

# ROTOR

JUNE 2024

THE MAGAZINE OF VERTICAL AVIATION



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SCHLAEFLI**  
VAI 2024–25 CHAIR

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**ON THE COVER:** Mark Schlaefli poses in front of “Lafawnduh,” a Bell 206L-4 operated by Yellowstone Helicopters and Dakota Rotors, two of seven helicopter companies Mark co-owns in the Upper Midwest and Mountain West of the United States. Doug Loneman of Loneman Photography photographed Mark, who will become chair of Vertical Aviation International on Jul. 1, 2024, near the Spanish Peaks overlooking the Madison River in southwest Montana. Read more about Mark, his formative years in the industry as a flight instructor and chief pilot, and his plans for the coming year in his profile on p. 26.

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Cade Clark, VAI's chief government affairs officer, has directed association advocacy programs for more than 20 years. Growing up, Cade worked at an FBO, where he learned to fly.



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Jaasmin Foote joined VAI as the association's social media manager in March 2020. She holds a bachelor's degree in English.



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Award-winning aviation journalist Mark Huber has covered the vertical flight industry for more than two decades for a variety of national and international publications. Follow him at @RotorWriter on X (formerly Twitter).



## David Jack Kenny

David Jack Kenny is a fixed-wing ATP with commercial privileges for helicopter. He also holds degrees in statistics. From 2008 through 2017, he worked for AOPA's Air Safety Institute, where he authored nearly 500 articles.



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For more than 25 years, Christine Knauer has written for major aircraft OEMs, MROs, and avionics manufacturers, as well as trade organizations and publications. She holds a master's degree in aviation safety.



## Gina Kvitkovich

Gina Kvitkovich, VAI's senior director of communications, joined the association in 2011 after decades of honing her skills in writing, editing, and publishing. As editor of ROTOR, she is responsible for every error in the magazine that you're reading—and for some of the good stuff, too.



## Zac Noble

Zac Noble, VAI director of flight operations and maintenance, has more than 37 years of experience as a pilot and mechanic. He spent 11 years flying in the air medical sector before coming to the association and is a veteran of the US Army, where he flew helicopters and multi-engine airplanes. Zac is a dual-rated ATP, a dual-rated CFII, and an A&P mechanic with IA privileges.



## Andrew Parker

Andrew Parker is VAI's copy editor. A professional editor and writer for more than 20 years, his previous experience includes serving as editor-in-chief of *Rotor & Wing* magazine, online editor of *Vertical* magazine, managing editor of *Aviation Maintenance* and *Avionics* magazines, and news editor of *Professional Pilot* magazine.



## Katia Veraza

Katia Veraza is VAI's manager of government affairs and regional relations. Before joining VAI, she was a managing consultant for government affairs. She earned her master's degree in political science from the Autonomous University of Barcelona.



## Bailey Wood

Bailey Wood is an association executive with over 25 years of experience in the transportation sector, specializing in communications, public relations, public affairs, federal advocacy, and nonprofit leadership. He served on Capitol Hill from 1998 to 2005 and was appointed to the US Department of Transportation, as a director of communications, under Secretary Elaine Chao, serving from 2019 to 2020.



## Jayne Wood

Jayne Wood joined VAI as assistant director of publications and media in November 2022, returning to the part of communications she loves—writing, editing, and publishing—after more than a decade as communications director for a nonprofit association. Before that, she was a communications consultant serving both associations and corporations.

## WRITE FOR ROTOR

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By Nicole Battjes



Nicole Battjes is the owner and director of operations for Rainbow Helicopters, a Part 135 air tour operation based in Honolulu, Hawaii, and the 2023–24 chair of the VAI Board of Directors. She is a dual-rated pilot, flight instructor, and check pilot with more than 3,500 flight hours in helicopters. An active industry volunteer and advocate, Nicole has worked on issues such as community compatibility and SMS implementation for small operators in the Hawaiian Islands.

## Empowering Vertical Aviation

*We have a new brand but the same purpose: serving you.*

**I**T'S BEEN AN HONOR AND PRIVILEGE TO SERVE AS YOUR BOARD CHAIR over the past year, a period of exciting, monumental changes that transformed our association to better serve you, our members.

We've accomplished a tremendous amount since last Jul. 1, when I became chair. The board diligently executed our strategic plan to strengthen the association and deliver greater value to our members. This included rebranding our association as Vertical Aviation International (VAI) this past February. The rebranding brings with it other changes, beginning with a new name for our annual event, the world's largest vertical aviation conference and trade show. The website for VERTICON 2025, [verticon.org](https://verticon.org), is already live, and the VAI staff is busy preparing for next year's show in Dallas.

The new website for the association, [verticalavi.org](https://verticalavi.org), will launch by mid-August to provide members a single point of access for all their member benefits. And, after 36 years, this will be the final issue of ROTOR magazine, which has served as the voice of vertical aviation since 1988. But don't worry, you'll still get all the news and stories that keep you on top of the vertical aviation industry: the first issue of VAI's new magazine, POWER UP, will land (vertically of course!) in your mailbox in September.

The association continues to advocate on behalf of our members. We have engaged at local, state, and national levels to preserve the ability of air tour operators to continue to fly, thereby protecting a critical part of the industry workforce development pipeline. Going forward, I ask all of you to reach out to the VAI staff and board to express any legislative or regulatory concerns that you need your association to address. The association's advocacy efforts can have powerful effects, but only if VAI knows which way to direct them.

Now I want to recognize some people who've been critical to my success as chair. First and foremost, I thank you, our members, for your support and for trusting me to lead the association during this important year. It's been incredibly rewarding to interact with so many of you and hear about your vertical aviation journeys. My sincere thanks go to James Viola, our president and CEO, who helped me lead the association through this historic transition.

I also want to thank the entire board for their steadfast support as we worked through the many decisions necessary to transform our association for the better. Mark Schlaefli and Stacy Sheard deserve special mention as they joined me on the Strategic Planning Committee that led our rebranding process. The VAI staff, led by COO Mike Hertzendorf, has delivered incredible support throughout my time as chair. Their professionalism and selfless service are a testament to the quality of people our industry attracts. There aren't enough words to thank each of them for their efforts, day in and day out, that keep the association running.

Although my time as chair is coming to an end, I'm proud to continue to serve you as a member of the VAI Board of Directors. Your association will be in good hands as I pass the gavel to Mark Schlaefli, owner and director of operations of Dakota Rotors. I've had the distinct pleasure of working closely with Mark over the past few years, and I'm confident he'll continue to execute our vision to Power Up!

The future is bright for our industry, and I look forward to the journey. As we say in Hawaii, *mahalo nui loa* (thank you very much) and *a hui hou* (until we meet again)! 🌺

Nicole



By James A. Viola



James A. Viola is VAI's president and CEO. After a career as a US Army aviator, he joined the FAA, where he served as director of the Office of General Aviation Safety Assurance before joining the association. A dual-rated pilot, James holds ATP ratings in both airplanes and helicopters and is a CFII. Contact him at [President@verticalavi.org](mailto:President@verticalavi.org).

# Are Helicopters Still Important?

*Yes! And that is why the vertical aviation fleet is expanding.*

**A**S YOU MAY KNOW, WE REBRANDED AS VERTICAL AVIATION INTERNATIONAL (VAI) in February, making the announcement at our association's conference and trade show, HAI HELI-EXPO 2024. But whatever name is on our letterhead, our purpose is to serve our membership, and I want to make clear what our rebrand means for you, our members.

The first thing most people will notice is that our name no longer has the word "helicopter" in it. Does that mean we are moving away from our [75 years of proud service to the helicopter industry](#)? Not in the least!

The unique capabilities of helicopters, including their ability to hover, land in confined spaces, and access remote locations, make them indispensable assets to communities around the world. From transporting critical medical supplies to providing aerial support during natural disasters, helicopters serve as lifelines in times of need.


As part of our 75th anniversary celebration in 2023, we identified [44 unique missions that helicopters perform](#), including helping farmers put food on our tables, monitoring the condition of our infrastructure, and maintaining the power grid. Nicole Battjes, VAI Board chair, summed up our industry's role perfectly in the title of her first column as chair: "[Vertical Aviation Is Vital](#)."

We rebranded to embrace a vertical aviation fleet that is expanding and diversifying. If the past 75 years have demonstrated any truth about vertical aviation operations, it is that we need a variety of aircraft to serve those 44 distinct missions. This is not a "one-size-fits-all" industry.

I look forward to seeing electric vertical takeoff and landing (eVTOL) vehicles moving to the flight line, but it will be many, many years before an eVTOL aircraft can lift, carry, and drop 12 tons of water on a wildfire. On the other hand, a Chinook is probably not the most economical ride for carrying a handful of passengers over a short distance. The aviation industry is always looking for ways to increase operational efficiency, and expanding the fleet is about creating more options, not fewer.

Helicopters epitomize the versatility of vertical aviation, performing many essential missions that support our daily lives. And when life goes sideways, they are there to provide the emergency services that only vertical aviation aircraft can accomplish. That is why new types of vertical flight aircraft are in development. Helicopters are such vital technology that they have made a convincing case for the utility of all vertical aviation aircraft.

VAI's rebrand expands the association's scope to encompass all facets of vertical aviation so that we will be better positioned to address the diverse needs, challenges, and opportunities facing the vertical aviation ecosystem. See "[AAM's Infrastructure Promise](#)" on [p. 44](#) for an example of how VAI's vision of a unified vertical aviation ecosystem will benefit all our members.

VAI takes immense pride in representing the diverse community of professionals worldwide who build, operate, maintain, supply, and support helicopters and other vertical-capable aircraft. Our association remains firmly committed to advocating for the interests of you, our members, and ensuring that your voices are heard, your contributions are recognized, and your interests are protected. 

A handwritten signature in blue ink, appearing to read "JAV", written over a light blue scribbled background.

## State Legislative Mid-Year Highlights

**I**T'S BEEN A VERY BUSY YEAR SO FAR for the VAI Government Affairs team. Our comprehensive monitoring and advocacy efforts across all 50 states have enabled us to track and engage with significant legislative developments at both the state and federal levels. Below are some recent examples of state issues; for a review of the recent FAA reauthorization bill, please see "2024 FAA Reauthorization Impact Summary" on p. 10.

### California

In February, California State Sen. Caroline Menjivar (D) introduced Senate Bill (S.B.) 1193, which aimed to restrict the use, sale, or distribution of leaded aviation gas (avgas) by airport operators and aviation retail establishments. The goal for the legislation was to mitigate the public health and environmental risks linked to the use of leaded avgas at California airports.

The bill's proposed timeline would end the use or availability of leaded avgas in 60% of California's airports by January 2026. This deviated from the FAA's established goal of eliminating the use of leaded aviation fuels in piston-engine

aircraft by 2030.

VAI held extensive discussions with the California Department of Transportation and Senate Transportation Committee members, and Chuck Street, VAI Western US regional representative, provided testimony during the bill's initial hearing alongside Aircraft Owners and Pilots Association (AOPA) representatives.

The California Senate Transportation Committee amended the bill to exempt those airport operators and

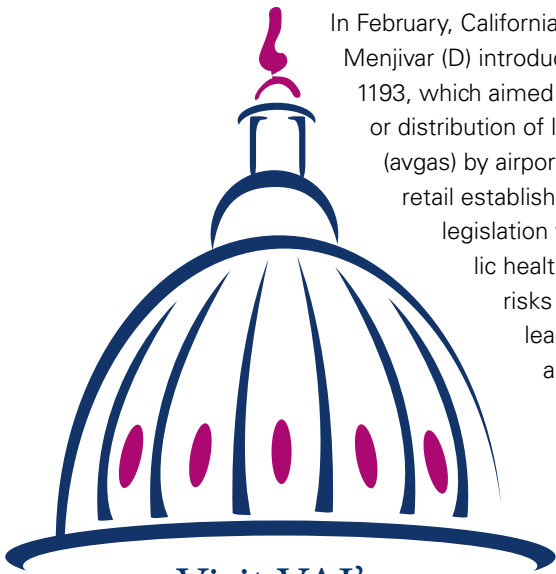
aviation retail establishments that have been determined by their county board of supervisors to have no access to commercially available unleaded aviation replacement fuel. Airport operators and aviation retail establishments would be permitted to submit written requests to their county board of supervisors for such determinations. The bill was also amended to exempt airports operating under federal grant assurances until those grant assurances expire. Following approval and amendments in the Transportation Committee, the bill proceeded to the Appropriations Committee, where it remained as this issue went to press.

While VAI supports the transition to unleaded fuels, the piston-engine rotorcraft community currently lacks a leaded-fuel alternative that has been approved by the FAA. Adhering to the FAA's 2030 timeline allows for certification of a safe alternative, as well as the establishment of adequate infrastructure and supply chains to facilitate a smooth and efficient transition. VAI is a proud member of the Eliminate Aviation Gasoline Lead Emissions (EAGLE) initiative, the government-industry partnership to end the use of leaded aviation fuel by 2030, and remains committed to a safe and responsible approach to this important goal.

### Colorado

In February, Colorado State Rep. Kyle Brown (D) introduced House Bill (H.B.) 1235. Initially, the bill set conditions for state aviation grants in densely populated residential areas, mandating a plan to phase out leaded gasoline, enact sound-mitigation measures, and comply with aviation easements or contracts by January 2026.

After extensive industry feedback and testimony, the bill underwent several amendments. Notably, it now seeks to convey explicit authority in the existing state aviation grant program to fund infrastructure enabling the sale of unleaded aviation gasoline and to subsidize purchases of such fuel at airports with significant general aviation activity. The bill designates a portion of grants annually to accelerate the transition from leaded to unleaded avgas, prioritizing airports with substantial general aviation traffic in urban and suburban areas.



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Additionally, the bill would allocate funds for airport sound-monitoring devices, education on sound prevention or mitigation, and future on-airport charging infrastructure for electric aircraft. Grants would be prohibited for airports in densely populated residential areas unless they comply with specified conditions, including adopting a phase-out plan for leaded aviation gasoline sales by 2030 and implementing sound-abatement measures.

Moreover, H.B.1235 would mandate the appointment of two new members to the Colorado Aeronautical Board, prioritizing individuals who are familiar with airport infrastructure and who reside in communities significantly impacted by airport traffic and, particularly, sound or lead emissions. These amendments aim to ensure a smoother transition to cleaner aviation fuels while addressing community concerns.

As of late May, when this issue went to press, the bill had gained approval from both the House and the Senate. Colorado's legislative session ended on May 8, leaving Gov. Jared Polis until Jun. 7 to either sign or veto the bill. Failure to sign by Jun. 7 would automatically enact the bill into law.

## Hawaii

In January, the Hawaii State Senate introduced Senate Bill (S.B.) 2747, a bill that proposed insurmountable insurance rates on air tour operators. While the bill originally introduced in January required liability coverage of at least \$1 million per person per incident, as amended, the bill required air tour operators to maintain aircraft liability insurance coverage of \$20 million per person per incident.

From the beginning, VAI took proactive steps to oppose S.B.2747, collaborating with industry stakeholders including its Hawaii members, AOPA, the National Business Aviation Association (NBAA), and the National Air Transportation Association (NATA). In addition, VAI engaged in constructive dialogue with Hawaii state legislators to address the vertical aviation industry's concerns about the bill. These included the impracticality of obtaining the specified insurance coverage at a reasonable cost and the risk of violating FAA grant assurances, potentially jeopardizing Hawaii's federal funding for airport improvement programs.

At the end of the session, the bill did not move to conference, which means the bill was stopped.

## New York

In April, the New York City (NYC) Council reviewed multiple resolutions that call upon local, state, and federal authorities to

restrict or prohibit helicopter operations within the city. Suggested actions include urging the FAA to ban charter and tourist flights and limiting operations at city heliports to electric-powered rotorcraft.

Additionally, there are proposals to amend New York's 1998 Hudson River Park Act to prohibit heliport use and establish a sound tax. Another resolution seeks to install sound-level meters in areas prone to helicopter sound for data collection and reporting by the NYC Department of Environmental Protection.

VAI opposes legislation that would ban nonessential helicopter operations as well as any proposals to restrict the use of New York City's heliport system.

