



The Beacon

The newsletter of Chapter 54
Lake Elmo, Minn.

January 2022



21D RCO 118.625 COM 122.8 AWOS 120.075 Elev. 1932'
Runways **4-22** (2497' x 75') **14-32** (2850' x 75')

Chapter House, South Airport Entrance at the Beacon

Chapter Meetings 2nd Monday of Each Month
7:00pm social 7:30pm Meeting

Who's currently who in Ch.54:

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From the Flight Deck (Leif Erickson)

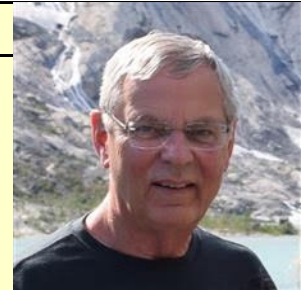
Looking Forward to 2022

2022 looks to be an exciting year for Chapter 54. A lot of fun and events and activities are being planned for the year.

Bill Schanks, working with the board, has developed an extensive list of fun activities for chapter members. The majority will be scheduled on either the third Monday or third Saturday of each month. You will hear more about the planned activities in the coming weeks. I just want you to give you a heads-up (maybe tweak your interest) about the activities as we get closer to scheduling. The goal is to have fun and get to know more chapter members.

2022 also looks to be a financially challenging year. The chapter is now operating on a fiscal year rather than a calendar year. This change will make the chapter's fiscal year coincide with the elections of officers and directors at the annual November Membership Meeting. The fiscal year will run from December to the following November.

Charlie Becker stated that chapters cannot survive on dues money only. For the past two years, Chapter 54 has relied on annual dues income and donations to fund our day-to-day operations. In fact, in FY 2021, the chapter operated in a deficit. Our expenses exceeded income by more than \$900. Our total income was \$2,700 and our fixed expenses totaled \$3,600.



To address this problem for FY 2022, the chapter has two choices; either increase revenue or decrease expenses. On the expenses side, our FY 2022 operating expenses are fixed. They include hazard Insurance on the clubhouse, liability insurance from EAA, MAC lease for our clubhouse lot, gas and electricity, and the chapter cell phone/hot spot for Zoom meeting. Throw in a few clubhouse maintenance items and total expenses are \$3,900.

On the revenue side, our \$25 annual membership dues generated \$1,800 of revenue, new memberships

\$270, donations \$240, a Young Workshop \$225, and \$100 from various miscellaneous sources. The total income was \$2,700.

Cutting expenses will not be possible. But generating more revenue is possible by raising the annual dues. I know, that is not a popular option, but it may be our only option. My projection is that raising our annual dues by \$10, and hosting two Young Eagles Workshops, the chapter will generate \$3,900 of total revenue. Enough to balance the budget

I have been a member of Chapter 54 sine 1999. During those 22 years, I do not recall a dues increase. Can anyone correct me if my memory has faded? We are basically operating on the same dues revenue as we did 22 years. Raising annual chapter dues from \$25 to \$35 will be my proposal to the board.

Our FY 2022 benevolence budget is very challenged. One the expense side the board approved Anika Hovland to attend the 2022 Air Academy. She was originally granted a scholarship to attend the air academy back in 2019. The air academy was closed in 2020 and 2021 due to COVID. Her funding for 2022 will be carried over from 2019. The annual contribution to Farnsworth may be in jeopardy this year.

Traditionally benevolence funding was provided by profits from our pancake breakfast. Hosting that event in no longer an option, for a variety of reasons. In 2022, the Chapter needs to develop a fund-raising plan to generate

funds for future Air Academy scholarships and charitable donations to Farnsworth. or another worthy cause.

A committee of four members (Robyn Stoller, Gregg Adler, Jim Pearsall, and Leif Erickson) are working on a Two-Year Plan to address the budget and other issues facing the chapter in the coming two years. The focus will investigate sources of revenue to fund scholarships and charitable contributions. And to find activities to promote member engagement. Watch this space for updates on the committee's progress.

During December all the board members attended Zoom transition training on how to access and use the Roster Management App and the Google Workspace Cloud Drive. Thanks to Scott Hanson for setting up the Google account for non-profit organizations. Workspace cloud storage will replace the metal file cabinet in the clubhouse. It will be provide permanent and easily accessible storage for all the chapter's documents and records.

