



Volume 16 – 04

www.FlyingClub1.org

April 2016



The Privileged View

Steve Beste, President

Navigating. Imagine that it's 1918. You have no GPS or sectional chart. Highway road maps have not been invented yet. Indeed, the country has no highways, per se. Railroads, yes, but nothing like U.S. 29, much less an interstate. Most roads are dirt. Imagine all that, and now accept your mission: you must fly the mail from New York to San Francisco. Oh, and you're flying the converted De Havilland DH-4 that you see here. How on earth are you going to find your way? Here's the story, assembled from the websites I list below.

Flying conditions were poor, and the pilots were forced to fly in all kinds of weather. The Post Office brass, who didn't know how to fly, were unyielding about keeping the mail on schedule in spite of the risk, hoping that it would make the public trust the service more. Tragically, of the 40 pilots hired when flights began in September 1918, at least half had died in the first 15 months of operation, most from weather-related crashes.



Initially, the pilots had only compasses and pilotage. Most pilots still flew about 200 to 500 feet AGL so they could navigate by roads and railways, not that the roads were anything like the paved highways of today. That meant that the flights could take place only in daylight. Each night, the mail would be loaded onto railcars and would travel overnight until daylight allowed another plane to take over.



In 1919, they began using bonfires and the first artificial beacons to help with night navigation. In February 1921, an airmail pilot named Jack Knight put this to the test with an all-night flight from North Platte, Nebraska to Chicago. Knight found his way across the black prairie with the help of bonfires lit by Post Office staff, farmers, and the public.

Bonfires were obviously not a permanent solution. Beginning in 1923, the Post Office worked to complete a transcontinental airway of giant concrete arrows with beacons on towers for night use. These were spaced 15 to 25 miles apart, each bright enough to be seen for 40 miles in clear weather. The system was completed coast to coast by 1929.



Remnants of this system still remain, though mostly out west as in the picture above, to the mystification of hikers who stumble across them. I mean, what is this *doing* here?

Naturally, people have been cataloging these sites [on the internet](#). The ones in our area are all in

Pennsylvania, but it doesn't look like there's enough left to justify flying over.

But perhaps we should revive these concrete arrows. At the last Club meeting, one of our members confessed to having trouble finding Lenn Bros. field. Perhaps the Club should pay to put one of these arrows nearby, pointing to it. This is what they call tried and tested technology. It worked in 1923; it will work in 2016. I'll propose it at the next meeting.

Fly safely,

Steve

Credits

The picture above comes from [Aviation Archaeological Investigation and Research](#) by way of an article in [Conde Nast Traveler](#), June 17, 2013 by Ken Jennings. The map is from that same article.

The story of early airmail flying - and the history of navigation aids from bonfires to GPS - is told on the [U.S. Centennial of Flight Commission](#)'s website.



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 Airpark which are occurring in the next month. Sources are: The [EAA Calendar of Events](#), the [AOPA Calendar of Events](#), www.flyins.com, www.socialflight.com and the [Virginia Department of Aviation Calendar of Events](#).

Date	Event Description	Location	Distance from 7VG0
Sat, Apr 16 12-2PM	The Most Amazing Hot Dog Lunch Ever	Hanover County Municipal Airport (KOFB)	59 NM
Sat, Apr 23 11:30AM-5:30PM	Wilmington Delaware Hangar Picnic	New Castle Airport (KILG)	119 NM
Sat, Apr 23 8:30-10:30AM	Old Dominion Squadron and EAA Chapter 339 Fly-in Pancake Breakfast	Franklin Municipal Airport	125 NM
Sat, Apr 23 10AM-12PM	Lower the Cost of Flying: AOPA presentation on flying clubs and pizza lunch	Heritage Field Airport (KPTW)	140 NM
Sun, Apr 24 9AM-1PM	Fly-in Drive-in Breakfast	Greater Cumberland Regional Airport (KCBE)	73 NM
Sat, Apr 30 10AM-3PM	IG Flight Services Cook Out - Free hot dogs and hamburgers	Altoona-Blair County Airport (KAOO)	101 NM

Also, it is not a fly-in event, but on Tuesday, April 12 from 7-9 PM a seminar titled “What is it Like to Survive an Aircraft Crash” will be given at the Robin’s Nest Cafe at Shannon Airport (KEZF).

