



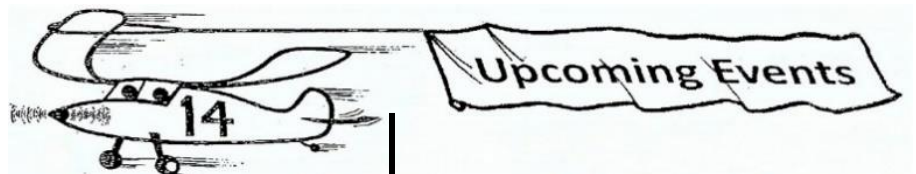
# Spirit of Flight

**Experimental Aircraft Association  
Chapter 14: San Diego, CA**

**July 2024**



*Young Eagle parents gather in the shade of our replica field hangars to watch activity on International Young Eagles Day, June 8<sup>th</sup>.*



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**July 13<sup>th</sup>—Young Eagles Rally**

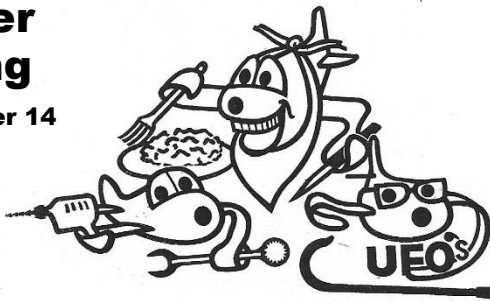
**July 20<sup>th</sup>—Pancake Breakfast and Membership Meeting.** Caleb Taylor speaks about the aviation industry and aviation careers.

**August 3<sup>rd</sup>—Lunch in Hangar 1**

**August 10<sup>th</sup>—Young Eagles Rally**

# Chapter Briefing

## EAA Chapter 14 Members



**Chapter Activities:** Information provided by Chapter members.

*Week ending June 1:* It was a busy Saturday getting ready for International Young Eagles Day even though it was overcast and a bit cool— well, maybe that was good after all, since a group of volunteers worked hard getting the Chapter spruced up. Lots of effort was expended on getting Hangar 2 cleaned, organized, and ready for the Build-a-Box activities. And, a clever and stalwart crew figured out how to put up two replica World War 1 hangars – sorry, didn't get the names of all the volunteers. We're working on getting a better way of noting who volunteers for different tasks so we can be sure to acknowledge them. Member Stephen had a warm lunch available for everyone: hamburgers, potato salad, grapes, ice cream and more – he knows his way around our grill – we were very appreciative. Jonathan and Scott finished up work to make our internet connection robust for the busy upcoming YE rally.



*A crew erects one of our replica WWI field hangars to provide shade for parents watching flights on International Young Eagles Day.. 6/1*

*Week ending June 8:* All week long, YE coordinators Shon, Noah, and Scott worked tirelessly to have everything organized for International Young Eagles Day – and their hard work paid off – even the weather cooperated with a sunny day. The WWI hangars came in very handy, as parents were able to be in the shade taking pictures of their kids taking flight. All of our Ray Scholars were there as volunteers, with Annie and Samantha working the ramps, and Bekk heading the Build-a-Box station. There were so many parents and member volunteers helping out – couldn't keep track of them all. Here is a partial list: A huge shout-

out goes to our pilots Chris, Bruce, Trevor, Jonathan, Tom, Ron, and Abraham – obviously there is no YE rally without our dedicated, exceptional pilots. And the large ground crew kept everyone safe and organized: Isabelle, Josie, Justin, Kyle, Nick, Scotlyn, Veronica. And, of course, many thanks go to all the volunteers in the kitchen, including Trinidad, Sharon, and Ashley. Trinidad reported we served over 100 lunches – we're sure that is a record for a YE lunch. And, a big round of applause for everyone who stayed and got everything back shipshape and put away. It was an amazing day because of our volunteers. We couldn't do it without you.



*A Young Eagle wields a hammer at the Build-a-Box station. Bekk (off camera) steadies the center punch and thinks about the lines to "The Ballad of John Henry."*

*Week ending June 15:* One of the favorite times of the month at the Chapter for some members occurred as always on the 3<sup>rd</sup> Saturday: Pancake breakfast, expertly prepared by Kevin and his son David. Nice weather greeted those who made it down for both breakfast and our excellent program talk.