Finally, I am pleased to announce that Marlon Gunderson will be our new representative on the Reliever Airports Advisor Council (RAAC). Marlon is replacing John Renwick. John is stepping down after many years of service on the council. Thank you, John for your service. And Paul Evenson will represent the chapter on the Lake Elmo Airport Advisory Council (LEAAC).

In summary, I am looking forward to an exciting and challenging 2022 for Chapter 54.

Leif E.

Chapter Meetings

The **October 11th** meeting was a hybrid remote/clubhouse meeting. Officer and Class III director nominations were made for elections to be held in the November meeting.

Mitch Zahler and **Bill Schanks Jr** then presented on the topic of *Unscheduled Off Field Landings, and I'm from the FAA and I'm here to help.*

Mitch experienced an engine suddenly intent on destroying itself when he was west of the Volk Field airspace on his Sunday return from Oshkosh in his Swift this year. Just south of I-90 and coming up on restricted airspace R-6901B, Mitch established a glide towards Sparta/Fort McCoy (CMY), the nearest airport.





Mitch was flying at a relatively low altitude due to the smoky air that day and it quickly became clear that he would be several miles short of making CMY. At this point he was surrounded by unforgiving hill country south of I-90 but he noticed what looked like a large flat wheat colored field north of I-90 in the restricted airspace, so he headed towards it through the haze. When down to a couple hundred feet it became clear that he not only had the field made but also that it was not a wheat field but rather a beautiful wheat colored crushed and compacted gravel airstrip 6000 feet long for restricted military use!

Mitch rolled to a stop after an uneventful dead stick landing, maneuvered the aircraft to a parking area, and made a cell phone call to an airbase phone number. The call resulted in a conversation with the base commander including some probing questions about why he had landed his airplane in restricted airspace on a restricted runway.

It was Sunday, and the base commander had field operations planned for Monday and later in the week and wanted Mitch to get the Swift off the field on Tuesday. Mitch told the commander he could come back on Tuesday get it flyable within 12 hours and fly it out. The base commander agreed to Mitch's plan.

Mitch's wife drove down to pick him up on Sunday. On Monday, Mark Holliday helped Mitch pack up tools and a spare engine that Mark had available at Lake Elmo, and early Tuesday, Mitch and Mark drove back to Fort McCoy to replace the Swift's engine. By 7:30 pm Tuesday, and with a pleased base commander, Mitch took

off and flew back to Lake Elmo where he removed the engine to give back to Mark. The damaged engine was found to have a broken rod.

See [a video of Mitch's presentation](#) for the full story.

Bill Schanks Jr. also dealt with some adversity on the way back from Oshkosh this year, experiencing a deadstick into a field due to fuel starvation in his club Champ. The fuel starvation was due to fuel exhaustion from a particularly long taxi for take-off at Oshkosh, greater than anticipated headwinds on the flight to Lake Elmo, lack of sufficient fuel level indication at low fuel levels, and as yet uncalibrated fuel burn rate and unusable fuel quantity.



The landing into a field with a fence at the end was finessed by executing a beneficial ground loop aided by a slippery surface that allowed the newly rebuilt Champ to slide sideways without dipping the wing far enough to catch a wing tip.



Given the lack of injuries or damage, the FAA declined to visit the site and just wanted photos of the landing site and aircraft. Local law enforcement visited the site and approved and assisted in Bill's plan to take off from an adjacent stretch of roadway once the aircraft had been refueled.

The FAA had some constructive feedback for Bill and volunteered him for some additional training.

See [a video of Bill's presentation](#) for the full story.

The chapter thanks both Mitch and Bill for sharing these experiences so that we can all learn from them.

The **November 8** chapter meeting kicked off with elections for chapter officers and class III directors. The results are reflected in the positions noted in the title page heading of the newsletter, changes which include Robyn Stoller as Vice President, Ed Trudeau as Secretary, Gregg Adler as Education Director, Jim Pearsall as Membership Director, Vicki Moore as Young Eagles Director, and Bruce Olson handling Social Media. Thanks to all of these new leaders for stepping up to take these rolls, and to those continuing in their current roles!