Eighty Year History of the Warrenton Airpark (1936-2015)

By Tom Richards

Previous newsletter articles have covered the history of the airpark from its founding in 1936 through its use as a very active glider field in 1992.

Special Note - This page is being added to the Airfield History in early 2016 to incorporate inputs received from Bill Kellett, one of the major players in the glider operation, who provided the information inserted below. Verbatim information is italicized. Author inserts are in normal font.

Warrenton Soaring Center Significant Crashes - Well, crashes are very much a part of aviation and I see no problem from the WSC perspective with documenting those we had at WSC. And we had a bunch. The only downside I can see would accrue more directly to you as owner/operator - because, as we both know, that field is by definition a pretty challenging one to fly out of (trees, etc.) and, as the owner, you wouldn't want to 'advertise' that "I have an inherently dangerous airport".

Anecdote: We once had a visit from an internationally famous British glider pilot/instructor, Derek Pigott, who was at the time the chief flight instructor of what was then the largest glider club in the world, Lasham in the UK, and the author of many excellent training books. At that time, we were using runway 22 for takeoffs and runway 15/33 for landings, depending on the wind (usually RWY 33). Derek and one of our instructors landed on RWY 15, after which he was heard to comment "You can't fly gliders out of this field", or words to that effect. We thought it was funny at the time. Others have quoted him saying, "a very difficult place to land" - a typically British under-statement.

Now, having said THAT, be aware that WSC had a LOT of accidents/incidents! That's due in large part (in my personal opinion) to the generally casual approach we took toward safety in our operations. And I have to say that as one of those responsible for making a lot of those decisions...

One of the most memorable ones was technically not on the airpark - - a glider pilot (Bill Vickland) landed short in the field just beyond the threshold of runway 4. Because the field was big and to avoid the inconvenience of having to disassemble the glider to get it over the fence, it was decided to just fly the towplane (PA-18 Super Cub) and just tow it out. The towplane's left wing struck a small tree just as it was getting airborne and was totally destroyed, killing the towpilot, Bill McLean. Glider and pilot were undamaged/uninjured.

Another was when the pilot of a privately owned SGS 1-23 apparently became disoriented or otherwise incapacitated and wound up flying at high speed, inverted, over the airport and crashed in the landfill on the NW side of the airport. Fatality, of course.

One serious injury I recall was when the pilot of a 2-33 on takeoff for some reason 'kited' on the towplane (raised the nose to a very high angle, overpowering the towplane's ability to maintain attitude). The rope eventually broke, the towplane crashed off the end of RWY 22 seriously injuring the towpilot, Dave Brown, who now-a-days flies his Stearman at the Flying Circus (below). After-which, the glider stalled into the ground from an altitude of about 100' seriously injuring the glider

pilot (back injury).

One of the funnier incidents involved a homebuilt with a truly weird (VERY thick) airfoil - - very high drag/high lift wing - - that a guy had actually designed and built in his apartment in DC! on his test flight, for some reason he wound up trying to land on RWY 4, which we never did because of the slope. Well, this thing didn't have satisfactory spoilers to control his descent, so he gets down to about 10' over the ground at, maybe, 20 kts, and couldn't get his sink rate higher than that



of the runway itself! He wound up flying all the way to the end, pulling up slightly, and making a left turn to eventually land (safely) on the last half of RWY 33, while wing runners and everyone else scrambled to get out of the way. In addition to those two fatalities, we had LOTS of gliders-in-the-trees, gliders-landing-short, etc. We managed to damage a glider pretty much every year we operated there!

