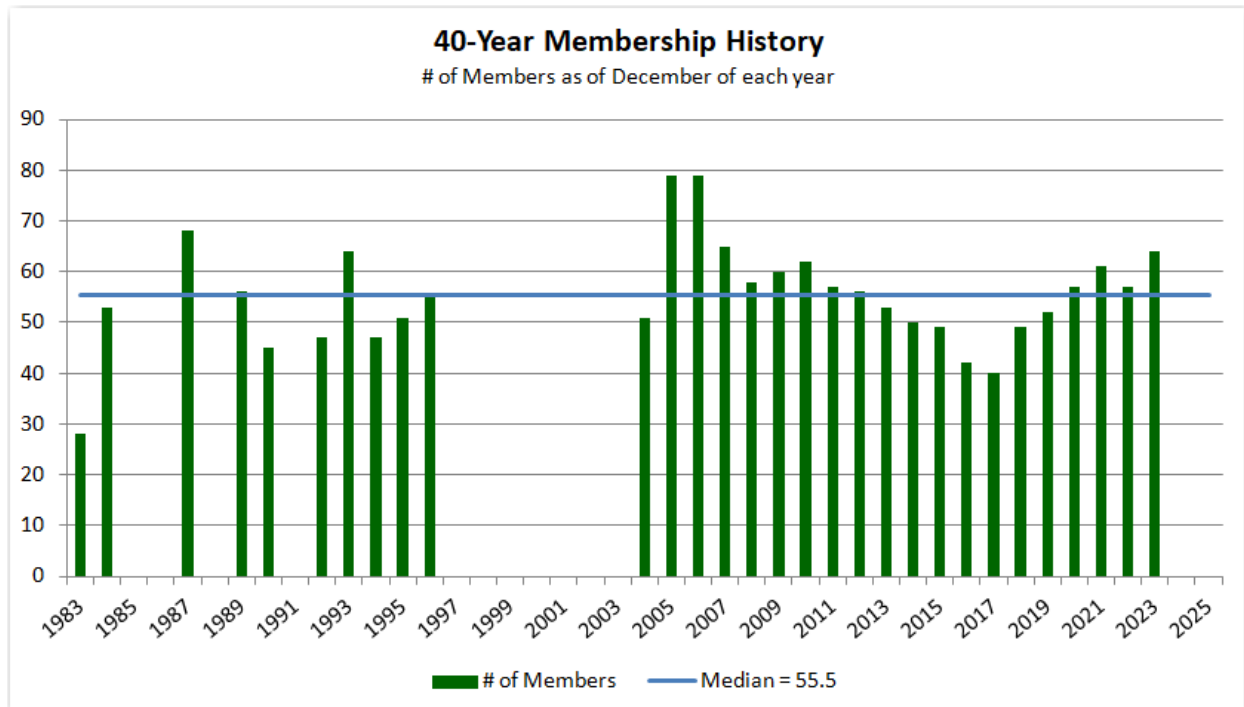




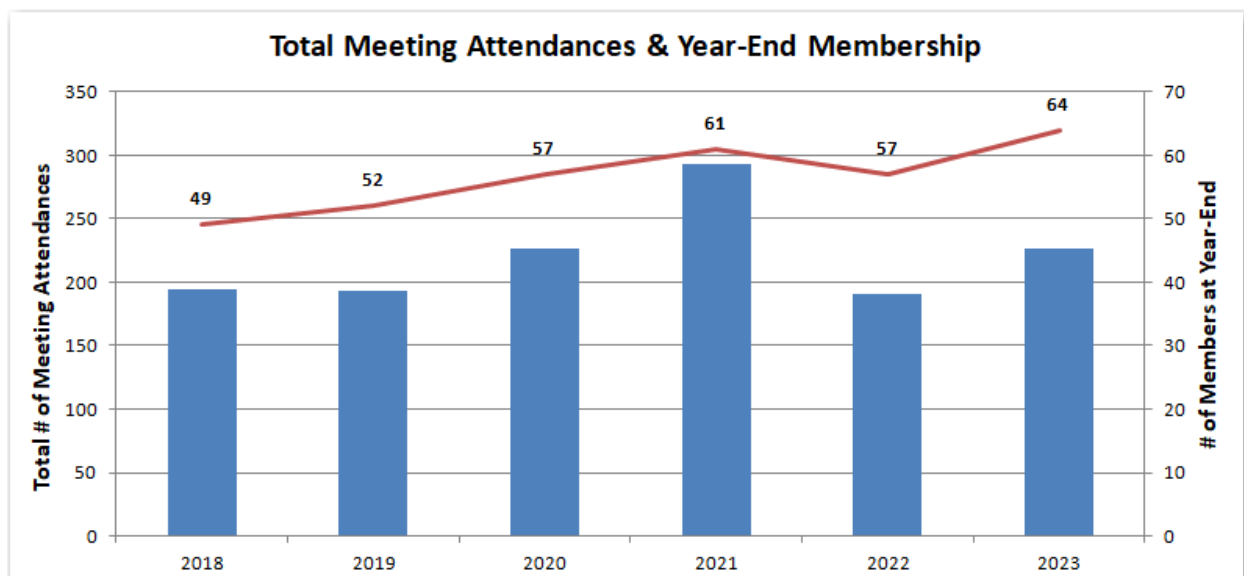
Historical Data about the Club

By Steve Beste

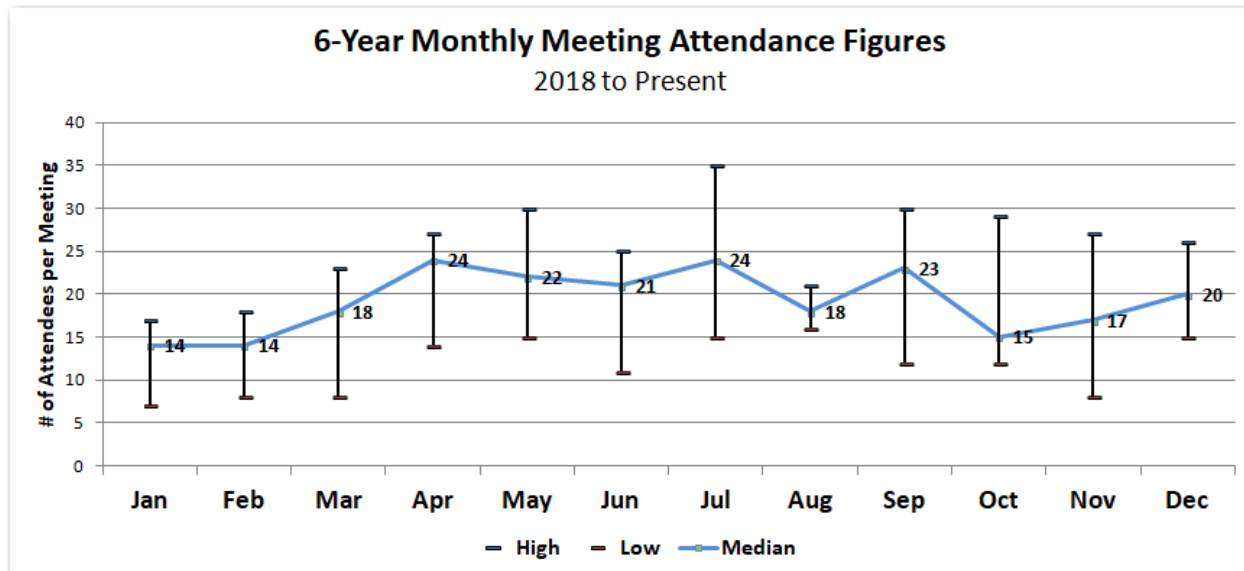
I love statistics and charts, so I've assembled these three charts from club minutes and year-end membership rosters. Good news! Total year-end membership was up last year.



The number of attendances at meetings was also up.



No surprise, our summer meetings are our most popular ones.



Meeting Minutes

January 2024

Flying Club One Meeting

Saturday, January 13, 2024

Warrenton-Fauquier Airport (HWY)

Midland, VA

Call to Order

President Steve Beste called the meeting to order at 11:05 AM with 23 attendees.