Next on the program, we heard from chapter member **Jay Schrankler** discussing the 1965 Beechcraft Debonair he has recently taken ownership of.



Chapter members may recall Jay's presentation a few years back about the high tech new Cavalon Autogyro he had put together via a build-assist program and was flying out of New Richmond.

Jay, who has owned, over the years, a Cessna 170, a Cessna 172, a Cherokee 180, and a Jabiru, has now also parted with the Cavalon and taken on a Debonair project (as well as a Pietenpol, but that's a story for another day).



Jay's C33 Debonair has been a Minnesota fixture for it's whole life, starting with the Minnesota Department of Aeronautics and passing through small businesses around the metro, including Modern Aero (FCM), Executive Aero (FCM), Gopher Aviation (RST), Mercury Aviation (STP), and Northern Airmotive (STP). It was owned for many years by 3M Corporate pilot Louis Bernet (sp?), and was sold posthumously by Louis' estate to Barry Hammerback in Wisconsin. Barry, Jay, and Pat Ehlenfeldt founded Perceptive Avionics at the New Richmond airport (RNH) to service the General Aviation market with certifications (pitot-static and transponder), and to perform panel upgrades, installing the latest technology into older aircraft. Jay bought the Debonair from Barry with the commitment to upgrade and restore N8949U, preserving a nice example of the type and keeping it local.



The Debonair's panel is 80's era with no GPS and an inoperative auto-pilot, and it's 225 hp IO-470-K

Continental Engine is in need of overhaul. Jay has pulled the engine and intends to update the panel with an Aspen PFD and an Avidyne stack for GPS, navigation, radios, transponder, and autopilot. The airplane will serve as a demonstration platform for a Perceptive Avionics upgrade as well as a beautiful piece of flying history that can transport Jay to visit family and friends and shuttle between his residence on Cedar Lake near RNH and his apartment in Chicago which he frequents in his leadership role at the Polasky Center for Entrepreneurship and Innovation at the University of Chicago.



Jay has both Gopher and Badger degrees in Electrical Engineering and Computer Science and has enjoyed a technical and executive career at Honeywell before taking entrepreneurial leadership roles at the University of Minnesota and now the University of Chicago. Stop by [Perceptive Avionics](#), Hangar 11-14 at RNH to say hello, or for a bid on your next transponder check or panel upgrade.

The November meeting finished up with **John Derosier** demonstrating safety wiring techniques, using proper fasteners, and identifying legal and counterfeit parts and tooling. John is a mechanic with Delta Airlines. He noted that to the casual observer a wire through a castle or slotted nut may look okay but how do we know it is tied correctly, is it an authentic fastener or a counterfeit and is it the correct wire type and gauge? A lost nut can have catastrophic consequences. John also talked about why owning quality tools is important and how the wrong tool can make a mess of a job or in some cases you. John shared anecdotal stories from his years wrenching on the heavy and not so heavy iron to bring home his points.

The **December 13th** Chapter meeting kicked off with holiday treats and coffee, thanks to Robyn, and a round of welcomes to new member **Frank Kurkowski** who this year completed the building of a Quad City Challenger

XL-65 powered by a 64ph Rotax 582.



Frank lives in St. Paul and keeps his Challenger at the Bloomer airport in Wisconsin. Frank finds the Challenger easy and fun to fly and had so much fun building it that he's purchased another kit, a Merlin PSA, for his next 'challenge'.



Frank's Challenger is featured in the November Sport Aviation Member Central Mission Accomplished section (pg.107).

After Frank's welcome to the chapter, Leif and Gregg shared the news that the chapter has awarded a scholarship to **Anika Hovland** for attendance at the EAA Air Academy next summer. Anika has endured the cancellation of the two prior summer Academy programs due to the pandemic. We're all hoping the third time is charmed.

Robyn then introduced the fantastic program she had arranged for the night: "A day in the Life of an Airline Pilot" by new chapter member **Susan Bailey-Schmidt**, a



Delta Airlines captain and Embry-Riddle Adjunct Professor. Susan has been with Northwest / Delta Airlines for 21 years. The list of aircraft she flies and has flown includes A330, A321, A320, A319, DC9, CRJ and EMB120. Susan is a Lead Flight Standards Pilot (10 years on 320 series aircraft), Flight Standards Pilot on A330, and serves on Aviation

Safety Action Program Event Review and Threat Review Committees.