*Week ending June 22:* Quiet week at the Chapter. Jimmy K is visiting Montana, but other members kept working on their aircraft and projects. Jonathan is working with our alarm company to make some updates.

*Week ending June 29:* The week started out with hot weather, but a good breeze kept Gert, Jim, and Jonathan and others busy at the Chapter. Nigel scored a nice donation of office chairs from where he works. They are upgrading and our Hangar 1 and the library/workshop are the beneficiaries. Thanks to Nigel for the donation and to Ryan for doing the transportation. The fun stuff happened on Saturday when a group hosted by Chris did a flyout to French Valley and enjoyed breakfast at the French Valley Café. See a report elsewhere in the newsletter.

**General Meeting:** Kerry opened the meeting and welcomed visitors and guests. Then wearing his Program Director hat, introduced the program for the month, [What Engine Data Can Reveal](#). See an overview of the presentation elsewhere in the newsletter.

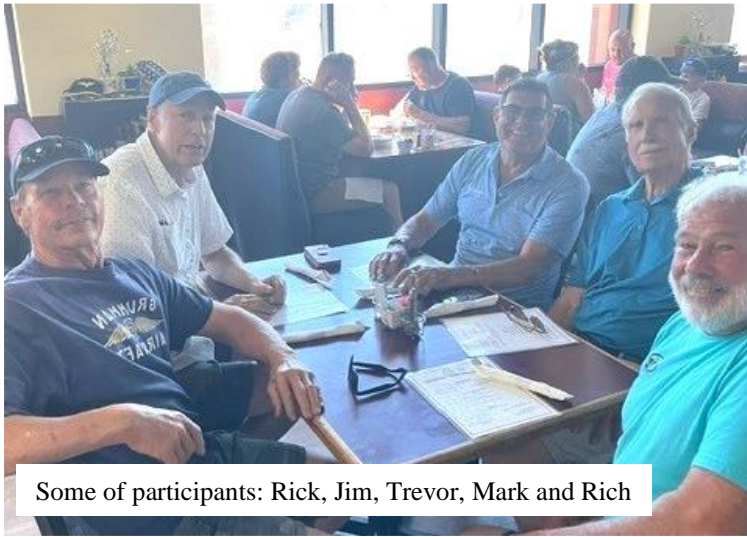
# Flyout to French Valley

**Chris Constantinides**

Saturday Flyout to French Valley F70 on the last The Saturday of June was great. Wheels up was at 8:15 am. We had 8 planes, 15 participants – and best news: the flight was smooth and clear.



We had breakfast at the French Valley Café (always a treat).



Some of participants: Rick, Jim, Trevor, Mark and Rich



Gary, Jonathan, and Sydney.

Also in attendance were Manny, myself, Steven and his YE son Kenan, Toni, Zack, myself, and one other YE volunteer – really sorry I missed the name.



EAA Chapter 1279 was having their annual BBQ and the hangar was full of visitors. We stopped by to say hello and have a look around.



We left before the heat got too bad and enjoyed blue skies on the way back. No better way to start the weekend.



### **Kerry Powell, EAA-14 Program Director**

June 15: Caleb Taylor, will speak about the aviation industry and aviation career paths at our July meeting.

Caleb is on the Board at the San Diego Air and Space Museum. He is also a commercial airline pilot, flight instructor, a designated pilot examiner and an air ambulance pilot, grew up in San Diego. He is the founder and currently the president and chief pilot for large cabin jet aircraft at Encore Aviation in Carlsbad. He is also the chief pilot at ST Air Service. Mr. Taylor founded and was president of ProFlight in Carlsbad, for 28 years. Earlier, Mr. Taylor had been a corporate pilot at both Cal-West and Executive Wings, both based in Fresno. In 1986, he was a simulator and ground instructor at the Cessna Learning Center in Wichita, and, before that, for six years, was a charter pilot and flight captain for the Stephen B. Colwell Company in Mammoth Lakes. Earlier, he had been first officer and a flight instructor at Critical Air Transport/The Flying School in San Diego, where he was also involved in medevac operations throughout the western United States and Mexico. He began his professional flying career as a flight instructor at Star Aircraft in San Diego in 1978. Mr. Taylor began his flight studies with the late Bill Gibbs, when he was 16. He has accumulated over 14,000 flight hours.