Visitors and New Members

- New member **Bob Prange** introduced himself. He's active with the Young Eagles program at EAA Chapter 186 in Manassas.
- Visitor **Micah Nicholas** came with **Jeff Crider**. Michael is 16, lives in New Market and is eager to learn to fly.

Flying Attendees

- None. High winds kept everyone on the ground.

Regular Reports

- *Treasurer and Membership Director: Fabian Georges* reported that:
 - The Club has a bank balance of \$4,492.18, of which \$1,400.00 is reserved.
 - This spring, Fabian will move the Club's accounts to QuickBooks online. At that point, the books will be accessible (read-only) by anyone on the Board.
 - Fabian is submitting the reports required by the State Corporation Commission.
- Name tags are coming in the mail before the February meeting.
- Membership stands at 65.
- Minutes of the December meeting were accepted as published in the January newsletter.

Other News

- **Ron Clements** donated and delivered a Rubbermaid cabinet for use in our hangar. **Jeff Crider** drove it from KHWY to the hangar at KCJR.
- **Fabian Georges** volunteered to fabricate a bonding cable for connecting the Breese to the hangar ground during refueling.
- At **Fabian's** suggestion, **Jeff Crider** volunteered to connect the Breese's intercom to the plane's power supply. Jeff says he knows how to do this in a way that will not introduce interference into the intercom audio.

Business

None

Program

- Together we planned a hypothetical trip from KHWY to Tangier Island in our Breese. This generated a lively discussion.

- The trip is probably not feasible due to the over-water flying. To stay within gliding distance of shore – even at the 19-mile narrows north of Pax River – the Breese would have to climb to 9,800 feet. The alternative – ditching if the engine failed – was not popular.
- MPH vs. Knots. About half the attendees plan and fly using statute miles and mph. These tended to be the people flying lighter aircraft. The other half use nautical miles and knots.

50-50 Drawing

Won by **Ron Clements**. Half of the \$68 total went to the Club.

Adjourn

President, Steve Beste adjourned the meeting at 12:28 PM.

Cook Out

None. We don't provide food at our cold-weather meetings, January, February and March.

Adrian Eichhorn's Polar Flight

Directly after our meeting, the Virginia Aeronautical Historical Society hosted a pizza lunch and a talk by Adrian Eichhorn about his round-the-world and trans-polar flights. Sixteen of our members stayed for that talk.

Submitted by **Steve Beste**, Secretary Mark Wood being out sick that day.

Board Meeting Minutes

January 23, 2024 by Zoom

Present: Bastien, Beste, Bishton, Georges, Ooi, Whatley

Call to Order – 8:00 pm

Secretary Mark Wood has resigned

Citing his wife's concern about Board-member liability, Mark has resigned as Secretary. He still intends to be active in the Club. He did not attend this meeting.

Jim Heidish's yellowtail proposal accepted

Jim Heidish has proposed putting a yellow tail on the Breese with Club markings. He has researched the best technical means for doing so, and will do the work himself at his own expense. **The Board accepted his proposal.**

Maintenance

Michael Bishton described how responsibility for maintenance is done at the Skyline Soaring Club.

- One technically-competent person is assigned responsibility for each plane. They:
 - See that the aircraft is maintained to FAA standards.
 - Fix – or cause to be fixed – squawks reported by pilots.

The Board endorsed this approach. Club member Tim Loehrke has volunteered to be our Maintenance Chief along these lines.

Training

Michael Bishton described how training is tracked at the Skyline Soaring Club:

- The Club has a standard syllabus that all CFIs follow. The syllabus covers FAA requirements but also items peculiar to the club and its aircraft.
- As pilots demonstrate, master and are tested on syllabus items, their progress is recorded online. This lets the CFIs and the club as a whole ensure that all pilots are learning all the syllabus items.
- Pilots who have not flown in 90 days must take a check ride with a CFI before flying again as pilot in command.

The Board endorsed this approach. Club member and CFI Grover McCall has volunteered to be our Training Chief. He already has as an action item: the creation of a training syllabus. Michael Bishton will confer with him.

Flying Member Enrollment Steps

The Board reviewed the steps that an existing pilot will have to take to be approved to fly our airplane.