In September Susan won the prestigious Delta Chairman's Award. This award honors a few select employees across Delta's worldwide operations who embody reliability, innovation, thoughtfulness, servant leadership and who demonstrate the highest standards of service to customers, coworkers and the communities Delta serves. Susan is also Adjunct Assistant Professor at Embry Riddle Aeronautical University teaching courses on human factors in aviation and crew resource management.

Susan shared her path into aviation, which was commercial, not military, and included education, training, and a masters degree at Embry Riddle, jobs out of Boston, Anoka, Memphis, Oklahoma, and with Fedex, prior to NWA/Delta. Many of her early hours were in a Cessna 150, a Cessna 172, a Seneca Light Twin, and an Embraer twin turboprop. Susan's husband, Kelly, is also a professional pilot; they are Lake Elmo residents and share a Cessna hangared at 21D for recreational flying.

The oldest model Jet Susan has flown is the DC-9 with direct linkage from the yoke to the control surfaces and scores of steam gauge instruments.



The DC-9 has an impressive deck angle in the flare.



Imagine the pilots perspective in that attitude! It would feel like holding level for the stall at 30 feet up. More recently, Susan has obviously been flying more modern and advanced aircraft, like the Airbus 330 with fly by wire and a modern avionics suite, and a spacious bunk area for rest breaks on long haul flights.



Susan noted that schedules for pilots tend to be both unconventional and varied. Airlines operate 24/7/365 so pilot schedules fill in all of those hours. A pilots schedule depends upon the type of aircraft and operation, pilot seniority, and pilot preference. More preference is afforded to the more senior pilots, but in general the profession is very good at allowing pilots to tailor their schedule to their specific needs and goals, and to adjust them as their needs change over time. To accommodate her parenting needs for example, Susan was able to settle into a 3 day weekly schedule of departing Monday morning for Amsterdam out of MSP, overnighing there and resting up before doing the return flight and being home to pick up her son from school on Wednesday afternoon.

Susan described the timing and tasks of a typical flight. The timing is different for international vs domestic flights, but contains the same general flow, starting with meeting the crew (2-20 members depending on size of aircraft and length of flight) up to several hours before the flight. The flight is then planned, taking into consideration weather and adverse conditions, and then providing a crew and dispatch briefing. Once at the airplane, a preflight walk around is done, followed by checking the flight deck set up and doing a paperwork review. These duties include:

- Sign in and update manuals
- Approved Model List / documents review

- Emergency equipment check
- Program Flight Mgmt Systems/interior preflight
- Approve/sign dispatch release
- Obtain ATIS, clearance, load closeout
- Startup flows and checklists

Susan ended with some tips for those who aspire to become an airline pilot. The number one piece of advice is to keep a clean driving record. Airlines look at this as an indicator of how applicants make decisions and regard laws and regulations. Airlines of necessity place an extremely high emphasis on employees desire and ability to adhere to protocol and rules. Other advice includes:

- Do well in school
- Research the best pathway for you
- Develop good leadership skills
- Develop good communication skills
- Develop good work habits
- Behave ethically and with integrity

This talk was a great treat for Chapter 54 and we are very fortunate to have Susan and Kelly join our ranks!

For the **upcoming January Chapter meeting**, VP Robyn Stoller shares:

Kick off your 2022 by joining the EAA 54 gathering on Monday, January 10 at 7:30 p.m. **Trudi Amundson** will

present a very interactive and thought-provoking program on “Airplane Crashes – An In-Depth Look at 5 Aircraft Accidents”. Her presentation is inspired by Peter Garrison’s book “Why-Thinking about Plane Crashes”. (Garrison writes the 'Aftermath' column for Flying magazine.)

PLEASE NOTE: The January 10 gathering will be VIRTUAL - held via zoom meeting ONLY. (Enjoy from the comfort of your home on a night when -10F is forecast.)