Anyone considering an aviation career should attend. Caleb has had an interesting career and has some great stories.

## **New Neighbors at EAA 14**

**Donna Ryan**

If you've been at the Chapter within the last couple of months, you've seen a lot of construction going on right next to us. Pictures of the large earthmoving machines have been featured in past newsletters. It's all part of the upgrade to Brown Field that has been talked about for a long time. If you missed the TV announcement about groundbreaking or the article in the newspaper, here's some additional information. Quotations are taken directly from the San Diego Tribune article of June 11, 2024 by David Garrick.

The headline announced, "\$100 million Brown Field revamp gets off the ground. New terminal, customs area, hangars expected over 20 years at underused facility." The article went on to announce that Industrial Realty Group (IRG) was spearheading this major upgrade. "The project is the first part of a four-phase development plan that will include a modern terminal, a new customs inspection facility, dozens of commercial hangars and more than a million square feet of retail space. . . While the first new buildings at Brown Field are slated for completion by the end of next year, the overall project, now called San Diego Airpark is anticipated to be built over 20 years."

The newspaper article claimed this upgrade will create new jobs, bring additional money to the San Diego area, and increase usage of Brown Field. The article also stated that the project "requires the developer to build a road across the northeastern boundary of the airport from La Media Road to federal property nearby."

For more information, copy the link below to your browser: <https://www.jrma.com/projectsdetails/air-center-san-diego>



*CAD drawing of planned facility just west of Chapter 14. The control tower is at the upper right of this image.*

# What Engine Data Can Reveal

## Short Summary by Donna Ryan

*The following information is based on a talk given by Joe Godfrey*

Joe Godfrey provided an informative and valuable talk about the advantages of engine monitoring systems and how to interpret the data these monitors produce. His goal was to convince each listener of the value and importance of regular engine data analysis. The comments below are taken from Joe's talk. His discussion was filled with screen shots of specific engine reports and information on how to read and correlate the data. However, this summary is just a high level recap and doesn't include the many specifics he provided. Another reminder: good idea to be at the meeting in person or log into Zoom to get the full benefit of the information.

Joe has been based at CRQ since 1986, got his instrument rating in 1988, and has owned a Bellanca Viking since 1990. Joe is the Director of Analysis at SavvyAnalysis Pro and has worked there since 2008. Among other services, the company has a team of analysts who look at data downloaded from a piston engine, interpret it, and send out a report with results to the customer. The report is loosely modeled on oil analysis reports.

While the talk was primarily about using engine data, Joe gave a very brief overview of the Savvy Analysis company. It was founded in 2008 by Mike Busch, who many of you know from his GA maintenance columns in EAA's [Sport Aviation](#) magazine. The company supports all popular engine monitors in terms of interpreting data. Savvy provides a free platform if you want to interpret the data yourself. However, if you want experienced help to help read and understand the data, it can provide that as well. Annual subscriptions are designed for owner/operators of one aircraft; there are also special packages available for maintenance shops, flights schools, or clubs where the package can be applied to different aircraft.

See their website [www.savvyaviation.com](http://www.savvyaviation.com) for more information and a lot of testimonials on how the program helped out.

The main portion of Joe's talk was on what engine monitoring systems can do for you and the longevity of your engine. An engine monitor is a device that records many important engine parameters such as EGT (Exhaust Gas Temperature), CHT (Cylinder Head Temperature), FF (Fuel Flow), and Oil Temp. Newer monitors have alarms. The device stores the data, which can be downloaded into a computer and then uploaded to SavvyAviation for analysis. Analysis can highlight such problem areas as clogged injectors, weak spark, mis-timed mags, induction leads, cooling problems, governor over- and under-speeds, cooling problems, MIFs, etc. etc. If you are watching the data real

time as you are flying, you can also get the information needed to decide if a problem needs to be addressed right away (start looking for the nearest airport or field), or if it can safely wait until later. By interpreting data, you can make informed maintenance decisions, such as which cylinder you need to replace (and not just shell out money to do all of them if it isn't necessary).

Joe shared a variety of data displays and discussed them in detail.