Katia Veraza, VAI manager of government affairs and regional relations, testified before the NYC Council on Apr. 16 on behalf of our members, highlighting the importance of our industry. She emphasized that the proposed measures would adversely affect small businesses, essential operations, and infrastructure crucial to the city and the region. It's also worth noting that the city's efforts to regulate helicopter operations based on sound concerns conflict with the FAA's sole authority to regulate aviation operations.

## VAI State Legislative Priorities

As you can see from the above examples, VAI has been monitoring and engaging with state legislation to protect the interests of our members. By keeping a close eye on legislative activities, we're able to proactively address proposed laws that could negatively impact the industry. At the same time, we use our monitoring efforts to support measures and initiatives that benefit our members and the industry. This helps us contribute to well-informed policies and create a positive regulatory environment for growth.

As VAI's influence expands, we're unlocking new opportunities and forming partnerships with stakeholders who share our values and priorities. We're asking states to enact legislation that focuses on enhancing infrastructure, zoning, workforce development, advanced air mobility planning, tax incentives, and funding for state aviation departments while maintaining the federal government's authority in aviation regulation.

Please reach out to [advocacy@verticalavi.org](mailto:advocacy@verticalavi.org) if you believe there is any legislative activity in your state or region that could affect the industry. Your input helps VAI remain proactive in safeguarding your interests. Together, we can make a real difference in shaping policies that support our industry's growth and prosperity. 🌐

## 2024 FAA Reauthorization Impact Summary

**O**N MAY 15, CONGRESS PASSED A BILL THAT REAUTHORIZES THE FAA for another five years and provides the agency with lawmakers’ direction about its programs and priorities. The FAA Reauthorization Act of 2024 offers notable enhancements for both general aviation and the vertical aviation industry. It aligns with priorities supported by VAI in aviation safety, workforce development, and advancements in air mobility development.

While we cannot cover the entire 1,000-plus-page bill in this article, we highlight below some important provisions.

### Title III – Aviation Safety Improvements

#### Sec. 320. Crash-Resistant Fuel Systems in

**Rotorcraft.** Directs the FAA to task the Aviation Rulemaking Advisory Committee (ARAC) with reviewing and updating the 2018 report of the Rotorcraft Occupant Protection Working Group by reviewing National Transportation Safety Board data from 2016 through 2023 on post-crash fires in helicopter accidents and determining to what extent crash-resistant fuel systems could have prevented fatalities.

In addition, this section requires the ARAC to develop recommendations on ways to encourage helicopter owners and operators to expedite installation of crash-resistant fuel systems, regardless of the original certification and manufacture date of their aircraft. It also requires the FAA to implement those recommendations or work with the US Helicopter Safety Team, as appropriate, to implement such recommendations.

**Sec. 333. Helicopter Safety.** Tasks the FAA’s Investigative Technologies Aviation Rulemaking Committee (ARC) with reviewing and assessing the need for changes to safety requirements related to flight data recorders, flight data monitoring, and terrain awareness and warning systems for turbine-powered

rotorcraft certificated for six or more passenger seats.

#### Sec. 363. Commercial Air Tour and Sport

**Parachuting Safety.** Requires the FAA to issue a final rule increasing safety regulations for commercial air tour operators based on the recommendations of an ARC. Beginning two years after the date on which the final rule is promulgated, operators are prohibited from conducting commercial air tours unless they either hold a commercial air carrier certificate and conduct air tours under 14 CFR Part 135 or 121, or they comply with the

FAA’s final rulemaking. Such requirements do not apply to small businesses conducting 100 or fewer commercial air tours in a calendar year.

The FAA is also required to issue new or revised regulations that require commercial air tour operators or persons conducting aerial photography operations who seek to conduct these operations with removed or modified doors to receive FAA approval prior to conducting such operations.

### Title IV – Aerospace Workforce

#### Sec. 426. Military Aviation Maintenance Technicians

**Rule.** Requires the FAA to issue, no later than 18 months after enactment of the reauthorization bill, a

### VAI Members

Learn more about how this legislation will affect the vertical aviation industry in our members-only [Legislative Action Center](#) on [rotor.org](http://rotor.org).

notice of proposed rulemaking to revise 14 CFR Part 65 to create a written competency test for military aviation maintenance technicians and to develop, as necessary, a relevant Airman Certification Standard to qualify eligible military maintenance technicians for civilian mechanic certificates with airframe or powerplant ratings.

**Sec. 440. Improving Federal Aviation Workforce Development Programs.** Establishes a new aviation manufacturing workforce development program to support the education and recruitment of aviation manufacturing technical workers and aerospace engineers. This section authorizes funding levels for the aviation maintenance, aircraft pilot, and aviation manufacturing development programs at \$20 million, respectively, for each fiscal year 2025 through 2028.

## **Title VI – Modernizing the National Airspace System**

**Sec. 627. Low-Altitude Routes for Vertical Flight.** Directs the FAA to initiate a rulemaking process to establish or update low-altitude routes and flight procedures to ensure safe rotorcraft and powered-lift operations in the National Airspace System (NAS).

**Sec. 628. Required Consultation with National Parks Overflights Advisory Group.** Requires the FAA and other agencies to consult with the National Parks Overflights Advisory Group in the development of air tour management plans over lands administered by the National Park Service.

## **Title VIII – General Aviation**

**Sec. 818. Part 135 Air Carrier Certificate Backlog.** Directs the FAA to take such actions as may be necessary to reduce the backlog of Part 135 air carrier certificate applications. Specifically, the FAA must set a goal to maintain, within one year of the reauthorization bill's enactment, an average certificate processing time of less than 60 days and, within two years of enactment, an average processing time of less than 30 days.

**Sec. 827. EAGLE Initiative.** Requires the FAA to continue to partner with industry and other federal government stakeholders to carry out the Eliminate Aviation Gasoline Lead Emissions (EAGLE) initiative through the end of 2030.

**Sec. 829. Prohibition on Using ADS-B Out Data to Initiate an Investigation.** Prohibits the FAA from initiating an investigation (excluding a criminal investigation) of a person based exclusively on ADS-B Out data.

## **Title IX – New Entrants and Aerospace Innovation**

**Sec. 907. Remote Identification Alternative Means of Compliance.** Requires the FAA administrator to review and evaluate 14 CFR Part 89, Remote Identification of Unmanned Aircraft, to determine if unmanned aircraft manufacturers and operators can comply through alternative means of compliance, including through network-based remote identification.


**Sec. 908. Part 107 Waiver Improvements.** Directs the FAA to use a performance- and risk-based approach in reviewing requests for waivers related to 14 CFR Part 107, Small Unmanned Aircraft Systems.

**Sec. 924. FAA Comprehensive Plan on UAS Automation.** Requires the FAA to establish a comprehensive plan for the integration of autonomous uncrewed aircraft systems (UASs) into the NAS.

**Sec. 930. Beyond Visual-Line-of-Sight Operations for Unmanned Aircraft Systems.** Directs the FAA to issue a notice of proposed rulemaking within four months of the authorization bill's enactment to establish a performance-based regulatory pathway for UASs to operate beyond a visual line of sight (BVLOS).

**Sec. 955. Rules for Operation of Powered-Lift Aircraft.** Requires the FAA to publish within seven months of the authorization bill's enactment a special final rule for the operations of, and pilot requirements for, powered-lift aircraft, and apply specific requirements and considerations to such rulemaking.

**Sec. 957. Powered-Lift Aircraft Entry into Service.** Requires the FAA to provide short- and long-term solutions for the safe integration of powered-lift aircraft into the NAS, including controlled airspace.

**Sec. 958. Infrastructure Supporting Vertical Flight.** Requires the FAA to update Engineering Brief No. 105, Vertiport Design; publish a performance-based vertiport design advisory circular; and begin performing the work necessary to update the Heliport Design Advisory Circular in order to provide performance-based design guidance. 

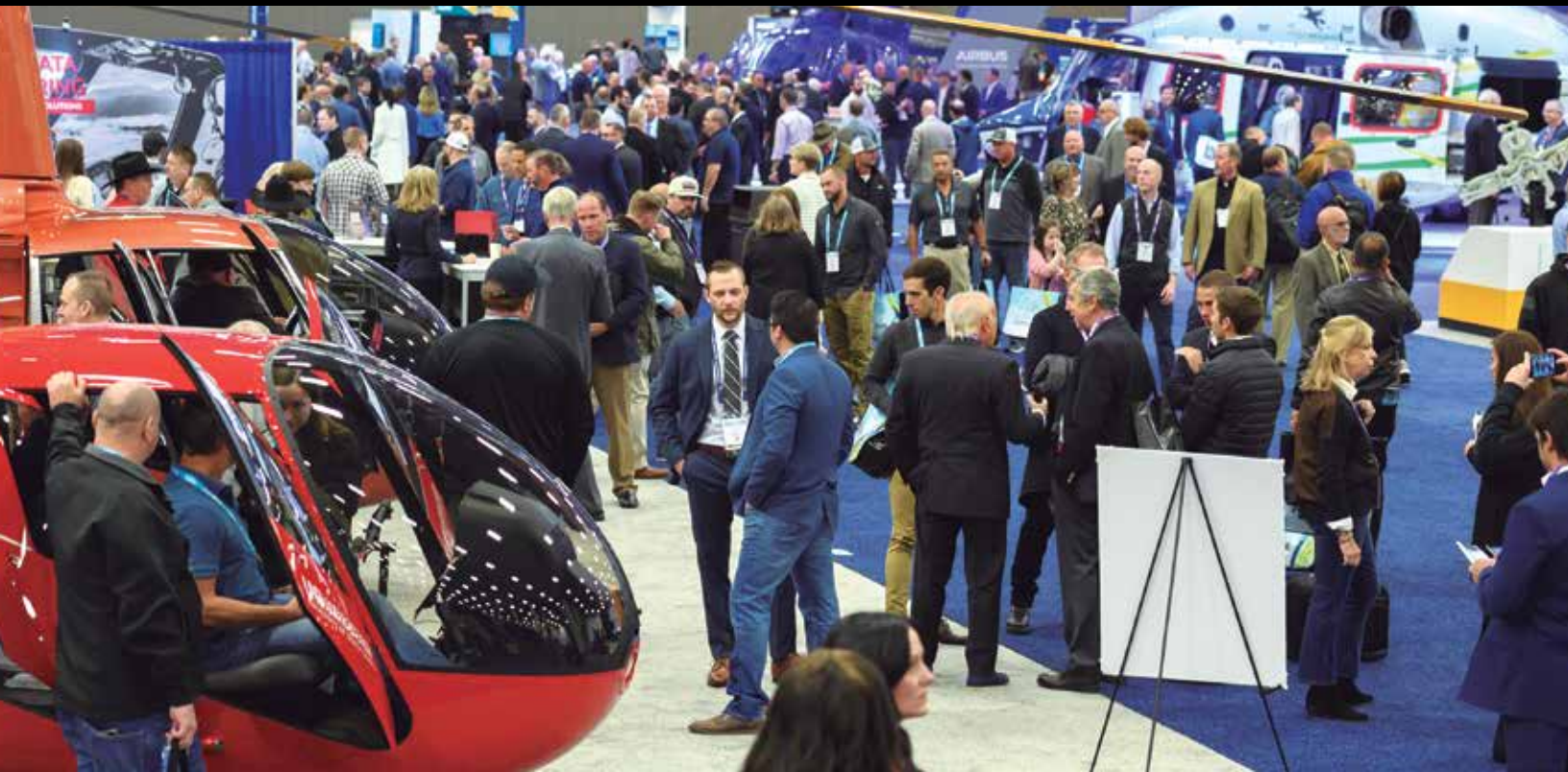
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# ROTOR WASH

INDUSTRY DATA, TOPICS, ADVICE, HAPPENINGS, ISSUES, AND NEWS TO KEEP THE ROTORS TURNING

## VAI BRIEFS

### VAI Spearheads Efforts to Preserve Airspace Access over US National Parks

VAI IS ACTIVELY ADVOCATING to protect airspace access over national parks and monuments across the United States amid efforts by the FAA and the National Park Service (NPS) to restrict or eliminate air tours over national parks.

Recently, the agencies asked for comments on an air tour management plan (ATMP) for Arizona’s Canyon de Chelly National Monument that proposes the elimination of all overflights. VAI Chief Government Affairs Officer Cade Clark underscores the potential damage this and other ATMPs could cause.

“The FAA and the NPS are finalizing ATMPs for 23 parks, with some plans cutting air tours by up to 86% and others

calling for their complete cessation,” Clark notes. “We are staunchly advocating to



preserve access to this airspace, not only for air tour operators but also for members of the public who wish to experience the

beauty of the parks and monuments from the air.”

VAI is counting on support from the vertical flight community to challenge the proposed ATMP restrictions and emphasize the importance of preserving access to park airspace for everyone. As part of this effort, the association is seeking relief from ATMPs that do not appropriately safeguard park visitor access and enjoyment of America’s natural treasures. VAI has also established the [ATMP Legal Defense Fund for Airspace Access](#), aimed at supporting lawsuits filed by air tour operator members that challenge airspace restrictions in national parks.

In its advocacy efforts, VAI is ►



SEE VIDEO

508,000

5,900

77

54

## VAI ON SOCIAL

**Too Many Aircraft, Not Enough Time!** In this viral video that racked up over 508,000 views and 5,300-plus engagements, VAI Brand Ambassador Faith Ortega finds it difficult to pick her favorite helicopter on the show floor at HAI HELI-EXPO 2024. When we asked viewers which aircraft at the show they liked best, our followers said the MD 500 and Bell 407 were their favorites.

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TOP: ISTOCK/USA-BLUE

► underscoring the economic implications of restricting air tours, particularly the potential losses to the aviation industry, and the vital role air tour operators play in providing entry-level jobs for pilots and supporting local economies. The potential closure of air tour operations at national parks could lead to significant job losses and disrupt the aviation industry’s workforce pipeline—a situation that demands immediate attention and action.

The economic impacts of restricting helicopter tours extend beyond the operators themselves to the communities they serve, including potentially devastating small communities reliant on tourism.

***“By challenging proposed airspace restrictions and highlighting the economic and social consequences, VAI aims to ensure that future generations can continue to enjoy the splendor of America’s natural landscapes from both the ground and the sky.”***

—James Viola, VAI President & CEO

“We hope our advocacy underscores the importance of striking a balance between conservation efforts and public access to national parks,” says VAI President and CEO James Viola. “By challenging proposed airspace restrictions and highlighting the economic and social consequences, VAI aims to ensure that future generations can continue to enjoy the splendor of America’s natural landscapes from both the ground and the sky.”

VAI is also criticizing the ATMP development process for excluding crucial safety input from organizations such as the National Parks Overflights Advisory Group, an approach that hinders collaboration between industry stakeholders and regulators.

With upcoming court cases looming, every contribution to the ATMP Legal Defense Fund is crucial. VAI members who would like to contribute to the fund may visit [rotor.org/atmp-ldf](http://rotor.org/atmp-ldf) to learn more.

**VAI BRIEFS**

**VAI Members Elect 2024–25 Board of Directors**

AT HAI HELI-EXPO 2024 IN ANAHEIM, California, the members of Helicopter Association International voted to elect the first board of directors for the organization

under its new brand, Vertical Aviation International. The board will sit for fiscal year 2024–25. VAI members reelected current board members Brian Jorgenson and Rick Kenin, who will fill the two available commercial operator positions. Their new three-year terms start Jul. 1, 2024.

While VAI member operators select the board members, the board itself selects its panel of officers, or Executive Committee, each year. Beginning Jul. 1, 2024, the following board members will serve one-year terms as officers:

- Chair Mark A. Schlaefli, Dakota Rotors
- Vice Chair Brian Jorgenson, Timberline Helicopters
- Treasurer Rick Kenin, Boston MedFlight
- Assistant Treasurer Paul Gottwig, Los Angeles County (California) Fire Department.

Schlaefli understands that he takes over as board chair at an intriguing time in the association’s history.

“Having been involved in the organization’s rebranding efforts, it’s quite humbling to take over as chair during the first year with a new brand and robust strategic plan. VAI has a great history, and we support an incredible industry that provides incredible value to people’s lives,” Schlaefli says. “There is excitement about VAI’s fresh identity and renewed purpose, and I feel a great sense of responsibility to help lead the organization forward and support VAI staff to bring innovative, industry-leading education, advocacy, and support to our membership.”