Trudi Amundson is a very engaging speaker who involves her audience in discussing each situation. At the end of this program you will understand why the accidents happened and what could have prevented them. For both student pilots and experienced pilots this will be a great presentation to help sharpen your aeronautical decision-making skills.

Trudi has a broad spectrum of flight experience. She has 1900 hours flight time, is a multi-engine commercial pilot, flew blood for St. Paul Red Cross, flew fire patrol for 3 years at Bemidji Aviation, has flown over 100 rescue dog flights and many Young Eagles flights.

Join the zoom meeting at 7:00 p.m. for 30 minutes of social time prior to the start of the official Chapter meeting at 7:30 pm.

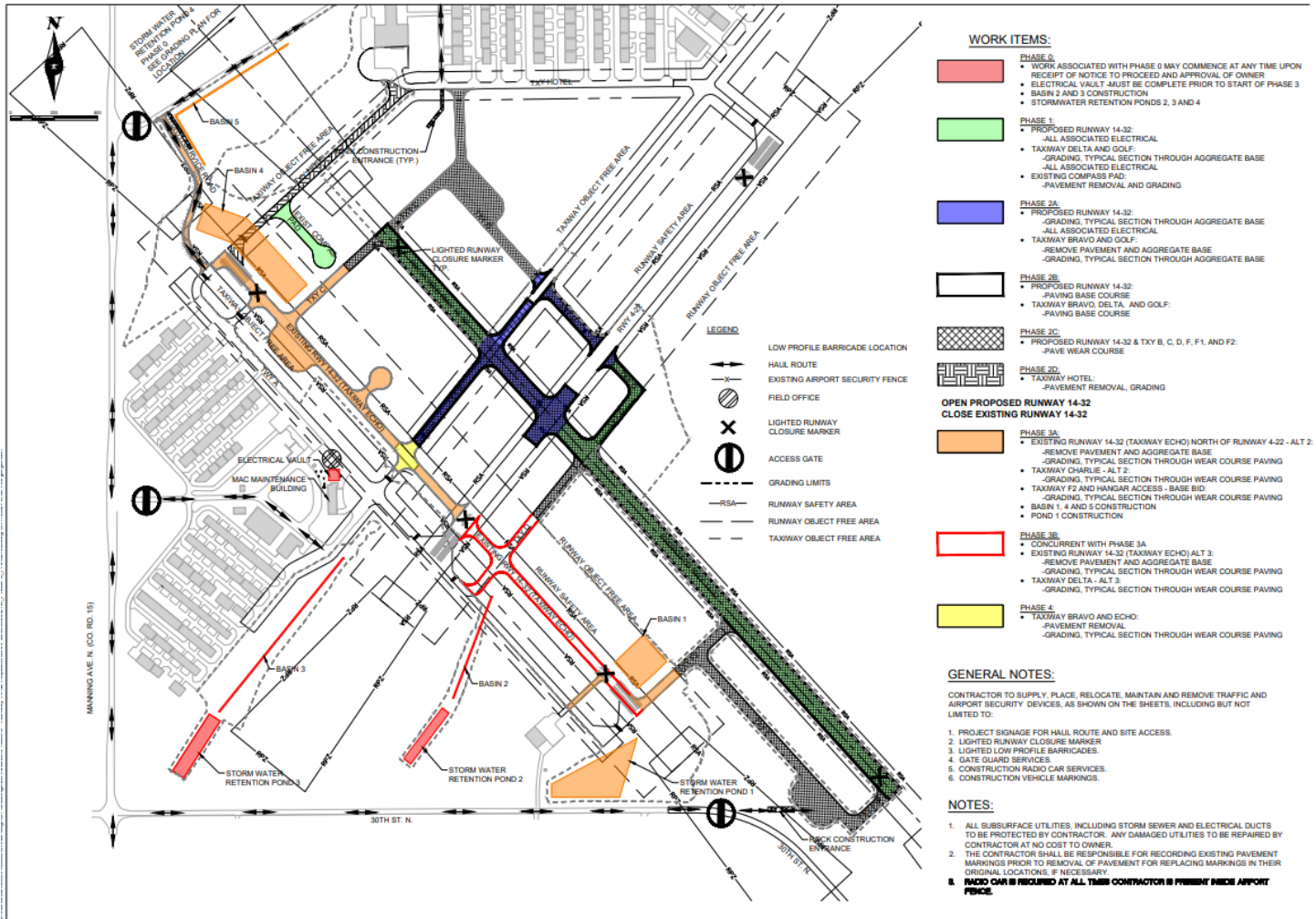
Join us for a fascinating and informative program. Hope to see you at the zoom meeting!