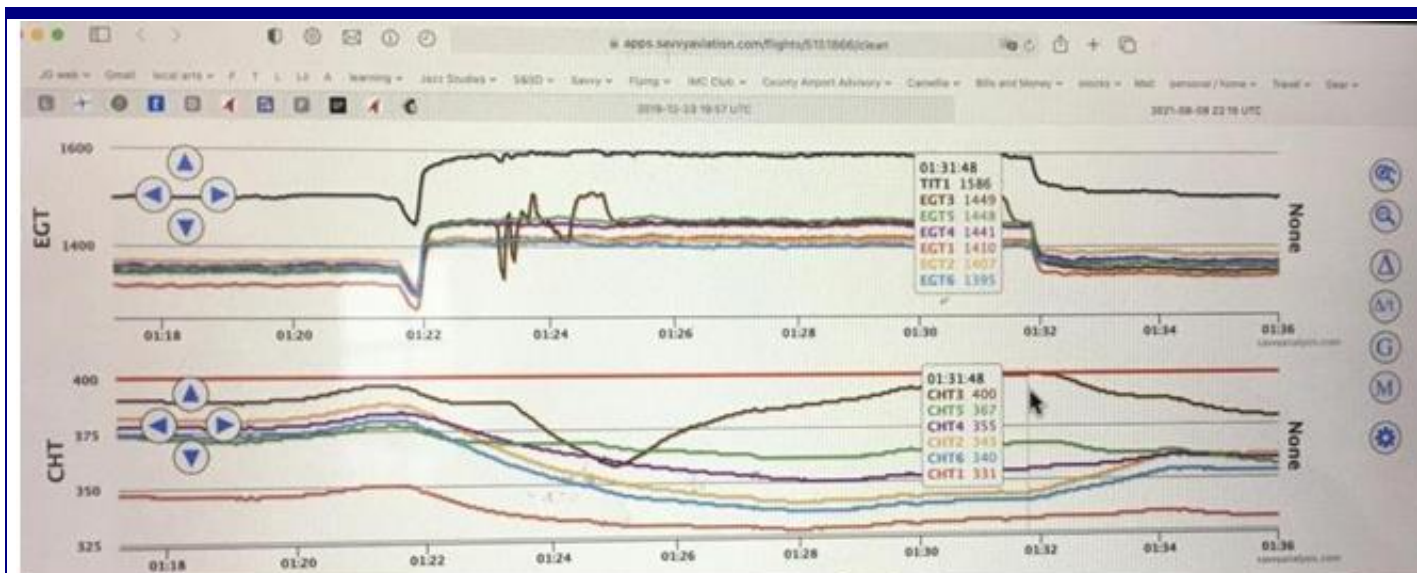
In one instance, when looking at a CHT data display, he pointed out how to determine if the anomaly showing on the data was a bad connection or something more serious, like a bad crack in the exhaust pipe.



*Exhaust pipe crack, identified through anomalies in CHT data.*

The example at the top of the next page shows an 18 minute segment of data collected by the monitor. For each example, Joe discussed what the data might mean. Example: when CHT goes up, but combustion is stable, it may be a cooling problem, a broken piston ring, or maybe a spark driven event. Or in another instance, for CHT, cylinder 3 might be tracking perfectly but it is hotter than the other cylinders. What might be causing that? Does the problem look serious enough to have the cylinder borescoped? Or maybe you were making power changes and the data can show which cylinder doesn't like that. First step is always to evaluate and judge the data to make sure that the issue isn't just a bad probe. Another important step is to look at all data types together to make the best interpretation and corroborate the recommended action. These are all areas that the reports can help with. You can put overlays on the data, such as altitude over fuel flow, to see what was happening at a particular time, e. g. doing touch and goes. The company provides a variety of reports. The example reports on, and offers an interpretation of, the maximum CHT and CHT spread during the cruise phase of a flight.

Another advantage of an engine monitoring system is that it can act as "evidence" when selling the plane. You have something to show that you did required maintenance and



**Expanded EGT / CHT Data Display.** With minute-by-minute tracking of all cylinders, the engine monitoring system shows the result of every change in combustion or power. From this data, it appears that cylinder #4 may have had some combustion problems (too lean maybe) around 01:24, resulting in erratic EGT and declining CHT, while the cylinder #3 CHT probe may be faulty, since it's pegged at 400 degrees.

operated the aircraft sensibly. You can even go and do a flight and then give the data to an agent or the prospective buyer to show actual engine performance. This gives real peace of mind to buyers. They can see that the plane has been well taken care of and maintained.