With organizational changes in the air, Schlaefli feels his role is clear. “There are two focus areas, the first of which came directly from our membership, and that is the promotion of and support for VAI staff in executing our strategic plan. On a more personal level, with many of the things happening across our industry, advocacy remains a top priority to help our members highlight the immense good that comes from vertical flight capabilities and to fight for our ability to deliver those services,” he says.

Schlaefli, who is currently completing a term as vice chair, continues: “From workforce development to actively advocating and fighting for airspace access and keeping the legislative wolves at bay, VAI will deliver solutions, and it is a humbling experience to be a part of that process.”

VAI President and CEO James Viola is pleased to have a seasoned group of leaders prepared for the 2024–2025 term. “We announced significant ►



# VAI 2024–25 Board of Directors



**CHAIR**

**Mark A. Schlaefli**

Dakota Rotors LLC  
Custer, South Dakota, USA  
*Commercial Aviation*



**VICE CHAIR**

**Brian Jorgenson**

Timberline Helicopters  
Sandpoint, Idaho, USA  
*Commercial Aviation*



**TREASURER**

**Rick Kenin**

Boston MedFlight  
Bedford, Massachusetts, USA  
*Commercial Aviation*



**ASSISTANT TREASURER**

**Paul Gottwig**

Los Angeles County Fire Department  
Los Angeles, California, USA  
*Government Service*



**PRESIDENT AND  
CHIEF EXECUTIVE OFFICER**

**James A. Viola**

Vertical Aviation International  
Alexandria, Virginia, USA



**DIRECTOR, CORPORATE AFFAIRS  
& CORPORATE SECRETARY**

**Sarah Arnold**

Vertical Aviation International  
Alexandria, Virginia, USA



**DIRECTOR**

**Nicole Battjes**

Rainbow Helicopters  
Honolulu, Hawaii, USA  
*Commercial Aviation*



**DIRECTOR**

**David McColl**

Winco, Inc.  
Aurora, Oregon, USA  
*General Aviation*



**DIRECTOR**

**Randal R. Rowles**

Helicopter Institute Inc.  
Fort Worth, Texas, USA  
*Commercial Aviation*



**DIRECTOR**

**Stacy Sheard**

Executive Jet Management/Fanatics  
Philadelphia, Pennsylvania, USA  
*Commercial Aviation*



**DIRECTOR**

**Robert Miller Stallings**

Titan Aviation Fuels  
New Bern, North Carolina, USA  
*General Aviation*



**SPECIAL ADVISOR-  
INTERNATIONAL**

**Francois Lassale**

SGI  
Denpasar Selatan, Bali, Indonesia

► changes in our organization back in March, and now we need to implement those changes and advance our industry and our association," he says. "Knowing that this board is already up to speed on the issues facing us means we have that much more time to work."

Schlaefli also sees the benefit of having

no changes to the board this year. "I am ecstatic that Brian and Rick were reelected. Both are veterans of the Executive Committee, are acutely in tune with our strategies and challenges, and will once again serve in an executive capacity this year. Having Paul join the Executive Committee represents a

tremendous addition as well. Having that familiarity in place at this time—just after a major rebrand—allows us to continue the strategic journey into the future of vertical aviation."

Schlaefli is proud of the work VAI board members put into their efforts to help the industry. "Service on the VAI Board of Directors is an important mechanism in my efforts to give back to the industry and work on behalf of our membership by providing services and support that will directly impact their operations," Schlaefli says. "I have been fortunate to have mentors from every industry sector. The underlying consistent message from all of them has been clear—find ways to give back and move our industry forward for the good of all."

VAI BRIEFS

**VAI Expands Annual Salute to Excellence Awards Program**

VAI IS BROADENING ITS ANNUAL Salute to Excellence Awards program, which celebrates the highest standards of professionalism in vertical aviation. The program's newest honor pays tribute to the late Harold Summers, whose legacy and spirit continue to inspire the vertical flight industry.

The newest Salute to Excellence Award, the Harold Summers Legacy Award, honors the association's longtime director of maintenance, who passed away in October 2021.

During a career spanning more than 60 years, Summers was widely recognized for his tireless efforts to improve and support all aspects of the rotorcraft industry. In recognition of her unwavering support for her late husband, Zhilin Summers was the inaugural recipient of the Harold Summers Legacy Award at HAI HELI-EXPO 2024 in Anaheim, California. ►

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VERTICAL AVIATION INTERNATIONAL

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By Andrew Parker

## Passing the Rotorcraft Practical Test

*How to make sure things go smoothly with your designated pilot examiner.*

**CONGRATULATIONS! YOU'VE COMPLETED MOST OF THE WORK REQUIRED** to obtain your helicopter pilot license. Now it's time to meet with an FAA designated pilot examiner (DPE) for your practical test and checkride.

Like most of us, DPEs have their pet peeves. But you can avoid triggering them with proper preparation and focus. Follow the suggestions below to remain in sync with your DPE on test day.

**1 DON'T let nerves ruin your readiness.** Almost everyone is nervous before a checkride, and DPEs understand this, says Randy Sharkey, FAA DPE and pilot check airman at Sweet Helicopters. Take steps to boost your confidence with thorough preparation: make sure your documentation is in order ahead of time and arrive early for your appointment. At the test site, walk around and familiarize yourself with the area. Calm your nerves before testing starts with simple relaxation techniques such as deep breathing or visualizing a successful checkride.

**2 DO your homework.** Know the material inside and out. Sharkey explains that the practical test will have no surprises: what shows up on your test is in the FAA's [Practical Test Standards](#), which are available online.

**3 DON'T try to bluff the examiner.** If you forget the answer to a question, be honest and let your DPE know. The examiner will let you check your notes or the book—as long as you don't do so for every question.

**4 DO take your time with the preflight checklist.** After you've passed the oral portion of the test, tell your examiner you'd like to take a break before the checkride. Approach the preflight checklist in a slow and measured way before taking off—don't rush this important safety practice.



**5 DON'T blame the wind for your performance.** If your checkride takes place on a windy or gusty day, don't cite the conditions as the reason you were unable to conduct certain tasks. The DPE is evaluating your ability to fly in a variety of weather conditions.

*Thanks to Randy Sharkey for the tips above, which are based on his presentation at the May 25, 2023, HAI@Work webinar, "DPE Pet Peeves." To learn more about how to prepare for your practical test, [watch the recording](#) of the webinar at [hai.rotor.org/oNlr3](http://hai.rotor.org/oNlr3).*



# BENEFIT OF THE MONTH



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## Flight Data Monitoring Program

*VAI members receive special pricing and hands-on support to help improve safety.*

VAI has partnered with Truth Data Insights to offer a powerful flight data monitoring (FDM) program to help helicopter operators improve their flight safety. VAI member operators enjoy exclusive access to FDM services as well as special pricing on the program, which offers three tiers of support:

- **Core:** entry-level FDM service
- **Plus:** software and data access for operators performing internal FDM analyses only
- **Premium:** full analysis support, software, and operator consulting.

The Web-based, user-friendly FDM program offers:

- Hands-on tutoring and support
- An actionable, customized plan based on the user's fleet data
- Help identifying risks, improving fuel consumption, reducing unnecessary maintenance, and more
- A dashboard with interactive displays, graphs, maps, and trend analyses
- A secure, fully automated data-transfer system
- A step-by-step implementation plan.

For more information on the VAI FDM program or Truth Data Insights, visit [verticalavi.org/fdm](https://verticalavi.org/fdm).

► “We received numerous suggestions on how to honor Harold’s spirit and legacy,” says James Viola, VAI president and CEO. “After careful consideration, we decided to create a new award that truly reflects Harold’s passion and his enduring efforts to enhance our industry. I am grateful to the VAI Technical and Maintenance Working Group, which proposed this idea and made it a reality.”

Now featuring 11 award categories, the VAI Salute to Excellence Awards recognize outstanding contributions by people working throughout the vertical aviation industry. While some awards acknowledge superlative efforts by individuals, several are open to teams or companies. VAI believes it’s only a matter of time before it receives nominations for people working in the advanced air mobility sector.

“We specifically changed the language of our awards criteria several years ago to include drones and other UAS [uncrewed aircraft system] aircraft,” Viola says. “Since then, we have honored several UAS operators with awards, and we look forward to receiving nominations for exceptional people working in advanced air mobility soon.”

VAI is currently accepting nominations for all 11 Salute to Excellence Awards:

- Harold Summers Legacy Award
- Matthew S. Zuccaro Land & LIVE Award
- Communications Award
- Humanitarian Service Award
- W.A. “Dub” Blessing Flight Instructor of the Year Award
- Law Enforcement Award
- Golden Hour Award
- Safety Award
- Maintenance Award
- Pilot of the Year Award
- Lifetime Achievement Award.

Nominations will be accepted through Sep. 30, 2024. VAI will announce the award recipients in early 2025.

For more information on the criteria for each award and the nomination process, visit [rotor.org/events/salute-to-excellence](https://rotor.org/events/salute-to-excellence).



#### VAI BRIEFS

## Celebrate World Helicopter Day!

THE OFTEN AWE-INSPIRING WORK helicopters perform is widely acknowledged across the vertical flight industry. But the public may not always be fully aware of the more than 40 missions the aircraft conduct. World Helicopter Day, Sunday, Aug. 18, 2024, presents an opportunity to boost that awareness while celebrating the wonderful contributions rotorcraft make to society.

The event, which marks its 10th anniversary this year, isn’t just about raising public awareness of the good helicopters do, however. It’s also a grand celebration of the people who design, build, maintain, fly, and support the aircraft. In short, it’s a time to appreciate the incredible work we do and the impact helicopter operators have on our lives.

“This is a perfect opportunity for companies in our industry to open their doors and invite the public to witness what makes vertical flight special,” says James Viola, VAI president and CEO. “Tell or show the media what you do. Work with

local politicians to share your efforts in their communities. We have the coolest industry in the world, and the world needs to know about it!”

To make the publicity effort easier for VAI members, the association is providing a small tool kit with checklists, templates, and guides for planning celebratory events, working with the media, and writing press releases. The kit also offers suggestions for inviting the public to your base of operations, and it can be scaled and adjusted for companies of various sizes. The kit is available to VAI members only at [rotor.org/world-helicopter-day](https://rotor.org/world-helicopter-day).

“We recognize that celebrating on a Sunday in August could be difficult for operators,” adds Viola. “It’s in the middle of the busiest time of year in the Northern Hemisphere. Some operators will be fighting fires or conducting agricultural operations. Some will be flying air medical operations or building power-line towers. But that’s the key point we want to convey: our versatility in conducting missions makes us vital to the public good.”

Ultimately, it doesn’t necessarily matter where a company celebrates its work. While it’s always great to promote your ►

► business to your home community, showing how you support them, you may be able to promote World Helicopter Day even if you're flying missions across the globe, as the press release templates can be used in any community.

During the monthlong celebration, VAI also recommends promoting safety in all

your messaging. This could include discussing the need to check the weather, conducting preflight and post-flight inspections, explaining how autorotations work and why they're necessary, and explaining the difference between a precautionary landing and an emergency landing.

Finally, VAI recommends using Aug. 18

as a chance to expand public awareness of the significant need for pilots and maintenance personnel in the vertical flight industry. "This is a perfect workforce development opportunity, particularly if you're working on a mission nearby," adds Viola. "Let tomorrow's pilots and maintenance people see the operations up close today. Show them how cool it can be to pick their own mission to fly."

**VAI BRIEFS**

**VAI Calls for Photo, Video Submissions to Support Vertical Flight Industry**

VAI IS INVITING PHOTOGRAPHERS AND videographers to contribute their best work to a new initiative designed to enhance the visibility and understanding of the vertical aviation industry.

The association will feature contributors' photos and videos across various VAI publications and marketing materials as part of the organization's ongoing effort to promote achievements and developments in our dynamic industry.

VAI's communications platforms, which, in addition to ROTOR magazine, include the ROTOR Daily e-newsletter and various marketing efforts, reach a wide audience, providing significant exposure for contributors while showcasing the importance and innovation of helicopter operations.

VAI is looking for high-quality, engaging, visually captivating content that highlights the diverse aspects of vertical aviation. This includes operational footage of helicopters in various settings, images of maintenance work, training sessions, and any other content that depicts the breadth and impact of the industry. If you are interested in participating, contact PJ Barbour, VAI's video and multimedia producer, at [pjb@verticalavi.org](mailto:pjb@verticalavi.org). 

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Goshen, Indiana, USA

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**JUL. 20-21**

**2024 Electric Aircraft Symposium**

Vertical Flight Society

Oshkosh, Wisconsin, USA

Learn more at [vtol.org/eas](https://vtol.org/eas)

**JUL. 22-26**

**Farnborough International Airshow 2024**

Farnborough International Ltd.

Farnborough, Hampshire, England

Learn more at [farnboroughairshow.com](https://farnboroughairshow.com)

Visit VAI at Booth #3944

**JUL. 22-28**

**EAA AirVenture Oshkosh 2024**

Experimental Aircraft Association

Oshkosh, Wisconsin, USA

Learn more at [eaa.org](https://eaa.org)

Visit VAI at Booth #363

**JUL. 29-AUG. 3**

**APSCON / APSCON UNMANNED 2024**

Airborne Public Safety Association

Houston, Texas, USA

Learn more at [publicsafetyaviation.org](https://publicsafetyaviation.org)

Visit VAI at Booth #898

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National Business Aviation Association

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By Jen Boyer

## Torque, Huey Crew Member and Therapy Dog, EMU Inc.

*The Belgian Malinois accompanies veterans on exposure therapy flights to treat PTSD.*

**F**ROM EARLY ON, TORQUE displayed a gift for helping people. While training to become a detection dog, Torque, a 10-year-old Belgian Malinois with nonprofit EMU Inc., had the opportunity to become familiar with helicopters. She soon became a natural, showing none of the anxiety canines typically exhibit around rotorcraft.

One day, she demonstrated a unique capability to connect with military veterans, proving she could do much more than locate devices: she could help veterans find peace.

ROTOR conducted an “interview” with Torque and her team during HAI HELI-EXPO 2024 in Anaheim, California.

**ROTOR: What an inspiration you are to so many, Torque. Tell us about yourself and your work.**

**Torque:** I’m from the San Francisco Bay Area, and I’m a crew member of EMU 309, a 1965 Vietnam War-era Bell UH-1H Huey helicopter that’s been fully restored to its wartime combat configuration. Nonprofit EMU Inc. owns and operates EMU 309, the only airworthy Vietnam War-era Huey that still has all its original parts.

EMU’s mission is to preserve the history of the Huey and serve US veterans by offering what are called “exposure therapy” flights to those suffering from post-traumatic stress disorder (PTSD).

I’ve been flying with this Huey crew for over a decade, which is why I hold the Guinness World Record for the dog with

the most flights in a Huey helicopter. As I share this with you, I’ve completed 462 flights!

**How did you get involved with EMU?**

I’m trained to be a detection dog, helping apprehend child sexual predators and traffickers by sniffing out electronic storage devices, such as cell phones, thumb drives, and SD cards that contain evidence. My owner is a longtime detection-dog trainer and handler who has taught many dogs to fly comfortably and safely in helicopters. I started training to fly when I was 6 months old.

**How did you get comfortable with flying?**

There’s much more to it than just sitting in the helicopter and flying. I received a lot of training to make sure I was well acclimated to working in and around the aircraft. The high-pitched sounds, vibrations, rotating blades, and intense rotor wash can be uncomfortable for people and dogs—but not me. I’m right there with our crew during their proficiency training.

We’ve practiced many hydraulic-system and engine-failure scenarios in which everyone involved knows how to respond ... including me! While flying, I wear a tactical dog harness that’s tethered to the aircraft via two lines for safety. I also don goggles that have passed the American National Standards Institute (ANSI) Z87.1 impact-resistance test and special ear-plugs to protect my ears from sound,



wind, and debris.