The Lake Elmo Airport Advisory Committee (LEAAC)

The third quarterly meeting of the LEAAC was held in December, organized and led by the MAC and our new airport manager Phillip Tiedeman. This is a forum for airport neighbors and local city representatives to engage with airport management and airport users to address issues of concern as they arise.

The December agenda / slide set is available [at this link](#). The meeting was chaired by Luke Peterson. As a summary:

- Stormwater analysis led to the proposal that there would be no change in drainage basin areas or discharge locations. Filtration basins will control rate and water quality. Volume control will be achieved with evaporation.
- Four electrical evaporators will be deployed to control excess volume in each of four ponds. The evaporators spray a mist out the sides of the unit close to the surface to minimize drift. They are anticipated to run for 32 days/year, with the exception of the largest pond which could run 85 days/year.
- An analysis of noise data collected August 4-10 on and around the airport for an initial sound study was presented. Data was collected from 3 locations. Charts presented showed: number of landings and takeoffs per runway per day, sound events for each hour of the day (with peaks at 10am, noon, and 3pm), total number of individual noise events above 65dB and 80dB (none above 90dB) for each location. Noise maps were presented showing noise levels in the area surrounding 21D as modeled based on the flight events and aircraft types actually operating over the data collection period. Measured noise levels were consistently lower than the modeled results.
- 3rd Quarter noise complaints related to the Lake Elmo Airport included 25 noise complaints from 4 locations, and 7 nighttime complaints from 3 nighttime locations (households), up slightly from 2020.
- An overview of progress on the airport improvement construction was provided with some aerial views. Work on the grading for new runway 32/14 is running ahead of schedule due to the mild weather that extended into October and November. The most visible change in this period as shown in the photo on the next page, has been the removal of the trees north of the railway, west of the FBO, which would have been in the flight path of the new primary runway.



[Here is a new link](#) to the general Lake Elmo Airport MAC website with links to LEAAC information and other items of interest to airport users.

[Subscribe](#) to an occasional 21D newsletter from MAC and manager Phillip Tiedeman that provides information of note for 21D airport users. Included in this newsletter are links to [ongoing drone photos](#) of progress on the 21D airport improvements underway, this one from December 1 showing the trees gone from northwest of the FBO:



ICEPORT 2022



A sincere "Thank You" goes out to [Tanis Aircraft Products](#) for their continued generous support of this unique, family-friendly event!

For the latest ICEPORT event updates, please visit: [Facebook.com/CreateLift](https://www.facebook.com/CreateLift)

- Pilots monitor: 122.9
- No fee for this event (Donations are highly encouraged to offset Mac's Twin Bay plowing expenses)
- Plowed iceway (Skis & wheels welcome)
- GPS coordinates: 46.17N/93.48W

"Look for the orange safety cones depicting the landing zone"

VENUE: ICEPORT 2022 Fly-in Brunch (Mille Lacs Lake, MN)

DATE/TIME: Saturday, March 5th, 2022 10:00am - 3:00pm (Prize drawings @1:00pm)

LOCATION: Mac's Twin Bay www.macstwinbay.com/da-boathouse-restaurant

No word yet on a Trick Air flyin at Jackson Seaplane base in McGregor (Feb.20 last year), but Iceport 2022 can go on your calendar for March 5th. Check TrickAir.com/flyin for any future announcement.

Lake Elmo Airport History 1949-1968

Leif has scanned and posted 75 pages of Lake Elmo historical documents which are available on the Chapter Google drive [at this link](#). Their provenance is legitimate: emeritus chapter leader Bob Waldron found them when cleaning out his office files and recalled receiving them from Polly Holliday, owner with Ward Holliday of Lake Elmo Aero, the field's FBO

during the last half century of the prior millennium, together the parents of Mark Holliday who still owns many of the rental hangars around the field and the lone hangar off of 30th Ave where he has hosted the annual pre-Oshkosh Swift gathering for many years. Look through them on a snowy evening and let us know if you discover something to share. Note that the airport improvement plan written in 1966 shows a diagram (on page 64) showing runway 14/32 realigned and lengthened almost exactly as is being done today. The 1966 plan (described in paragraph #7 above that diagram) was to have 3 stages, the first of which would start immediately and move and extend 14/32 to 3400'. Ultimately 14/32 was to be 3500'. Well that took a little longer than planned!