As part of his presentation, Joe described how borescopes work (almost like dentist x-rays) and that you can now get new borescopes for around \$300 (they are worth every penny). By using a borescope and engine data information you can feel pretty confident about the state of your engine's health. In January 2024, Savvy added a repository for borescope images. He shared some pictures of cylinder heads. Joe noted that cylinder heads should look something like a pepperoni pizza – that means there is symmetrical heating. He gave an example of why one might decide to borescope a cylinder. He shared an example where the data report showed a troubling oscillating pattern on cylinder 5 for EGT. The software flagged this and Joe recommended a borescope. When they looked at the cylinder head, this was what they saw (original picture was blurry too).

There is a green spot in the upper right of a cylinder. This shows asymmetrical heating. Assuming the rotator didn't fail (and thus gave bad data), this picture indicates a failing valve, or a valve that isn't seated properly, causing the gas to get hotter. You can reseal a valve without replacing the cylinder, but if you see this green spot, it may or may not last. As part of the discussion, Joe mentioned lapping valves and recommended Savvy's YouTube video on this topic. Joe also noted that if the compression on a cylinder is usually 70 and now reads 58, this is a really good time to borescope.

Joe mentioned that he also writes a monthly column for the company's newsletter called "Puzzler" whose goal is to help

pilots recognize and analyze data in real time so they can make informed decisions about safety of flight and maintenance. You may benefit from looking at a number of Joe's Puzzler articles. At [www.savvyaviation.com/Resources](http://www.savvyaviation.com/Resources), scroll down to Savvy Analysis Puzzlers and click on one of the monthly columns. They are very informative.

Final point: Valuable information is in engine data. It is good to know that all is going well, but even more useful to know when something is going wrong.



*Borescope photograph of cylinder showing asymmetrical heating as described in the text.*

## New Members

**Donna Ryan**

Welcome to our new members. The information below comes from their membership application. Some people just include the essentials; others expand a bit on their experience and we always appreciate that.

Look for them at the next meeting, introduce yourself and get to know them better. We appreciate their support.

**Chris L.** has a PPL with a Piper Arrow II. He's glad to donate his time and volunteered to help at International Young Eagles Day. He is really interested in Van's Aircraft RV-15 and can't wait to see it fly. We really appreciate his volunteer spirit and will definitely take him up on it.

**Bryon W.** holds commercial SEI, multi, and glider ratings. As a special skill he can contribute to the Chapter he mentioned Aero Engineer. Great addition to the Chapter. Thank you.



## International Young Eagles Day Photos



*Starting a week ahead of time, volunteers cleaned up Hangar 2 in preparation for the Build-a-Box workshop. 6/1*



*Activity on the ramp. Parents talk to volunteers and each other while watching YEs taxi and fly. 6/8*



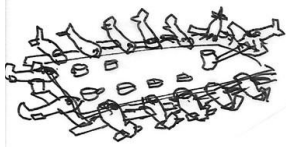
*One of our YE coordinators marshals participants for the next YE flight.. 6/8*



*Jonathan loads Young Eagles into his Meyers, one of seven planes that flew YEs on International Young Eagles Day. 6/8*



*Finishing up with lunch in Hangar 1 for everyone. Trinidad estimated that we served over a hundred lunches to YEs, parents, volunteers, members, and guests. 6/8*



# June 15, 2024 Board Meeting

**Donna Ryan, Chapter 14  
Secretary**

*Provisional Minutes – Pending Board Approval*

The Board meeting was held on Saturday, June 15, beginning at 11:49 a.m.

Directors and officers present were: Rich, Jimmy, Trinidad, Kerry, Jonathan, Kevin, Larry, Donna, Ron, and Nigel.

Directors and officers absent were: Gene (excused), Grant (excused), Alan, Stu (excused). A quorum was present for the meeting. Bob H and Scott were guests.