My handler volunteers with EMU 309 and, as luck would have it, the chief pilot used to fly dog teams during the Vietnam War. Meeting me for the first time brought back some of those memories for him, and he initially didn’t seem to want to spend time with me. One day, when he was napping, I snuggled up to him and won him over. It was then that he got the idea that I could play an important part in helping veterans heal.

**What do you do in your current job?**

I accompany veterans during exposure therapy flights in EMU 309. Many veterans return home from combat with serious PTSD. Through exposure therapy—a cognitive behavioral technique—we try to help them process some of what they’re feeling. I offer the kind of companionship and connection that only a dog like me can provide.

Every now and then, a veteran will begin to panic when the rotors start turning. I crawl over and sit next to them. I pass no judgment, nor do I question why they need my help or what’s troubling them. Many of them will hold on to me during flights as they connect to the memories of their past as soldiers. I help keep them grounded in today, where past threats don’t exist.





## CHECK OUT Torque's visit to HAI HELI-EXPO 2024!

One time we flew with a 9-year-old boy who wanted to know why his father serving overseas loved flying helicopters so much. I could see him starting to get scared as we took off. I crawled up on the bench and put my head in his lap. He wrapped his arms around my neck and when our crew chief turned around to check on him, the boy gave the thumbs-up signal and said, "If Torque can do this, so can I!"

One of the reasons I fly in this Huey is to honor the service and sacrifice of more than 4,000 loyal US War Dogs who served as patrol and detection dogs during the Vietnam War. Those brave canines were credited with saving an estimated 10,000 American lives, yet their contributions have been largely forgotten.

### **What's your favorite part of flying?**

Sticking my head out the open door of the helicopter! It's like a giant car window. The wind rushing through my fur, all the smells, it's exhilarating! You haven't lived until you've swallowed a bug from the open door of a Huey going 110 mph!

### **What are your most memorable experiences?**

HAI HELI-EXPO 2024, for one! It was such an honor to attend. I met so many interesting people and learned a lot about different types of helicopters. I wanted to fly in every one of them!

Another time, when we flew to a Memorial Day event, a man wearing a Vietnam veteran hat approached me. When we made eye contact, he fell to his

knees and started to cry. I went to him to offer comfort and he pulled a photo from his hat. It showed him with his war dog in Vietnam—the dog he had to leave behind. With tears in his eyes, he said, "Thank you for remembering our dogs." I will never forget him.

I was also humbled to hear about a life-size sculpture of me that honors my service. Sculptor James Mellick designed it with a unique component—the body of a Huey helicopter in my torso. The sculpture will be on display at the American Kennel Club Museum of the Dog in New York City from September through December 2024. 🐾

*Editor's note: Learn more about Torque and follow her adventures on Instagram at [www.Instagram.com/k9\\_torque](http://www.Instagram.com/k9_torque).*



# FLYOVER

MARQUETTE, MICHIGAN, USA | JUL. 6, 2023

ENSTROM HELICOPTER | ENSTROM 480B

PILOT: SENIOR TECHNICAL FELLOW BILL TAYLOR

PHOTO BY MARK BENNETT





A man, Mark Schlaefli, is standing next to a black helicopter on a tarmac. He is wearing a dark jacket, grey pants, a white cap, and glasses. The helicopter is a small, modern model with a large cockpit window. The background shows a clear blue sky and a line of trees.

# Mark Schlaefli

**‘VAI Is about  
Supporting You’**

Workforce development,  
airspace access are key priorities  
for VAI 2024–25 chair.

By Christine Knauer

**H**ELICOPTERS HAVEN'T ALWAYS BEEN A part of Mark Schlaefli's workday. The new chair of the VAI Board of Directors embarked on his vertical flight career later in life—at 41. Two decades later, he's demonstrated there's a place for everyone in vertical aviation.

Mark, who will step into his new leadership position at VAI for one year beginning Jul. 1, 2024, has enjoyed a range of roles in aviation, including line pilot, chief pilot, director of operations, and, currently, co-owner of seven helicopter companies in the Upper Midwest and Mountain West of the United States, including Dakota Rotors in Custer, South Dakota. Now, Mark has added another important role: industry advocate.

It all started with a potent mix of adventure, curiosity, and determination. Before he entered aviation, Mark was a computer-graphics designer longing to break free from his desk job to work outdoors. While vacationing near the Gulf of Mexico, he would watch helicopters come and go, ferrying crews, executives, and supplies to oil platforms offshore. He wondered who was flying all the machines.

"It really piqued my curiosity. I've always been fascinated with aircraft, especially helicopters. I was under the impression that you had to go into the military to even have a chance to work in the industry," says Mark. "I'm not sure where that idea came from. But it turns out, that's absolutely not true."

In 2005, two years before taking his first flight lesson, Mark attended HAI HELI-EXPO®, the annual aviation conference and trade show now known as VERTICON. There, he gained a good understanding of the industry but found little encouragement. One presenter at the show told him his age would be an issue if he were to pursue a career in aviation.

"That just motivated me more to say, 'I'm doing it,'" says Mark. "I started looking into what it would take, from the process to the cost to the career options. I discovered that, in fact, it is entirely possible to build a career in aviation starting at age 41.

"I chose helicopters specifically for the variety of their capabilities," Mark continues. "And given the airlines' flight-time requirements and retirement age of 65 at the time,

Left: Mark at Dakota Rotors' main location near Custer, South Dakota. Below: Mark briefs his team in the hangar. "We all work very closely to help create excellent pilots," he says. (Johnny Sundby Photography)



While a flight instructor at Civic Helicopters in Carlsbad, California, Mark trained both San Diego County Sheriff's Department and San Diego Police Department pilots. (Mark Schlaefli Photo)



I believed I could have a longer career with helicopters than with fixed-wing aircraft.”

### A New Career

Mark's foray into aviation began in 2008 at Civic Helicopters in Carlsbad, California, where he completed his ratings, served as a flight instructor, and learned about flying and the industry from owner Chin Tu. Mark also credits 2021–22 VAI (then HAI) chair and Helicopter Institute president Randy Rowles as an early mentor, along with *Rotor Pro* Editor in Chief Lyn Burks and, in later years, Eric Lincoln, former director of operations for Blue Hawaiian Helicopters. Mark is quick to point out that many more people continue to guide and shape his growth in the industry today.

After gaining expertise and flight time at Civic Helicopters, Mark joined Papillon Grand Canyon Helicopters in southern Nevada in 2010. He flew the Eurocopter EC130 and AS350 for air tours and charters, rising through the ranks to chief pilot.

Mark then moved to Sundance Helicopters in Las Vegas,

Nevada, in 2014 as chief pilot and was promoted within eight months to director of operations. He oversaw a fleet of up to 29 helicopters, one fixed-wing aircraft, and 60 pilots across three bases in Nevada and Arizona. Mark stayed with the company until it closed in 2020 due to the COVID-19 pandemic.

“I probably would have stayed there forever had it not been for the pandemic,” Mark says. “It was a great combination of tour and utility work, and the team we built was incredible.”

Mark landed next at Redding Air Service, a utility operator in Northern California, first serving as chief pilot and then as director of operations, a position he still holds today. At Redding Air Service, he manages a fleet of eight aircraft engaged in power-line construction, human external cargo operations, fire suppression, and other utility services.

In 2021, Mark and business partner John Wells purchased four companies specializing in Part 91 and Part 135 air tour operations in South Dakota, and later in the greater Yellowstone ecosystem in Montana and Wyoming.

The acquisition included Dakota

Rotors, which offers Part 135 on-demand charter services and Part 133 external-load operations. Dakota Rotors also provides pilots, aircraft, and maintenance to the other companies in the group. Its fleet of nine aircraft comprise Robinson R44s and R66s, Bell 206B-3s, and Bell 206L-4 LongRangers.

“At the height of our business in the summer, we have about 30 employees and 18 pilots,” says Mark.

### Building a Workforce

Workforce development will be one of Mark's chief priorities as VAI chair. Tour operations like his have historically been an important stop for new pilots, enabling many to gain hours and experience before moving on to other missions.

“I've hired a lot of pilots over the years, probably north of 225. A majority of those represent lower-time pilots who are breaking into the industry, building time and, more importantly, experience,” says Mark, who has 3,600 flight

hours and an airline transport pilot rotorcraft certificate as well as rotorcraft instrument, CFI, and CFII ratings.

“At Sundance, we were developing a program to hire pilots with 750 hours instead of the typical 1,000 hours. The idea was to take pilots with a new commercial license and slowly work them into the flight rotation while mentoring and training them along the way to have them functioning as commercial pilots earlier and at a higher level of safety and performance. Unfortunately, with the pandemic, Sundance folded before the program got off the ground.”

Mark plans to re-create the Sundance program at Dakota Rotors, with the goal of helping pilots go from the learning environment to the commercial flying environment in a way that adds value and experience to their resume. He’s also interested in helping pilots earn their commercial license in exchange for time working for the company



A Bell 205 operated by Redding Air Service performs work under a fire response contract with Shasta-Trinity National Forest in California. Mark still serves as director of operations for the utility operator, where he was also chief pilot before purchasing his own helicopter companies in South Dakota. (Mark Schlaefli Photo)

as a cost-effective approach to developing a workforce in-house.

With both experienced pilots and maintenance technicians in short supply, Mark

believes operators themselves have to be part of the solution.

“My company can produce only so many experienced commercial pilots at a time. We need more companies doing something similar,” Mark says.

“There are other things operators can do to promote workforce development. For example, we added a safety management system [SMS] to our small operation. With us introducing SMS to people early in their career, they can begin to understand what a healthy safety culture is, how to assess risk, and how to apply mitigation to their daily activities. It prepares them for the next step in their career working for a larger company.”

### Passionate about Airspace Access

Another industry issue Mark feels passionate about, airspace access, directly affects his air tour business. Federal rules have cut his air



Mark’s companies fly tours and perform utility operations from the group’s main location near Custer, South Dakota. (Johnny Sundby Photography)



“Advocacy for issues like airspace access is one of the biggest benefits of VAI. The association has a fantastic government affairs team working on our behalf to engage with lawmakers.”

—Mark Schlaefli

tour flights over the Mount Rushmore National Memorial and Badlands National Park from an allocation of 9,300 to 0. In response to what amounts to a ban on air tours by uninformed policymakers, Mark has filed suit to overturn the new rules.

“Advocacy for issues like access is one of the biggest benefits of VAI. The association has a fantastic government affairs team working on our behalf to engage with lawmakers. We may not get everything we want, but we have someone out there fighting for us.”

The owners of Dakota Rotors are finding ways to cope with the shifting landscape. The company has grown over the past couple of years by adding new locations in the Yellowstone area and diversifying into other sectors such as utility operations.

### Serving the Industry

As for what’s ahead in his year as chair, Mark is focused on continuing to develop and implement [VAI’s strategic initiatives](#). Of the association’s new identity as Vertical Aviation International, he emphasizes that the organization’s member-focused purpose hasn’t changed.


“It’s just more inclusive,” Mark explains. “We’re embracing the future. Helicopters *are* vertical aviation. We’re just evolving to include other vertical-capable aircraft. We want

a unified industry ecosystem, with manufacturers, operators, training organizations, and service providers all working together and supporting each other.”

Having attended HAI HELI-EXPO every year since 2010, Mark values the show for its focus on networking, sharing best practices, and discussing industry needs.

“I learn something every time I attend. Actually, I learn something new every day in this job. It’s one of the things that attracted me to the industry. I love that education is a big piece of what VAI offers,” says Mark, who has served on several of the association’s committees and working groups, including those involving safety. “I think learning how to establish a healthy safety culture is essential. We replicate our mistakes over and over. The causes of accidents are repeated themes. Finding ways to curb those is one of our greatest challenges.”

Mark thinks of his role as VAI chair as a mixture of leadership and service.

“Rather than focusing on individual accomplishments, I’m more interested in our collective growth as an industry. It’s about supporting VAI staff, engaging with members and serving their needs, and ensuring the health of the association. I want what’s best for all of us. I want us all to prosper; I want us all to be safe. I’d like there to be a future where we all share in increased opportunity.” 





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# HAI HELI-EXPO 2024

# BUILDING TOMORROW

HAI HELI-EXPO 2024's theme of "Building Tomorrow" was especially relevant for an event where show producer Helicopter Association International announced a rebranding to embrace an expanding and diversifying vertical aviation industry. The show featured many other nods to the theme, however, as 15,000 attendees gathered in Anaheim to connect, learn, and grow as aviation professionals.





**Above:** Students attending the Aviation Maintenance Never Events Professional Education Course break into small groups to discuss ways to increase compliance in the workplace.

**Near left:** Jeremy Van Vliet of VAI member A&P Helicopters takes advantage of the Meet the Regulators session, an annual event at HAI HELI-EXPO, where attendees have the opportunity to talk directly with FAA representatives who support the rotorcraft industry.

**Far left:** Attendees at Monday night's Welcome Reception and Rebrand Reveal show off their new VAI merch.

**Bottom left:** There was plenty to talk about on the HAI HELI-EXPO 2024 show floor, which hosts everything you need for your aviation business.

**Right:** In her remarks at a luncheon, FAA Deputy Administrator Katie Thomson recognized the versatility and value of vertical aviation, calling helicopters "the Swiss Army knife of aviation."



**Right:** Zhilin Summers, the widow of HAI Director of Flight Operations Harold Summers, is congratulated by James Viola, HAI president and CEO (left), and Nicole Battjes, chair of the HAI Board of Directors (right), on receiving the inaugural Harold Summers Legacy Award. The newest addition to the association's Salute to Excellence Awards lineup, the award recognizes those who follow the example Harold set for sharing his time, energy, experience, and wisdom to aid and improve the vertical flight industry. Zhilin was recognized for her unwavering support of Harold's work on behalf of the industry before his death in October 2021. Nominations for the 2025 Salute Awards are now open at [rotor.org/salute](http://rotor.org/salute).





# HAI HELI-EXPO 2024

## Heralding a New Era

By Jen Boyer



WATCH  
the 2024 HAI  
HELI-EXPO  
Fly-In

**T**HE NUMBERS CONFIRM IT: HAI HELI-EXPO 2024 was an astounding success. A record-breaking 15,000 attendees from 87 countries walked the halls of the Anaheim Convention Center in California in February, up from more than 12,400 last year. News of the show's attendance levels was eclipsed only by the major announcement of the event: the unveiling of the association's new identity, along with the new name of its annual conference and trade show.

At the Welcome Reception and Rebrand Reveal on Feb. 26, HAI Chair Nicole Battjes revealed that the organization would henceforth be known as Vertical Aviation International,

or VAI. Designed to represent the association's support of the entire vertical aviation community, the rebranding included renaming HAI HELI-EXPO, the world's largest vertical aviation trade show, as VERTICON.

Overnight, new VAI branding went up throughout the convention center and VAI-branded shirts, name tags, publications, and swag were pulled out for the first day of exhibits on Feb. 27.

"This year's show was historic because of three things: celebrating our 75th anniversary; being back in California, where our organization was founded in 1948; and unveiling our new branding," says VAI President and CEO James



## The association's rebranding, record-breaking attendance make this year's show one for the ages.

Viola. "As our industry changes with new technology, it is important for our organization to evolve to ensure we are representing and supporting the entire industry."

And, notes Viola, while the association's name no longer includes the word "helicopter," the aircraft will continue to be important to the group's purpose. "Helicopters are not going away," he affirms. "They are vital in so many critical missions around the world."

"Just as when we changed our name years ago to include 'international' as an

acknowledgment of our growing global membership," Viola continues, "our new name today encompasses all aspects of the vertical flight industry, including helicopters, eVTOL, UAV, UAM, and all the developing and future technology that drives these modes of flight."

### Supply-Chain Issues Persist

The mood on the show floor was optimistic during the three days exhibits were open, Feb. 27–29, with hundreds of sales of aircraft and products taking place and historic partnerships

and agreements announced.

Bart Reijnen, president of Airbus Helicopters Inc. and head of the company's North America region, accurately summed up the state of the industry as "a time of transition." For the OEM, this transition included not only Reijnen taking the helm from Romain Trapp (the new EVP of customer support and services at the firm's parent company, Airbus Helicopters) but also, from Reijnen's point of view, the industry as a whole dipping in 2023 after two years of steady post-COVID growth.