- Many of the steps are administrative – get a hard-copy notarized Liability Waiver, get a copy of the pilot's license, BFR signoff, insurance binder, check, and so on. Set the pilot up in Flight Circle.
- The last step is approval of the pilot to fly our airplanes.

The Board:

1. Agreed that endorsement by two CFIs will be necessary and sufficient to certify a pilot as eligible to fly our airplanes. No action by the Board will be required.
2. Agreed that the administrative aspects of enrollment and certification will be handled by a Flight Operations Chief. Michael Bishton volunteered to take on that role, at least until the program is up and running.

Marketing

1. **Brochure.** Michael Bishton will ask Jim Heidish to create a brochure advertising our opportunities to become a flying member.
2. **Distribution.** Once we have the brochures, we'll ask volunteers to take them local airports.
3. **Marketing Chief.** The creation of this role is deferred to later.

Adjournment – 9:20 pm

Service Providers

Recap our standing list of service providers:

- **PPG instructor and dealer:** Brian Goff, 703-963-7389
spin2329@gmail.com
<https://www.paraflightnc.com/>
- **Aircraft instructor - CFI:** Pete Bastien, 703-568-5778
- **Aircraft instructor - light sport and seaplane:** Chuck Tippet, 540-905-5091
- **Gyroplane Instructor:** Frank Noe, 443-253-7681
frankcanfly@yahoo.com
<http://www.gyromoj.com/>
- **Machinist:** Luther Taylor, 540-222-3927
- **Welder:** Luther Taylor, 540-222-3927
- **A&P mechanic/IA:** JD Ingram, 513-388-6312
- **Light Sport Condition Inspections, Rotax Certified:** Tim Loehrke, 703-618-4005
- **A&P mechanic specializing in tube & fabric, based at CJR:** Air Klocker Aviation
(Abe Makely, Saverio Gambassi)
571-309-7023
airklockeraviation@gmail.com

For more information on instructors, see <http://www.flyingclub1.org/instructors/instructors.php>

Activities

Flying Club 1 Activities Schedule

Club meetings will be held on the second Saturday of every month at the Warrenton-Fauquier Airport (KHWY). Please see the schedule below for the location of other meetings and information on events. Changes in time or location will be posted in this newsletter and on the Club website.

Date	Activity	Location	Description
Saturday, February 10th, 11am	Winter meeting	The terminal building at the Warrenton-Fauquier Airport	Program: Navigation, Flight Planning and Flight Review for the Frugal Pilot by Sean Roe
Saturday, March 9th, 11:00am	Winter meeting	The terminal building at the Warrenton-Fauquier Airport	Program: TBD
Saturday, April 13th, 11am	Fly-in, club meeting, and cookout	The terminal building at the Warrenton-Fauquier Airport	Club meeting, fly-in, and cookout
Saturday, May 11th, 11am	Fly-in, club meeting, and cookout	The terminal building at the Warrenton-Fauquier Airport	Club meeting, fly-in, and cookout
Saturday, June 15th	8:00am Poker Run 11:00am Fly-in and club meeting	The terminal building at the Warrenton-Fauquier Airport	Poker Run Club meeting, fly-in, and cookout
Saturday, July 13th, 11am	Fly-in, club meeting, and cookout	The terminal building at the Warrenton-Fauquier Airport	Club meeting, fly-in, and cookout
Saturday, Au- gust 10th, 11am	Fly-in, club meeting, and cookout	The terminal building at the Warrenton-Fauquier Airport	Club meeting, fly-in, and cookout
Saturday, September 14th, 11am	Fly-in, club meeting, and cookout	The terminal building at the Warrenton-Fauquier Airport	Club meeting, fly-in, and cookout
Saturday, Octo- ber 12th, 11am	Fly-in, club meeting, and cookout	The terminal building at the Warrenton-Fauquier Airport	Club meeting, fly-in, and cookout
Saturday, Octo- ber 26th, 9am	Club 1 Color Run Fly- out	Meet at the Front Royal Airport for the run down to Luray	Club 1 Color Run Fly- out: Front Royal to Lu- ray

Date	Activity	Location	Description
Saturday, November 9th, 11am	Fly-in, club meeting, and cookout	The terminal building at the Warrenton- Fauquier Airport	Club meeting, fly-in, and cookout
Saturday, De- cember 7th, 12-3pm	Holiday Party	The terminal building at the Warrenton- Fauquier Airport	Monthly meeting and Holiday Party

Membership Dues Policy

The period of membership is the calendar year: January through December.