Phase 4: 1992 - 2004 Continuing as Warrenton Airpark - Transition and Growth - Arrival of the Ultra-lights

The highlighted and underlined statement in last month's excerpt from Jim Kellett's account of the WSC's eventual lack of success at Warrenton Airpark being attributed to "continued failure to get hangars constructed" was an ongoing concern for the owner, Charles Beatley, who began construction of a "4-square" hangar and had it partially completed as depicted in the 1994 USGS aerial photo shown at right.

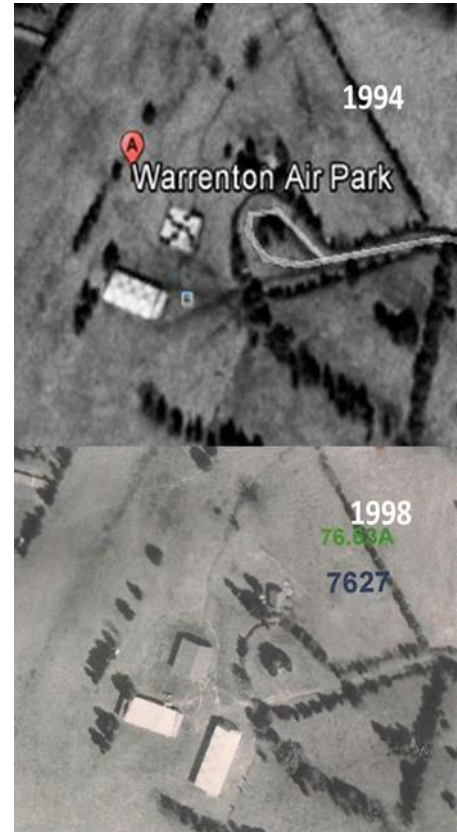
At this time, (around 1995 when the nice 2-bedroom cabin designed by Beatley was finished) what was to become known as the "clubhouse" was nothing more than a concrete and stone floor with no walls or roof - except the bathroom had walls and was completed and operational - and affectionately referred to by pilots who flew here as "the out-house". After 1995, it served as the Club House for Flying Club 1 - the charter club of the U.S. Ultralight Association (USUA) Flying Club that had earlier operated out of Whitman Strip.



Note that by 1987, the field had 3 runways (in contrast to the 1981 topographic map), with a 3rd runway just south of mid-field. The WSC description of the field makes no mention of this runway. So it is presumed that this runway was established in 1992 in order to appear as it does in the March 1994 aerial photo (immediately below). Below right are two enlarged aerial photos of the central area that shows the turnaround and hangars - the top shows this area enlarged from the 1994 photo, with the bottom showing the exact same area taken in 1998.

The color photo (next page) shows an excellent view looking to the north-west along this runway taken in 2000 with it being completely outlined by small 3-6 foot cedar trees. This photo was taken by Robert Morris and shows his ultralight landing on the main runway.

This 2000 photo also shows the cluster of *three* hangar buildings on the right side of this new runway. This indicates that within the 4-year period (1994-1998), Mayor Beatley has not only finished the 4-square hangar by adding the roof and sliding doors, but has also added siding and sliding doors to the original “carport hangar”. Also, he added 12-by-45 foot caps on both ends (expanding its capacity from 4 airplanes to 6. But even more significantly, an entirely new 45’x95’ - 6T hangar has been constructed! While the first two hangars were built or remodeled using volunteer labor with materials mostly donated, or otherwise “scrounged”, this third and largest hangar was built by the Morton Company, a construction contractor based in Culpeper. **The net result is that 4-year span saw the hangar space quadrupled - from 4 in 1994 to 16 by 1998.**



So who is using all this hangar space? - Migration of the Ultra-lights.

Ultra-light aircraft began showing up just as the gliders were leaving. This growth in ultra-light flying in the early- and mid-1990s produced an increased demand for hangar space. Some of those had started flying at Whitman Strip (a public-use grass strip 10 miles due east of Warrenton Airpark) and a few migrated 10 miles west, being attracted by better hangars and a more scenic setting.