One of the biggest stories from HAI HELI-EXPO 2024 in Anaheim, California, was the news that the show's producer, Helicopter Association International, was adopting a new name and identity, Vertical Aviation International (VAI). Here, Board Chair Nicole Battjes, flanked by the association's Board of Directors, makes the announcement at the Monday Welcome Reception and Rebrand Reveal.

"In terms of North America bookings, when you include all the different OEMs, the market is down 15% or more, which came as a surprise after two years of growth," Reijnen said. "That's why I call it a transition. It's also a transition in the sense that [Airbus has] invested a lot in new helicopters. [In] 2024, we'll see deliveries of those aircraft and their entry into service."

Reijnen suggests the dip is a result of the VUCA (volatility, uncertainty, complexity, and ambiguity) world we live in today. Everything from the air ambulance market's uncertainty surrounding the No Surprises Act to an overall industry-wide difficulty acquiring insurance and meeting higher insurance premiums to dealing with labor shortages adds to the complexity for the entire vertical aviation community.

The primary challenge across the industry, however, remains supply-chain issues. Whether raw materials or manufactured components, engines, and parts, reduced supply and skyrocketing demand continued to increase costs and competition.

"Nobody wants to hear COVID as an excuse, but we're still feeling the impact of the pandemic, coupled with the fact that small- and medium-sized suppliers aren't buying a ton of material," explained Eric Schreiber, international business development director for Sikorsky, a Lockheed Martin company. "[Suppliers] are first going to liquidate

their current stock, which then causes lead times across the entire supply chain to elongate, which in turn creates much longer lead times on high-demand raw materials."

Now a full year out of bankruptcy, MD Helicopters is continuing to see significant increases in lead times from suppliers, pushing the recovering OEM's timeline out another 6 to 12 months before it's reached its targeted levels of parts supply available to ship within 24 hours. The company has made progress in the past year, with 80% of its targeted parts in stock. Like many others, the company is adding more suppliers.

"We're working our way down the supply chain, with each step [requiring] people and face-to-face meetings," said MD Helicopters President and CEO Brad Pedersen. "We're sharing production and aftermarket plans and signing LTAs [long-term agreements] to help suppliers prepare to support our needs."

Engine manufacturers lamented similar constraints, with Rolls-Royce, Safran, GE, and Pratt & Whitney Canada (P&WC) all facing long lead times for both raw materials and precision parts made from those materials as demand for engines and engine support increases.

"Demand is huge right now, with utilization increasing, especially with replacement aircraft for grounded Russian helicopters, as well as older helicopters needing parts and replacement," said Nicolas Chabée, VP of helicopter engine

marketing and sales at P&WC. “We’re seeing backlogs of two years—plus that are actually growing to almost three years. The supply is where the challenge continues to be. A lot of that comes from raw-material availability.”

OEMs are being creative in how they help tip the supply-chain scales in their favor, from purchasing suppliers outright to encouraging them to buy extra materials and commit to higher parts quantities in order to respond quickly to potential increases in demand. For example, Airbus and Safran last year partnered with a private equity firm to purchase raw-material processing company Aubert & Duval. MD Helicopters, meanwhile, signed longer-term contracts with suppliers to encourage the latter’s investment in increased materials procurement. And P&WC offers suppliers training in demand projection and materials purchases to help them prioritize their purchases and capacity.

“It does pay back, and we’re seeing improvement, but there are still issues,” Chabée said of P&WC’s hands-on approach with suppliers.

Guimbal reported strong sales of its Cabri G2 but with deliveries hindered by the same supply challenges. The company is continuing development of a four-seat helicopter.

While both Guimbal and P&WC battle supply-chain issues, their collective steps forward in the past year highlight the tenacity of OEMs of all sizes to succeed in a VUCA world.

“For us, 2023 was dominated by the hunt for supplies, suppliers, and materials,” said Guimbal President Bruno Guimbal. “While we didn’t deliver more than 30 helicopters as we’d hoped, we still delivered, and we have almost sold out 2024.”

### Historic Announcements

While HAI’s rebranding to VAI was the most visible news at HAI HELI-EXPO 2024, several other big announcements at the show also had historic significance for the industry.

On Day 1 of Expo, Kurt Robinson, president and CEO of Robinson Helicopter Co. (RHC) and son of RHC founder Frank Robinson, announced his retirement. He named former Bell engineer and senior executive David Smith as the OEM’s new president. Smith joined RHC last year as VP of operations.

The move marks the first time since the company’s founding in 1973 that RHC has not been led by a Robinson family member. The company remains privately owned by



**SEE**  
**how the Wisk**  
**Aero Gen 6**  
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**configured**

The Wisk Aero Generation 6 air taxi drew lots of visitors. The company’s four-seat electric vertical takeoff and landing aircraft is designed for autonomous operations.





Hill Helicopters' HX50 model is a clean-sheet design still in development. It promises a range of 700 nm, cruise speed of 140 kt., payload of 1,760 lb., and styling on a par with luxury automobiles—all at a base price of about \$756,000.

an investment firm, with the retiring Robinson holding a large share. Smith's position at the helm marks a new era for the world's most prolific helicopter manufacturer.

"To keep the company successful, you always have to be looking 5, 10, 15 years out, so this is not something I suddenly decided; it's been in process for some time," Kurt Robinson revealed. "Dave has been with us

for a year and has more than 20 years of experience in the industry. His enthusiasm for the industry and Robinson has been phenomenal. The R66 has taken off, like the R22 and R44 before it, so what do we do next? This is the perfect time for a transition of leadership."

What's next for RHC is still under wraps, but Smith has already increased the company's

engineering team by 50%. One plan he did share during Expo was an emphasis on updating the R22 to ensure it remains relevant and modern.

"We're having real good success with recruiting engineers," Smith teased. "We have race-car guys, electric-vehicle people, and system-safety specialists, so it's helped us with the early design for any project."

Across the hall, Leonardo and Bell announced that their on-again/off-again relationship was enthusiastically back on to work together in the tiltrotor market. The two OEMs signed a memorandum of understanding during the show to evaluate opportunities for cooperation. Their first mutual project will be for the NATO Next Generation Rotorcraft Capability concept study #5, for which Leonardo will take the lead on a tiltrotor architecture proposal, with Bell in a supporting role.

"This alliance with Bell is important," said Roberto Garavaglia, SVP of strategy and innovation at Leonardo. "We believe—as we saw when Bell's tiltrotor was chosen [for the Future Long-Range Assault Aircraft program]—the rotorcraft of choice for this generation is the tiltrotor."

Industry newcomer Hill Helicopters made its Expo debut with a mock-up of its much talked about, customer-built HX50 personal



At HAI HELI-EXPO 2024, Kurt Robinson, president and CEO of Robinson Helicopter Co., announced he would move to an advisory role in the company while remaining on its board of directors. Kurt, shown third from right with Robinson staff members and Expo visitors, was a familiar sight at the Robinson booth, having worked for 40 years in the company that his father, legendary aircraft designer Frank Robinson, founded in 1973. The company named David Smith, VP of operations, the new president and CEO.



helicopter. Designed entirely in-house from the ground up, including avionics and engine, the sleek carbon-fiber aircraft was surrounded by a steady, curious crowd throughout the show. The HX50, which more resembles a luxury automobile than a conventional aircraft, is not yet in production. However, Founder and Chief Engineer Jason Hill reported that more than 1,200 orders are already in for the experimental helicopter and its commercial counterpart, the HC50.

Meanwhile, underdogs Schweizer and Enstrom reported steady progress and growth, with the two piston OEMs announcing industry-first insurance programs and advancements for their airframes. Both manufacturers have negotiated with insurance providers to develop favorable rates for their aircraft's owners and operators based on their helicopters' lower accident and incident rates compared with other aircraft in their categories—mainly Robinsons.

With the cost of insurance becoming a barrier to aircraft ownership, both Schweizer and Enstrom noted the importance of securing lower-cost insurance. Schweizer also hinted about conducting research into a future five-seat model. The current S300 series seats up to three people, while the OEM's turbine S333 seats four.

Both companies reported international sales and busy assembly lines, and Schweizer highlighted its new OEM Certified Helicopters offering, an overhaul and refurbishment program in which the OEM purchases Schweizer 300C and 300CBi models regardless of airworthiness and either overhauls or refurbishes them for sale at lower than new prices.

"There are a lot of good aircraft still out there that have [been waiting for] parts," Schweizer CEO David Horton said. "This program helps get that existing fleet back in the sky while giving customers options based on their budget."

As the lights went down on HAI HELI-EXPO 2024, attendees were reminded again of a new chapter for the annual trade show, with an invitation to join VAI at VERTICON in Dallas, Texas, Mar. 10–13, 2025 (exhibits open Mar. 11–13). [R](#)

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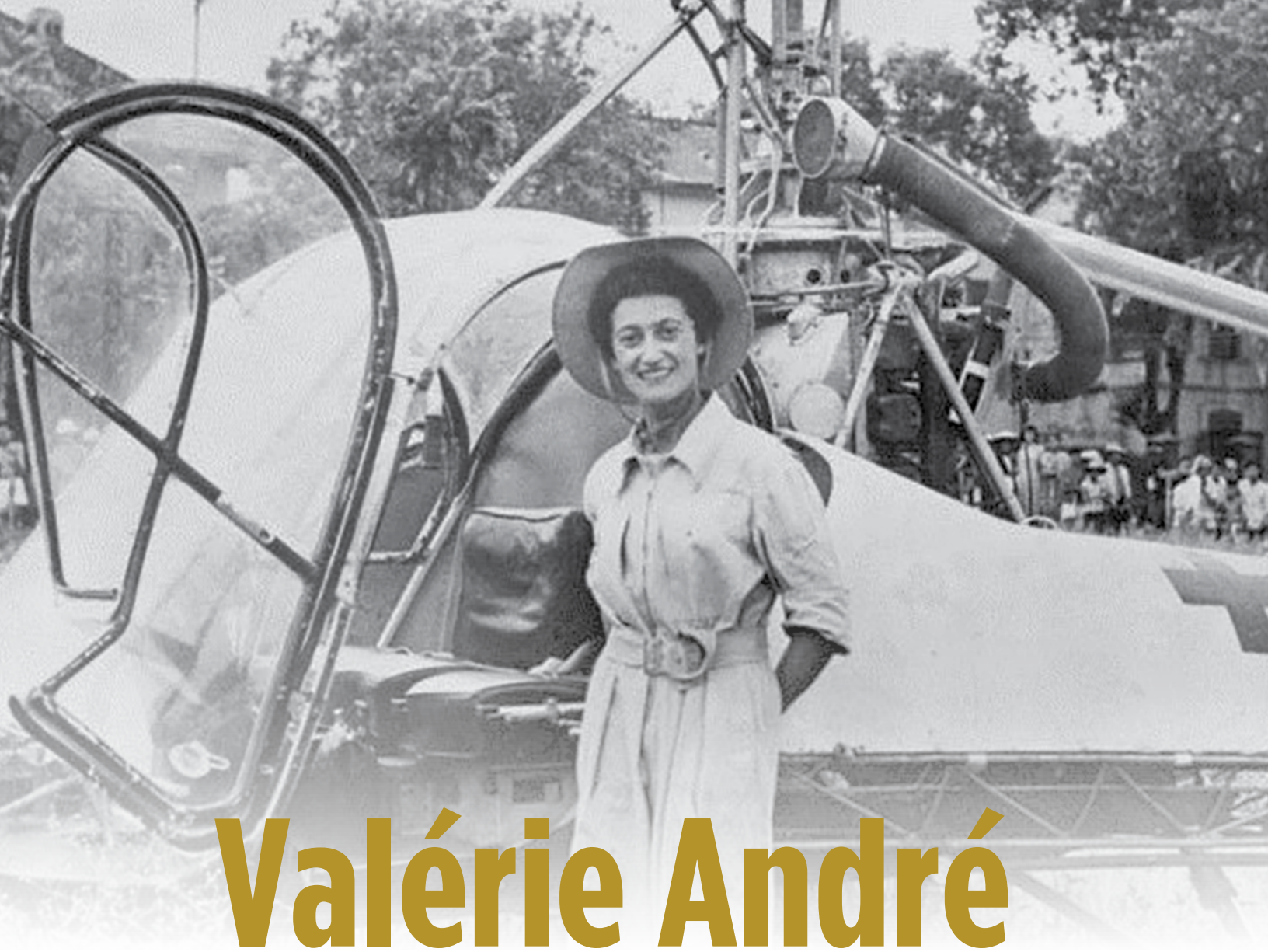
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# Valérie André

## The World's First Female Helicopter Rescue Pilot

She broke through barriers to become a military pilot and neurosurgeon.

By Charles Morgan Evans

**A**T A REMOTE FRENCH ARMY OUTPOST near Nam Dinh, Vietnam, in November 1952, a group of soldiers waited with one of their wounded for a helicopter on its way from Hanoi, roughly 57 miles away. Though helicopters had been introduced to the war in Indochina earlier, the soldiers had never seen one. But they

knew it could save lives and meant they no longer had to transport their wounded by truck or jeep across almost nonexistent roads, exposed to ambush, to reach a distant airstrip.

As the Hiller 360 made its approach, its strange, somewhat delicate, insectlike appearance caught the attention of the soldiers first. Then, the men noticed its pilot, a young

woman, who self-assuredly made a precision landing at their compound. Time was of the essence when loading the wounded onto the Stokes litters on each side of the helicopter. The pilot urged the men to quickly help her secure the wounded soldier. She knew the enemy Viet Minh could be lurking nearby and wouldn't hesitate to fire on them, even with red crosses painted on the Hiller's fuselage.

The pilot then made her way back into the cockpit and signaled that she was ready to lift off. The men stood back in awe, wondering who this angel of the battlefield was. To them, the helicopter and its female pilot seemed to come from a futuristic fantasy. But the pilot, Valérie André, and the aircraft weren't figments of anyone's imagination.

André, a captain and a surgeon in the French Military Medical Corps, was one of the founding members of France's then recently inaugurated military helicopter rescue squadron. By the time she picked up the wounded soldier at Nam Dinh, André had already served five years in Vietnam. Flying rescue helicopters would make her a legend.

## Hooked on Aviation

André was born in Strasbourg, France, on Apr. 21, 1922. Her destiny as a pilot was set at the age of 10, when she met acclaimed pilot Maryse Hilsz. Hilsz had just completed a nearly 13,000-mile journey from Paris, France, to Saigon, Vietnam, and back. That meeting hooked the young André on aviation. She regularly visited the Strasbourg aerodrome after that, eventually taking her first fixed-wing flight lessons at 17 years of age in the summer of 1939.

"Boys were trained to fly free as part of national defense," she says. "I had to pay for my lessons."

André's love affair with aviation was put on hold, however, with the onset of war. Germany declared war on Poland in September of that year, and France, in turn, declared war on Germany. André's world was completely upended. She would begin attending university the following year to fulfill her other life ambition to become a doctor. When Germany defeated France in 1940, her medical education nearly ended. To continue her studies, André defied the Germans and left Strasbourg, despite protests from her family.

Her life was immediately in danger. The Germans had forbidden Strasbourg residents to leave without authorization. In Clermont-Ferrand, the Gestapo raided André's university, searching for Resistance operatives, saboteurs, and Jewish students and faculty. André narrowly evaded arrest. Afterward, she fled to Paris, where she lived in hiding and under threat of arrest until the summer of 1944. When the Free French liberated Paris in August 1944, André compared the exile army to an incarnation of modern knights.

## Surgeon on the Front Lines

After graduating medical school in 1947, André enlisted in the French Military Medical Corps and volunteered to serve in French Indochina as a doctor. The region, which comprised Laos, Cambodia, and Vietnam, had been under French rule since the late 19th century.

In the 1940s, a group of Vietnamese nationalists led by Ho Chi Minh sought independence for Vietnam, and war broke out between France and the insurgents in 1946, lasting until 1954 and the withdrawal of French troops. The French Army suffered massive casualties, and doctors were in short



Far left: Valérie André poses in front of a Hiller helicopter at Lanessan Hospital, Hanoi, Vietnam, 1952. André also served as a surgeon at Lanessan. Left: André commands a Sikorsky H-34 helicopter in Algeria, 1959. (Photos: Valérie André. Used with permission.)

supply. Trained in neurosurgery, André performed more than 100 procedures per month after her arrival.