Dennis Hoffman passed away November 1st, 2021. Dennis was a long-time member of Chapter 54 who flew many Young Eagle flights with the chapter in his lovingly maintained and polished 1953 Cessna 170B. Dennis also built a polished aluminum



Midget Mustang and beautifully restored a Piper L4 warbird.

Dennis was a talented, well equipped, and generous fixture on the field. Many 21D home builders benefited from his knowledge, his unrivaled set of tools, his calibrated set of aircraft scales, and his humor. He will be fondly remembered and greatly missed. [Obituary](#)



Big Carnelian Lake circa 2003

Dennis

Door lock reminder



A reminder to lock the clubhouse: If you have let yourself into the clubhouse and are leaving, or if you are the last to leave after a chapter event, please make sure the lock switch is left in the horizontal 'locked' position. Thanks!

Editor's 2¢ (M. Gunderson)

RAAC / LEAAC

As mentioned in chapter emails and Leif's column above, John Renwick is passing the baton to me for representation of 21D lease tenants in the MAC Reliever Airports Advisory Council (RAAC), which meets quarterly and comprises representatives from all six reliever airports -- lease tenants and airport businesses. RAAC meets with MAC Reliever Airport staff for updates on new developments, and to share concerns as tenants and airport users. John has done a great job of representing 21D tenants for years and I hope I can approach his level of detail and competence in this role. I in turn have passed on my position on the LEAAC to Paul Evenson and thank him for his willingness to serve.

John noted in his summary of the December quarterly RAAC meeting that:

1.) reliever airport leases will be coming up for renewal over the next few months. Renewing tenants will receive a letter from the MAC about it, starting next month for the many leases that are due to expire in May. There have been many changes to the lease document, mostly clarifications and compliance with Federal anti-discrimination laws. One change that might affect you is an increase of the required liability insurance coverage from \$500,000 to \$1,000,000. Have a look at your insurance policy -- many of may already have \$1M coverage. And,

2.) MAC staff will begin the process of revising the rates and charges ordinance in Q3 of 2022. This is the document that determines what we have to pay for our leases. For a long time now, it has contained an automatic 3% annual increase in lease rates, and this is something for which we'd like to get some relief.

The RAAC meets quarterly in the month prior to my quarterly newsletter, so I'll include a summary from the most recent meeting in each of these newsletters (as well as a separate emailing to the airport tenants Google group.

Can't get enough of Sully?

Neither can I. He's had movies and books made of the Miracle on the Hudson and has even wrote his own books. There are real-time second-for-second recreations and simulations of that 210 second flight from Laguardia to the Hudson. I thought I'd seen most of the articles, but I ran across one that had slipped through the cracks (mine at least). In case it escaped you too, check out this [2009 Vanity Fair article by William Langewiesche, "Anatomy of a Miracle"](#) which focuses on bird strikes, engine design and

testing for such events, the perhaps inevitability of such an event, and of course Chelsea Sullenburger's and Jeff Skile's masterful performances. William Langewiesche is a commercial pilot, author, and son of Wolfgang "Stick and Rudder" Langewiesche.

Holiday Travel

I haven't traveled much on commercial airlines the last couple of years, but I braved holiday travel via Sun Country Airlines to LAX this year. Sun Country struggled with a software disaster for much of the holiday week, but fortunately our flight out on the late afternoon of Christmas day was before those troubles, smooth and close to on time with very light crowds on both ends. The flight back on the evening of New Years Eve also featured no TSA lines but was delayed about 3 hours and, by the time we arrived MSP at 2:30 am, the late hour proved



challenging to find an available gate, someone who could drive a jetway, and apparently people to unload baggage because we waited on the tarmac for 20 minutes for a gate, waited another 20 for the Jetway to connect, and another 45 minutes for the checked baggage to hit the carousel. Folks were getting surly.