Around 1998, Flying Club 1, (www.flyingclub1.org) moved its main base of from Whitman Strip to Warrenton Airpark. This club averages about 50 active members approximately 20 of whom own and fly airplanes - which for the most part are either ultra-lights or “ultra-light type”.

As its name USUA Flying Club 1 suggests, this club was essentially the cornerstone of a national organization known as United States Ultralight Association (USUA). As ultralight rules changed in January 2008 to no longer allow for 2-seat trainers, thus making ultralight pilot training more difficult, this national organization has become largely defunct, with many affiliated clubs becoming inactive.

The events that led to the club moving to the airpark is a long, sad story involving three old men who are all now dead. Since hangar space at the airpark was limited, a number of the ultra-lights (perhaps 7 or 8) remained at Whitman until summer 2005 when ultra-lights were banished. This ban was a condition imposed by the county upon extending the special exception for continued operation as an airfield. This was based on complaints from neighbors and one other individual, who did not like the way the field was being run. This closing was preceded by a change in ownership of Warrenton Airpark as described next.

On December 27, 2003 Mayor Beatley died. This was in the midst of this westward migration of ultra-lights from Whitman Strip to the Airpark. He was 86 years old and was hospitalized for what was to be a relatively minor hernia repair when he contracted pneumonia - that resulted in his death. His ashes were spread on the airfield in a private memorial ceremony on May 1st 2004, from a Piper Cub flown by Chuck Tippett, a Flying Club1 member and long-time friend. Coincidentally, this was the day following purchase of the field from the Beatley estate by Tom Richards, a relatively new member of Flying Club 1, who, due to unfortunate timing, had never met Mayor Beatley. Marge Beatley, the surviving widow, stated on this occasion, “Owning this field prolonged his (Charles Beatley’s) life by 10 years”.

Mountain Wave Turbulence

By Dick Martin



I had heard of mountain wave turbulence but thought it was something pilots around the Rockies out West had to worry about. However I just learned first hand that mountain wave turbulence is something that pilots flying around the mountains of Virginia also should be aware of.

January 11 looked like a perfect flying day - ceiling and visibility unlimited, glorious clear sunshine everywhere, no haze, temperature around 40 degrees, wind completely calm. I decided to fly my light sport Allegro up over the mountains toward Luray and New Market to enjoy the spectacular view.

On takeoff from Warrenton-Fauquier County Airport, I was surprised to experience some turbulence as I climbed out, but nothing serious. As I climbed toward Luray to the west, the turbulence ended and I relaxed, anticipating a beautiful, smooth sightseeing flight. Then I noticed my groundspeed (indicated by the GPS), slowing. My airspeed was normal, about 105 mph, but at 3,000 feet my groundspeed had dropped to 55 mph and at 6,000 feet my groundspeed was 24 mph. If I had continued to climb, I might have been flying backwards.

So I decided it was time to descend. However, to my surprise, I couldn't. I throttled back but the plane kept floating up past 7,000 feet. I turned around before reaching the first mountains and eventually the plane began to descend, but very reluctantly. An added complication was that the engine cooled too much while idling in the cold winter air and I had to add power to keep it warm, further slowing my descent.

This all took place slowly in smooth air and I worked my way back down with full flaps and lots of circling, more puzzled than alarmed. I became somewhat more alarmed when I asked Dave Darrah of KHWY, an experienced military pilot, what had happened. He said it sounded like a mountain wave and sent me a good article ([“The Hidden Dangers of Mountain Wave Turbulence,”](#) in NOAA’s publication, “The Front”, November 2011).

The NOAA article explains that in the fall, strong “westerlies” begin to develop across much of the country in response to the seasonal southerly shift of the jet stream. Mountain waves develop on the downwind side of mountains. They generally exist in smooth undulating airflow and sometimes benefit glider pilots. However they may also contain strong clear air turbulence in the form of breaking waves, downdrafts, and rotors that pose a serious invisible threat to pilots. Their unpredictable up-and-down winds can sometimes persist several miles downwind of the mountains.