Still, her intense interest in aviation endured. When given the opportunity to be part of a medical team parachuting into remote French military outposts throughout Indochina to treat the wounded, she jumped at the chance. On one mission to Laos, where she was airdropped into a French fort, André treated both military personnel and civilians who lived near the outpost. Her skill and compassion became legendary among the villagers, and she became known as "the woman who came from the sky."



**GLIMPSE**  
how  
helicopter  
rescues were  
performed in  
the early '50s

## First Air Ambulances Arrive in Vietnam

In 1950, English pilot Alan Bristow, who later founded the global helicopter operation that still bears his name, came to Saigon believing that the French government wanted to buy a Hiller as a gift for Vietnam's on-again, off-again emperor Bao Dai. When that proved not to be the case, Bristow asked the company's French distributor to ship him one of the innovative Hiller UH-12/360s so he could demonstrate its utility to the French Air Force. The demonstration convinced the air force to try the helicopter as an air ambulance because of its ability to land at even the remotest outpost, hours from the nearest airfield or days from the nearest hospital.

The air force initially bought two Hiller 360s, ushering in the first use of helicopters in Vietnam for medical rescue. André, who was among those who witnessed the demonstration of the Hiller in Saigon in 1950, immediately lobbied her superiors for a chance to become a rescue pilot.

"I had medical training to stabilize the wounded," she says. "And I weighed less than 45 kilograms [99 lb.], which

meant we could even carry an extra wounded man if necessary."

It wasn't easy to convince her superiors. André had already experienced significant prejudice as a woman in the French medical corps: some labeled her a threat to the "prestige of men." Yet, André persevered, earning respect as a surgeon, and she would do the same as a rescue pilot. The commanding officer of the nascent helicopter squadron, Alexis Santini, was tough but fair-minded. He told André if she could hold her own with the men, he would put her into service.

## Flying into Danger

Following helicopter flight training in France and several months of practice, back in Vietnam André flew her first rescue mission on Jan. 22, 1951. Danger stalked her on each of her 129 missions. Flying to reach a far-off French outpost often took more than an hour, and once there, André frequently had to be escorted by fighter aircraft strafing surrounding areas with machine-gun fire and dropping

André in a Hiller 360 at Helicop-Air, August 1950. Helicop-Air was the distributor at that time for Hiller helicopters in France.

(Photos: Valérie André. Used with permission.)





André with Alexis Santini at Tan Son Nhut Air Base, Saigon, Vietnam, 1951. André's future husband, Santini was the first commander to welcome her into the French Air Force as a helicopter rescue pilot.

napalm to disperse the enemy Viet Minh, who targeted her.

The Hiller was often mechanically temperamental, once stranding André in a no-man's-land when a cooling-fan gearbox failed. Fortunately, French troops found her before the Viet Minh did. On another mission, her wounded patient regained consciousness midflight and, in a panic, tried to wrest control of the helicopter. André was able to fight the soldier off and maintain control of her machine until he fell back into a coma.

André proved her mettle as a pilot in both health and sickness and earned the respect of all who served with her. She went on to serve in Algeria as both a medical rescue and troop transport pilot and chief medical officer for the Reghaïa air base near Algiers. By this time, she had graduated to piloting the more sophisticated Sikorsky H-34 and Sud Aviation Alouette II.

When she returned to France in 1962, André continued serving in the French Army as a medical officer assigned to air bases throughout the country. She never lost her fascination with helicopters. When inspecting the bases, André was assigned an Alouette II to cover the wide distances between locations.

In 1963, André and Santini married. Of the commander who first believed in her skills as a pilot, André says Santini was the man who "mattered most" in her life.

## A Distinguished Career

André received numerous commendations and medals of honor for her service. She remained in the French Army and rose through the ranks, becoming a colonel in 1970

and a brigadier general in 1975—the first woman to achieve the rank in the French military. In 1982, André was promoted to medical inspector general.

During the latter part of her career, she lobbied for gender equality based on merit for women pursuing medical careers in the military. André garnered support from members of the French National Assembly to level admission standards that had favored male over female applicants. As a result of André's effort, women now represent more than 50% of the medical corps' personnel.

In April 2024, André celebrated her 102nd birthday. A modest and gracious person, she lives quietly in her adopted town of Issy-les-Moulineaux, near Paris. But she's

always fought fiercely for the causes she believes in.

"I have always been a rebel," André says. "I rebelled against outdated injustices or outdated traditions. But I was always a rebel who liked order ... and risks." 🗨️

*Editor's note: Charles Morgan Evans is the author of Helicopter Heroine—Valérie André—Surgeon, Pioneer Rescue Pilot, and Her Courage Under Fire, published by Stackpole Books, 2023. For ordering information, visit [hai.rotor.org/WKLe6J](http://hai.rotor.org/WKLe6J).*



André in Paris, May 2017. André, the first woman promoted to the rank of general in the French Army, was awarded the Grand Officer Legion of Honor on Sep. 18, 1981. (Charles Morgan Evans)



# AAM's Infrastructure Promise

Vertiports and heliports at medical facilities like Vassar Brothers Medical Center in Poughkeepsie, New York (above), will need to accommodate not just helicopters in the future but cargo drones and electric vertical takeoff and landing aircraft, as well. (Heliplanners Photo)

## Funding and technology for advanced air mobility will benefit all vertical aviation.

By Mark Huber

**W**HEN IT COMES TO GOVERNMENT investment, vertical aviation has tended to get the short end of the stick compared with the fixed-wing industry. But times are changing.

The billions of dollars and environmental enthusiasm backing a new generation of advanced air mobility (AAM) electric vertical takeoff and landing (eVTOL) vehicles could have a spillover benefit for the entire rotorcraft sector.

“We’ve always been second fiddle to the airlines,” laments Rex Alexander, president of aviation consultancy Five-Alpha and a member of VAI’s Vertical Flight Infrastructure Sub-Working Group. “People who fly at 1,000 ft. and below really don’t get nearly the money the fixed-wing community that flies at 3,000 ft. and above receives.”

But infrastructure expert Alexander sees promise in the excitement surrounding AAM. “I think there’s an

opportunity here,” he says. “We’ve been told by people at the FAA and on Capitol Hill that if you can tie this new low-altitude infrastructure, including vertiports, low-level weather predicting and reporting, and air traffic control, to advanced air mobility, we can help you,” Alexander continues. “The legacy helicopter industry will definitely benefit from the influx of funding and technology AAM is going to bring to the low-altitude flight environment.”

Chris Martino, VAI’s senior director of operations and international affairs, echoes Alexander’s assessment. “Our members won’t operate just helicopters; some will transition over to these next-generation vehicles, and some will operate both,” Martino says.

“It’s not just the vertical aviation fleet that will become more diverse—we expect to see that diversity reflected in an operator’s hangar. And we see our purpose as supporting all vertical aviation aircraft,” Martino explains.

## The Template for Shared Infrastructure

But how will this diverse fleet be served by a cohesive infrastructure model? Martino points to future vertiports at Level I trauma center hospitals as a possible template. Hospitals currently house an estimated 90% of all heliports and helipads in the United States, according to Alexander.

The vertiports and heliports of tomorrow will transport to hospitals not just patients but also organs, critical supplies, and medications via cargo drones, eVTOLs, and traditional helicopters. Aviation facilities at these medical centers will need to accommodate all three types of aircraft.

Performance-based facility design criteria, as discussed in the FAA's 2022 [Engineering Brief \(EB\) No. 105, Vertiport Design](#), are the key to bringing this template to life, according to Martino. Performance-based design standards—where regulators define the goal or performance standard that must be met but leave to designers and engineers how to meet that standard—are increasingly used in aviation rulemaking. Prescriptive design, which spells out exactly how standards must be met, is increasingly seen as unable to keep up with the modern pace of technology development.

“It really is incumbent upon regulators, legislators, and industry to work together to create performance design criteria for this new operational environment,” Martino says. “First, because that’s the way to build infrastructure with the flexibility to serve a diverse fleet. Second, because I hope we’ve learned the lesson that we need to design for all future technologies that can meet the performance standard.”

EB No. 105, which the FAA claims is a “living document,” applies more-stringent standards for operations of eVTOLs compared with traditional rotorcraft, including suggesting a larger physical infrastructure than is included in the agency’s latest heliport design advisory circular ([AC 150/5390-2D—Heliport Design](#)), issued in January 2023. The standards in EB No. 105 could be relaxed in time, once regulators have a better handle on AAM vehicle performance.

But for now, the catch is that most AAM vehicle performance remains unknown. Even so, via the FAA’s Airport Data and Information Portal (see “Voluntary Design Standards, Mandatory Registration,” [p. 47](#)), a vertiport developer can apply for the agency to study a particular facility design under Part 157.

“Until we get some of these vehicles operational, we can’t know” about performance, Martino says. And performance means more than just speed, range, and payload. In addition to the operating environment and tempo, Martino mentions other variables that may affect vertiport design, such as

questions about social and public acceptance and the source of infrastructure funding.

But this temporary entropy doesn’t equate to inaction. VAI is committed to driving programs to get the infrastructure funded and to working with industry partners via the association’s Advanced Air Mobility Advisory Council, Martino points out. In November 2023, the council issued an updated [Roadmap of Advanced Air Mobility Operations](#) with near-, mid-, and far-term goals for AAM operations and infrastructure. The roadmap calls for leveraging current airports, developing additional infrastructure standards and capacity, and building new vertiports.

## Single Classification for All Players

What exactly is the difference between heliports and vertiports? According to the [Northeast UAS Airspace Integration Research Alliance](#), a vertiport is “a collective term referring to areas designed specifically for AAM aircraft to take off and land, much like a heliport is a designated area for helicopters.”

The elevated heliport at Lurie Children’s Hospital in Chicago hosts more than 70 flights annually. Illinois is home to 273 heliports, according to the state’s transportation department. (Rex Alexander Photo)



Developing AAM infrastructure that can serve all vertical aviation aircraft will require both a short and a long game, notes Alexander. Utilizing existing airports is the short game, he says.

“Airports lend themselves better to the space requirements and [just afford] more opportunities. In many cases, they also have the needed electrical capacity. Many heliports don’t have electricity, and those that do have only 110-volt service, so moving in sufficient electricity [to support eVTOLs] is a huge challenge,” Alexander says.

There’s also the question of local politics and regulations surrounding infrastructure, says Kathryn Wright, VP at Heliplanners, an aviation planning firm specializing in heliport and vertiport development. Getting zoning approval “for a completely new animal” like a vertiport is “a big lift, a lot of work, and a much bigger uphill battle [in the current political

environment], whereas a heliport, especially where there’s already local zoning approval, is a lot easier to handle. I tend to be of the belief that a vertiport should be [considered] a type of heliport,” Wright says.

The long game is “to figure out what is and is not compatible” in terms of “mixing helicopters in with eVTOLs at

a single site,” says Alexander. He points to aircraft throughput volume, multiple and simultaneous operations, and wake turbulence as just a few of the variables that need to be considered when mixing in a 5,000-lb. eVTOL and, say, a 15,400-lb. Leonardo AW139 helicopter. “Are

they equivalent enough from a performance standpoint?” Alexander wonders.

The folks at Vertiport Chicago seem to think they are. Located off the South Loop in downtown Chicago, Illinois, the facility sprawls over 10 acres and sports ramp space for

**“The legacy helicopter industry will definitely benefit from the influx of funding and technology AAM is going to bring to the low-altitude flight environment.”**

**—Rex Alexander, president, Five-Alpha**

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# Voluntary Design Standards, Mandatory Registration

*US heliport facilities, whether public or private, must register with the FAA.*

WHEN THE FAA RELEASED ITS long-awaited revision to the heliport/helipad/helistop design advisory circular in January 2023 (AC 150/5390-2D, Heliport Design), the agency stressed that the guidelines were voluntary for privately owned facilities and did not necessarily apply to vertiports. What the FAA did *not* emphasize, however, is that these facilities, whether publicly or privately owned, still must register with the FAA via the agency's online [Airport Data and Information Portal](#) (ADIP) per 14 CFR Part 157.

This process includes completing [FAA Form 7480-1](#), which includes providing a city map, heliport layout plan, and landing-area sketch or US quadrangle map. The information must be provided to the FAA within 90 days of the construction, implementation, or modification of the airport/helicopter facility. These same requirements are expected to apply to vertiports.

Kathryn Wright, VP at Heliplanners, an aviation planning firm, says a large percentage of the helicopter community remains ignorant of the Part 157 requirement. "If you polled a random sample of thousands of pilots and people in the industry, a very large percentage would have no idea this is required. It's just an education issue," Wright says.

Wright, who serves as secretary of VAI's Vertical Flight Infrastructure Sub-Working Group, stresses that any area considered for helicopter operations must submit to the Part 157 process, even if it's just a parking lot next to a fire station with an encircled "H" painted on the pavement.

Wright says complying with Part 157 entails three key steps:

- The heliport facility submits the landing area to the FAA via the ADIP, including information such as its location and elevation and what the design looks like
- The FAA conducts a study of both the landing area and the adjacent airspace, a process that generally lasts about four months, running through the FAA airports and standards divisions and district offices
- The FAA issues an airspace analysis determination letter with one of three possible findings: no objection, conditional no objection, or objectionable.



Densely populated and congested metro areas such as Houston, Texas, home to Landry's West Loop South heliport, are attractive markets for vertiport expansion. (*Heliplanners Photo*)

A *conditional no objection* letter generally will contain suggestions as to how to make the landing area safer, adding items such as signage and lighting. An *objectionable finding* is equivalent to the FAA finding the landing area unsafe but does not stop a private owner/operator from using the area.

An objectionable finding would have consequences only for a publicly owned/public-use facility, Wright says. Even in that case, the facility still could be operated, but it wouldn't qualify for federal financial assistance, including the FAA's [Airport Improvement Program](#).

Once the heliport is up and running, the owner must submit an airport master record to the FAA. That happens automatically when the owner accepts comments from the FAA and the agency issues a finding of either no objection or conditional no objection.

Not having a determination letter from the FAA can have significant collateral consequences, Wright warns, especially in the event of accident-related litigation. "It just makes it easier for a jury to think you were doing something wrong."

And it is the pilots, as opposed to the owner of the heliport/helipad, who often bear the brunt of the blame when things go sideways. "Most of the time, pilots are blamed for accidents caused by poor infrastructure design," Wright says. "They aren't trained in what to look for so that they know if it's a good or bad landing site—and they need to be. But, again, many sites have no determination letter. At the very least, you should be submitting to the FAA and getting that determination letter."



Above: Vertipoint Chicago is already gearing up to add electric vertical takeoff and landing aircraft to its traffic mix. Opposite: The Kaiser Permanente Vacaville Medical Center heliport, Vacaville, California. (Vertipoint Chicago and Heliplanners Photos)

up to eight helicopters and hangar space for nine more.

Last year, the vertipoint announced plans for scheduled eVTOL service to O’Hare International Airport (KORD), beginning in 2025, using Archer Midnight eVTOLs owned and operated by United Airlines. The eVTOLs should be able to make the trip between Vertipoint Chicago and O’Hare in 10 minutes, versus the typical hour-plus freeway crawl that ground vehicles endure.

### Financing Still an Issue

Because Vertipoint Chicago sits adjacent to a major rail yard, bringing additional electricity onto the site will be easier than it would be at some other locations. Still, the larger question of financing eVTOL infrastructure remains far from settled. Political leaders in Chicago, New York, Los Angeles, and Miami have all voiced support for AAM but haven’t made any significant financial commitments to advancing it.

Initially, that support will need to be federal. And there’s the sticking point. According to Alexander, it comes down to vertipoint ownership: privately owned facilities are ineligible for federal funds and grants, and the vast majority of US heliports and helipads are private. “You have to be public to even apply for federal grant money,” he notes.

Alexander thinks the problem can be solved by creating a new classification of heliport and vertipoint beyond the current private and public by adding the term “private-commercial” and making facilities under the categorization eligible for government support. But that process, he warns,

could take four to six years, requiring rule changes for grant eligibility.