## Board Decisions

(Subject, moved by, seconded by, pass/fail)

- May 2024 Minutes were reviewed and approved. Jimmy/Ron: passed.
- Treasurer's Report was reviewed and approved. Kerry/Nigel: passed.
- Authorize \$100 a month for YE supplies without prior approval. Kerry/Ron: passed
- Authorize \$1,000 for supplies and canvas material for two of the WWI hangars. Ron/Kerry: passed
- Authorize \$300 to implement and activate new alarm code system for the trailer. Kerry/Jimmy: passed
- Motion to adjourn. Jonathan/Ron: passed.

## Old Business

Agenda Handouts: **Trinidad** noted information from the Membership/Hangar Rent report, as well the handout on historical lease rent rates.

Lease Option/Lease Renewal: **Trinidad** discussed the recent meeting held with City Representatives. He shared information made by the City concerning both exercising the lease option or asking for a lease extension. A permanent committee composed of all officers, as well as **Gene, Bob M., and Bob W.** was established to deal with the lease process.

International Young Eagles Day: **Trinidad** reported that the International Young Eagles Day was a very big success and Scott expressed appreciation for all the assistance and volunteers. There were 48 young people participating and 100 lunches were served. All did a fantastic job considering space issues we have right now. See further discussion for ways of improving the program even more under New Business.

World War I Replica Hangars: Participants who attended the International Young Eagles rally stated that the two WWI Replica hangars were a big hit with parents/guardians while they waited and watched for their Young Eagles on their flights. The Board decided to keep the hangars, clean and

shellac them, and then replace the canvas covers. The Board authorized up to \$1,000 for maintenance supplies and the tarps for two hangars.

Internet access: **Jonathan** outlined the problems/solutions to past internet issues and discussed current and future plans to make it even more robust.

Business Cards: **Kerry** is still looking at prices. **Scott** offered to get a quote from Uprint and work with **Kerry** on this task.

## New Business

Possible Donations: **Scott** noted that a donation of seven computers to the Eagles' Nest. The donor also plans to donate funds to upgrade the computers. This will be a very welcome addition. **Donna** discussed the Chapter's donation program. **Scott** mentioned that certain software programs are available below cost or no cost for 501(c)(3) organizations. He will work on securing some and will work with **Jonathan** to ensure the programs will work well for the Chapter.

Young Eagles: A number of points were discussed during this section of the meeting.

- *Coordinator Organization:* Scott provided an overview of the new YE organization now that we have the benefit of 3 coordinators. Each YE coordinator has a specific area of responsibility, which each keeping the others fully informed of specifics in each area. The need to obtain Board approval before any major changes are made to the YE program was stressed.
- *No-Shows on YE Days:* A suggestion was made to sign up a specific group first and then open it up to the public. **Shon** is already setting this up with a Scout group and **Noah** is exploring opportunities with a high school.
- *Pilot Recruitment:* Efforts will be made to recruit more pilots to lessen the load on each pilot and avoid burnout. This issue must be addressed before considering having multiple events in a month.
- *Separate STEM events from YE rallies.* It was agreed to run YE events separate from STEM events or YE Workshops.
- *Visitor Safety:* Discussed best practices for visitor safety during a rally, on both our leasehold and restricted areas.
- *YE supplies:* YE program needs basic supplies and should not need Board approval to purchase these. A motion was made to allow the YE Coordinators to purchase up to \$100 a month without prior approval.
- *Venmo:* **Scott** had previously discussed the feasibility of using a financial platform such as Venmo to accept donation payments for YE's or food, Chapter store purchases etc. He will prepare a presentation for next month's Board Meeting.



- **Special Requests:** The Board leaves special requests from parents up to the YE Coordinators. The need for parents and young people to attend the briefing before being allowed to fly was reiterated.
- **Food costs:** **Trinidad** outlined current format for YE lunches and costs. The need to minimize costs was discussed.

**Tables and Chairs:** **Trinidad** discussed the need for additional tables and chairs. While we will look for donations, we may need to purchase them. Trinidad will get a bid. Scott suggested setting up a 501(c)(3) account with Home Depot which could help with the expenses of this and other expenses.

**Need breakfast chef for July:** As **Kevin** will be going back to Oshkosh in July, we will need someone to man the grill for July. Stu very kindly volunteered.

**Gold Chapter Luncheon:** We had originally planned the luncheon for members on Saturday, July 27. However, due to vacation schedules, it was later decided to have it in September, probably the first Saturday in September.