I like the smooth, clear air and the lively performance of my plane on chilly winter days. However I had previously noticed that on some winter days in our area the wind was light on the surface but surprisingly strong from the west just above the surface. From now on, when planning flights to the west from the Warrenton area, toward the mountains, I will check winds aloft before departing. West winds of more than 30 knots above three thousand feet could be producing invisible mountain wave turbulence not far from KHWY and the Warrenton Airpark. My experience was disconcerting because it’s a bad feeling not to know what is causing the plane to behave unpredictably. The NOAA article explains that the consequences can sometimes be a lot worse. Be careful.

Meeting Minutes

March 2016

Flying Club One Meeting

Thursday, March 3, 2016
Centreville High School
Centreville, VA

Call to Order

President, Steve Beste called the meeting to order at 7:30 P.M.

9 members present.

CONNECTIONS

Visitors & New Members

None

Old Members

Steve Beste said he is looking to borrow an engine hoist (engine puller) and also find a machine shop that drills precision holes in aluminum tubes. Steve is in the process of rebuilding his Trike since the accident last fall. He received good leads on both from members. Windy, windy, **Jim Heidish** said that he finally found a day that the wind was forecast to be below 10 MPH only to be pushed back to the Airpark (sideways) after only 15 minutes of flying. **Dick Martin** said he experienced the same thing many times this winter, starting out in a gentle breeze only to hit a very strong wind, and said it has to do with the mountain waves from the Blue Ridge still flowing high above the Airpark.

SERVICE PROVIDERS

Recap our standing list of service providers:

- PPG instructor and dealer: **Michael O'Daniel**
- CFI: **Pete Bastien**
- Fixed wing instructor: **Chuck Tippett**
- PPG, Ultralight, LSA and General Aviation flight instruction: **Grass Roots Flyers**
- Welder: **Tom Kotsch**
- A&P mechanic (not at Airpark): **JD Ingram**
- Light Sport Condition Inspections, Rotax Certified: **Tim Loehrke**

REGULAR REPORTS

Secretary: Position Vacant. Minutes (taken by **Jim Heidish** of the February meeting) were published in the March Club Newsletter and approved as published.

Treasurer: Jim Birnbaum reported February Income: \$127.00, Expenses: \$0.00, the Flying Club 1 Checkbook Balance: \$3076.52.

President: Steve Beste - nothing special to report.

Safety and Training Director: Pete Bastien - not at meeting.

Membership Director: Jim Birnbaum reported that membership renewals are coming in. Again as a reminder, the monthly roster that is emailed out has a date after each member's name. If 2015 is still by yours, you need to pay your 2016 dues.

Warrenton Airpark Owner: **Tom Richards** - not at meeting. **Adjourn**

President, Steve Beste adjourned the meeting at 9 P.M.

Old Business

Submitted by **Jim Heidish**

None

New Business

We had a proposal that we honor long time member **Law Clement**, who was very active in the Ultralight/LSA movement and is celebrating his 90th birthday this year, with a testimonial luncheon and commemorative plaque. This will be hosted by the club some time in April. The members agreed. All the information about the event will come later.

MONTHLY PROGRAM

Steve Beste showed a short pre-program video about 100 small drones being used in a very dramatic art, light and music show in the night skies over Germany.

Scott Schreiber presented a new look at the FAA's NextGen system and the ADS-B. The new approach counts on each aircraft that has the proper on board receiver/transmitters playing a very important roll in this pro-active air traffic control system. Each aircraft in the system not only receives all data system wide, but also transmits all the data they have to offer. now this system counts on satellites, aircraft and ground stations for all the data to be transmitted. Scott explained that there is an existing satellite system in place that can eliminate all the ground stations from the system and is much more reliable. This system was originally put into orbit for cell phone networks but became operational too late and the many, many ground towers we see took over.