When the funding does come, Martino stresses, it needs to be inclusive of both new and existing infrastructure and not discriminate against helicopters. “VAI is fighting hard to make sure the FAA is integrating existing infrastructure, inclusive of helicopter operations.”

To that end, VAI’s Vertical Flight Infrastructure Sub-Working Group is focusing on:

- Advocating for and engaging with international regulatory bodies to promote the harmonization of heliport and vertipoint design standards
- Providing education and resources for the heliport-vertipoint development and approvals process
- Developing a model infrastructure-protection ordinance for adaptation and adoption by states and municipalities
- Applying evolving fire-protection standards.

The sub-working group’s membership consists of heliport planners, helicopter operators, helideck manufacturers, lighting specialists, fire-suppression specialists, eVTOL OEMs, and heliport managers who hail from countries including Australia, India, the Netherlands, and the United States.

On Capitol Hill, Congress continues to promote AAM with legislation including the Advanced Air Mobility Coordination and Leadership Act, which was signed into law in 2022. The act directs the US secretary of transportation to establish an “advanced air mobility interagency

working group” to “plan for and coordinate efforts related to safety, operations, infrastructure, physical security and cybersecurity, and federal investment necessary for maturation of the AAM ecosystem in the United States, particularly passenger-carrying aircraft” and develop “an AAM national strategy.”

Additionally, the 2024 FAA Reauthorization Act passed by Congress in mid-May streamlines regulatory processes to facilitate AAM and implement policies to support and promote vertical aviation. The National Aeronautics and Space Administration (NASA), too, is deeply involved in the issue and is developing an AAM “playbook” with enabling technologies and strategies.

Internationally, the European Union Aviation Safety Agency in March 2022 released its Prototype Technical Design Specifications for Vertiports (PTS-VPT-DSN), and in July 2023, the UK Civil Aviation Authority published CAP2538, Considerations for Aerodromes and

Vertiports Planning to Operate Vertical Takeoff and Landing Aircraft. That same month, Australia’s Civil Aviation Safety Authority released Advisory Circular 139, Guidelines for Vertiport Design.



In the United States, Alexander thinks federal oversight via the private-commercial classification is essential for AAM to succeed. “We’re going to have to have oversight of vertiports. If it’s private, the FAA has no authority, and then oversight would fall to the states, but only if they have [regulations] on the books,” he says.

Regulations aside, AAM continues to drive innovation that will benefit all vertical aviation. This includes urban microweather hazard-detection technology being developed by Mitre Corp. for the FAA and low-altitude air traffic management and deconfliction work continuing at NASA. These and other advancements promise to make the airspace below 1,000 ft. demonstrably safer for all users. [🔗](#)

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# ALL ABOARD!

## The SMS Helo Is about to Take Off

By Chris Hill

**A**S OF MAY 28, 2024, PART 135 on-demand operators, Part 91.147 air tour operators, and certain Part 21 certificate holders could no longer stand idle and wait for a safety management system (SMS) mandate.

The long-anticipated expansion of the Part 5 SMS rule has arrived. With it, over 2,500 affected entities must plan to complete their SMS journey within two or three years (depending on the certificate). That generous timeline will expire in the blink of an eye for many operators who delayed implementation plans.

The new rule improves alignment with International Civil Aviation Organization (ICAO) Annex 19—Safety Management while addressing several FAA calls to action,

including congressional mandates and National Transportation Safety Board (NTSB) recommendations. While the rule is too lengthy to summarize in this article, we will address and comment on some noteworthy elements of it.

### Who Must Comply with the New SMS Rule?

The reach of the SMS rule has extended far beyond Part 121 air carriers. If you currently hold or are in the process of applying for any certificate or letter of authorization issued under US federal aviation regulations, it's crucial that you familiarize yourself with the updated rule and how it may impact your operation. Whether you're a commuter operator, on-demand operator, or you conduct passenger-carrying flights for compensation or hire, this rule is relevant



## Buckle up—the journey might get a little bumpy for unprepared operators.

to you, in whole or in part. Here’s a brief overview of the revised applicability. For more details, please refer to Part 5.1.

- Operations conducted under Part 121 (air carriers)
- Operations conducted under Part 135 (commuter and on-demand operations)—new
- Operations conducted under Part 91.147 Letter of Authorization (LOA) holders or applicants (passenger-carrying flights for compensation or hire)—new
- Part 21 type certificate and production certificate holders—new.

### Small-Operator Exemptions

Some SMS requirements do not apply to certain single-pilot operators. A review of Part 5.9(e) reveals 13 potential Part 5 exemptions that may apply to a select group of single-pilot operators, specifically “entities with a single pilot who is the sole individual performing all necessary functions in the conduct and execution related to, or in direct support of, the safe operation of the aircraft.”

This exemption would require the individual to be the aviation equivalent to the “chief cook and bottle washer.” All necessary functions of the sole individual are clarified in the new rule to “generally include: operational control, refueling, ground handling of the aircraft, flight planning, weight and balance calculations, performance of preventive maintenance, coordination of maintenance activities, preflight and post-flight activities, and financial decisions related to operating the aircraft safely, in addition to operating the aircraft.”

If a sole proprietor performs all those tasks without assistance, they will indeed get much-needed relief from illogical requirements like submitting a written hazard report to themselves.

### What Is a Safety Management System?

If you’re not yet familiar with the foundational components of an SMS and how to apply them, it’s time to get up to speed, and fast. The definitions section of the SMS rule is short, with only 10 definitions provided. An SMS, as defined in Part 5.3, is “the formal, top-down, organization-wide approach to managing safety risk and assuring the effectiveness of safety risk controls. It includes systematic procedures, practices, and policies for the management of safety risk.”

Definitions of an SMS from most resources follow a similar theme to that shown above. For those still disoriented by the whole thing, I prefer to think of SMS from an operational risk management perspective and ask three simple questions.

**1. What keeps you up at night?** To consider what can go wrong in daily operations, one must attempt to identify employee and

customer exposure to hazardous conditions and activities hiding in plain sight or lurking in the shadows. This is no small task, but it is the most critical SMS activity. Every employee and stakeholder must participate in this process (via, for example, observation, interviews, surveys, and so on). Once this process is completed, an operator should develop a comprehensive list of hazardous activities and conditions and assess the corresponding risk level based on probability and severity. The risks deemed too high must be mitigated to the lowest acceptable level.

**2. What are you doing about it** once you’ve identified some risks that need mitigating to reach a lower, more “acceptable” level? Beyond avoidance, what else can be done to reduce the likelihood or severity of those risks resulting in an accident or incident? What policies, procedures, training, and education can you provide to ensure that employees and customers understand workplace hazards and how to avoid, mitigate, and report them?

**3. How do you know if it’s working?** What are your results? Don’t just consider lagging indicators such as accident and incident statistics. Do employees feel safe reporting unsafe conditions? A spike in employee reports (this is a good thing versus accidents) should provide the information you need to answer that question. Are employees more invested in workplace safety and efficiency? Do they better understand hazards, and are they being reported before they lead to undesired outcomes? If the answer to these questions is yes, you are off to a good start. Be patient and repeat the process, addressing any gaps you discover.

Of course, getting beyond a general understanding of SMS is paramount for compliance with the new rule. Where should you start? Fortunately, several excellent resources are available to make that determination. Here are some to consider in your quest for SMS knowledge:

- [Safety Management Systems Rule](#): Federal Register PDF version of the final SMS rule.
- [Advisory Circular 120-92B](#): Safety Management

Systems for Aviation Service Providers.

- **Safety Management International Collaboration Group (SM ICG)**  
Products: This Skybrary site contains 40 documents on SMS.
- **Vertical Aviation Safety Team (VAST)**  
Safety Library: Click on the “SMS” text filter to display 40 downloadable resources, including SMS tool kits, videos, and guides.

### Complexity and Scalability Concerns

Section 2.2 of AC 120-92B acknowledges that SMS can indeed be a “complex topic with many aspects to consider.” For those concerned about the challenges of implementing an SMS, the FAA assures us that “an SMS does not have to be an extensive, expensive, or sophisticated array of techniques to do what it is supposed to do. Rather, an SMS is built by structuring your safety management around four components: safety policy, safety risk management, safety assurance, and safety promotion.”

Concerns regarding scaling an organization’s SMS to comply with



the new rule were well documented during the notice of proposed rulemaking process. From the rule: “An SMS must be suitable for the size, scope, and complexity of the organization and include: safety policy, safety risk management, safety assurance, and safety promotion.” The FAA’s response to these concerns is that Part 5 offers provisions for scalability, as does AC120-92B, which states: “The SMS requirements are the same regardless of the size of your organization. However, Part 5 allows organizations of different sizes to meet those requirements in different ways. The SMS functions do not need to be extensive or complex to

be effective. All businesses, regardless of size, may use existing systems, programs and resources to document and track safety issues to resolution.”

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tools, coaching, and analysis to guide our members through critical SMS milestones. Regardless of your organization's size or SMS maturity, our resources are tailored to your development, implementation, validation—and, now, declaration requirements. VAI President and CEO James Viola looks forward to the opportunity to help. "We knew this day was coming, so for the past several years, we've built a powerful network of partners ready to provide our members the SMS solutions they need to succeed," Viola says.


**SMS education:** VAI offers several ways to enhance your foundational knowledge of SMS. Through VAI's Learning Management System (LMS), registered users can view three SMS courses tailored to small operators and maintenance organizations: "How Small Operators Can Develop an SMS"; "SMS for Small Fleet Operators"; and "The Dirty Dozen: Integrating the Quality and Safety Management Process." Finally VAI, through its partnership with the National Air Transportation Association (NATA) and the Transportation Safety Institute (TSI) are providing NATA's SMS course, offered through the TSI and available to VAI members at a discounted rate. This five-day course explains how to design, develop, implement, and sustain an effective and verifiable aviation SMS. To learn more, go to [rotor.org/nata-sms-course](https://rotor.org/nata-sms-course).

**SMS coaching:** SMS development and implementation isn't easy. Doing it correctly and in regulatory compliance will take time and effort. But we've got you! Our network of expert SMS service providers includes complimentary coaching services that accompany various available SMS software and evaluation solutions. To learn more, go to [rotor.org/sms](https://rotor.org/sms).

**SMS software:** Are you having trouble organizing the work that supports your SMS? There's an app for that! While in-house tracking with spreadsheets and other desktop applications can be used to demonstrate evidence of SMS compliance, there's a better way. SMS software and tracking solutions are specifically designed to make your SMS journey much easier. VAI has partnered with four industry-leading software solution providers who are ready to save you time and effort, giving you more time to focus on the business of

flying aircraft and turning wrenches. To learn more, go to [rotor.org/sms](https://rotor.org/sms).

**SMS evaluation:** Do you need another set of eyes to help evaluate gaps in your SMS implementation? Perhaps you're getting close to making a declaration of compliance, indicating that you've developed and implemented an SMS that meets the applicable requirements of the expanded Part 5. VAI, in partnership with WYVERN, is offering a preflight check of your SMS, which will help you determine

just how prepared you are. A more comprehensive SMS evaluation, accompanied by a professional SMS coach, will ensure that you can declare with confidence when your SMS implementation is complete. To learn more, go to [rotor.org/sms](https://rotor.org/sms). 

*Disclaimer: VAI strongly encourages all potential stakeholders to conduct their own internal review of the new SMS rule and seek professional assistance to determine their own strategy to ensure compliance.*



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## QUICK FACTS

### Elizabeth Vavashe

First female helicopter pilot, Zimbabwe  
Victoria Falls, Zimbabwe

## CURRENT JOB

I am a helicopter pilot at Zambezi Helicopter Co., which provides scenic flights over the Victoria Falls and the Zambezi River in southern Africa

## FIRST VERTICAL AVIATION JOB

My first real helicopter job is my current role with Zambezi Helicopter Co., where I have worked for close to eight years now.

## FAVORITE HELICOPTER

There are aspects of different helicopters that I love. I love the sound of the Bell 412 blades, the versatility of the Leonardo AW139, the sleek look of the Airbus H160, the effortless lift of the S-64 Aircrane, the affordability of the Robinson models, and the serious face of the Sikorsky S-92.



**VIEW**  
a Zambezi  
helicopter  
tour over the  
Victoria Falls

## How did you decide helicopter aviation was the career for you?

I first became interested in a career as a helicopter pilot through a company-sponsored training facility at my former job. The company owned a Robinson R22 and a Bell 206A JetRanger and needed pilots for their wildlife conservation work. After a rigorous interview process, I emerged as one of two top candidates. I landed in Johannesburg, South Africa, on Jun. 3, 2005, to begin flight training. Prior to that, I had never been close to a helicopter. My first training flight was also my first helicopter flight, and I immediately knew flying helicopters was my life's calling.

Unfortunately, as a female pilot, I faced prejudice and other barriers during training and while trying to get a job after completing my CPL [commercial pilot's license] in 2008. I dedicated the next eight years to advocating change and keeping my dream of flying alive.

In 2016, I got my break, joining my current company as a line pilot. I love that the company gave me a chance to fly. Fast-forward to 2023, and I received the Leonardo AW139 Flight Training Course scholarship through Whirly-Girls International. This scholarship has been a major highlight of my career so far.

I know helicopters chose me rather than me choosing them, because I have set the record for the highest number of hours flown by a Zimbabwean female pilot: 2,800 hours and counting. Helicopter flying has shaped and molded my character in many more ways than I can mention. I attended HAI HELI-EXPO 2024 in Anaheim, California. It was my first show, and I met some incredible helicopter people there.

## How did you get to your current position?

In 2015, I wanted to convert my South African CPL to a Zimbabwean CPL, so I went to Zambezi Helicopter for the conversion checkride. After flying with the chief pilot in a Bell



206 for the checkride, I got a job offer a few months down the line. I became the company's first civilian-trained pilot—and Zimbabwe's first female helicopter pilot.

## What are your career goals?

My goal is to fly the AW139. I would like to continue being a role model for young people in my community and in disadvantaged communities around the world. I am currently in training for my flight instructor ratings, courtesy of my employer, and hope that I will be able to teach and share my love for helicopters with others in the future.

## What advice would you give someone pursuing your career path?

Stay true to your life's purpose and pick something you will enjoy as a career, because this choice will significantly affect all other aspects of your life. Always look at things from other people's perspectives and keep learning and evolving.

## Who inspires you?

I am inspired by my parents, my pastors, my siblings, my friends from across the globe, and women helicopter pilots. The Whirly-Girls played a significant role in reviving my career. I am inspired by Stacy Sheard, past chair of HAI (now VAI); Emilia Njovana, the first



female pilot in Zimbabwe; Collen Rupiya, who gave me a chance when others did not; and the late PJ Mundy, who encouraged me through training and invested in my career.

#### **Tell us about your most memorable helicopter flight.**

My most memorable flight involved taking my parents on their first helicopter flight and seeing them smile. This happened in 2018 in Victoria Falls; they traveled more than 300 km (186 miles) to visit me. The joy I could see on their faces is beyond expression, and it was rewarding to know they were proud of what I had achieved. I am thankful for them encouraging me to be patient and keep moving forward.

#### **What still excites you about helicopter aviation?**

I am excited by the advancement of technology in helicopters. It is good to see that the industry is focusing on improving safety while growing in relevance. Helicopters perform crucial missions that are integral to modern-day society, including airlifting critically injured patients, performing search-and-rescue operations, transporting VIPs, and conducting military operations.

#### **What challenges you about helicopter aviation?**

I am curious to look beyond what we already know and glimpse


at how new generations will add to this fast-evolving industry. How will the industry continue to integrate itself within the wider aviation industry and reduce the rate and severity of helicopter accidents? I live to see helicopter aviation in Africa become inclusive, with common goals of growth and sustainability, transforming Africa into a hub for trade and furthering her civil pursuits for a community of togetherness.

#### **What do you think is the biggest threat to the helicopter industry?**

I can speak only about the helicopter industry where I live. In Zimbabwe, we have helicopter operators who do not employ women for any role in their organizational structures.

I think the biggest threat here is the slow adaptation to change that makes it difficult for the industry to incorporate inclusivity and diversity, implement real legislative compliance, and attract new generations of talent.