The upside of finding your flight delayed at LAX, at least if you haven't returned your auto rental yet, is that you can drive 1 mile south of the terminals on Sepulveda and 2 miles west to Dockweiler state beach, ½ mile off the departure end of Rwy 25 and go for a beach walk while you wait.

We were in SoCal where my wife is from, to visit some from her family we haven't seen since the start of the pandemic. But I also took it as an opportunity to look up one of my cousins who I had reconnected with



at his brother's funeral last fall in Dodge Center, MN. Joe and Wayne Aarsvold, sons of my father's sister are both about 10 years older than me and both served in Vietnam as Air Force technicians. Wayne came home to Dodge Center after Vietnam to take over the farm, but Joe got an aviation engineering degree and ended up in Long Beach working for McDonnell Douglas and Boeing. Wayne kept active in aviation at Dodge Center as a CFI and was a partner in a Maule there. I learned at Wayne's funeral that Joe had retired and moved to Camarillo, which is near where we would be visiting my wife's family in Ventura and Ojai during the holidays. I told Joe I would look him up when I got out there, and I did.

I knew Joe had worked for MD/Boeing for the last 30+ years but on my visit I learned about the start of his career, after serving in the Air Force. After his schooling he started at Cessna in Kansas as a propulsion engineer, then jumped to Beech to work on the Starship fuel system. He didn't stay there long because Beech paid \$0 for the first 4 hrs of overtime, and 90% of hourly base pay thereafter, and there was lots of overtime. He bounced to Helio-Courier in a tiny town in SW Kansas but they went broke, and then a pal called him with a job at a startup called Avtek in Camarillo. He was there for about 2 years until it went bust, then he found work at MD. He showed me this brochure he had saved from that time.



It was powered by two P&W PT6-A turboprops, and looks sort of like a small Beech Starship. Joe said they recently pulled the prototype out and parked it on the ramp there at Camarillo. Here's what it looks like now:



By the time Avtek folded, Joe was married with kids, so he figured it was time to look for a more stable job and signed on with McDonnell Douglas. He had a great career with MD/Boeing ending up as a Liaison Engineer, testing jets as they finish production and riding with the delivery crews to finish the tests en route and review with the customers.

Green Developments in Aviation and elsewhere

Electric aircraft are getting a lot of attention these days. I like how electric power in bicycles and automobiles has progressed, but I don't see those as a solution for distance travel (not for me anyway). I think of an all-electric automobile as mission limited to local travel, similar to an eBike. I'm sure that's an arguable point and may evolve with technology, but it really becomes clear electric means local mission for electric flight. Battery energy per weight really limits the range of an electric aircraft, but works fine for certain short duration flight missions, including local training.

I read recently of plans by Airbus to develop carbon free or carbon neutral long haul air transportation by building [infrastructure](#) and [aircraft](#) for liquid hydrogen fuel. Hydrogen is not so much an energy source as it is an energy storage and delivery mechanism, so ultimately it is only as 'green' as the source of energy that creates the electrical power to generate Hydrogen by electrolysis, but electrical generation is trending away from fossil fuels over time.

Airbus is also working on developing a carbon neutral [synthetic hydrocarbon fuel similar to kerosene called PtL](#) which could power some of the existing fleet. Again the synthesis is powered by electrical energy; it pulls CO2 from the atmosphere to create the hydrocarbon fuel so when combusted in the jet engine there is no net creation of CO2.

Ultimately, achieving Carbon neutrality including for flight relies on creation of the majority of electrical power without fossil fuels and that's a discouraging long way off. Incremental steps towards this are being made with wind and solar, but personally I don't see significant conversion to Carbon free happening without a major shift to Nuclear power generation. I've been very encouraged to see [Bill Gates work at Terra Power](#) coming to fruition after 15 years of work and development of the modern 4th generation nuclear plants represented by the [Natrium design](#), recently selected by Warren Buffet's Wyoming electrical utility (PacifiCorp) for demonstration as a coal generation plant replacement.

There are clearly many hurdles to clear in all of this, but it's encouraging to see some path developing.