Renewals can be sent in starting in October for the upcoming year. Members who have not paid their dues by the end of February will be dropped effective March 1 and will not receive the newsletter or the membership roster.

Dues are \$20 per year. But if more than one family member is active in the club, then a family membership covering both of them can be had for \$25. Please:

- Make your check out to **Flying Club 1**
- Mail it to **Fabian Georges**

P.O. Box 5322

Springfield, VA 22150

- Include a copy of the membership application that's attached at the end of this newsletter (and is available on the club [website](#)). That's our way of keeping your contact information up to date.



Join as a Social Member

- Fellowship
- Local knowledge
- Technical advice
- Share your stories
- \$20 / \$25 /year

Click or scan this QR code to join [online](#).

Or mail in the form below.



Join as a Flying Member

- Everything at left plus
- Fly our airplanes

This is much more involved.

Click or scan this QR code to see [online](#) how to join.



New/Renewal:

☐ New

☐ **Renewal**

Type of membership:

☐ **Individual - \$20**

☐ **Family membership - \$25** (when more than one member of the family is active in the club)

First Name: _____ **Last Name:** _____

Name To Go On Your Name Tag: _____

E-mail Address: _____

Cell phone: _____ **Home phone:** _____

Street or PO Box: _____

City: _____ **State:** _____ **Zip:** _____

Emergency Contact: Name: _____ **Phone:** _____

Aircraft make and model: _____ **N-Number (if any):** _____

Pilot rating(s): _____

Instructions

for joining as a social member by mail

1. Fill out the above form
2. Make out a check for \$20 (individual) or \$25 (family)
3. Make it payable to **Flying Club 1**
4. Send the form and check to:
Fabian Georges, Treasurer
7051 Brookfield Plaza, #5322
Springfield, VA 22150

Flying Club 1 General Information

The Flying Club 1 is a nonprofit, recreational club dedicated to the sport of ultralight and light sport aircraft flying.

2024 CLUB OFFICERS AND DIRECTORS

President: Steve Beste 703-321-9110

Vice President: Allen Whatley 571-235-6978

Secretary: VACANT

Treasurer: Fabian Georges 714-661-8800

Director At Large: Pete Bastien 703-568-5778

Director At Large: Michael Bishton 301-320-9542

Director At Large: Lucy Ooi 585-410-5573

2024 CLUB VOLUNTEER STAFF

Membership: Fabian Georges 714-661-8800

Club Artist: Jim Heidish 703-524-5265

Newsletter Editor: Lucy Ooi (“Wee”)

Ooi.Lucy@gmail.com

Web Master: Steve Beste,

president@flyingclub1.org

A club is only as good as the members who volunteer to support its activities. The following listed activities with the club require mem-

ber support in varying amounts. Please indicate on your membership application the function(s) (can be more than one) you will support as a Club member. All active Club members are expected to participate. However, members who live some distance away and cannot attend meetings regularly may prefer to support functions associated with Club weekend activities.

ANNUAL DUES (Jan 1-Dec 31) \$20.00. Family membership (typically husband and wife): \$25.00. A spouse who wishes to participate will please complete a membership application form.

CLUB WEB SITE: <http://flyingclub1.org>

MEETINGS are monthly, year-round. See the web site for dates and places.

THE NEWSLETTER: The newsletter is published by email on the first of every month.

SUBMITTING ITEMS FOR THE NEWSLETTER Members and non-members are encouraged to submit items for this newsletter. Send submissions to Lucy Ooi at Ooi.Lucy@gmail.com at least one week prior to the end of the month.

If you are interested in joining the U.S. Ultralight National Organization go to their website for membership information at: www.usua.org

Likewise, if you are interested in joining the U.S. Powered Paragliding Association, the National PPG Organization, go to their website for membership information at: www.usppa.org