**Volunteer Sign-ins and Monthly Drawing:** **Donna** discussed need to have a better sign-in system for Chapter volunteers. YE's already have a new digital one, but we also need a simple paper format for the other work parties/volunteers who help out on an informal basis. **Donna** also reviewed the system at EAA Chapter 1 that holds a drawing each month for a gift card and presents it to one of the volunteers who has served for the month. As **Scott** is already working with EAA 1 on other matters, he will contact them to see how the system works.

**Remove last names for Chapter members from the newsletter and other public media:** Because of the increasing need to protect against phishing attempts and other scams, the Board agreed to remove the last names of any children and adults from future newsletters and other social media. This will provide increased privacy for our members.

**Separate Alarm Codes for the Library:** The Hangar Manager had requested a separate alarm system for the library. **Jonathan** reviewed several issues we have had recently when a member is in the library using the simulator, but then another user arms the system because he is not aware that someone is still on site. Jonathan discussed plans to install a separate alarm system/code for the library as well as a plan for re-keying the lock so that both new and old keys can open it. A motion was made to approve \$300 to complete the upgrade.

**New Winches for Doors in Hangars 1 and 2:** **Trinidad** noted that the winch for Hangar 12 needs replacing. Board members want to ensure that winches in both hangars are safe and reliable. **Nigel** offered to look into possibilities.

**Replace hangar lights in Hangars 1, 2, and 3:** **Jonathan** thanked **Ron** for recent work on repairing lights in Hangars 1, 2, and 3. He suggested replacing fluorescent lights with

LEDs when individual lights no longer work. The Board agreed.

### Items Identified During the Meeting to be discussed next month

Lease discussions; library alarm system; digital payment methods; WWI hangar refurbishment; rising costs; hangar winches; business cards.

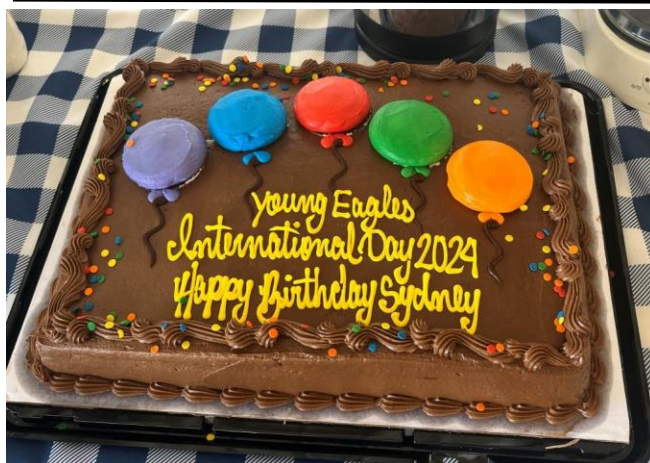
The meeting was adjourned at 1:49 pm.

\*\*\*\*\*

A virtual motion was made on June 17, 2024 to increase the amount approved in a previous motion from \$300 to \$748 to implement and activate a new alarm code system for the trailer. Jonathan/Donna: passed.

The original rough quote did not include labor or the new key system.

Submitted by **Donna Ryan**



*Any excuse for a cake! Celebrating International Young Eagles Day as well as Sydney's birthday. Happy Birthday Sydney!*

## Chapter Information

<b>Facebook</b>	<a href="http://www.facebook.com/pages/EAA-Chapter-14-San-Diego-CA/134162329986593">http://www.facebook.com/pages/EAA-Chapter-14-San-Diego-CA/134162329986593</a>
<b>Website</b>	<a href="http://www.eaa14.org">http://www.eaa14.org</a>
<b>Hangar Phone</b>	619-661-6520
<b>General Information</b>	<a href="mailto:eaal4contact@gmail.com">eaal4contact@gmail.com</a>
<b>Events</b>	<p><b>Open House at the Brown Field hangars:</b> every Saturday from 10:00 am to 2:00 pm.</p> <p><b>Pancake Breakfast:</b> 7:30-9:30 am, third Saturday of each month</p> <p><b>General Meeting:</b> 10:00 am, third Saturday of each month</p>
<b>Membership</b>	Applications available at our Brown Field hangars and on our website