#### **Complete this sentence: I know I picked the right career when ...**

I look through the helicopter window and see the views. It is perpetually satisfying. I get to do something meaningful while enjoying what I do—that is a whole new level of fulfillment. 

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Photo Credit: Brent Bundy

# Running on (Almost) Empty

*Your planned fuel stop doesn't have fuel. Now what?*



**T**HANKS TO THEIR UNPARALLELED flexibility in where they can land, helicopters are less susceptible to accidents caused by fuel exhaustion than just about any other class of aircraft. That doesn't translate to complete immunity, though. Precisely the wrong combination of insufficient planning, ill-advised pilot decisions, inhospitable terrain, and just plain bad luck can result in the engine quitting while the aircraft is still in the air. And each such accident follows a moment or two when a different decision could have eliminated the risk of crashing.

## The Flight

On Jun. 11, 2023, a pilot and an aerial photographer boarded a Bell 206B JetRanger at Dodge City (Kansas)

Regional Airport (KDDC) to continue a pipeline inspection. They'd stayed in Dodge City overnight after completing the previous day's work. Winds were gusting to 26 kt. when they met at 8:00 am but were forecast to subside, so they waited about an hour before taking off.

The main pipeline the pilot and photographer were following ran southwest to the vicinity of Beaver in the Oklahoma panhandle, and the pilot determined that they could inspect that area and all the branches "except one really long one" en route. The pilot planned to refuel at Perryton Ochiltree County Airport (KPYX), 20 miles southwest of the end of the pipeline and just across the Oklahoma panhandle in northernmost Texas.

They landed at Perryton but found no one at the FBO. There was a self-service pump, but, to quote from the pilot's account on the NTSB's Pilot/Operator Aircraft Accident/Incident Report form (Form 6120.1):

"I began paying for the fuel and getting the grounding cable and hose pulled out for the refuel. I couldn't get the fuel pump to operate correctly. I threw every switch and pressed every button on the pump and it did not work. I called the airfield manager on the number that was left on the desk and there was no answer. Left a message asking for help with the pump. My passenger and I walked around the airfield looking in hangars to try to find someone that might be able to help and weren't able to find anyone. We still had over half a tank of fuel so we decided to depart and fly a new main line to the north and we would break off for fuel at a nearby airfield."

As they flew north past Ashland, Kansas, the pilot decided to refuel at Comanche County Airport (3K8) in Coldwater, Kansas. While planning the flight that morning, he'd identified 3K8 as offering full-service Jet A, but "upon arrival that was not the case." The Wichita sectional chart depicts 3K8 with symbols indicating fuel is available, but the FAA's Chart Supplement (formerly the Airport/Facility Directory) lists only 100LL gasoline. The pilot surmised that he must have mistakenly pulled up the listing for Comanche County, Texas, instead.

With the fuel gauge showing 15 gallons and the nearest source of Jet A 40 nm northeast at Pratt Regional Airport (KPTT), no available options looked good. Hopes to flag down a motorist for help faded as 20 minutes went by without a single vehicle passing the airport. The pilot ultimately decided "to fly north 15 to 20 miles and find a road to land next

to" as offering a better chance to flag down a passing vehicle or "even be able to get a call out from the fuel truck at KPTT."

About 20 miles northeast of 3K8, the helicopter crossed a sizable wind farm, one of many in the area. After clearing the turbines, "we [were] pushing 25 to 30 miles and I was looking for a good spot next to a road." He identified a landing site and set up the approach, but at about 100 ft. agl and 40 to 50 kt. the engine flamed out due to lack of fuel. The pilot entered autorotation but touched down hard. "The nose pitched down and the tail came over the top, and the aircraft came to rest on the left-hand side," he reported.

The skids separated, the main rotor severed the tail boom, and the helicopter rolled onto its left side. Its owner described the main and tail rotors as "completely destroyed." The pilot and photographer escaped through the shattered windows. While the National

Transportation Safety Board (NTSB) officially classified their injuries as "minor," the pilot described the photographer as "bleeding badly in a few places," which he helped dress. After finding his phone in the wreckage, he was able to call 911.

### The Aircraft

The Bell 206 has a semi-rigid, teetering, two-bladed main rotor and a conventional two-bladed tail rotor driven by a single Rolls-Royce (formerly Allison) M250 turbine engine rated for 420 shp. Standard fuel capacity is 91 gallons. At its last 100-hour inspection 15 days before the accident, the 1972-model helicopter had logged 22,057 hours. It was registered in the restricted category with a Part 133 external-load certificate.

### The Alternatives

The two obvious decision points during the flight were the departures from Perryton and Comanche County. (On the ground with the engine shut down, the risk of an accident is just about zero.) However, opportunities to avoid the accident were available before the pilot and photographer left Dodge City. Small airports in rural areas don't get a lot of traffic and consequently may not pay for continuous staffing. An advance call to Perryton advising of an ETA might have improved the prospects of someone being there to help—and if no one answered, flagged that airport as unreliable for fuel-planning purposes.

Several more options were open after they landed at Perryton. Perhaps the simplest and potentially most useful was to phone back to base, asking for help identifying fueling stops that aligned at least somewhat with their inspection schedule. (The helicopter's operator is a substantial firm specializing in power-line and pipeline inspections by both



The Bell 206's main rotor and tail rotor were completely destroyed as a result of the accident. (National Transportation Safety Board/Local Authority Photo)

airplanes and helicopters, so it seems likely someone would have been there to answer the phone and would have had the resources to perform the search.) If that conversation wasn't helpful, the fairly busy Liberal (Kansas) Mid-America Regional Airport (KLBL) was less than 40 nm to the north-northwest—not the direction of the patrol route but well within their existing fuel supply.

The published reports don't state

whether the pilot communicated his plan to refuel at Comanche County back to his employers, but that information would surely have helped them decide how to manage the situation.

Finally, whereas gasoline engines can't burn jet fuel—misfueling has caused detonation progressing to several catastrophic engine failures—turbine engines have some ability to burn gas. The operations manual for the Rolls-Royce M250 engine

lists MIL-G-5572E, essentially aviation gasoline of whatever octane rating, as an emergency fuel to be burned with the boost pump on for no more than six hours per turbine overhaul cycle. The Bell 206B flight manual doesn't seem to mention this option, however, so we can't fault the pilot for not knowing that pumping 15 or 20 gallons of avgas at Comanche County would have gotten them to Pratt.

### The Takeaway

Even in the densely populated regions that boast multiple full-service FBOs within any 50-mile radius, availability of fuel is never guaranteed. Whether due to mechanical problems with the truck (where there's no self-service), the self-service pump (where there's no truck), or the only staffer taking an off-airport lunch break on a slow day, situations arise in which a planned fuel stop suddenly isn't one. The question is, what do you do then?

Numerous factors figure into the answer. How much fuel do you have left? Do you know where the nearest alternative source might be? Can you reach someone to help you figure that out if you don't have the answer at your fingertips?

It's already given that the day's plans are going to need some readjustment, so don't be afraid to step back and focus on the bigger picture: the aircraft isn't going to fly long after the fuel runs out, and the consequences of an unplanned landing are almost never better than those of a flight that concludes as planned.

Far-flung rural airports—often unattended, perhaps with self-serve equipment of unpredictable reliability—compound those concerns, and their operators aren't necessarily energetic about filing NOTAMs advising of outages. This places a still heavier burden on the pilot or dispatch office to confirm fuel supplies before taking to the air.

In both situations, however, one fact remains constant: Landing because you don't have enough fuel is wise. Taking off for the same reason isn't. [✈](#)



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# A Precautionary Tale

*Did you decide to Land & LIVE? Then you did the right thing—no matter what the media says.*

**A**S YOU READ THIS COLUMN, I'd wager that thousands of moviegoers are enjoying a ridiculously unrealistic helicopter scene in a modern action film. Hollywood is constantly treating viewers to helicopters doing impossible stunts that sometimes end in spectacular crashes.

While industry insiders may laugh at these routinely outrageous representations, much of the viewing public soaks it up and believes the unbelievable. And who can blame them—our helicopters are impossibly dynamic aircraft capable of doing amazing feats that no other machine can accomplish. And don't you enjoy an exciting action movie that showcases our industry, even with—maybe especially with—the occasional blooper?

Given these larger-than-life portrayals, the public and media are understandably naïve about helicopter safety,

technology, and performance realities. They often overlook important aviation news, such as advancements in safety, technology, and human performance, in favor of violent, shocking, or tragic events—because the latter bring in clicks or views. These flawed perceptions can lead to negative coverage of routine vertical aviation activities, such as precautionary landings.

## Emergency versus Precautionary Landings

Most laypeople don't understand the difference between precautionary and emergency landings. These generic terms don't explain the flight conditions that may prompt a pilot to land at an unplanned destination such as an open field, beach, or road.

When experiencing an in-flight anomaly, pilots must use their judgment and training to promptly assess the situation and comply with relevant manuals, policies,

Helicopter pilots' superpower enables them to land their aircraft almost anywhere—and save lives in the process. Learn more about this special ability, and download this poster, in the November 2023 Spotlight on Safety feature. (Colten Gonzalez-Hill Design)



and regulations that dictate appropriate actions. Chief among these directives is the rotorcraft flight manual, which includes an emergency procedures section describing potential abnormal conditions and any landing criteria that may apply. The criteria often vary, based on the aircraft type, operator policies, and other factors.

**Emergency landings.** When witnesses or other persons not affiliated with helicopter operations unilaterally declare the pilot performed an “emergency landing,” they seldom understand the terminology that they are using. An emergency situation is one in which the safety of the aircraft or of persons on board or on the ground is endangered for any reason.

Helicopter emergency landings are uncommon. In rare instances, they might involve a loss of power, smoke, fire, or critical system malfunction. In-flight conditions requiring a pilot to land right away are usually emergencies that demand immediate action while in the air and once safely on the ground.

**Precautionary landings.** A precautionary landing is a premeditated landing, on or off an airport, when further flight is possible but inadvisable. Most unplanned, precautionary helicopter landings are made from an abundance of caution. It’s our industry’s equivalent of pulling onto the shoulder when the car’s check-engine light comes on. News reports often mistakenly—or intentionally, for effect—report these events as emergency landings.

Depending on the severity of in-flight conditions, a pilot might land as soon as possible (more severe) or as soon as practical/practicable (less severe). Pilots may have the flexibility to return to their original takeoff location or divert to the closest suitable location. When flying over urban areas, mountains, forests, or water, pilots will continue the flight to a safer landing area unless conditions further deteriorate, requiring an immediate landing or ditching.

When the VAI communications team receives a news report that breathlessly reports a “helicopter emergency landing” that is clearly a precautionary landing, they

do reach out to educate that media outlet about the difference between the two.

But we continue to see that mistake, and sometimes I hear from pilots or operators who are frustrated about receiving negative attention for doing the right thing.

### Keep Doing the Right Thing

The key point for those in our industry to understand is that when a pilot responds to any abnormal in-flight situation and performs an unscheduled landing, it doesn’t matter what anybody else calls it. As spelled out in 14 CFR 91.3, “the pilot-in-command of an aircraft is directly responsible for, and is the final authority as to, the operation of that aircraft.”

Annex V, 7.2, of Regulation (EU) 2018/1139 of the European Parliament and of the Council echoes this theme, stating, “The pilot in command must have the authority to give all commands and take any appropriate actions for the purpose of securing the operation and the safety of the aircraft and of persons and/or property carried therein.”

No matter what the local TV station or newspaper has to say about your “emergency,” the world’s civil aviation authorities, including the European Union Aviation Safety Agency (EASA) and the FAA, direct you, as pilot in command, to assume the final authority as to the operation of your aircraft.

When HAI launched its Land & LIVE initiative in 2014, some wondered if pilots

choose to continue on in deteriorating flight conditions because they fear FAA disciplinary action if they made a precautionary landing. If you’ve heard that aviation tall tale, I can tell you that it is false. The FAA, and to a large extent other international regulatory agencies, support pilots who make sound aeronautical decisions—in fact, the regulators want every pilot to do so!

In the meantime, the exaggerations and mischaracterizations of precautionary landings by the media will continue. We may not possess the power to divert the media from weaponizing a normal day in the office for a vertical aviation professional. But we can—we must—continue to do what we know is right.

Pilots, dispatchers, owners, and operators: Never allow the media or others to distract you from your professional duties. Keep acting in the best interest of your aircraft, crew members, passengers, and the public.

And when it’s time to land—[use your superpower](#) and, as Matt Zuccaro, our former president and CEO, said, “Land the damn helicopter!” Begin every flight with a commitment to your duty to bring that flight to a safe conclusion.

If you are not familiar with [VAI’s Land & LIVE](#) safety initiative, I invite you to check it out and take the Land & LIVE pledge for pilots. Operators can also pledge to support their pilots when they decide to make the safety of flight their top priority. [📷](#)



# Tools Secure? Double-Check to Be Sure

*Don't assume you left nothing behind after working on an aircraft.*



**W**HEN RESTORERS OF CHARLES Lindbergh's *Spirit of St. Louis* found a pair of pliers in the belly of his airplane, they thought the tool had been left behind during one of the aircraft's restorations. After some careful investigation, as I cite in a 2022 [Spotlight on Safety article](#), it was determined the pliers had been left by Lindbergh himself on his famous 1927 transatlantic flight.

While this may not be the first instance of a tool having been lost in an aircraft, it's likely the most well-known early example. Lindbergh had many fuel valves he had to manipulate during the course of his 34-hour trip from New York to France. The single-engine airplane was laden with fuel, and pliers would have made moving the fuel selector valves much easier on his hands and fingers.

## A Job Well Done

The Internet is loaded with examples of aviation accidents related to poor tool control. Of course, a lost or misplaced tool doesn't always lead to an accident, but it happens frequently enough that tool control has become a top priority over the past couple decades, to the point that aviation tool companies now sell tool-boxes with tool shadowing already in place.

Recently while performing some maintenance in the area of the rudder pedals and flight controls, I went down into my aircraft's "bowels of misery," contorting my body for hours while entering and exiting the fuselage.

For those of us who've been there, you know what I'm talking about. Machines are often built around a single widget where it seems like someone held up an



item and declared, “Hey, let’s build an aircraft around this thing,” and bam, just like that, they build the machine without regard for the people who’ll have to repair or service it.

I was nearing the end of the job and thought it would be wise to run a magnet around the floorboard area and ribs to see what it might pick up. I had been careful not to drop any hardware or anything else I was using while working in the aircraft, so I was pleased to find no magnetic debris after sweeping the area with the magnet.

After climbing back out of the aircraft for the final time, I quietly celebrated my maintenance victory. You know the feeling—thinking about a job well done. But then, at that moment of bliss and accomplishment, I thought to myself, “You know, you should really contort yourself again and put your head in there to make sure everything is correct.”

There ensued the personal mental battle we’ve all faced at one time or another. “I just got out of there,” I argued with myself. “I didn’t drop anything, and the magnet didn’t pick up anything.

“Dammit,” I countered to myself, “I need to get back in there to double-check, or I won’t be able to sleep tonight.”

### Trust Your Intuition


Heeding my inner voice, I curved my body into the aircraft again like a circus professional and wedged my head into a tiny hole, leaving no room to spare so I could get my eyes on the target. And holy cow, lying there was a screwdriver from years past, wedged right between the rudder pedals, that the magnet couldn’t pick up. I was able to get my fingers into the space and pluck it out.

Afterward, I couldn’t help but feel thankful that my conscience hadn’t allowed me to rest until I had rechecked

the area where I’d been working to verify that I had left behind no foreign object debris.

Thinking back over my many years as a pilot and maintenance technician, how many times have I been strapped in the cockpit ready to perform an engine start and then worried I hadn’t secured a compartment? How many times have I thought a panel was closed, fastened with several screws, only to open it back up again to verify that everything was as it was supposed to be?

Bottom line: we must listen to our inner voice. Often it’s just a passing thought, but sometimes you have that “aha” moment after following up on something when you say to yourself, “I’m glad I checked that,” and a flight goes on without incident because you did.

Did it cost you more time? Maybe, but the confidence—and security—you gained was worth the extra effort. 

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