Activities

2016 Flying Club 1 Activities Schedule

Designated Club meetings will be held the first Thursday of each month in the Centreville High School, Union Mill Rd., Centreville, VA, at 7:30 PM. Others will be held at 11:00 AM at the Warrenton Airpark as shown in the 2016 schedule. Changes in time or location will be posted in this newsletter and on the Club website.

Date	Activity	Location
Sat, May 7th	Club meeting, fly-in and cookout at Warrenton Airpark	Airpark
Sat, June 4th	Club meeting, fly-in and cookout at Warrenton Airpark	Airpark
Sat, June 18th, 7:30 am	Poker Run	Airpark
Sat, July 2nd, 11 am	Club meeting, fly-in and cookout at Warrenton Airpark	Airpark
Sat, August 6th, 11 am	Memorial table, monthly meeting, fly-in and cookout at Warrenton Airpark	Airpark
Sat, September 3rd, 11 am	Club meeting, fly-in and cookout at Warrenton Airpark	Airpark
Sat, October 1st	Club meeting, fly-in and cookout at Warrenton Airpark	Airpark
Sat, October 22nd	Club 1 Color Run Fly-out	Airpark
Thu, November 3rd, 7:30 pm	Conversation, club business meeting and program	CVHS
Sat, December 9th, 5 pm - 8 pm	Monthly meeting and Holiday Party	Airpark Club House

Classifieds

Ads will be run twice and then dropped unless resubmitted, or renewed by telephone or e-mail.

Please advise the editor: **Lucy Ooi**

(Ooi.Lucy@gmail.com) when the ad is no longer needed.

To place an ad in the newsletter, contact ooi.lucy@gmail.com

Membership Dues Policy

The period of membership follows the calendar year - January through December. The renewal period starts on 1 October with regular dues at \$20.00 and family at \$25.00. Members who have not paid their dues by the end of February will be dropped effective 1 March and will not receive the Newsletter or Membership Roster. New members joining after 1 October will be charged \$20.00 or the family rate, if applicable and will be credited with full membership for the following calendar year. Please mail payments to Flying Club 1, 8570 King Carter Street, Manassas, VA 20110. Payment can also be made at the regular monthly meeting. Please include the Membership Application form with your payment. This will be used to ensure that our records are current. A copy of the membership application is attached and also printed at the end of the Newsletter.

Jim Birmbaum
Flying Club 1
Membership Director, Treasurer

MEMBERSHIP APPLICATION



Type of membership: New, Renewal, Regular, Family membership

Name(s): _____

Name To Go On Your Name Tag: _____

Street or PO Box: _____

City: _____ State: _____ Zip: _____

Telephone, Home: _____ Cell: _____ Work: _____

Spouse's Name: _____

Emergency Contact: Name: _____ Phone: _____

E-mail Address: _____

Aircraft Liability Insurance through: _____

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

Pilot rating(s): _____

Club Activities or Services for Which You Volunteer: _____

Information from this application will be in the club's membership roster which goes only to members.

Instructions:

1. FILL OUT THE ABOVE FORM.
2. ENCLOSE A CHECK FOR \$20 (\$25 FOR A FAMILY) MADE OUT TO **“FLYING CLUB 1”**.
3. SEND THE FORM AND CHECK TO:
Jim Birnbaum, Treasurer
8570 King Carter Street
Manassas, VA 20110-4888

To join the national USUA, go to <http://www.usua.org>

To join the national USPPA, go to <http://www.usppa.org>

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.

2016 CLUB OFFICERS AND DIRECTORS

President: Steve Beste 703-321-9110

Vice President: Dick Martin 703-242-2367

Secretary: Open - to volunteer, contact Steve!

Treasurer: Jim Birnbaum 703-361-7478

Director & Past President: Len Alt

703-945-9314

Director At Large: Pete Bastien 703-568-5778

Director At Large: Lucy Ooi 585-410-5573

2016 CLUB VOLUNTEER STAFF

Safety & Training: Pete Bastien

Membership: Jim Birnbaum 703-361-7478

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